SAJMMR

ISSN (online) : 2249-877X

South Asian Journal of Marketing & Management Research

Published by
South Asian Academic Research Journals
A Publication of CDL College of Education, Jagadhri
(Affiliated to Kurukshetra University, Kurukshetra, India)

SAJMMR ISSN (online) : 2249 –877X

Editor-in-Chief : Dr. Dalbir Singh

Impact Factor : SJIF 2021 = 7.642

Frequency : Monthly

Country : India

Language : English

Start Year : 2011

Indexed/ Abstracted : Scientific Journal Impact Factor(SJIF 2020 - 7.11), Google Scholar, CNKI Scholar, EBSCO Discovery, Summon(ProQuest), ISC IRAN, Primo and Primo Central, I2OR, ESJI, IIJIF, DRJI, Indian Science and ISRA-JIF.

E-mail id: saarjjournal@gmail.com

VISION

The vision of the journals is to provide an academic platform to scholars all over the world to publish their novel, original, empirical and high quality research work. It propose to encourage research relating to latest trends and practices in international business, finance, banking, service marketing, human resource management, corporate governance, social responsibility and emerging paradigms in allied areas of management including social sciences , education and information & technology. It intends to reach the researcher's with plethora of knowledge to generate a pool of research content and propose problem solving models to address the current and emerging issues at the national and international level. Further, it aims to share and disseminate the empirical research findings with academia, industry, policy makers, and consultants with an approach to incorporate the research recommendations for the benefit of one and all.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

ENHANCING THE POTENTIAL OF THOUSANDS OF WORKFORCE COMMUNICATIONS PROFESSIONALS: A TALENT MANAGEMENT KNOWLEDGE IN THE DOMAIN OF EFFECTIVE COMMUNICATION

Satyendra Arya*

*Associate Professor,
Department of General Management/Production and Operation,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: satyendra.management@tmu.ac.in

DOI: 10.5958/2249-877X.2021.00101.6

ABSTRACT

Despite the fact that millennials have been widely studied in both popular and academic literature, there have not been enough strategic communication studies to assist us fully grasp this distinct and important generation in the communication profession. A key goal of this research is to take a talent management approach in order to gain a thorough understanding of millennial communication professionals' (MCPs) generational attributes as they relate to their workplace values, and to determine how such values would affect key phases such as recruitment millennial communication professionals (MCPs), engagement, development, and retention in talent management in strategic communication. Two national panels were recruited to conduct comparative analyses, with one panel consisting solely of MCPs and the other panel consisting solely of communication managers and executives who have direct working and/or supervising experience with MCPs. The results of the comparative analyses were compared to those of the original study. A comprehensive report on generational perception disparities, as well as differing expectations about talent management, may be obtained from the comparison findings of the two studies. The findings of the research as well as their practical consequences are addressed.

KEYWORDS: *Communication, Leadership, Millennial, Profession, Talent Management.*

1. INTRODUCTION

Although literature on Millennia as a distinct and important consumer group in general is abundant, there is limited study into thousand-year-old communications specialists. The Millennium Generation, the biggest working force in the United States, has already had significant impacts in many sectors and in different settings. The Deloitte Global Millennium Study shows that thousands of years want their employers to influence. Millennials desire a stronger feeling of influence to be engaged in positive social initiatives at the local level, which will enhance their employers' loyalty. At the same time, businesses also confront the fact and the problem that young talents move too quickly and too often from one position to the other before they can achieve the long-term growth objectives of the organization. Believing that strategic talent management can play a critical role in linking talented employees, the corporate context, organizational culture and social causes with organizing efficiency and long-term reputation, this

study seeks to learn the expectations of thousands of communication professionals on talent management efforts and strategies of organizations[1].

The aim of this research is thus to get greater insight into how the generational characteristics of millennial communications professionals in relation to the workplace influence critical stages such as recruitment, commitment, development, and retention of talent management. We believe it is possible for organizations to: 1) explore strategic approaches to talent management that attract, engage, develop, preserve and benefit from this generation, and 2) assess opportunities for leadership development to help develop these young professionals to be future leaders on the field.

In order to reach the main objective of this research, we have conceived two online surveys to acquire two comparable national audience groups, which would provide us with complete self-reported information and a balanced evaluation of this unique generation. In our initial online poll we recruited an adult Millennia Communication Professionals (MCPs) nationwide panel that was born between 1981 and 1996.

This panel includes 420 MCPs who presently occupy a full-time communication job in various companies. Our second online poll consisted of a nationwide sample of 420 senior communication managers and managers (MGRs) who interact directly with MCPs on-the-job. While there are no direct relationships or connections between recruited interviewees in these two national panels, we think that having two expert panels enables us to compare the findings, detect the gaps in perceptions and ultimately provide suggestions for successful personnel management[2].

Following this argument, we invited the two panels to express their views on the generational characteristics of MCPs in relation to their place of employment. Five factors linked to workplace values have been evaluated, including work centrality, recognition and award, risk orientation, work-life-social value and technology orientation. We examined further the expectations and views of both panels on critical stages in the talent management process (i.e., recruitment, engagement, leadership readiness, leadership development, and retention). After analyzing the findings of the two panels, we finish the argument by presenting insights which may be taken into account by the organization. Research and practical consequences are addressed[3].

1.1 Theoretical Framework:

The subjects of talent and talent management have been one of the main driving factors for business and consultancy in the last decade. Such study on talent management in companies has focused on the practice of particular organizations, while facing criticism of the absence of definitions and theoretical frameworks. The absence of a general concept of talent management leads to a shared discussion regarding its purposes and scope and its role in providing vision and leadership beyond enterprises. Such a discussion highlights the continuing debates as to whether or not we should consider talent management to be an inclusive strategy (i.e., the talent management approach is about managing all workers' skills) (i.e., talent management is about the talents of high potential or high- performing employees only). As talent management is discussed, several key organizational trends in talent management literature, including efficient talent management in the context of mergers and acquisitions, an understanding of talent

expectations for international business transactions, and talent management within the top management team, have been explored.

Although little study on management of different generations of talent on the job begins to emerge in literature, few have concentrated on connecting talent management with the millennial generation of employees, despite the fact that this generation has become the biggest group of employees in the US. In this study, we utilize the idea of talent management and the strategic talent management method for guiding research design. We believe that it is essential and necessary to integrate young professionals from the initial recruiting phase through commitment and leadership development to the retention and gain phase in the strategic talent management process of the company[4].

As a widely-accepted definition in talent management literature, academics describe talent as the systematically-developed inherent capacity of people who are involved in their own activities, feel it significant and desire to engage in energy. They also maintain that every talent advances through a specific lifecycle, described as the talent management cycle, including recruiting, education, performance, development and retention. Research-based talent management allows people to perform brilliantly, or consistently at their best, in one or more areas of human functioning.

With several topics investigated and debated in the context of Talent Management, the development and evolution of talent management theory reflects a shift from traditional approaches focusing on organizational elites and the management of human resources towards talent especially suited to today's dynamic and competitive business environment. Strategic talent management can be designed in three phases: (1) identify key strategic positions of the organization that contribute definitely and significantly to the competitive advantage of the organization; (2) develop a pool of high-potential and high-performing candidates for those key positions to fill; and Researchers claim that this process is mediated by desire for labor and organization, and is further complicated by generational characteristics and expectations[5].

Based on the findings of commercial research, millennial communication professionals are likely to anticipate different methods for talent management and leadership development from prior generations. New millennial talent may first benefit from mentoring and networking initiatives but eventually need the development of human resources and skills to lead top management. Talent management techniques may thus be utilized to engage, retain and develop thousand-year-old workers. Consequently, businesses will gain by increasing their productivity, increasing customer retention, reducing risks and attaining better operational and financial performance via the people management process.

1.2 Engagement of Employees:

The commitment of employees was evaluated at two levels (i.e., engagement in the job and engagement in the organization). The first level evaluates how a thousand-year-old communications professional is involved in the present work on the basis of the agreement between responses and job related statements such as 'I am so involved sometimes that I lose sight of time.' The second level evaluates how committed a thousand-year-old communication expert has been to the organization based on the agreement of responses with statements relating to organizations such as 'One of the most interesting things for me is involving people in this company.' Three items from Saks were modified for measuring organizational involvement in

this research. The seven-point Likert-type scales of 1 (highly divergent) to 7 assessed all items (strongly agree). Internal reliability estimates were 793 and 876 for employment and organizational levels respectively[6].

1.3 Readiness for Leadership:

Leadership is the extent to which a thousand-year-old communication expert feels confident in his/her leadership. Measures to evaluate the leadership preparedness of millennial communications professionals have been developed from public relations research. Six elements related to six key characteristics (e.g., autonomy, ethical direction, team cooperation, connection building abilities, strategic decision-making, and communication-making) describe effective public relations leadership. One example is "I am sure that I now have enough skills to provide an impressive view of how communication may assist the business." A seventh question has also been introduced to evaluate your overall confidence in leadership (i.e., I am confident that I have now sufficient capabilities to become an excellent leader in communication in the near future). Similarly, respondents from the Millennium group were asked to self-report their own judgments whereas executive group respondents reported their views on millennial staff based on observed and supervised experience. All items were assessed using Likert-type seven-point scales of 1 (strictly divided) to 7 (strongly agree). The internal reliability estimate for leadership preparedness was 915 across the sample.

1.4 Development of Leadership:

The individual responsibilities of millennial communications professionals in leadership development relate to the degree to which they have committed to a variety of conduct and activities in search of leadership development chances inside and beyond their existing company. In this study, leadership development efforts assessment measures were taken from research on employee psychological contracts for the development of leadership skills and abilities in companies. One example is: "I aggressively improve my leadership skills and abilities through acquiring important work-related talents to boost my worth." The seven-point Likert-type scales of 1 (highly divergent) to 7 assessed all items (strongly agree). The internal reliability estimate for the development of leadership was 857 across the whole sample[7].

2. DISCUSSION

This research aimed to identify specific generational attributes associated with the workplace values of millennium communications professionals, as well as to detect perceptual gaps in employee involvement, leadership readiness, leadership development, recruitment and retention among thousand-year communication professionals and communication executives who work with them directly. Since the millennium generation has become the largest group of people in different occupations across the United States, our research responds to the urgent need of millennial communication professionals for research, as well as their expectations on key aspects of the talent cycle, including recruitment, leadership development, involvement and resounding.

By performing a comprehensive and comparative study based on two national populations, we focus on the perceptual gaps between MCPs and their MGRs. The extent of these disparities increases the significance that communication professionals of this generation be known to demonstrate their full potential as future communication leaders. A thorough knowledge of the sensory gaps in talent management's main components may be valuable for managers and organizations trying to recruit and conserve this section. The results from this study not only

offer many particular insights on the character of the Millennium Generation, but also on the practical consequences for the re-exploration and re-definition of the roles and responsibilities of MCPs in their organizations[8].

Since our study focuses mainly on offering ideas for creating a comprehensive talent management system inside the business with the expectation that such reasoning and efforts may have a beneficial effect on the communication profession and address certain talent management problems. Our results reveal that millennial communication professionals love to take different leadership positions and are actively pursuing chances for leadership growth both within and beyond their present company. While they are not yet ready, it will be very useful to concentrate on leadership practices and problems, such as the provision of tools for leadership practice and support for leadership development efforts. Such efforts would contribute to the MCP's commitment to leadership positions in order to achieve an effect via different tasks and initiatives on specific elements of organizational performance, both tangible and intangible.

Although this research provides significant solutions to unknown problems relating to the literature's management of thousand-year-old communication experts, the findings should be evaluated with regard to their limits. One important restriction is that although we have been able to collect two large national samples of professionals and managers working in the communication industry in general, there is no direct reporting or working connection between the two groups. The use of single informants from various organizations, in their organizations, may not reflect the truths of thousands of communication experts. Future study may expand our findings by bringing together numerous informants from the same company[9].

Finally, our findings open up a dialogue between recruiters and millennial communication professionals to tackle talent management problems and possibilities efficiently. In setting up the talent management system, companies must take into consideration the institutional environment and culture. At the same time, it is equally essential for young professionals to accept responsibility and reflect on each other in a thorough manner. MCPs want greater freedom, flexibility, independence and self-initiated jobs. At the same time, however, MCPs must also evaluate their intercultural and cross-functional competences inside and beyond organizational duties so that proper positions and skills are not misidentified. For a sustainable personnel management cycle, a mutual benefit viewpoint is highly required[10].

3. CONCLUSION

Analyzing perceptual deficiencies in the generational attributes, engagement, leadership, leadership development and recruitment expectations of two respondent groups: MCP and MGR, with experiences working with MCPs, this study focuses on the need to create a sustainable and competitive talent management system through incorporation. The Deloitte Global Millennium Survey shows out that Millennials feel responsible for numerous problems at work and believe that they may have an effect on good causes at work. In order for companies to be successful in long-term, sustainable recruitment and retention of top talents, they must try to give millennial staff more control and make them feel their employers have an effect.

The fundamental elements of the talent management system, such as recruiting, culture, development and retention, must be subject to changes and efforts. Make recruiting a customized, honest job description process. Nearly two-thirds of the MCPs questioned said that their decision-making was influenced primarily by the reputation, location and culture of a

company. If these are the main characteristics that millennials are looking for, how can companies appeal to them? The practical implications for businesses are to take care of your claims if you provide an integrated package of personal improvement and professional development.

Provide a job description that matches the real task when young employees are employed. Approaches like incorporating a young rock star in interviews and organizing a small social/virtual gathering for MCPs may increase commitment and ignite outcomes. It is essential to highlight the diversity efforts of the business, since millennials are the most ethnically diverse generation in American history. Our findings showed that MCPs want to work for a socially responsible company. For retention efforts to be further enhanced, businesses may position themselves within the community, explain their CSR activities and share a "invisible" culture by connecting such efforts with a social purpose that can provide life to the company.

We also realized that certain key contexts, such as individual level research (e.g., strategies managing individuals to balance the challenge to work and life), organizational level (e.g. organizational and HRM strategies that influence talent management) and international level (e.g. multinational talent management practices transcends), ranged from individual levels to individual and international. However, we have not yet been able to find some trans-industry or transnational talent management studies. While our study setting is robustly based on strategic communication, future research should seek to see if or not models of talent management may transcend the many companies, sectors, networks or across national boundaries.

REFERENCES:

1. R. Sharma and J. Bhatnagar, "Talent management – competency development: Key to global leadership," *Ind. Commer. Train.*, 2009, doi: 10.1108/00197850910950907.

2. S. L. Sweem, "Leveraging Employee Engagement through a Talent Management Strategy: Optimizing Human Capital through Human Resources and Organization Development Strategy in a Field Study," *Copyr. 2009 by ProQuest LLC*, 2009.

3. H. J. M. Ruël and C. Lake, "Global talent management in mncs in the digital age: Conceptualizing the GTM-ICT relationship," *Adv. Ser. Manag.*, 2014, doi: 10.1108/S1877-636120140000014015.

4. E. Pallis *et al.*, "NEREUS: An ERASMUS+ Strategic Partnership for skills development in the field of next generation networked media over 4G+ infrastructures," 2017, doi: 10.1109/EAEEIE.2017.8768594.

5. H. J. Bernardin and J. E. A. Russell, *Human Resource Management : An Experiental Approach*. 2013.

6. J. A. G. Suárez and J. I. P. Fernández, "Creacity, a proposal for an index to measure the tourist creativity. Application on three urban cultural destinations in Spain," *Rev. Estud. Reg.*, 2015.

7. M. Staunton, "Implementing talent management in a global services company," 2014.

8. R. Thomas, "In modern supply chains, the soft stuff is the hard stuff," *Int. J. Phys. Distrib. Logist. Manag.*, 2014, doi: 10.1108/ijpdlm-05-2014-0100.

9. J. A. Laub, "Assessing the servant organization; Development of the Organizational

Leadership Assessment (OLA) model. Dissertation Abstracts International," *Procedia - Soc. Behav. Sci.*, 1999.

10. J. A. Laub, "Assessing the servant organization; Development of the Organizational Leadership Assessment (OLA) model," *Diss. Abstr. Int.*, 1999.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

A STUDY OF AGGREGATE PLANNING IN LOGISTICS

Dr. Vipin Jain*

* Professor,
Department of Finance & Account,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: vipin555@rediffmail.com

DOI: 10.5958/2249-877X.2021.00102.8

ABSTRACT

These days, supply chain management is concerned with the movement of raw resources, goods, and information. Supply chain management includes the effective use of assets and information to meet customer needs, transfer products, services, and assets. Comprehensive planning refers to a medium-term evaluation of demand, inventories, skills, and labor utilization level. The traditional mathematical programming formulae are typically used to decrease the total operational budget. This phrasing, on the other hand, is purely commercial and ignores sustainability. This research examines traditional aggregate planning to include extra environmental and social elements to combine three fundamental characteristics of sustainability. To improve aggregate preparation efficiency, we combine these additional requirements with conventional expenses. Finally, we evaluate the models and understand the outcomes of a real-life study.

KEYWORDS: *Aggregate Planning, Aggregate Production Planning, Environment, Strategy, Sustainability.*

1. INTRODUCTION

A company's production must be planned and managed at a number of different levels. For medium-range capacity planning, the aggregate planning period typically spans between 2 and 9 months in length. The goal of aggregate planning is to create a production plan that makes optimal use of the organization's resources in order to fulfil projected demand as effectively as possible. Production rates, employee levels and changes, inventory levels and modifications, back orders and authorizations are all choices that need to be made by the planners in the organization. It is only via thorough planning that one can determine the optimal resource input mix and expected output levels.

Demand and supply will be considered in the course of comprehensive planning. If this is the case, factors such as promotion, price, and product mix may be used to determine success. If demand fluctuations are taken into consideration, marketing and operations would be included in the aggregate planning process on a daily basis.

It is basically a broad-based planning technique that is used in aggregate planning. Planners tend to avoid concentrating on specific goods or services unless there is obviously just one main product or service offered by the organization. It is instead dependent on total or composite

capacity that they rely on Budgeting, personnel, and marketing are all important management decisions that have a significant impact on the entire strategy[1].

The link between budgeting and planning is very strong. Many budgets are constructed based on gross production predictions, staff levels, inventory levels, acquisition levels, and other factors such as these. As a result, an overall schedule should serve as the basis for the original budget preparation as well as for any financial changes that may be necessary.

Most aggregate planning methods make use of continuous decision variables, which include changes in the industrial and people environments that occur on a regular basis. Given the availability and diversity of these methods, it is surprising that so few significant implementations have been published. Several factors have been identified as contributing to the lack of comprehensive planning recognition in the market environment, including dynamic structures with rigid expectations and unworkable alternatives.

Sustainability is shown in both literature and the most non-academic of materials as a desire to preserve a practice or method, or as a way to raise environmental consciousness among the general population. Both statements are correct, but only to a certain extent. As previously said, sustainable development is closely linked to the idea of sustainable growth, which is described as "growth that meets today's needs without compromising the ability of future generations to fulfil their own requirements."

The traditional approach to the issue of communal planning is based on a strictly economic description of the situation. Sustainability, on the other hand, means that social and environmental requirements, as well as economic considerations, must be addressed as the "three pillars of sustainability," as the phrase goes[2].

For supply chain management to be viable, it is necessary to consider all three of the sustainable pillars throughout the decision-making process. The application of the triple bottom line secretariat to economic quantities has yielded very valuable results, which have been shared with the public. Additionally, to financial concerns, it has been shown that decision-makers may determine their sustainability choices by integrating environmental and social issues.

A supply chain is a network of organizations that are involved in various processes and activities that generate products and services that are valuable to consumers. It traces all stages and functions involved in meeting customer needs, including manufacturers and suppliers, as well as transporters, warehouses, retailers, and the actions of the customers with respect to each of these points on the supply chain, among others. Systemic methods to developing, planning, managing, and running overall supply chain processes are referred to as supply chain management (SCM) or supply chain operations management (SOM)[3].

It is the process of creating a production plan to satisfy consumer demand while taking into consideration worker hours, productivity, inventory capacity in facilities, raw material availability, and any other limitations in the supply chain, among other factors. Accumulative planning serves to synchronize the flow of commodities across the supply chain and to support choices about how to most efficiently use production and transportation resources, as well as supply facilities and inventory; this planning assists in successfully managing supply and demand

Plants that mix materials together, such as asphalt and concrete plants, are essential components of the supply chain for many construction projects. In batch plants, materials such as cement,

water, aggregates and selected admixtures are combined to produce asphalt or concrete, which is then loaded into trucks through silos and transported to the construction site. Batch plants that supply construction projects have their own distinct supply chains; the production method used by batch plants is make-to-order rather than make-to-stock, and order quantities and specifications vary greatly. Batch plants that supply construction projects have their own distinct supply chains. It raises the complexity of collective planning to the point where mathematical models and linear programming are no longer adequate for producing successful plans. In such situations, simulation models can represent the intricacy and unique connections that exist between locations throughout the supply chain, allowing for the generation of alternate decision-making scenarios[4].

1.1 The Fundamental Methodologies:

In this section, we'll look at the first three methods in detail, each with its own main point. The fourth approach is a hybrid of the first three. Demand disparities are addressed via the use of a mix of stocks, part-time workers, overtime, subcontracting, and backup orders, all of which are part of the overall workforce level strategy. Maintaining consistent production rates necessitates the ability to adapt to changes in inventory demand, backlog, or subcontracting. In order to combine market capacity, a "chase" strategy must be used; the anticipated production for a given period must match the forecasted demand for that period.

In addition to whatever technique an agency uses, business rules and costs are two important considerations. Business regulations may impose limitations on the options available or the degree to which they may be used. Generally speaking, aggregation planners attempt to achieve a balance between demand and supply within the parameters established by laws or contracts while incurring the least amount of cost.

1.2 Production Scheduling for Aggregates:

Operational control is achieved via the use of aggregate production planning techniques (APP). The commitment of processing, inventory, and personnel levels is required in order to satisfy shifting demand from a planning viewpoint spanning six months to about one year. The development of aggregate production plans is required in order to take advantage of employment opportunities and to play a critical role in the management of company operations. It is possible to maintain a balance between supply and demand while simultaneously reducing prices via the use of aggregate procurement techniques[5].

As a result of applying upper-level forecasts to lower-level scheduling production-floor operations, the Overall Production Planning Process becomes more powerful when applied in the future for periods ranging from two to eighteen months. Plans are often either chase plans, in which case workers are changed as a consequence, or level plans, in which case labor is usually constant and inventories and back orders are utilized to meet fluctuating demand as required. Chase plans are more common than level plans.

Aggregate Production Planning's main goal is to evaluate company policies and administration inputs linked to operations, marketing and distribution, accounting, materials, and finance, as well as human resources and engineering, in order to compress prices and enhance revenues. As a result, it improves customer service, decreases inventory investment, reduces changes in the pace of production, reduces changes in labor levels, and increases the utilization of equipment and facilities.

In order to achieve the required outcomes, a variety of methods are used throughout the aggregate preparation process. Most of the time, there are two kinds of approaches: informal methods of trial and error and statistical procedures, which are both effective. During the run-through, casual tactics are used more often than they are in other sections of the game.

Statistics methods have been the subject of much research, but they are still not as extensively used as they might be. They are mostly used to evaluate the efficacy of different aggregate preparation processes, which is a relatively new field of study for statistical approaches. In the usual process of aggregate preparation, there are many steps that must be performed before the final product may be used[6].

2. DISCUSSION

A table or worksheet may be helpful for each proposal to summarize the capacity, demand and costs connected with the plan. Graphs may also be utilized to assist the development of the different choices. Compared to other approaches, the tablet solving programme technique is the best for businesses, since the tablet solution is readily available on virtually all private computers, the prototype of the APP is relatively easy to formulate in a tablet format and it is finally easy to interpret the results.

In order to obtain the best possible aggregate output schedule from a sheet solver, many criteria must be observed. To implement the Aggregate Output Planning mode, the required data for its execution must first be collected. As a second stage, develop your APP concept in the form of a tablet. The assessment of the solutions produced is the next step. The overall production planning prototype of the proposed diagram may be shown, and its solutions can be applied to related divisions such as engineering, employees, preparation, sales and marketing, as well as warehousing and whether or not the explanations given are acceptable.

With regard to financial performance, the current overall production plan and the optimal plan generated by the overall production planning prototype may be compared. If the resolution is not suitable, the values of some input parameters may need to be reassessed or the restrictions modified to get a more acceptable outcome. The APP prototype table is updated until the ideas are regarded as appropriate for use. The final step is to execute the previously established net output schedule. After the APP model has been built and solved in a suitable way, the answers discovered may be applied[7].

A few aspects of the model, such as demand, associated costs, productivity rates, number of employees and inventory levels may be modified when the aggregate production plan is executed. These criteria should be regularly updated to stay up with the ever changing overall development timeline and address the APP prototype.

The aggregate production design is a well-organized process management approach, focusing on production, inventory, labor, and other models for satisfying demand. Total output planning may be related to planning decisions throughout the preparation phase. The objective of aggregate output preparation is to decrease to lowest feasible levels the price of production, the effect of variable demand, inventory and labor expenses.

By compiling aggregate production, utilization and revenues produced by plants and equipment are also optimized. A production schedule is created monthly or every quarter, specifying how many employees, the amount of and the type of production (such as standard, subcontracted or

overtime) and the entities to be generated, processed and reoriented in order to achieve productivity in the development of aggregate production.

Aggregated output planning also constitutes a proactive method to develop and access alternatives, including recruitment, laying off, firing and overtime modifications of workforce, use of the anticipatory inventory, use of subcontractors and the development of appropriate commodities and pricing approaches.

A more detailed description of the aggregate planning issue would be more in line with the common situations in practice. To sum up, in view of unforeseen seasonal demand, a company's production managers should assess the projected service level as well as the performance profile level according to the proposed reformulation. By using several different production outlines which are consistent with the company's workforce, overtime regulations and subcontracting, it is also able to choose the profile that best suits their preferences for the degree of amenities and inventory turnover. In essence, the trade-offs between quality of service and inventory are evaluated to allow all parties concerned to make informed choices regarding their alternatives.

The approach proposes a service or inventory trading strategy to promote efficient aggregate development, while other techniques concentrate on individual cost forecasts. One benefit is that communication between production, marketing and investment managers, all of which have competing goals in the corporate climate of today, is possible. Thresholds for inventory turns, operation and output may also be set which are mutually consistent. The use of a simulation model also enables for the investigation in a relatively short period of time of a huge number of different output profiles[8].

The outline of the production decision is a dynamic model proposed to help the manager throughout the design stage. The necessity to build a logical, understandable and simple approach was stressed. The growth process is regulated by a ratio known as the RPCC which reflects the relative value of the price that changes the production quantity compared to the cost of keeping the inventory. An effective plan horizon is calculated using this ratio to determine the planning horizon measurement.

Two indicators are calculated to redirect demand across different periods on the basis of the current production rate. Both the intended horizon ratio and the actual time ratio are computed to divert demand across various timeframes. Based on the fundamental principles of these measures, the issue of planning is split into nine Member States, all of which are equally extensive and exclusive. A comprehensive set of statements is drawn up, each of which is intended to offer logical answers to each of the issues.

The transition from high-volume batch production to continuous flow advancement in U.S. manufacturing led to an increased number of crew-loaded facilities. Continuous variables are prevalent in almost every available aggregate plan prototype, and both workforce settings and output need to be adjusted often[9].

The manufacturing-switching control has been developed to manage various creative environments which rely on the amount of team members. Inventory costs are calculated using an interval method, rather than by standard point figures. The method enables overtime decisions to be made and is intended to work together. Unbundling of prototype selection factors and directly associating them with lower level arrangement events is a feasible approach. The hierarchical technique reduces the complexity of the solution method by dividing the issue into a

series of sub-problems and replacing outstanding, viable solutions with lower statistical optimality costs. In reality, this approach is the best way to go.

This issue is addressed by a front end estimating module of the enhanced hierarchical production planning prototype, which does not anticipate distinct products in the front end estimating module of the prototype. This method also offers useful tools to aid managers in their decision-making processes while minimizing direct expenditure. The usage of the different modules within the classified production-planning framework will all benefit from the participation of middle management, planners, manufacturing-planning workers etc[10].

3. CONCLUSION

Over time spans ranging from two months to a year in duration, intermediate-range planning sets fundamental standards of work, production, and inventory. It occupies a middle position on the planning continuum, between the large-scale design judgments of long-range planning and the more specific and thorough short-term planning decisions made at the local level. Starting with an overall planning horizon projection, it progresses to preparations for putting the strategy into action on particular goods and services in the market environment. The integration of goods or services into a single product or service is the central component of the transitional preparedness process. The use of this approach allows planners to take into account general employment levels and inventory levels without having to become engaged in technical specifics that are best left to short-term planning.

Given the complexity involved with a dynamic manufacturing environment, it is obvious that no one comprehensive decision model for planning can account for all of the variables. But in order to be helpful, a model must correctly reflect the reality of the evolving context in which it will be utilized. This is not always the case. It seems that the ambiguity and restricted expectations connected with these techniques preclude their widespread use in practice at this time. Therefore, resources must be allocated to provide managers with the information they need in order to evaluate the appropriate costs involved with providing feedback on these prototypes.

REFERENCES

1. R. A. Aliev, B. Fazlollahi, B. G. Guirimov, and R. R. Aliev, “Fuzzy-genetic approach to aggregate production-distribution planning in supply chain management,” *Inf. Sci. (Ny).*, 2007, doi: 10.1016/j.ins.2007.04.012.

2. M. Türkay, Ö. Saraçoğlu, and M. C. Arslan, “Sustainability in supply chain management: Aggregate planning from sustainability perspective,” *PLoS ONE*. 2016, doi: 10.1371/journal.pone.0147502.

3. U. Laili and A. Riani, “ANALISIS RANTAI PASOKAN (SUPPLAY CHAIN) PADA CV BIOJANNA NUSANTARA KARANGANYAR,” *J. Pendidik. Insa. Mandiri*, 2015.

4. A. Singhvi, K. P. Madhavan, and U. V. Shenoy, “Pinch analysis for aggregate production planning in supply chains,” 2004, doi: 10.1016/j.compchemeng.2003.09.006.

5. H. C. Liao, Y. K. Chen, and H. H. Chang, “The APP strategies selected in SCM of the hospital,” *Int. J. Serv. Technol. Manag.*, 2011, doi: 10.1504/IJSTM.2011.040381.

6. J. Singhal and K. Singhal, “Holt, Modigliani, Muth, and Simon’s work and its role in the renaissance and evolution of operations management,” *J. Oper. Manag.*, 2007, doi: 10.1016/j.jom.2006.06.003.

7. P. R. Panchalavarapu, “Supply Chain Management: Strategy, Planning and Operation Sunil

Chopra Peter Meindl," *Interfaces (Providence).*, 2003.

8. U. Venkatadri, S. Wang, B. Montreuil, and A. Srinivasan, "Demand and order planning in supply chain networks," 2004.

9. B. K. Bahinipati, "A framework for semiconductor industry supply chain planning: Perspectives of intelligent enterprise," *Int. J. Intell. Enterp.*, 2012, doi: 10.1504/IJIE.2012.052558.

10. A. Entezaminia, M. Heidari, and D. Rahmani, "Robust aggregate production planning in a green supply chain under uncertainty considering reverse logistics: a case study," *Int. J. Adv. Manuf. Technol.*, 2017, doi: 10.1007/s00170-016-9459-6.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

ATHLETES AS A ROLE-MODELS FOR ADOLESCENCE

Dr. Manjula Jain*

* Sr. Professor,
Department of Finance & Marketing,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: jainmanjula76@gmail.com

DOI: 10.5958/2249-877X.2021.00103.X

ABSTRACT

Specifically, the first section of this work is concerned with theoretical concerns about the significance of role models and idols in general, and for young people specifically. Following that, the findings of existing research are discussed. According to studies, the vast majority of idols, particularly sports heroes, are males, and it is boys who are most enamored with sports players. In the second section of the paper, we report the results of a pilot research in which we questioned both female and male students about their role models. A significant proportion of males identified sports heroes or 'action stars,' whom they admired for their power, aggressiveness, and ability to get things done in a fast and efficient manner. Contrary to this, for the females who were questioned, athletes did not serve as role models in their lives. They were envious of the movie and music industry's stars and leading ladies. Ending with a discussion on the possible consequences of these orientations is followed by the issue of what type of solutions teaching may provide in this situation.

KEYWORDS: *Athletes, Idols, Role Models, Sports, Sports Heroes.*

INTRODUCTION

People need heroes and heroines to look up to as role models. They're a lifeline for kids and teens in need of guidance and direction. Stars and idols, who are continuously created and presented in the media as role models, are a good example of this. They're the stuff of dreams; they enliven and enlighten the world, and they add a little glitz and glitter to the daily grind. As a result, idols and models serve to maintain gender identities and hierarchies by symbolizing and reinforcing the values and norms prevalent in a society or among a particular group. The following questions are addressed in this article based on existing research as well as the findings of a pilot study:

1. Who are the female and male role models and idols in your life?
2. The gender roles associated with well-known and famous cult figures and the gender of these characters are of interest to both girls and boys.
3. Is there a place in society for role models like athletes?

3.1 Basic Concepts and Theories:

Learning by imitating or learning from a role model is referred to as "learning by imitating" in the psychology of learning. Imitating others helps people learn both discrete knowledge and complex behavioral patterns. Individuals may be led by orientations and acceptable ways of acting without needing to evaluate their own behaviour in a variety of circumstances and adapt to changing surroundings by learning from a role-model[1].

Social and ecological environments are thought to be in a dialectical relationship, with each one being perceived and processed (and thus having an effect on the other) while also being able to be influenced and changed by each individual. This idea is part of a socioecological approach to socialization. When we talk about a socio-ecological environment, we are referring to the three facets of human life: social, cultural, and material. This interweaving of micro- and macro-ecological settings implies that specific circumstances individuals are faced with have society values, conventions, and interpretive patterns influencing them (i.e. hierarchies of gender), which in turn affect broader contexts of interaction There are a few variables that play a role in the creation of gender that researchers have identified. One of these aspects is called "the social reproduction of gender" and it explains how people carry out gender norms and expectations in real life. Women, men, and politics are all part of the same social system, which is why academics say gender is a system that "sets expectations for people, organizes day-to-to-day social processes," and is "built into key social structures of society" such as the economy. Gender is something we create and do, not something we are or have. There is a lot of interest in the way gender is constructed and reconstructed via human contact and social life, and academics believe that everyone is continuously performing gender in order for that social life to have a certain texture and order[2].

Children's 'doing gender,' their 'active hand in the construction of gender, and how communal behaviors e.g. line-forming, seat-choice, teasing animate the process,' are topics academics discuss in their research papers. She does not, however, discuss the significance of role models in this process. Assuming that the above-mentioned ideas are applied to the process of "learning using a role-model," not only are behavioral patterns and "doing gender" transmitted and learned, but also clusters of orientations, attitudes, and values that fit into the image and identity a person has of himself or herself, can be assumed. People choose their own role models and look for characteristics and patterns of behaviour in those they like. On the other side, individuals look for role models who ‘suit' them. This assumes that the processes are reciprocal. Role models, on the other hand, may have a positive impact on a person's self-image and future goals.

Individuals are encouraged to recognize and replicate patterns of interpretation and behaviour by role models and idols. Since of this, they are especially important throughout childhood and adolescence because they provide children tools for navigating their surroundings and navigating society as a whole. This helps young people deal with the normal difficulties of adolescence while also helping them seek for standards and values. Women and men both benefit from having role models to look up to as they establish their own gender identities[3].

Developing a positive self-image, maintaining a healthy balance and presenting one's identity, as well as the presentation of gender – or "doing gender" – are all under threat today due to the lengthening of adolescence, a time of transition, increased individual freedom, and an increase in the variety of lifestyles available. Newspaper articles, books, and empirical research all attempt to identify and characterize today's youth-centered society. 2 Most scholars agree that role

models and heroes are important in shaping young people's self-image, strengthening their connection with the "group," and helping to define who is "in" and who is "out" of the group.

3.2 An Overview of Literary, Film, and Television Models:

3.2.1 The World of Disney Princesses and Marvel Super Heroes:

Role models for children may come from a variety of places. It's not uncommon for children to take after people from the people in their close family and circle of acquaintances. Children's and teenage literature is another important resource for finding role models since it exposes girls and boys to a broad range of characters with whom they may identify. There are a plethora of heroes and adventurers in German boys' fiction, as exemplified by the "successful man," a strong, aloof, and self-reliant figure who "does his thing."

Similarly, young women's literature portrays female characters in more or less stereotypical ways. While there are a few impudent and rebellious female characters in German novels for younger girls, adventurous female characters are entirely absent in literature for older girls. Typically, female characters' rebellion is soon overtaken by their acceptance of traditional gender norms. Only Pippi Langstrump and Red Zora are true heroines in the sense that they have their own lives and do "heroic acts" in their youth. Female readers are denied the dream of connecting with a female character as they grow from infancy into maturity since there aren't any mature heroines in literature. Kehlenbeck's rare 'adventurous women,' unlike many of the male heroes, didn't depend on physical strength or athleticism. For example, one person stood out: 'Lady Alanna of Trebond,' who took pleasure in her athletic accomplishments and enjoyed physical exercise and sports training much[4].

3.2.2 Idols of the Sport:

Sport as we know it now evolved in England throughout the 18th and 19th centuries, with its emphasis on competition, outclassing one's opponent, and breaking records. It's no secret that throughout history, the stuff of heroes has been athletic prowess and accomplishment. In sports, you'd find all the elements for a good story: intrigue, thrills, success, and superhuman achievements. Sport continues to satisfy young people's need for thrills and identity-affirming experiences.

Sports stars of today aren't only in the news; they're often the focus of serious current affairs stories as well. 'Sisyphus, live,' published by the German news magazine Der Spiegel, started with the following: 'The late-nineties superstars are known as Boris and Jan, Michael and Frank. In Germany, millions of people watch television to keep up with heroes' great acts. Sports heroes like Michael Schumacher, Boris Becker, and Steffi Graf are well-known to the general public, according to an Emnid survey. Having athletic heroes as role models goes hand in hand not just with media competition being so fierce, but also with the advertising industry's aggressive marketing tactics as well as with the commercialization of sports in general and the athletes that play them. Because of this, athletes not only appear on television sports programmes, but they also promote a wide range of goods, from chocolate to automobiles to insurance firms.

Sports stars have long been seen as role models for young people of all ages. Generations of youngsters have fantasized of becoming Pele or Beckenbauer while playing football on the street. With the discovery of these age groups' athletic interests by the mass media comes the publication of a special issue of the teen magazine Bravo titled Bravo Sport, which features the latest on children and adolescent sports heroes[5].

3.2.3 Existing Research On Children, Adolescents and Their Role Models:

As a result, the importance of role models is frequently ambiguous and difficult to grasp. In a society that is growing more complicated and diverse, real-life idols, who are respected, copied, and even worshipped, seem to have lost some of their significance. The results of research on role models show that they vary considerably and that no accurate information is therefore available regarding how often and to what degree role models are embraced, much alone about the impact they have on people's lives. According to the 'Shell Youth Studies,' the number of teenagers who say they have a role model is decreasing with time. When it came to religious instruction, however, a research conducted by the Salzburg religious educator Bucher in 1996 revealed an entirely opposite pattern. According to his findings, 59% of teenagers cited their mother as a role model, 54% cited their father as a role model, and 25% cited Jesus Christ as a role model. Eighty percent of 10- to 11-year-olds said a family member helped them become oriented. Pop stars were mentioned by less than 10% of those polled in Bucher's study. The research found that as children got older, so did the quantity and importance of role models in their lives.

UNESCO's global research, however, painted a quite different picture: Action heroes were identified by 30% of boys and 21% of girls, while pop idols were named by 19% of youngsters interviewed: 'Terminator' star Arnold Schwarzenegger was recognized by a whopping 88% of the students. He served as a role model for 51% of children in "violence-prone" nations, while just 37% of youngsters in more peaceful areas of the globe saw him as a role model. It's a shame that these findings don't account for gender. Role models were not explicitly mentioned when students were polled[6].

Only a few research on role models take gender into account when asking and interpreting questions. Because male idols are more prevalent and more visually appealing, it's no surprise that in the aforementioned "Shell Youth Studies," more teenage boys (18%) reported to have an idol (14 percent). Many more East German teenagers than their peers in West Germany said they had a role model usually someone in their own family. The eastern states had a higher percentage of females who said their mother was their role model, compared to the western states, which had a lower percentage. Only 10% of teenagers cited athletes as role models, compared to 40% who cited a film or tele-vision star. When it comes to teenage boys, athletes are the most common role models; when it comes to adolescent girls, actresses and artists are the most common.

In spite of the disparities, which may be explained in part by questions asked and variations in samples, there are obvious overall patterns as well as trends unique to ages and genders in the findings of the study. Male role models and idols predominate; women, too, prefer male idols; and almost no guy would choose a female role model as a role model for himself. Even among adults, this is a common propensity. According to an Infratest poll in Germany, which surveyed people aged 16 to 79 in the former Federal Republic, Mother Teresa came out on top among the 20 men's and women's idols. Women nominated just six idols, all of whom were male. There were no other female idols mentioned by the males, with the exception of Mother Teresa[7].

For girls and women, male idols have a different meaning than for boys and men, so keep that in mind. For example, just because females become enthusiastic about soccer and create fan clubs doesn't guarantee they'll want to participate in the sport. Girls want their partners to be like the football stars they adore, not the other way around. Soccer stars are no different from other

celebrities when it comes to girls 'having a crush' on them: they 'fall in love' with the players. 'I truly fell in love with him during the 1992 European Cup, when he played for the Danish national team,' said Melanie, a Flemming-Pouvlsen fan.

DISCUSSION

For the most part, the young people we spoke with looked to popular culture for role models and idols. They looked to television and film stars and singers as well as sports personalities to find their heroes. People in their immediate social surroundings had just a little influence on their decision to use them as role models. Boys favored their role models because of their dominance, power, and courage, while females preferred their idols for a variety of reasons. The girls' choice of idols, on the other hand, was mostly determined by characteristics like physical attractiveness and social behaviour.

The bottom line is that girls and boys choose role models that uphold conventional gender norms. An important element of many boys "male socialization' is their fascination with superheroes, warriors, and super-men, as well as sportsmen. This fascination stems from their exposure to masculinity modelled on aggression and supremacy. One thing to keep in mind, however, is that a significant number of young women and men tend to reject models that are overtly based on gender stereotypes (e.g. Barbie, Rambo). There's a chance this means youngsters reject conventional gender norms and ideals because of their dysfunctional characteristics and limitations on their freedom of expression. Other studies have shown that androgyny may appeal to both girls and boys depending on their age group. While only a small percentage of the boys we spoke with cited sports stars as role models, many more cited their heroes' "sporting" attributes such as endurance and fighting power as attributes they aspired to have. When it comes to role models, women athletes have a unique set of challenges since they are seldom selected as role models[8].

That said, how does this impact youth athletic interest and participation? What are the long-term implications of this? Is the high 'drop-out' percentage of females in sports, as well as the wide fluctuations in their participation, linked to the absence of visually appealing female athletes? Sports heroes and athletic achievements seem to have an impact on the general public's interest in and involvement in sports. The popularity of various sports has risen in Germany as a result of athletic successes. For example, Steffi Graf and Boris Becker helped launch the tennis craze, while Henri Maske popularized boxing. Finally, soccer is huge in Germany, thanks in part to the country's legendary footballers. For example, in Schuler, a student describes admiration for NBA players and his attempts to emulate them in daily life and in the gym. This is an impressive description. According to a young girl in the film Flash Dance, after seeing Alex perform, gymnastic dance became their favorite activity in physical education classes. Empirical research on the role-modeling effects of Mila, the protagonist of the animated television series, found that she became an inspiration to 73 girls (aged 7 to 15). Mila returns to volleyball after a lengthy absence due to sickness. She progresses from being a member of the school team to being the greatest player in the world. Mila was well-known among the females questioned, and many of them admired her and assessed her as "good," "cool," or "amazing." Some of the girls were even inspired to join a volleyball team as a result of Mila's influence and encouragement[9].

Despite the fact that there are female role models and heroes out there, it's safe to conclude that a dearth of female role models is a direct result of girls and women showing little interest in sports. Furthermore, as a result of this reciprocity, women's sport has received little public interest and

therefore has been neglected by the mainstream media as well. In turn, this implies that women's sport is at a financial disadvantage because of a dearth of sponsorship and/or advertising agreements. There are thus no funds available for finding fresh talent, training and growing in sports - the conditions for athletic success. High levels of athletic performance and victory, on the other hand, create idols. Women's soccer, which is still a neglected sport in Germany, exemplifies these interdependencies. The players quickly acquire the moniker "viragos," are only known to a tiny group of ardent supporters, and the general public is uninterested in them. It's understandable that soccer isn't a popular choice among female athletes. Though it's unclear whether sports personalities can inspire individuals to participate in a sport for an extended length of time, they can certainly "market" athletic activity. A significant element in the complicated structures of active participation in sports, at least to us, seems to be models and idols.

Watching the development of celebrities in the entertainment industry particularly bands teaches us that stars may be created according to certain recipes based on collective symbols and messages tailored to a specific audience. Players of both genders may be marketed as stars, but sportswomen must contend with the fact that the competitive sport they play has its drawbacks as well, and that marketing athletes as heroes is a logical outgrowth of the market. The impact of sports stars being used as models, as previously said, is often ambiguous. Even if you're a competitive athlete, you should still strive to be seductive[10].

CONCLUSION

This paper does not address the important issue of how negative signals of competitive sport may be dealt with in a pedagogic setting (e.g., the unconditional primacy of performance and success). However, in our view, schools must help familiarize young females with positive role models in sports. An initiative in Baden-Württemberg, Germany, is presently collecting data on women who have made significant contributions in a variety of areas, including sports. Amelia Earhart, Valeska Glen, and Lili Henoch, a Jewish track and field star who perished in Nazi-occupied Europe, are just a few of the lesser-known women from history. A prominent position and public recognition for the school's successful female athletes may be provided to today's competitive sportswomen and even today's successful school girl athletes. It's not certain whether such measures will encourage females to seek for role models in sports and incorporate sports into their everyday life more often, but it's worth a shot.

REFERENCES:

1. T. R. Gleason, S. A. Theran, and E. M. Newberg, “Parasocial interactions and relationships in early adolescence,” *Front. Psychol.*, 2017, doi: 10.3389/fpsyg.2017.00255.

2. S. B. Martin, P. A. Richardson, K. H. Weiller, and A. W. Jackson, “Role Models, Perceived Sport Encouragement, and Sport Expectancies of United States Adolescent Athletes and Their Parents,” *Women Sport Phys. Act. J.*, 2016, doi: 10.1123/wspaj.13.1.18.

3. J. D. Estrada, C. García-Ael, and J. L. Martorell, “Gender differences in adolescents’ choice of heroes and admired adults in five countries,” *Gend. Educ.*, 2015, doi: 10.1080/09540253.2014.992302.

4. S. M. Molstad, “Coaching Qualities, Gender, and Role Modeling,” *Women Sport Phys. Act. J.*, 2016, doi: 10.1123/wspaj.2.2.11.

5. V. Møller, "Sport, Religion and Charisma," *Sport. Ethics Philos.*, 2017, doi: 10.1080/17511321.2017.1292307.

6. J. A. Vescio, J. J. Crosswhite, and K. Wilde, "The relevance of sporting role models in the lives of adolescent girls.," *ACHPER Heal. Lifestyles J.*, 2003.

7. J. Guagliano, C. Lonsdale, R. Rosenkranz, G. Kolt, and E. George, "Can coaches act as physical activity promoters for girls in organised youth sport?," *J. Sci. Med. Sport*, 2013, doi: 10.1016/j.jsams.2013.10.080.

8. E. Miller *et al.*, "143. Female Adolescent Athletes' Perspectives on a Gender-Based Violence Prevention Program," *J. Adolesc. Heal.*, 2012, doi: 10.1016/j.jadohealth.2011.10.217.

9. Sport Scotland, "Social and Cultural Barriers," *J. Bone Jt. Surg.*, 2016.

10. S. B. Martin, P. A. Richardson, K. H. Weiller, and A. W. Jackson, "Role Models , Perceived Sport Encouragement , and Sport Expectancies of United ...," *Women Sport Phys. Act. J.*, 2004.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

ENTOMOPHAGY AND THE PRESERVATION OF HUMAN FOOD SECURITY

Vibhor Jain*

* Associate Professor,
Department of General Management/HR/BR,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: vibhor.management@tmu.ac.in

DOI: 10.5958/2249-877X.2021.00104.1

ABSTRACT

Food security is a concern in many developing and less developed nations, owing to the rise in human population, as well as the decline in agricultural production and availability of food resources. Edible insects are a naturally occurring, renewable source of food that provides carbohydrates, proteins, lipids, minerals, and vitamins in addition to other nutrients. The practice of eating insects is widespread among ethnic groups in South America, Mexico, Africa, and Asia where indigenous insects are readily accessible and may be eaten in a variety of ways (raw/processed), as well as utilized as an ingredient or supplement in contemporary cuisine. Entomophagy, as a result, provides a chance to close the protein gap in human diets, notwithstanding a few limitations that have been addressed. In terms of food security, greater attention should be paid to evaluating and revalidating entomophagy in the context of contemporary living. Further study would be required to fully utilize insect biodiversity and ethno-entomophagy, to prevent overexploitation of these insects, and to start conservation efforts aimed at protecting insects.

KEYWORDS: *Agriculture, Entomophagy, Food Security, Insects, Production.*

1. INTRODUCTION

Food security is rapidly becoming a concern for human beings as a result of rapidly growing populations, rising consumption levels, and the potential for food supply to decrease. The production of agricultural products has almost reached a standstill, and chronic hunger is rampant in many developing countries. Global food insecurity appears to be caused by a combination of natural factors such as climate change, the energy crisis (depleting soil fertility), the occurrence of pests and plant diseases, and man-made factors such as increased food prices, non-availability of foods, a lack of purchasing power among consumers, unequal distribution of foods, and so on. Global food demand is expected to increase for at least another 40 years[1].

The demand for food will rise by 50% by 2030, with the human population increasing by six million people per month and existing food stocks at their lowest level in 50 years. Searching for new and readily accessible sources of nutrition to supplement or replace meals may be a realistic and necessary step. It will take time for efforts to improve food supply through new technologies to be implemented on a large scale in order to become feasible/practical, cost-effective, and environmentally friendly (for example, genetically modified crops, geo-engineering, crop

genotypes with resistance to pests, diseases, and drought, plants with the ability to reflect sunlight (albedo effect), new chemical molecules, integrated plant nutrient and pest management techniques, and so on)[2].

The Food and Agriculture Organization of the United Nations (FAO) took the initiative to develop a policy and suggested a programme to feed people with alternative sources, including insects, as part of its global duty, at the very least for member nations. The organization emphasizes the need of both physical and economic access to food that satisfies people's nutritional requirements as well as their preferences, despite the fact that globalization of the world economy has the potential to undermine food security, particularly in Africa.

Entomophagy is a word used to describe the practice of consuming insects as a source of nutrition. Although the terms 'micro-livestock' and ‘mini-livestock' are not synonymous with the term entomophagy, they are frequently used to classify insects that may be consumed by humans. The consumption of palatable insects is now a natural food resource for many ethnic groups in Asia, Africa, Mexico, and South America, where entomophagy is a sustainable practice that provides economic, nutritional, and environmental advantages to rural communities[3].

However, entomophagy is becoming less prevalent in certain areas as a result of the growing consumption of contemporary foods, the transformation of social structures, and demographic shifts. Tasting, nutritional content, cultural traditions, local prohibitions, familial history, and accessibility are all factors that influence which edible bug species are preferred by consumers. According to researchers, there are 1391 bug species consumed across the globe.

This author later reported 1681 species in 14 insect orders, and more recently 2086 insect species that are eaten by 3071 ethnic groups in 130 countries, all reported by the same author. Eating edible insects varies depending on the area and country within a region, with 348 species in Mexico, 250 in Sub-Saharan Africa, 187 in China, 96 in the Central African Republic, 83 in Ecuador and 60 in India and Borneo, 55 in Japan, 50 in Thailand, and 40 in Nigeria being the most abundant. Despite the fact that various statistics are available for different insect orders, the Lepidoptera, Orthoptera, Coleoptera, and Hymenoptera are the insect orders that produce the bulk of edible insects. The Isoptera, Homoptera, Heteroptera, Diptera, and Odonata are some of the other common insect orders[4].

Worldwide, entomophagy plays a significant role in human food security, and academics have already conducted a thorough study of the topic. Similarly, the results of the FAO workshop and 'The Food Insects Newsletter,' which is no longer published but is available as a collection of 13 volumes in a book, are the finest sources of information on edible insects. Improvements in nutrition and food security will be required in the future.

In order to feed people, this review considers entomophagy as one of the practical and viable solutions to food security. It presents recent developments to supplement earlier reports, discusses major challenges, and envisions future steps in order to feed people by suggesting that entomophagy be included in future food security plans and initiatives.

3.3 Entomophagy:

For the following reasons, entomophagy is widely practiced across the world:

a. Insects are readily discovered in forestland and water resources, and they may be gathered in large numbers in a short period of time when their populations are high.

b. The brief life cycle of insects, as well as their rapid intrinsic growth rate, allow them to be raised and duplicated quickly in tiny places and over a short period of time. Because edible insects do not need grain feeding, their upbringing is more ecologically friendly than that of conventional cattle. When compared to conventional cattle, insects reproduce at a higher rate. For example, the female house cricket Achetadomesticus L. (Orthoptera: Gryllidae) can lay from 1200 to 1500 eggs in 3 – 4 weeks and has a very low water requirement, whereas the beef industry has a ratio of four breeding animals for every marketed animal. For example, the female house cricket Achetadomesticus L. (Orthoptera: Gryllidae) can lay from 1200 to 1500 eggs in 3 – 4 weeks and has a very low water. Furthermore, the efficiency of conversion of ingested food (ECI) is greater in insects (up to 44 percent in certain insects) than it is in conventional meats (up to 20 percent in some insects). Take, for example, the house cricket, which has an ECI that is twice as efficient as pigs and broiler chickens, four times more than that of sheep, and six times larger than that of a steer when losses in carcass trim and dressing % are taken into consideration.

c. Low-income areas are unable to feed their families during a food shortage because only insects are available. This is especially true at the beginning of the rainy season, when livestock is starving, new crops have only recently been planted, and the stocks of stored produce from the previous crop season are running low. The result is that local markets are overrun with insects that have been packaged in plastic bags and marketed as food items throughout the planting season. Packages of insects may be readily disseminated as an emergency food security strategy in the event of a natural catastrophe (such as floods, droughts, or human disease outbreaks), ethnic conflict, or a war, for the same reasons as above[5].

d. Insects are usually combined with, or often eaten as a complement to, main diets based on maize, cassava, sorghum, millet, beans, and rice, and they are also used as a component in the production of other food products such as flour. 'Tortillas' (thin flat bread prepared from finely ground maize) are supplemented with mealworm larvae in Mexico, while the termite MicrotermesbellicosusSmeathman supplements maize protein alone in Nigeria, both of which are native to Africa.

e. The following methods of preparing insects are available: frying, braising, stewing, stewing after frying, boiling, and roasting. All stages of the life cycle are consumed, although larvae and pupae are frequently offered in restaurants and at local and retail markets in metropolitan areas. Fried grasshoppers in cans and chocolate-covered ants are popular in Mexico, while chocolate chirpy chips or popcorn with roasted crickets and grasshoppers are popular in the United States, ants with popcorn are popular in Colombia, and maggot cheese is a delicacy in Italy, among other places. In the United States, several restaurants are integrating insects into their recipe books and menus, such as stir-fried mealworms and caterpillar crunch, among other dishes[6].

f. Food businesses in industrialized nations have taken the initiative to export insects in the form of beetle juice, canned silkworm pupae, caterpillars of hesperid butterflies, and juvenile stages of ants, in addition to supplying local markets with these products. In comparison to traditional cattle, insects generate much lower levels of greenhouse gases (GHG), especially

methane and nitrous oxide, per kilogram of meat consumed. When compared to mealworms, a pig emits up to 100 times the amount of greenhouse gases. Also seeming to be considerably reduced is the emission of ammonia, which is responsible for the acidification and eutrophication of ground water. A pig generates 8–12 times the amount of ammonia produced by crickets, and up to 50 times the amount produced by locusts.

3.4 Insects Nutritional Value:

A loaf of bread made from the grubs of the African palm weevil Rhynchophorusphoenicis (F.) contains all of the main and minor nutrients required for proper body development. In a recent research conducted in Kenya, wheat buns enriched (5 percent mix) with the termite MacrotermessubhyalinusRambur outperformed conventional breads in terms of certain characteristics (e.g., size, color, texture, fragrance, and consumer preference) and customer choice, as well as overall quality. Furthermore, the researchers discovered that the enriched bread contained higher levels of riboflavin (0.17 mg versus 0.26 mg), niacin (0.90 mg versus 1.11 mg), folic acid (0.30 mg versus 0.33 mg), calcium (10 mg versus 10.83 mg), iron (1.20 mg versus 1.80 mg), and zinc (2.78 mg versus 3.23 mg) than regular bread. The oil produced from R. phoenicis grubs has a high concentration of unsaturated components and possesses favorable physiological characteristics, which allow it to be utilized as an edible oil in many cultures[7].

In the case of silkworm caterpillars, eating them may provide adequate amounts of copper, zinc, iron, thiamin, and riboflavin to meet daily needs, and the shortage of riboflavin can be remedied by consuming insects that contain this amino acid. In addition, protein synthesis from insects is more environmentally friendly and uses less resources than animal protein production (Gordon, 1998). It is necessary to do further study to determine if the production of a kilogram of insect protein is likewise more ecologically friendly than the production of a kilogram of traditional animal protein when the whole production chain is taken into consideration.

2. DISCUSSION

Entomophagy is the practice of consuming insects as a food source. Humans have been harvesting insects as sustenance for thousands of years, and insects are still being collected today. Previously, this practice was seen as 'old' and 'barbaric,' and there was a strong opposition to the inclusion of insects in meals on the part of many people. However, it is now receiving global interest since insects are being touted as the future food source for the globe. Over the last few years, the Food and Agriculture Organization of the United Nations (UN) has made consistent efforts to promote entomophagy as a healthy, sustainable, and environmentally beneficial activity. This has resulted in increased worldwide awareness of this technique, with individuals daring to experiment with insect dishes in ways they have never done before[8].

As it happens, it is necessary to address some fundamental questions about entomophagy, such as the types of insects that are edible, where they can be found, how they are supposed to be consumed, at what stage of their lives they are suitable for consumption, and whether they can be commercially bred are all addressed. Researchers addressed the different ways of collecting and capturing edible insects, including traps and nets. Insect harvesting is typically carried out by women, and in certain areas, by children, for whom insect farming may be a low-input, long-term type of agriculture with a minimal environmental impact. The manner in which the insects are collected is determined by their behaviour.

If the temperature is low enough in the morning, insects will be relatively inactive and easy to catch; nocturnal insects (such as termites and grasshoppers) can be caught in light traps because they are attracted to light; artificial breeding sites can be used to attract palm weevils; and the sound of crickets and cicadas can be used to locate them[9].

Obtaining a significant number of insects in the field is frequently difficult owing to the unpredictable nature of their whereabouts and density of populations. According to researchers in the Democratic Republic of the Congo (DRC), research on the management potential of wild edible insects will increase harvests, ensure nature's sustainability, and create the potential and economic feasibility of mass collection of promising species by local people, who will eventually contribute to rural food stocks and earn their livelihood, as demonstrated by researchers studying the brown silkworm AnapheinfractaWalsingham in the DRC. Caterpillar output in northern Zambia may be increased by shifting agricultural farming, which is another option.

Because most insects are only accessible in nature during certain seasons, the development of commercially viable methods of mass rearing in confined settings is essential. The raising of insects in captivity (cages, potted plants, and rooted food plants) at the village level, rather than depending on wild collection, may provide a more consistent supply of insects. It is possible to raise the hepialid caterpillar Wiseanacopularis Meyrick (Lepidoptera: Hepilidae) and the South American palm weevil Rhynchophoruspalmarum L. on alternate host plants or artificial diets (semi-synthetic/synthetic) in a laboratory setting.

Farmers in India have had great success raising the eri silkworm and mulberry silkworm in their homes, while in Japan they have raised giant hornets (Vespula spp.) in wooden hive boxes and in Thailand they have raised the eri silkworm on cassava leaves. Indoor rearing of these insects has become a routine commercial activity. For cricket farming, farmers in Thailand utilize cement tanks or wooden containers covered with a plastic sheet to store the crickets. For the crickets' benefit, a layer of sandy loam soil is added, which is then covered with dried grasses, bamboo shoots, or empty egg cartons to give shade. The introduction of egg masses is followed by the covering of containers with nylon netting. Water and an artificial diet consisting of chickfeed mixed with grasses or weeds are given for the chickens. Adult crickets are ready to be collected after 4 to 6 weeks of growth[10].

It is possible that the sale of insects generates more revenue for farmers in the Sahel than the sale of millet in areas where small-scale production units using simple techniques of mass rearing can be established. In these areas, small-scale production units with simple techniques of mass rearing can be established. If insects are raised or gathered in excess, preservation by drying may help to develop cottage businesses by providing a profitable commercial opportunity.

The transition from small units to an industrial phase, accompanied by the adoption of cost-effective mass manufacturing on a huge scale, is thus necessary. Of fact, taxonomic ambiguity and a paucity of knowledge on the biology of some insects make commercialization difficult in some cases. Accordingly, new research should focus on the identification of insect species, their ecology, and the nutritional content of insect species with short life cycles, which are the most suited for mass raising. In recent years, low-cost methods for mass raising of edible insects, such as crickets, grasshoppers, ants, and the giant water bug, have been developed and proven effective in China, Korea, and Thailand.

3. CONCLUSION

It is essential to raise awareness of entomophagy among customers as well as insect-rearing businesses. Street foods, including insect preparations, may be very safe provided they are prepared, kept, and sold in a sanitary environment. In certain cases, customers are ready to pay a premium for the safety of these meals. By hosting an international conference on 'The promise of edible insects' in Linvile, Alabama, USA in 2010, the Southern Institute for Appropriate Technology attempted to make such a breakthrough, which was successful in the United States in 2010. In a similar vein, a workshop on 'Edible insects' held in Chiang Mai, Thailand, in 2008, and co-organized by the FAO was a resounding success.

Finally, entomophagy may be revalidated by international initiatives that will be undertaken in countries that are experiencing a severe food crisis in the coming months. An international cooperation between developed and developing countries should be established in order to promote entomophagy and make it more accessible to the public. Insect surveying, literature search, nutritional value study on undiscovered species, as well as socio-economic factors (including consumer acceptability of these foods) would all open up new vistas in the fight against food insecurity. As a result, a multifaceted and interconnected global approach is required to guarantee sustainable and equitable food security, and entomophagy may play a part in this effort by collaborating with forestry, traditional medicine, agriculture, and animal husbandry on a multidisciplinary level.

REFERENCES:

1. G. Myers and S. Pettigrew, "A qualitative exploration of the factors underlying seniors' receptiveness to entomophagy," *Food Res. Int.*, 2018, doi: 10.1016/j.foodres.2017.10.032.

2. E. J. S. Lensvelt and L. P. A. Steenbekkers, "Exploring Consumer Acceptance of Entomophagy: A Survey and Experiment in Australia and the Netherlands," *Ecol. Food Nutr.*, 2014, doi: 10.1080/03670244.2013.879865.

3. V. J. Stull, M. Wamulume, M. I. Mwalukanga, A. Banda, R. S. Bergmans, and M. M. Bell, "'We like insects here': entomophagy and society in a Zambian village," *Agric. Human Values*, 2018, doi: 10.1007/s10460-018-9878-0.

4. R. T. Gahukar, "Entomophagy and human food security," *International Journal of Tropical Insect Science*. 2011, doi: 10.1017/S1742758411000257.

5. K. Wilkinson, B. Muhlhausler, C. Motley, A. Crump, H. Bray, and R. Ankeny, "Australian consumers' awareness and acceptance of insects as food," *Insects*, 2018, doi: 10.3390/insects9020044.

6. M. Shelomi, "Why we still don't eat insects: Assessing entomophagy promotion through a diffusion of innovations framework," *Trends in Food Science and Technology*. 2015, doi: 10.1016/j.tifs.2015.06.008.

7. G. Sogari, "Entomophagy and Italian consumers: An exploratory analysis," *Prog. Nutr.*, 2015.

8. D. Dobermann, J. A. Swift, and L. M. Field, "Opportunities and hurdles of edible insects for food and feed," *Nutrition Bulletin*. 2017, doi: 10.1111/nbu.12291.

9. A. Müller, J. Evans, C. L. R. Payne, and R. Roberts, "Entomophagy and power," *J. Insects as*

Food Feed, 2016, doi: 10.3920/JIFF2016.0010.

10. G. Taylor and N. Wang, "Entomophagy and allergies: A study of the prevalence of entomophagy and related allergies in a population living in North-Eastern Thailand," *Biosci. Horizons*, 2018, doi: 10.1093/biohorizons/hzy003.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

A REVIEW OF PROGRESSING TERMINOLOGY 'ENTOMOPHAGY'

Chanchal Chawla*

*Associate Professor,
Department of Account & Taxation,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: chanchal.management@tmu.ac.in

DOI: 10.5958/2249-877X.2021.00105.3

ABSTRACT

In academics, the food and agricultural sectors, governmental organizations, and the general public, there is increasing interest in insects as a source of human nutrition. The terms and ideas employed to describe these creatures and the human activities that surround them are, however, elementary in comparison to the variety of these organisms themselves, and to the current complexity and fast development of the practices that they are intended to describe. The objectives of this paper are to: (1) demonstrate how the roots of the term 'entomophagy' and its uses have evolved over time; (2) illustrate some of the problems associated with the term that necessitate its review; and (3) make recommendations for the term's use in future research and other practice. A brief historical review of insect eating as described by certain Western cultural sources is presented, followed by an examination of some of the taxonomic ambiguities and challenges associated with the term 'insects,' and finally an argument for more precise and contextual terminology in this both richly traditional and rapidly developing field.

KEYWORDS: *Consumer, Entomophagy, Insects, Nutrition, Organism.*

1. INTRODUCTION

According to the Oxford Dictionaries Online, 'entomophagy' is defined as "the practice of consuming insects, particularly by humans." This attention has been drawn to the widespread normality of eating insects in many parts of the world as a result of the construction of "entomophagy" as a practice uniting otherwise disparate groups. This has been particularly true among people who do not typically consume insects but who are becoming more interested in these foods, such as some westerners. This increase in worldwide interest has contributed to the formation of an international movement dedicated to exploring the possibilities of entomophagy in the development of more sustainable food systems and the valorization of traditional diets.

However, there are certain ambiguities in the phrase that may be deceptive, which we will discuss below. First, the presentation will provide an overview of some of the historical foundations and origins of the word 'entomophagy' in the Western tradition, as well as some of the contemporary applications of the term. In the next section, it will discuss some of the taxonomic difficulties posed by the many registers of the category 'insect,' followed by some examples of these differences in a cultural context[1].

The presentation will finish with considerations of some of the ramifications of terminological insufficiency in many areas, as well as suggestions for the future usage of the term

'entomophagy' in various fields. It is our hope that by publishing this paper, we will be able to kick off further research into the cultural, linguistic, and conceptual categories that inform our understanding of different classifications of insects and their edibility, as well as the implications of these categories for different fields of human activity.

a. Term Definitions and Methodology:

In this article, we provide the results of a preliminary research based on the expertise of the author group as well as relevant literature. In this paper, the primary method used is a search of the literature, which covers a wide range of disciplines, including entomology and its subfields, anthropology, biology, ecology, human nutrition, consumer behavioral science, psychology, primatology (including primatology in food), sociology, sensory science, and others. The search for literature was not comprehensive due to language and cultural considerations that will be discussed more below[2].

Along with a review of the literature, part 3 includes analyses of historical texts, dictionaries, and data gleaned from Google N-gram viewer and Web of Science searches; part 4 includes analyses of dictionaries and observational case studies from some of the co-authors; part 5 outlines current and potential implications of the terminological issues for various fields of research; and part 6 makes recommendations.

In no way does this article purport to be an exhaustive assessment of every area from which it takes its inspiration, or of every culture across the globe where particular insects are consumed or not eaten, or where relevant research has been conducted. Instead, this article serves as a collection of illustrative beginning points, which are mainly based on the co-authors' cultural and linguistic origins, as well as their study locations[3].

As a result, the majority of the materials are written in, transcribed in, or translated into English, with a strong emphasis on Western histories and civilizations. Although the writers acknowledge the absence of many significant pieces of research, they also acknowledge that some of these pieces are in languages and from areas other than those covered by the group of co-authors.

Some of the concepts used in the article could be defined more explicitly. "Insects" and "Insecta" are used to differentiate between various lay and scientific classifications of insects, which will be discussed in more detail in part 3 of this article. Unless otherwise specified, the pronoun "we" refers to the group of co-authors. In general, civilizations of European, Mediterranean, and/or Levantine origin are referred to as 'Western,' but we easily recognize that most modern Western societies are made up of a variety of cultural and ethnic groupings that overlap and intermix.

b. Changing Lexicon:

We can trace our ancestors' habit of consuming insects back thousands of years and across many different species. It was especially prevalent among our monkey predecessors, who are all 'to some degree insectivorous'. Insect eating is important for all primates in terms of nutrition, and it has been proposed that, based on the insectivory seen in chimpanzees, our closest living relatives, edible insects may have played an important role in the development of humans. As the name implies, insectivory refers to the eating of insects by nonhuman animals.

The word derives from the Latinate Linnaean class 'Insecta' and is used to describe the feeding of insects by nonhuman animals. In the case of insect eating by humans, it is unclear why the Greek-derived word "entomophagy," which has a more modern lexical history, was chosen as the

proper phrase – maybe ironically, to prevent the othering of particular human people and groups that we are dealing with here[4].

One of the first recorded instances of insects being used as food can be found in the Old Testament, which allows for the consumption of 'the locust of any type, the bald locust of any kind, the cricket of any kind, and the grasshopper of any kind,' among other insects, including ants. There is also an allusion to insects in the New Testament, namely, when John the Baptist is shown as "preaching in the desert of Judea," with "a robe of camel hair and a leather belt around his waist," as well as "eating locusts and wild honey." In later Western accounts, Aristotle describes cicadas (particularly the nymphs) as a delicacy in Ancient Greece in the 4th century BCE, a sentiment that was repeated by Athenaeus of Alexandria in the early 3rd century CE, as well as Pliny the Elder's account in the 1st century CE of Romans fattening 'cossus' larvae on flour and wine in the 1st century CE. Researchers provide a satisfactory derivation of the identification of the 'cossus'.

However, for the sake of tracing the origins of the word 'entomophagy,' the earliest documented etic interactions may be more relevant than later etic encounters. According to Herodotus of Halicarnassus, who lived in the 5th century CE, the Nasamonians hunted wingless locusts, dried them in the sun, pound them up, and then sprinkled them over milk to consume them in addition to collecting palm dates. Several centuries later, in the early 3rd century CE, Aelian of Rome recounts a dessert made of larvae from the tawny palm that was given to a party of Greek guests by a King of India, which the Greeks did not like for. The evidence for people consuming and delighting in some bug species dates back at least a couple of millennia, according to these few historical sources; and each behaviour recorded had its own specific context, species, and criteria of appropriateness to be considered[5].

c. Roots of Entomophagy:

The word 'entomophagy' itself is rather recent, at least in the English language and several other European languages. In fact, the word is not even included in Aldrovandi's 'De animalibusinsectis', which was published at the beginning of the 17th century and which contains information on the use of insects as food and which marks the beginning of the 'new age of entomology.' It is mentioned in the Oxford English Dictionary, but no information on when it was first used is provided.

In 1871, the term 'entomophagy' was first published in a volume entitled 'Sixth annual report on the noxious, beneficial, and other insects of the state of Missouri' by Charles V. Riley, state entomologist, which itself refers to a paper by W.R. Gerard entitled 'Entomophagy,' which 'in the same year had brought together all the facts read before the Poughkeepsie Society of Natural History,' according Unfortunately, the authors were unable to locate Gerard's eponymous article in its original form[6].

Published records of the term continue to appear throughout the 1870s and 1880s including the notable publication of Vincent Holt's Why not eat insects, which is widely regarded as the first document to introduce the concept of entomophagy to the general public in England before declining for a few decades and then rising steadily until today. For the earliest documented occurrences of the term "entomophagy," as well as equivalents in a few other languages. Bodenheimer's landmark book in 1951 who himself suggests honey eating as a form of

entomophagy marks the beginning of this twentieth-century revival in the areas of anthropology and ethnology, in particular ethno-entomology and cultural entomology.

Even while it is not the most popular stance today, it is somewhat similar to veganism's categorizing the eating of animals and their products together, which is what the vegan movement does. Also worth noting is the fact that some of the articles from this time period do not seem to make the distinction between the terms 'entomophagy' and 'insectivory' as previously stated. Furthermore, this difference may not necessarily exist outside of English, even within the romance languages; French, for example, seems to have used the terms interchangeably, especially in light of the recent inclusion of the term "entomophagy" to Le Petit Robert's novel in 2015.

Even contemporary definitions of 'entomophagy' do not always establish such a clear difference between the two concepts. While the Oxford Dictionaries Online definition of the word, as stated in the introduction, is 'the practice of eating insects, particularly by humans,' the more discipline-specific definition is 'the practice of consuming insects by animals' The term 'entomophagy' is defined as 'the eating of insects by other creatures' in 'A lexicon of entomology'; however, there is some ambiguity here since 'other organisms' may be interpreted to imply either the set of all organisms including or excluding insects. "Insectivore" is defined as "an organism that consumes insects," which could include consumption by all organisms including insects; and "insectivorous" is defined as "insect-eating; pertaining to organisms that subsist on insects."

The same book also defines "insectivore" as "an organism that consumes insects," which could include consumption by all organisms including insects. – this is the only instance in which there is a clearer distinction between the terms "entomophagy" and "insectivory," where the former could describe a behaviour of eating insects in a specific situation, and the latter could describe a behavioral pattern or habit of eating primarily or exclusively insects on a regular basis (italics added). A similar difference may apply to other consumed things that have both '-phagy' and "-vory" suffixed terms in their names. As a result, we may use the word 'insectivory' in this sense to compare it to other terms of similar construction that describe broad dietary trends rather than particular instances of food choice[7].

When we looked into Web of Science, we saw an intriguing trend in the use of the word 'entomophagy' as a search term for scientific articles written in English throughout time. From 1900 to 1980, just two papers were discovered (1930 and 1938), and both of these studies were about insects who engaged in a practice known as 'entomophagy.' The period 1981-1990 saw the publication of just one paper, which was a review of a book about the eating of insects by aboriginal people in Australia.

From 1991 to 2000 and 2001 to 2010, there are 15 and 16 publications that use the term 'entomophagy,' with some using the definition of 'human eating of insects' and others using the definition of 'insect ingestion by other animals' as a starting point. A large number of articles have been submitted since then, with 49 total submissions between 2011 and mid-2015, the vast majority dealing with human eating of insects and many placing a strong emphasis on traditional foraging of insects (ethno-entomology).

d. Insect-Eating Habits:

The fact that not all 'entomophagists' consume all insects, just as not all meat eaters consume all kinds of meat from all animals, should be self-evident to everyone. The type of bug deemed

edible and the manner in which they should be cooked and consumed are well defined and localized in cultures where insects are eaten as a food source. We believe it is appropriate to illustrate this point with a few real-world instances.

Consumer perceptions and acceptability of insects as food were investigated in two countries (the Netherlands and Thailand), where the degree and type of encounters with insects as food differed significantly. Those from the Netherlands were most concerned with sustainability, while participants from Thailand were more concerned with flavor and culinary familiarity. Among the insects eaten by the Thai were ant larvae, grasshoppers, and gigantic water bugs, whereas mealworms, which show no similarity to any of the insects used in Thai cuisine and are linked most closely with putrefaction, were highly despised. As a result of their recent availability on the market and appearances at public events, the Dutch were more acquainted with mealworms as a potential ‘sustainable' food source and were thus more ready to experiment with them[8].

2. DISCUSSION

Because the Food and Agriculture Organization of the United Nations has been using the word "entomophagy" in its official publications since 2012, it is possible that the phrase has assisted in spreading the message about the value of insects as food sources.

However, the phrase does serve to simplify the plethora of problems that exist in the industry. This process may be likened to the introduction of the phrase "non-timber/wood forest products" in the early 1990s, which was a similar approach. While this term had a significant impact on drawing attention to funding, policy, legal frameworks, and development for the forest sector in areas other than timber, it has lost relevance after 25 years as consumers' preferences have shifted to product names that are more descriptive of what they are buying (honey, berries, mushrooms, game, tree grubs etc.) From this broad terminology experience, we may make the following conclusions: it is beneficial to use a "generic" technical phrase during the launch phase; but, after attention has been garnered, more precise language is needed.

Current ambiguity in language used to characterize insect eating may act as a barrier to developing laws governing the use of insects for human food in many nations, particularly in developing countries. A particular regulatory framework does not currently exist in most Western nations since insects have not been a common component of most Western diets in recent history, and as a result, the language used to describe insects is extremely broad in nature, if it exists at all[9].

The debate over whether edible insects should be included in European food safety regulations is still continuing. When it comes to food safety, there are certain societies where insects have historically been eaten and where particular language for the practice is missing, such as Thailand, where insects are regarded no differently from other kinds of food when it comes to food safety regulations. Additionally, the Food and Drug Administration (FDA) in the United States seems to be treating frozen crickets in the same manner as any other food-grade frozen product – which, when combined with more precise language, may aid in the development of constructive laws in the future[10].

3. CONCLUSION

When compared to the lengthy history of people consuming insects, the word 'entomophagy' is a comparatively recent invention. Over the course of the word's brief existence, the meaning of the

term has evolved in at least a few European languages, becoming less synonymous with the general consumption of insects and various other arthropods by any creature and more specifically referring to human insect-eating habits. While this shift is positive, it does not lessen the term's implicit condemnation of human insect-eating from a Western, non-insect-eating paradigm as being an animalistic, inappropriate, and/or pathological eating/feeding behaviour – an attitude that may be contributing to the decline of cultural insect-eating in certain parts of the world.

Using the phrase may be extended to other members of insect-eating societies, homogenizing their varied behaviors and preventing them from being investigated in depth and evolving in their own unique way. This variety of behaviors also reflects the diversity of insect species, which may be obscured by the use of erroneous taxonomic classification systems. The term 'insect' is used in various settings by different cultural traditions, which informs distinct methods to categorization, as well as edibility and cultural appropriateness of meals.

REFERENCES:

1. R. Caparros Megido *et al.*, "Consumer acceptance of insect-based alternative meat products in Western countries," *Food Qual. Prefer.*, 2016, doi: 10.1016/j.foodqual.2016.05.004.

2. A. L. Yen, "Edible insects: Traditional knowledge or western phobia?," *Entomological Research*. 2009, doi: 10.1111/j.1748-5967.2009.00239.x.

3. J. Ramos-Elorduy, "Anthropo-entomophagy: Cultures, evolution and sustainability," *Entomological Research*. 2009, doi: 10.1111/j.1748-5967.2009.00238.x.

4. R. Caparros Megido *et al.*, "Edible insects acceptance by belgian consumers: Promising attitude for entomophagy development," *J. Sens. Stud.*, 2014, doi: 10.1111/joss.12077.

5. S. Niassy, H. D. Affognon, K. K. M. Fiaboe, K. S. Akutse, C. M. Tanga, and S. Ekesi, "Some key elements on entomophagy in Africa: Culture, gender and belief," *J. Insects as Food Feed*, 2016, doi: 10.3920/JIFF2015.0084.

6. A. L. Yen, "Entomophagy and insect conservation: Some thoughts for digestion," *J. Insect Conserv.*, 2009, doi: 10.1007/s10841-008-9208-8.

7. N. Katayama *et al.*, "Entomophagy: A key to space agriculture," *Adv. Sp. Res.*, 2008, doi: 10.1016/j.asr.2007.01.027.

8. D. Raubenheimer and J. M. Rothman, "Nutritional ecology of entomophagy in humans and other primates," *Annu. Rev. Entomol.*, 2013, doi: 10.1146/annurev-ento-120710-100713.

9. L. Nadeau, I. Nadeau, F. Franklin, and F. Dunkel, "The Potential for Entomophagy to Address Undernutrition," *Ecol. Food Nutr.*, 2015, doi: 10.1080/03670244.2014.930032.

10. J. Schrader, D. G. A. B. Oonincx, and M. P. Ferreira, "North American entomophagy," *Journal of Insects as Food and Feed*. 2016, doi: 10.3920/JIFF2016.0003.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

A REVIEW ON CONCEPT OF WHITE FEMINISM

B. R. Maurya*

*Assistant Professor,
Department of Business Law,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: brmourya.mourya321@gmail.com

DOI: 10.5958/2249-877X.2021.00107.7

ABSTRACT

The second wave of American women's liberation was often unaware of the paths in its theories, and its political practice failed to adequately address the common concerns of women of color and ethnicity in the United States and overseas. It was also unconcerned with how it looked to many in the younger generation as a harsh and disciplined women's emancipation. It repeated counter-talks as a consequence of such susceptible sides, which ultimately undermined its authority. The new thesis of the third wave, on the other hand, embraced a more diverse and polyvocal women's emancipation that charmed many who felt confined or restricted inside the previous wave. This fresh discussion, based on differentiation, dissected and decentred the following wave's ideas, providing improved methods for understanding and restricting.

KEYWORDS: *Ethnicity, Feminism, Liberation, Women's.*

1. INTRODUCTION

The first recorded usage of the term Feminism in the English language was in the 1880s, when it was coined by French feminists concerned with women's political rights. Feminism was originally associated with socialist and militant movements in Europe, and it was for this reason that American suffragists sought to separate suffragism from Feminism[1]. 'The right to vote is not founded on differences between the sexes or on hostility of one sex against another,' according to a 1909 article, which also depicted Feminists as people who 'wish to impose womanly characteristics on the males.'

When Martha Weinman Lear's essay The Second Feminist Wave appeared in the New York Times in 1968, people started to speak about feminism as a series of waves. Feminism, once thought to be as dead as the Polish question, is now again a topic, according to Lear. The Second Feminist Wave, according to proponents, arose after the joyful triumph of suffrage and eventually vanished into the sandbar of Togetherness[2].

Second-wave feminism focused on problems of equality and discrimination from the 1960s through the 1980s. The second-wave motto, "The Personal is Political," recognized the indissolubility of women's cultural and political disparities and urged women to see how their personal lives reproduced sexist power systems. Betty Friedan was a key figure in the second wave of feminism. Her book The Feminine Mystique, published in 1963, ridiculed the notion that women could achieve a fundamental sense of success only via childrearing and housework[3].

Friedan's book sparked the modern women's movement in 1963, forever altering the social fabric of the United States and nations across the globe, according to her New York Times obituary. It is generally regarded as one of the most compelling nonfiction books of the twentieth century. Friedan believes that women's problems are simply the result of dishonest and uncultured ideas that force them to find identity in their lives via their spouses and children. Women lose their own identities in the family as a result of this.

Many of Friedan's theories were already being discussed by academics and feminist thinkers, thus The Feminine Mystique was hardly groundbreaking in its thought. Its reach, on the other hand, was revolutionary. It ended up in the hands of housewives, who passed it on to their friends, who in turn passed it on to a whole chain of educated middle-class white women with lovely houses and children. And it gave them permission to be enraged.

2. DISCUSSION

2.1 The Second Wave: The Women's Liberation Movement's Uprising:

The second-wavers' high-pitched voice, ideas, and deeds held the thesis that the personal is political. The concept is difficult to trace back to any particular lady, although Carol Hanisch carefully disseminated it. The feminists would go on to argue that seemingly insignificant issues like sex, abortion access, relationships, and domestic labor were in fact universal and radical, and essential to the struggle for women's equality.

Unlike the first wave, second-wave feminism sparked significant hypothetical and theoretical debate regarding the origins of women's oppression, the nature of gender, and the family's role. In 1970, Kate Millett's Sexual Politics was a best-seller, and in it, she broadened the definition of politics to include all power-structured interactions, and she proposed that the personal was really political. In the same year, Shulamith Firestone, a founder of the New York Radical Feminists, wrote 'The Dialectic of Sex,' claiming that love robbed women by establishing personal manacles between them and the men they loved, men who were also their persecutors.

Germaine Greer, an Australian residing in London, wrote The Female Eunuch a year later, arguing that women's sexual suppression deprives them of the creative energy they need to be self-sufficient and happy. This trend began in the United States of America and eventually extended to other Western nations[4].

The First Wave was primarily concerned with the suffragette fight for the right to vote, while the Second Wave was more concerned with both public and private injustices. Legislative actions were also used to demarcate this period. In 1961, the Food and Drug Administration authorized an oral contraceptive pill, which was a significant step toward allowing women to pursue professions rather than being pushed into family life.

The essential link between women's struggle and what is usually understood as class struggle, as the Chicago Women's Liberation Union (CWLU) put it. Not all of a woman's efforts are necessarily anti-capitalist... All those who want to develop the working class's social and cultural autonomy are inextricably connected to the fight for women's liberation....

As a result, the liberation movement won several major legislative and judicial victories: The Equal Pay Act of 1963 theoretically prohibited the wage disparity between men and women; a series of landmark Supreme Court cases in the 1960s and 1970s granted married and unmarried

women the right to use birth control; Title IX guaranteed women's educational equality; and, in 1973, Griswold v. Connecticut6 and Roe v. Wade established women's reproductive freedom.

Former First Lady Eleanor Roosevelt presided over a Presidential Commission on the Status of Women established by the Kennedy administration. Paid maternity leave, access to education, and excellent childcare were all recommended by the commission on gender disparity in its report. In 1961, a group called Women Strike for Peace organized 50,000 women to oppose nuclear weapons and contaminated milk. A broad sense of unity among women striving for equality may be seen throughout the Second Wave. It also expresses the idea of many kinds of feminism. Radical feminism was popular, which advocated for the abolition of male dominance and the questioning of all gender norms.

Although the Second Wave was a very effective campaign that resulted in many legislative and cultural triumphs that led to greater equality, it was not without flaws.

2.2 Feminism in a Variety of Forms:

Women's tyranny is carefully linked to Marxist concepts of exploitation, dominance, and labor in socialist feminism. Socialist feminists believe that women are held back by their unequal status in the workplace and at home.

Post-World War II feminism, known as socialist feminism, recognized the repressive character of a consumerist culture and perceived a link between gender and racial inequality, similar to Marxism. Socialist feminism was never structurally capable of forming cross-class and inter-racial groups. However, we should not use it as the only basis for evaluating its achievements and failures. The existence of ethnically distinct feminist organizations enhanced the overall effect of the women's movement, rather than diminishing it[5].

The Second Wave may be defined as a sense of all-purpose solidarity among women striving for equality. It was also the birthplace of a variety of feminisms. Radical feminism was rife, calling for the abolition of male dominance and the questioning of all gender norms. Ecofeminism was widely acknowledged. It linked environmental justice and maintenance to women's freedom and rights.

2.3 Women of Color Are a Travesty:

Feminism's second wave, which began in the late 1960s and lasted until the mid-1980s. “White, middle-class, heterosexual women continued to dominate the narrative on the goals, ideologies, and strategies of the second wave, according to Laughlin, and the movement was massively disparaged for being excluding of the many other kinds of women,” according to Laughlin. These second-wave exclusions are at the heart of White Feminism.

Feminism manifests itself in various ways in different people, as seen above. Many women may not see their activities as feminist since they are not conscious advocacy, but rather a natural part of their daily lives. On a daily basis, women defy the limitations imposed by society via the skills they demonstrate in order to live and flourish. Non-white Feminists have multiple selves beyond gender, including color, class, ability, religion, and sexual orientation, which overlap and overlay in ways that are overlooked by others with different (and sometimes more restricted) experiences.

Protuberant feminists were white middle-class women who carved out feminist theory based on their personal experiences and problems. While there were numerous black, Latina, Asian, and

Native American activists in the movement, many felt marginalized and ignored. The prominent white feminists' paradigm was often at odds with their own[6].

White feminists identified gender as the primary reason for black women's exclusion from full participation in American society; black women were obliged to face the interaction of racism and sexism and find out how to get black males to think about gender problems while white women thought about race. Michele Wallace, Mary Ann Weathers, Bell Hooks, Alice Walker, and Bettina Aptheker were among the black feminists who spoke about these problems. White feminists' demand for unity and cohesiveness was founded on the idea that women formed a gender-based class or caste that was brought together by oppression.

During the inaugural meeting of the 'National Black Feminist Organization,' held in New York City in 1973, black women activists acknowledged that many of the traditional feminist objectives, such as day care, abortion, maternity leave, and violence, were also dangerous to African American women. When it came to explicit concerns, African American and white feminists formed an aggressive working alliance. African-American feminism, which began in 1968 with Fran Beal's founding of the "Third World Women's Alliance" (TWWA), was the most convincing.

The TWWA's central concern was that women of color had to fight several battles against racism, class, and gender dominance at the same time, and that this act was shared by all feminists of color. However, they were no more similar to white women in terms of appearance. The most important declaration of black socialist feminism was written by Boston's Combahee River Collective in 1975, which stated: "We think that sexual politics under patriarchy is as prevalent in Black women's lives as class and racial politics." We also find it difficult to distinguish between racial, class, and sex oppression since we frequently experience them all at the same time in our lives[7].

Combahee was retorting to forms of nationalism that delineated and promoted women's second-class status, subordinate to males, as part of their racial/ethnic identity, and claimed that feminism was a white philosophy, as were many other feminists of color. Various white feminists bowed to these demands as well; for example, a record number of socialist feminists supported the Black Panthers' armed pomposity without question. There is little question that many middle-class white feminists were unaware of the extent and impact of racism on working-class and impoverished women's everyday lives[8].

This unconsciousness was fueled by the same force of self-discovery. Women's liberationists were eager to reach women of color and created numerous initiatives centered on anti-racism and the concerns of working-class women, thus some accused white feminists of ignoring women of color, which was an overblown accusation. (Many of these charges were made by middle-class white feminists who were embarrassed by their advantages.) But, at times, middle-class whites' understandings and urgencies were so privileged, and their conversations so narrow, that their gatherings seemed discriminatory to many women of color[9].

Despite the fact that black women are not only more fraught than whites, but also more supportive of the women's movement's objectives, the women's movement is often characterized as "white middleclass." Black women, particularly those associated with the civil rights struggle, are concerned that feminism would splinter their numbers and divert public focus away from them. In other respects, black women's issues differ from those of white women, most notably in

terms of their economic situation, which is much worse than that of either white women or black males.

Furthermore, blacks are hesitant to join groups that they believe to be controlled by whites. Both the black and women's rights movements, it is claimed, need each other's support, and black women cannot attain equality until both campaigns succeed. While the Second Wave was critical in expanding the feminist movement's reach, it was not without faults and setbacks. Intersectional Feminism arose from concerns of racial discrimination during the Second Wave. Merriam-Webster defines intersectionality as the complicated, cumulative way that the consequences of many kinds of discrimination mix, overlap, or intersect[10].

3. CONCLUSION

The White Feminist Movement's tranquil antiquity mirrors the white-centric nationalism that defines American identity. People of color's perspectives are often overlooked in historical accounts, and non-white contributions are absorbed into white culture without acknowledgment of their origins.

Similarly, white Feminism's exclusionary waves reflect a wider disdain for the non-white experience in the United States. Outlining the rise of multiracial feminism raises many issues regarding shared standards established in normative Second Wave histories. By juxtaposing a multiracial feminist movement timeline with a normative timeline, conflicting views of what constitutes freedom emerge, as well as schisms in feminist awareness that still exist now.

Militant women of color and white women stood up to white supremacy and imperialism; some of these women avoided or rejected the term "feminist" because of its association with hegemonic feminism; these women still faced sexism within solidarity and nationalist organizations, as well as within their own communities. Assata Shakur, a leader of the Black liberation movement in the late 1960s, says in her autobiography, To me, the revolutionary fight of Black people had to be against racism, classism, imperialism, and sexism for genuine freedom under a socialist government.

REFERENCES

1. B. Tomlinson, “The Vise of Geometry: Distorting Intersectionality at the Scene of Argument,” *Meridians*, vol. 16, no. 1, pp. 1–36, 2018, doi: 10.2979/meridians.16.1.03.
2. J. Daniels, “The Trouble with White Feminism: Whiteness, Digital Feminism and the Intersectional Internet,” *SSRN Electron. J.*, 2015, doi: 10.2139/ssrn.2569369.
3. E. R. Cole and A. N. Zucker, “Black and White women’s perspectives on femininity,” *Cult. Divers. Ethn. Minor. Psychol.*, vol. 13, no. 1, pp. 1–9, 2007, doi: 10.1037/1099-9809.13.1.1.
4. K. Sendi, “The Limitations of U.S. White Middle-Class Feminism in the Middle East,” *Int. J. Gend. Women’s Stud.*, 2017, doi: 10.15640/ijgws.v5n1a11.
5. D. Ferreday, “‘Only the Bad Gyal could do this’: Rihanna, rape-revenge narratives and the cultural politics of white feminism,” *Fem. Theory*, 2017, doi: 10.1177/1464700117721879.
6. S. U. Noble and B. M. Tynes, “Chapter Two: The Trouble With White Feminism: Whiteness, Digital Feminism, and the Intersectional Internet,” in *The Intersectional Internet*, 2016.
7. N. Welang, “Triple consciousness: The reimagination of black female identities in contemporary American culture,” *Open Cult. Stud.*, 2018, doi: 10.1515/culture-2018-0027.
8. E. Ulus, “White fantasy, white betrayals: On neoliberal ‘feminism’ in the US presidential election process,” *Ephemera*, 2018.

9. A. E. Feenstra, "From White Feminism to Intersectional Advocacy : The Development of a White Antiracist Identity," *Vermont Connect.*, 2017.

10. "Talkin' up to the white woman: Aboriginal women and feminism," *Choice Rev. Online*, 2001, doi: 10.5860/choice.39-1256.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

CONCEPT OF TRADE SECRETS IN INDIA

Aruno Raj Singh*

*Assistant Professor,
Department of Criminal & Constitutional Law,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: arunorajsingh@gmail.com

DOI: 10.5958/2249-877X.2021.00108.9

ABSTRACT

The researcher's goal with this article is to clarify India's legislative framework for trade secret protection. Because in the age of globalization, every company's unhappiness or success is dependent on its secrets whether they be strategy-related secrets or customer information trade secrets are becoming more important. Trade secrets provide a competitive advantage in the commercial world, and as a result, one must guarantee that his or her business-related private knowledge is properly protected from rivals. The purpose of trade secret legislation is to protect, maintain, and promote business ethics and reasonable transactions, as well as to urge modernisation. Since the advantages of the information economy have been rapidly increasing, trade secrets have become the Intellectual Property of Choice. So, in order to attain competent simplicity in commercial transactions, it is essential to outline the laws necessary to properly protect trade secrets in India, as well as for the smooth operation and fair competition of a business in the market. The researcher is attempting to emphasize the rules governing trade secrets in India via this study report. Furthermore, a conclusion will be offered based on case law examples in order to alleviate the inadequacies that trade secret owners confront. The practical scenario will evaluate how the law defines trade secrets, how it protects them, and the suggested measures.

KEYWORDS: *Confidential, Intellectual Property, Legislation, Trade Secret.*

1. INTRODUCTION

Trade secrets are a kind of intellectual property that a company owns. A trade secret, unlike a patent, is not openly recognized. Any business exercise or advancement that is generally not known outside of the firm is considered a trade secret. Information considered a trade secret provides the business with a competitive advantage over its competitors and is often the result of internal development. Any classified commercial information that gives a venture a fair frame of reference may be deemed a trade secret.

Mechanizing or industrialized secrets, as well as mercantile secrets, are examples of trade secrets. Secrets of this kind are known as confidential information in certain countries. Unofficial use of such knowledge by people other than the owner is deemed unethical and a violation of the trade secret. The protection of trade secrets is either based on specific requirements or case law

on the security of private information, or it is based on the general principle of protection from excessive competition[1].

Trade secrets may take a variety of forms, such as a proprietary process, equipment, design, plan, procedure formula, scheme, or practice that is not visible to others and can be utilized to create a project that offers a competitive advantage or adds value to customers. Trade secrets are defined differently depending on the jurisdiction, but they always have the following characteristics:

- This is not public information;
- Their owner benefits financially from their secrecy.
- Their secrecy is carefully guarded.

Under article 39 of the Agreement on Trade-Related Aspects of Intellectual Property Rights, often referred to as the TRIPS Agreement, these three characteristics define a trade secret under international law.

Trade secrets are the "classified papers" of the business sector, much as limited texts are carefully guarded by government agencies as classified information. Companies are enticed to summarize what makes their competitors successful due to the high expense of creating specific inventions and processes that are much more expensive than acceptable intelligence. In order to protect its trade secrets, a business may require employees who have access to the knowledge to sign non-compete or non-disclosure agreements (NDA) when they join.

There are many instances of both physical and ethereal trade secrets. Google Inc.'s search algorithm, for example, is protected as intellectual property in policy and is regularly updated to improve and protect its maneuverability. Coca-secret Cola's formula, which is kept in a basement, is an example of a trade secret that is a method or recipe. It has never been revealed since it is not patentable. A procedural trade secret is an example of the New York Times Bestseller list[2].

While the list does appear in book sales as a result of aggregating chain and independent shop sales, as well as wholesaler data, the list is more than just sales figures (books with inferior general sales may make the list though a book with upper sales may not).

Example: An SME develops a process for developing its produced products that allows it to produce them in a more cost-effective manner. This method provides the company a competitive advantage over its competitors. As a result, the company in issue may value its know-how as a trade secret and not want competitors to learn about it. It ensures that only a small number of individuals are aware of the secret, and those who are aware of it are made aware that it is private. When working with other parties or licensing its know-how, the company executes confidentiality agreements to ensure that all parties understand that the information is confidential. In such circumstances, an opponent or any third party embezzling the knowledge would be considered a breach of the venture's trade secrets[3].

2. DISCUSSION

2.1 Misappropriation:

On the one hand, companies attempt to find out one other's trade secrets via legal methods such as reverse engineering or staff poaching, and on the other side, illegal tactics such as industrial espionage. Acts of commercial monitoring are generally illegal in and of themselves under the

relevant laws, and the penalties may be severe. The importance of that irregularity in trade secret law is that if a trade secret is acquired via unethical methods, it is generally assumed that the information has been embezzled.

As a result, if a trade secret is acquired via industrial espionage, the person who obtains it may face legal consequences for doing so illegally. (On the other hand, the owner of a trade secret is obliged to protect the secret to some degree from such espionage.) A trade secret is not deemed to exist under most trade secret laws unless its alleged owner takes reasonable measures to maintain its secrecy.

2.2 The Importance of Protecting Trade Secrets:

A business's trade secret is the most important positive characteristic that allows the company to maintain its reputation and market position. There is no need that a business be a large industry to get trade secret protection.

i. *Recent technology*: As we all know, computers and other systems are being extended to keep information hidden, although it was previously stored in tangible forms. A thief had to go through many stages in order to acquire knowledge from this bodily form, after which he could use that information inappropriately. With the increased skills, however, gaining access to the hidden knowledge has become much easier. The file that has collected in the computer system may be encrypted, password protected, and only workers with a need-to-know basis have access to it. If an employee needs to contact that information from the computer network, he may easily download it, email it, publish it on the internet, or just save it to a flash drive and walk out the front door undetected with thousands of documents in his hand. Trade secrets have no place in the digital world.Hackers nowadays get into networks and obtain sensitive information from companies, including trade secrets, in ways that no one expects. In 2002, the FBI dealt with almost 1,500 hacking instances, whereas in 2010, it dealt with 2,500. Philip Gabriel, aka "Stakkato," was recently charged with five charges of embezzlement of trade secrets. In this instance, he is accused of hacking into secured computer systems at Cisco Systems and NASA, including NASA's Advanced Supercomputing Division, from a distance of 5,000 miles. Peterson, a 16-year-old Swedish, is accused of carrying out the hackings[4].

ii. *Increasing value of trade secret information:* Trade secrets, like all other intellectual property, are growing more valuable and play an increasingly important part in the country's prosperity. This approach is also acceptable for Trade Secrets, according to the Congressional Research Service: “As the United States continues to transition to a facts-based economy, household businesses' dynamism and competitiveness are becoming more reliant on their know-how and intangible assets.A trade secret is a kind of intellectual property that protects confidential information. Previously, the economy was based on tangible assets such as natural resources and capital goods, but with the development of modern industries, the economy today assesses itself using intellectual property[5].

iii. *Increased international hazards:* There are dangers not only on a local level, but also from foreign organizations, businesses, and governments, which contributes to the importance of trade secrets to a significant extent. The globalization of business is mostly to blame for rising risks on a global scale. When a business operates on a global scale, the risk of misappropriation rises. New technology is another factor contributing to rising worldwide

risks. Hackers may get access to any information from anywhere in the globe. They just need PCs that are connected to the internet. The case of Xiang Dong "Mike" Yu, a project engineer for the Ford Motor Company, who smuggled Ford Trade Secrets to China while on a job hunt that led to an agreement with one of Ford's competitors, is one of the most recent instances of trade secret theft.

iv. *The USTA:* One of the reasons for a rise in trade secrets and trade secrets lawsuits is the USTA's development. The widespread adoption of USTA has increased awareness of trade secret law among attorneys, businesses, courts, and others, as well as increased confidence in the applicability of trade secret law and other laws. Prior to USTA, there was a great deal of variance across the states on a variety of trade secret problems, ranging from the kinds of behavior to the remedies. The USTA isn't perfect, but it provided a starting point for enacting legal punishments for trade secret theft[6].

v. *Numerous sources of litigation:* In the current indistinguishable economic environment, and especially in highly liquefied and spirited knowledge-based industries, there are numerous possibilities for trade secret-based litigation, such as if a company's endurance is jeopardized, its members will be stimulated to imperfection. This will be an additional risk for an endangered business, which would previously have been considered insignificant, and it will be seen as more important. As a result, the business will devote more resources to defending its rights than before.

2.3 Keeping Commercial Secrets Safe:

The practice of maintaining and protecting sensitive information as a trade secret, which embraces employee hiring and termination procedures designed to protect confidential knowledge. Before employing a future employee who has been contractually bounced or otherwise restricted by previous employers as to private topic matter, carefully examine the hidden liabilities. Also, discuss the scope of the restrictions on future use of the employer's private and proprietary information with all departing workers.

The employee's contract of employment should include a nondisclosure clause that spells out the subject matter areas that the employer considers secret. It's also a good idea to include a contractual clause that places reasonable restrictions on a former employee's competitive activity after he or she leaves. If the limitation is fair in terms of length, geographic breadth, and scope, it will usually be enforced by the courts[7].

Allow employees access to confidential information only if they have a "need to know" justification. Areas containing private information should be separated from areas with open access, with limited access available only to those who have a need to know the information. Additional security measures, such as electronic security, passkeys, or even color-coded identification badges, may be used to restrict access to such sensitive locations.

Employees must maintain constant vigilance to ensure that confidential information remains private. This may be accomplished via the use of signs and strategically positioned instructional messages. Many ideas conceived by other parties constitute trade secrets, even if they are not patentable subject matter. While the independent creator or initiator may be completely unaware of the law of trade secrets, most thinking people recognize the value of the idea and, more often than not, exaggerate it.

However, the one who surrenders the idea is not simply persuaded to do so, and instances have been shown in which revival has been achieved against the unsuspecting receiving firm on the grounds of a breach of a private relationship or abuse of a trade secret.

2.4 The Need for Information Confidentiality:

To assert a trade secret defense, the trade secret's information or subject matter must be kept hidden or private. If a trade secret is revealed to a non-company employee, the ability to protect it as a trade secret may be jeopardized unless it is carefully modified and controlled, if feasible, by a formal agreement or nondisclosure contract. As previously stated,

An employer should take the steps outlined below to manage the breadth and type of trade secret materials sent to its workers, as well as the circumstances and degree to which employees may gain access to such information[8].

2.5 Legal Aspects of Trade Secrets Protection India is one of the world's most populous:

Fair play along with honesty is the corporate world's strength. It can only be accomplished by defending trade practices. Except for trade secrets, every kind of intellectual property in India is governed by specific laws. India's legislature has not enacted any trade secret legislation. Apart from India, all members of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) have laws protecting trade secrets. Because there is no suitable legislation for trade secret protection in India, trade secrets are the most segregated sector. In India, trade secrets are protected by Section 27 of the Indian Contract Act, 1872, which provides for solutions and prohibits anybody from revealing any knowledge obtained through service or via contract[9].

However, there is just a universal treatment and no criminal remedies under this requirement. To be classified as a Trade Secret, any information must be highly confidential, according to this clause.

- The employee's prominence and the nature of his job.
- The nature of the information itself.
- Whether the information could be easily isolated from other information that the employee was free to use.

In 2008, an attempt was made to circumvent the National Innovation Act, 2008 in order to protect trade secrets in India. The Indian Innovation Act of 2008 is generally modeled on the American Competitiveness Act. One of the primary goals was to codify and combine privacy laws in order to better protect private information, trade secrets, and modernisation[10].

2. CONCLUSION

The purpose of trade secret legislation is to protect, maintain, and promote business ethics and fair transactions, as well as to urge modernisation. The law for safeguarding trade secrets is based on the common law of unfair competition, which was developed by English courts in the nineteenth century. Since the advantages of the information economy have been rapidly increasing, trade secrets have risen to become Intellectual Property of Choice. Unlawful use of such knowledge by anyone other than the owner is considered unethical and a violation of trade secrets.

The real proprietor of the trade secret would suffer harm if the secret was revealed. Trade secrets are data or information about a company that is not generally known to the public and that the owner reasonably challenges to keep hidden and confidential. Once trade secrets have been made public, they cannot be recovered, even if the usage of the product causes the disclosure.

If a trade secret is exposed during the process of utilizing it, there will be no defense. As a result, in order to accomplish the competent simplicity in commercial transactions, it is essential to outline the law in order to properly protect trade secrets in India, as well as for a company's excellent performance and fair competition in the market. Obtaining security will aid the growth of the country's business. As a signatory to the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), India has previously enacted laws to protect all intellectual property rights, such as the Copyright Act, Trademark Act, and Patent Act, but trade secret legislation has yet to be enacted. India is need to lay forth detailed laws and regulations in order to remove any doubts about Trade Secrets Protection. As a result, there is a need for trade secret protection.

REFERENCES

1. A. Kumar and A. Mishra, "Protecting Trade Secrets in India," *J. World Intellect. Prop.*, 2015, doi: 10.1111/jwip.12050.

2. M. Z. M. Nomani and F. Rahman, "Intellection of trade secret and innovation laws in India," *J. Intellect. Prop. Rights*, 2011.

3. M. Nair, "Protection of Trade Secrets/Undisclosed Information," *J. Intellect. Prop. Rights*, 2002.

4. Harshwardhan and S. Keshri, "Trade screts: A secret still to unveil," *J. Intellect. Prop. Rights*, 2008.

5. P. Reddy T., "The 'Other IP Right': Is It Time to Codify the Indian Law on Protection of Confidential Information?," *J. Natl. Law Univ. Delhi*, 2018, doi: 10.1177/2277401718787951.

6. F. L. Inman, S. Singh, and L. D. Holmes, "Mass Production of the Beneficial Nematode Heterorhabditis bacteriophora and Its Bacterial Symbiont Photorhabdus luminescens," *Indian Journal of Microbiology*. 2012, doi: 10.1007/s12088-012-0270-2.

7. J. P. Panda, "Factoring the RCEP and the TPP: China, India and the Politics of Regional Integration," *Strateg. Anal.*, 2014, doi: 10.1080/09700161.2014.863462.

8. G. Patil, "Critical Analysis of 'The National Innovation (Draft) Act, 2008,'" *SSRN Electron. J.*, 2013, doi: 10.2139/ssrn.2239718.

9. G. G. Nair, "Impact of TRIPS on Indian pharmaceutical industry," *J. Intellect. Prop. Rights*, 2008.

10. G. P. Daswani, "Trade Secrets, Its Significance and a Comparative Analysis of Trade Secret Protection in Different Jurisdictions," *SSRN Electron. J.*, 2017, doi: 10.2139/ssrn.2869715.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

AN ANALYSIS OF CASE STUDY ON HEALTHCARE ADMINISTRATION

Mohit Rastogi*

*Assistant Professor,
Department of Finance,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: mohit.management@tmu.ac.in

DOI: 10.5958/2249-877X.2021.00109.0

ABSTRACT

The mismatch between awareness and experience is a worldwide issue that leads to excessive health spending. In order for the void to be answered and the issue to be handled, there are various models and systems. The PARIHS Paradigm emphasizes the interaction of three key elements: information, meaning and facilitation, to effectively carry out practical research. It is used to assess the situation and to lead the transformation process. The goal was to depart from Iran's healthcare management system the current state of information adoption. With an objective to offer a complete systemic interview with 15 health care managers, this qualitative study used a guideline content evaluations method. Three important components of the framework have been addressed in the guiding questions: evidence, meaning and facilitation. The most significant forms of evidence used by administrators in decision-making were local knowledge and previous experience. The assessment acquired more weight compared to other sub-elements, such as society and leadership. As far as facilitation is concerned, the majority thinks that more activities should be undertaken. Findings of the author have revealed that managers in Iran's health systems decide on the basis of their own competency and other management specialists and local know-how.

KEYWORDS: *Facilitation, Healthcare System, Information, Iran, PARIHS Framework.*

1. INTRODUCTION

One of the main objectives of any health system today is to improve treatment outcomes and provide the highest possible quality of service. Faster development has raised people's health care aspirations in the fields of medical research and technology, while at the same time raising their consumer interest and improving their economic position. Although billions of dollars are spent on hospitals every year, the care quality remains low and unfavorable[1].

Fig. 1: Enterprise Risk Management In Healthcare Supports A Complete Framework For Making Risk Management Choices Which Optimize Value Preservation And Development By Managing Risk And Uncertainty And Their Links To Total Value.

Information is a vital source of knowledge and excellent behavior in any business. In the lack of consistency between success in the knowledge and health system, a mismatch develops among expertise and execution. Human development is possible through conservation, utilization and sharing of information, and public health requires a commitment to a decision-making system based on knowledge and evidence shown in Fig.1.[2].

There are direct effects on health decision-making on the scientific discoveries and information in this area. The results of the research are simply the distribution of findings before there is a shared agreement among information providers and the health care system, and for patients and the health system they would be inefficient. If expertise was not utilized, the financial money, personnel and energy would be used and the expenses paid by patients would be raised. It may be harmful for patients as well. It would additionally impede the supply of recommended preventative, recuperation and management healthcare services[3].

In a complex and collaborative process called the application of knowledge, information is produced, disseminated, exchanged or utilized to improve service delivery. The absence or lack of information tools, the aversion to knowledge generated from the results of research and the lack of time required to acquire information which may assist managers and policy makers all impede knowledge use. In addition, instead of research findings, managers usually decide on facts obtained from advice and outcomes from regular organizational measurements. Several approaches have been developed over recent decades to utilize expertise in practice or to assist this method. Kitson et al. created the “Promoting Action on Research Implementation in Health Services (PARIHS) conceptual framework with the goal of promoting research implementation in practice. This paradigm emphasizes the interaction between evidence, meaning and facilitation for effective implementation. The sub-components which make up these elements are addressed. Evidence includes sub-elements including research results, interactions between service providers and beneficiaries, and local (i.e. corporate) facts; community includes sub-elements such as leadership and evaluation methods; facilitation comprises priorities, tasks, and expertise of persons within and outside the organization that help others to make it soft. The framework may be used to assess and identify the current position for a business in terms of research executions in practice, and each sub element is categorized on a low to high scale. The author plans to use the above context to clarify the role of this discipline in making data available amongst other representatives of providers of health services, taking into account both the gaps

between different disciplines and organizations, and the lack of application in Iranian health system of management know-how[4].

2. LITERATURE SURVEY

J. M. Grimshaw et al. says one of the most consistent outcomes of clinical and healthcare research is that information cannot be converted into practice and the law. As a consequence of this evidence-and policy mismatch, patients do not flourish maximally from advances in healthcare and are exposed to high risk of iatrogenic harm, while healthcare services are susceptible to unnecessary spending, resulting in considerable opportunity. Over the past decade, the focus on how to bridge the gap between evidence and strategies in foreign policy and research has been growing. In this Article the author outlines current ideas and facts for direct translation of information, often referred to as the T2 analysis (the translation of new clinical knowledge into better health). The essay is split around five main themes: to whom research knowledge should be communicated, who should transfer research information, and how research knowledge should be translated, and how research knowledge should be transferred. The article addresses five major topics. According to the author, up-to-date systematic analyses or other scientific findings synthesis should generally be the basic unit of scientific translation. Info translators need to categorize key messages in the language and knowledge translation articles readily comprehensible for various target audiences. Depending on the size of the research, the relative value of knowledge translation to various target markets changes and effective knowledge translation endpoints may vary among the individuals involved. A broad variety of intended models for knowledge transmission were given for a range of disciplinary, relational (i.e., context) and target audiences perspectives. The majority of these data indicate that it is more likely for healthcare professionals and consumers to select a content conversion technique based on an assessment of possible obstacles and facilitators. Although there remains a lack of data on the potential effectiveness of various methods to address certain challenges, systematic analysis of approaches aimed at healthcare professionals and clients (i.e., patients, family members and informal care providers) as well as relevant considerations for the use of policymakers for the study are still helpful. There is an essential (although small) database to assist healthcare professionals and consumers on the selection of information translation methods. The evidence supporting the impact on health policymakers and senior managers of different methods of information translation is much smaller, but a plethora of novel approaches are required to be investigated[1].

I. Litvaj and D. Stancekova study focuses on there are two main areas in which the author defines information management in terms of its relevance and advantages to businesses, and the decision-making, decision-making and knowledge management link. The aim of the author's study is to use information management for decision-making. The same is true for the global consumer economy as commodities change, technology, economies, and industrial settings. This implies that businesses also have to adapt their strategic plans and management processes such that they are frequently prone to change. As these modifications are essential for businesses to react to global economic trends, the pace of these changes is increasing. So what is the requirement for effective adaptation? Answers are to satisfy and react to client expectations, to answer effectively to their needs and to innovate, to alter the company and its management processes. The management of information is one of the most sophisticated management systems and is being utilized by an increasing number of businesses. That's why the author has focused research on its utilization as a basic management process in decision-making[2].

3. APPROACHES

The method used was a guided content analysis in this qualitative study. This author has followed the instructions of Hsieh and Shannon to conduct interviews and examines the data [5]. This deductive approach may in particular assist to create categories and sub-categories of research before the commencement of data collection, which are in accordance with three key components of the PARIHS framework: evidence, meaning and facilitation.

This study was performed in the Iranian health sector. A single policy controls Iran's health care system. The Ministry of Health and Medical Education (MOHME, after its Spanish initials) is responsible for policy development and the general supervision of the health sector, and administrative processes in each province by medical and education institutions. The University's deans are thus responsible for the selection and employment of hospital and health care intermediate and high level managers. These managers may be general practitioners or medical professionals with or without experience in the administration of health care. As a result, 15 health administrators at the corporate and top level with adequate expertise in the Medical Sciences sectors were interviewed in 2018-19. It required them both a minimum of 5 years of management experience and a willingness to engage in the research. Following the provision of informed permission, the participants were interviewed separately. The author utilizes the diagnostic and evaluative questions as a guide for interviews, given that research is based on PARIHS paradigms (evidence, context and facilitation). The interviews started with open questions about management backgrounds, decision-making processes, and resource usage and system assessment. Then the interview was performed in order to give the rich and specified knowledge via examples and clear explanations linked to the components of the framework.

Each interview lasted an average of 60-90 minutes, and participants were encouraged to return if needed to additional sessions. In each interview, the general quality of the participants' voice was transcribed and read several times. Finally, the encoded segments were classified into the predefined categories of evidence, importance and facilitation.

The findings were reviewed in a community conversation spanning two hours to validate the completeness of the research with the participants. Participants were asked to assess the function of the health management of Iran as weak or solid in the PARIHS Framework.

4. DISCUSSION

Specialists or general practitioners often manage Iran's health sector. On the other side, general practitioners sometimes supervise company-level clinics. They are better prepared to handle the healthcare environment based on their experiences and participation in brief management and management seminars. Given the circumstances mentioned above and the views of the researchers, the degree of use of expertise in health is unfavorable and the system is mainly controlled by administrators based on their abilities, experience and medical competence. As shown by the findings of the author.

The results of the author indicated a strong focus on context, with less attention given to facts and facilitation. This comment is in line with the findings of Janson and Forsberg[6]. According to Ward et al., facilitation and meaning are the most important impacts on decision making. Use of information needs the most up-to-date data available, a complete knowledge of the structure and goals, a changing community and effective ways[7].

Incorrect evaluation of the problems and a lack of structure and procedures within the business tends to put high value on the importance due to capital shortages and a low degree of facilitation. In addition, managers rarely use study's results because of a high workload and lack of access to usable data. According to Gagnon and Bergeron, people and organizations are constructing particular barriers to evidential policy making, taking account of the issue. This problem is not just for managers: the nurses do not know about the evidence and do not use scientific findings in their daily work. Sadly, despite all these efforts, the use of awareness in the Iranian health system has yet to be institutionalized. A lack of time was observed in other surveys to prevent research results from being put into effect, and some administrators believe that research findings in areas relevant to them are not sufficiently accessible. In addition, lawmakers often make decisions based on facts, such as guidelines and regular calculation, rather than on scientific results. The use of information starts with needs, situational assessment and the creation of needs-based knowledge, and then goes forward to analyze knowledge transmitted to senior leaders, colleagues and public users and to monitor and receive feedback. Information is a non-linear process. As a consequence, factors like complexity, a failure to agree on research findings and the inability to address inadequacies for daily decision-making by managers could therefore have an effect.

In order to utilize information it must be able to access all three PARIHS models (evidences, meanings and facilitation) (evidences, meanings and facilitation). Studies by the author show that the Iranian health system focuses mainly on corporate culture and evaluation, but the management thinks that the present culture of the health system is inconsistent. In the meantime, corporate competence and collaboration among consultants and policymakers are regarded essential for making reforms and creating a sense of teamwork within the business. According to Senge, a collaborative community through education is the best way to apply ideas in practice[8]. A prevalent attitude in society tends to give personal gain greater importance than business efficiency, resulting to a lack of skills and poor cooperation. Furthermore, hierarchical systems are inconsistent and focus mainly on personal preferences and agreements. This emphasizes the need to change the existing management style as well as to strategically plan to assist develop operational systems which are centered on the real demands of the healthcare industry.

Managers also think that they should define staff values and beliefs. In this respect, Ward stated that the rating of employees should be continuous in such a manner that workers are involved in the transition process and priorities which are more important than their own needs to the company. Individual engagement, awareness of the business interest, confidence in growth and attention to multidisciplinary events, all of which, according to prior study, are helpful factors in developing an organization. Ending people that are successful in carrying out changes is dangerous and should be appreciated and improved for the business[9].

The findings indicated that the facilitation component has gotten less focus and that personal skills have gained more attention both within and beyond the organization. Some academics believe that facilitation is done by performing the work of others and encouraging others, while others consider that these two types are usually done through one community. According to Harvey et al., communication between internal and external facilitators is first required in order to ease the transition period which needs particular facilities and preparation[10].In comparison, the use of instruments facilitates the utilization of experience.

5. CONCLUSION

Drawing on the outcome. The healthcare system seems to need a framework for quick and practical access to research results, perspectives and skills from fellows. Administrators must, in addition, be trained to assume the role of insider or outsider healthcare facilitators. The mismatch between awareness and experience is a worldwide issue that leads to excessive health spending. In order for the void to be answered and the issue to be handled, there are various models and systems. The Promoting Action on Research Implementation in Health Services (PARIHS) Paradigm emphasizes the interaction of three key elements: knowledge, meaning and facilitation, to effectively carry out practical research. It is used to assess the situation and to lead the transformation process. The goal was to depart from Iran's healthcare management system the current state of information adoption.

REFERENCES

1. J. M. Grimshaw, M. P. Eccles, J. N. Lavis, S. J. Hill, and J. E. Squires, "Knowledge translation of research findings," *Implement. Sci.*, vol. 7, no. 1, 2012, doi: 10.1186/1748-5908-7-50.

2. I. Litvaj and D. Stancekova, "Decision - Making, and Their Relation to The Knowledge Management, Use of Knowledge Management in Decision - Making," *Procedia Econ. Financ.*, 2015, doi: 10.1016/s2212-5671(15)00547-x.

3. B. Uzochukwu *et al.*, "The challenge of bridging the gap between researchers and policy makers: Experiences of a Health Policy Research Group in engaging policy makers to support evidence informed policy making in Nigeria," *Global. Health*, 2016, doi: 10.1186/s12992-016-0209-1.

4. G. Harvey and A. Kitson, "PARIHS revisited: From heuristic to integrated framework for the successful implementation of knowledge into practice," *Implement. Sci.*, 2016, doi: 10.1186/s13012-016-0398-2.

5. H. F. Hsieh and S. E. Shannon, "Three approaches to qualitative content analysis," *Qual. Health Res.*, 2005, doi: 10.1177/1049732305276687.

6. I. Jansson and A. Forsberg, "How do nurses and ward managers perceive that evidence-based sources are obtained to inform relevant nursing interventions? - An exploratory study," *J. Clin. Nurs.*, 2016, doi: 10.1111/jocn.13095.

7. E. Snelgrove-Clarke, B. Davies, G. Flowerdew, and D. Young, "Implementing a Fetal Health Surveillance Guideline in Clinical Practice: A Pragmatic Randomized Controlled Trial of Action Learning," *Worldviews Evidence-Based Nurs.*, 2015, doi: 10.1111/wvn.12117.

8. P. Senge, "Managing and Leading Organizations As Communities," *Conf. Pap. Present. Syst. Dyn. ...*, 2002.

9. J. A. E. Kirchner, L. E. Parker, L. M. Bonner, J. J. Fickel, E. M. Yano, and M. J. Ritchie, "Roles of managers, frontline staff and local champions, in implementing quality improvement: Stakeholders' perspectives," *Journal of Evaluation in Clinical Practice*. 2012, doi: 10.1111/j.1365-2753.2010.01518.x.

10. G. Harvey, S. Llewellyn, G. Maniatopoulos, A. Boyd, and R. Procter, "Facilitating the implementation of clinical technology in healthcare: What role does a national agency play?," *BMC Health Serv. Res.*, 2018, doi: 10.1186/s12913-018-3176-9.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

GLOBAL MARKETING SUPERVISORS: A THOROUGH OVERVIEW

Dr. Manjula Jain*

* Sr. Professor,
Department of Finance & Marketing,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: jainmanjula76@gmail.com

DOI: 10.5958/2249-877X.2021.00110.7

ABSTRACT

As the speed of globalization accelerates, it is becoming increasingly important for businesses to ensure that they are able to successfully adapt to relevant consumer demands and preferences in the markets in which they operate. Excellence in policy formulation and execution is critical for both transnational and multinational administrations in this respect. This necessitates continuous, customer-focused explanation and affirmation about where and when the related administrations are headed, as well as how they can get to their desired potential roles. Furthermore, such companies are both capable and eager to enter and exploit all of the world's main and established markets, as well as grow into newer and less developed sectors. As a result, pricing considerations are particularly important. Channel architectures, promotion, and worldwide marketing strategies must all be considered. In light of the above ideas, the first section of this article analyses the fundamental elements that influence pricing in every market. Second, it delves deeper into the factors that influence price decisions then, it examines and assesses the elements that influence channel architecture and tactics for global marketers. Finally, it examines and expands on the "standardized vs localized" argument as it pertains to advertising.

KEYWORDS: *Brand, Businesses, Channel, Consumer, Global Marketing.*

1. INTRODUCTION

The price of a product is one of the key factors, particularly if it is new to the market and therefore unfamiliar for the appropriate consumer target group. Prices convey important economic information and product observed. In addition, prices have a significant impact on income. Marketing's most important concept is to fulfil and surpass customer needs, Haxthausen says. After all, consumers desire great goods to be bought at reasonable prices so that they have a respectable financial worth. In the specific sector firms must also make every effort to offer goods that satisfy all customer expectations and that are fairly priced in contrast to the comparable products provided by competitors[1].

Pricing policy significantly affects consumer buying habits and procedures. Moreover, pricing has a significant effect, along with the possibilities of a company's existence on how much money is produced on global marketplaces. As shown in the literature, much more study on international pricing is required (see Figure 1)[2].

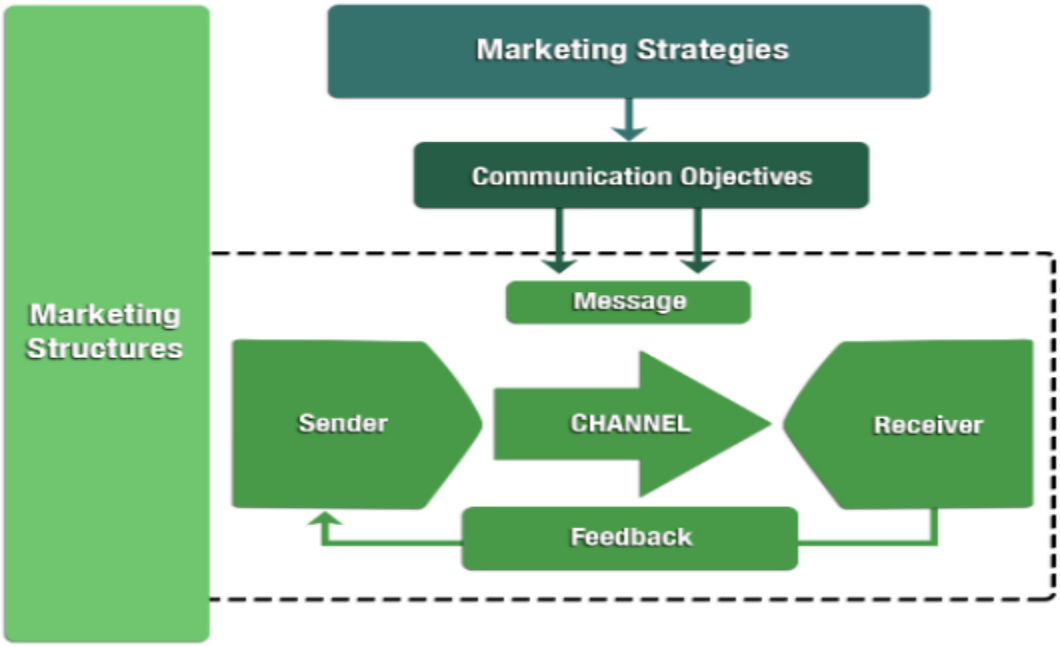

Figure 1: Introduction toFactors Affecting Multinational Marketers Accessto Channel Systems and Methods.

Prices are complicated and always arbitrary in the home market. Various currencies, currency restrictions, extra expenditure concerns and longer sales channels make the multinational company significantly more challenging. This article suggests collecting global price determination concepts and procedures based on a study of best practice in businesses. The main worldwide price issues; the pricing obligation location in the global business; pricing methods; and price transfer regulations are among the specific topics to be addressed[2].

International pricing involves sophisticated business planning and businesses need to establish price strategies, to know their commodities, and to take the environmental factors of the host country into consideration, says Musonera[3].Pricing policies are strongly influenced by customer buying behavior and decision making. Pricing is one of the important factors in the selling of product mixtures for export markets as it raises cash and determines the lifespan of a company. In contrast, academics have paid little attention to international pricing and export prices. This article analyzes the influencing factors of export pricing choices and illuminates international price policies in a competitive global market.

Mycotoxins are small toxic compounds generated as secondary metabolites by a few fungus species. They attack crops quickly and contaminate them with field or harvest toxins. Since ochratoxin and aflatoxins are large, a variety of analytical and identification methods that may be useful and functional have been studied in detail. Because of their diverse designs, it is challenging to use a single model method to study or identify these toxins. The practical circumstances for high-sensitivity analysis and the need for a professional laboratory environment impede regular study. This research analyzes various current analytical techniques including adaptive, broad-based study methods and identification in certain circumstances. In addition, price is part of a product, according to some experts and, without violating national laws, a global company has to coordinate pricing throughout its various locations[4].

There are a variety of methods used, many based on lab, but there seems to be no one methodology separating itself from the other to expert knowledge, even though analytical liquid chromatography, often connected to mass spectroscopy, is likely to be widespread. This study covers (a) procedures of pre-treatment such as liquid-liquid extraction, extraction of super-critical fluids, and solid phase extraction, (b) methods for separating samples such as high-performance chromatography, gas clock building, and capillary electrophoresis, etc. The current dynamics, benefits and drawbacks of these methods and future predictions were examined[4].

As a result, multinational businesses must demonstrate caution and judgment when setting pricing for their goods. According to Abratt& Pitt "only if the cost and supply balance on the one hand and the consumer value on the other can a good pricing strategy be achieved". To this aim, the significance of customer value should be highlighted, but it should be noted that businesses must pay their expenses to make an acceptable profit[5].

Moreover, arbitration, in the truly global economy, is anticipated to equal the cost of the products and services produced at various exchange rates in different countries in the same currency. However, a number of reasons why in the markets across the globe, such as transportation cost variations, the so-called "rule of one standard" could not be comprehended. Academics discovered this common approach to pricing. The specific focus of the research study on the US industrial capital goods industry is, nevertheless, a major drawback. Consequently, it is essential not, in particular, in emerging countries, to generalize similar findings to other markets, whether commercial or trade[6].

2. LITERATURE SURVEY

D. Mitra et al. stated in the paper that Choices on market entrance are one of the most significant strategic choices of a company. Although many recent studies have started to investigate the impact of knowledge and experience on foreign entrance, no research has studied the influence of a company's operations on subsequent entry choices in comparable markets. In order to describe the information businesses produce while operating in cultural and economically comparable markets, the authors of this study suggest the concept of nearly market knowledge. The authors gather substantial data on the complete global market entrance of 19 multinational businesses. They investigate the effect on foreign market entrance by using a hazard model based on 722 centration data of dynamic near market knowledge and other economic and cultural variables. In contrast to most prior research, the authors found that cultural distance from the local market is not an issue. In contrast, the authors discover substantial consequences on new measures in the area of cultural, economic and market knowledge, as well as many other economic elements. For future research and management practice the writers explore the significance of the findings[7].

R. Pappu et al. referred to the paper analyzes the connections between customers' national and product-level views of a country, and the equity that the customer associates with a brand from that nation, using a canonical correlation analysis. According to studies of mall intercept done in an Austrian State City, the consumer-based stock of a brand has been very much linked both to macro and micro images of the place of origin. Specific links between these two sets of constructs were discovered to be positive and product categories. In addition, each brand equity component provided varied contributions to the link according to the product category, and the connection was also created different for the two nation image dimensions (macro and micro).

Cars were also found to be more sensitive to the nation's image than TVs as a product category. The consequences for foreign marketers are immediate and significant[8].

3. EXTENUATING FACTORS TO CONSIDER WHEN TAKING A PRICING DECISION

- Commonly known as global marketing, the marketing camps organized and coordinated across geographical borders of target audiences and consumers concentrating not on national affiliations but on potential.
- Choices on the marketing channel are as essential as other strategic decisions. However, the economic situation is changing quickly, and that is important to remember. In addition, changes in distribution techniques may be required in new products and consumer requirements.
- Channels of delivery, both local or international delivery channels consist of a series of flows that connect producers of products and services to final users, state things are not from the thin air, develop and maintain various administrations that handle all the logistics tasks needed for sellers or buyers to complete transactions.
- Includes continuing and active examination by multinational marketers of methods of enhancing and leveraging distribution networks. After all, the supply routes rely on high-quality connections. Improving the difference between retailers is of importance because consumer goods companies maintain their connections effectively with retailers.
- Critical marketing components are effective networks and physical supply systems. Indeed, one might argue that without it, the needs and expectations of customers cannot be fulfilled consistently. A wide variety of players and procedures are required in order to ensure that the commodities are effectively shared between suppliers and consumers and thus satisfy consumer needs at least.
- Furthermore, merchants interested in selling abroad should choose for organic development, franchising, takeover and joint venture or licensing among the four ways of business entrance.
- Recent improvements in technology and telecommunications have helped to increase global franchising, which is much more cost efficient, as scholars point out.
- The degree of cooperation in country-specific sales promotion is based on whether the brand is local, regional, or global and experts say that result of internal communications may contribute to the coherence of external marketing communications of each brand. Two variables are given above to demonstrate the importance of brand expectations and marketing communication in the optimum selection of global marketing campaigns.
- The geocentric method combines the cost-saving benefits of uniformity with the advantages of contextual significance and the positive appeal for individualization." This is because a geocentric strategy ensures that Marketing Campaigns are designed from the outset to suit a global audience, that they accommodate for general characteristics and that local modifications are made for the different nations. The solution to traditional or limited advertising methods seems to be convincing.

- Global marketers should adjust their communications to ensure that inventories are light rather than big when a slump happens and that they use marketing efforts. The strategic significance of global marketing is emphasized in this situation.

4. DISCUSSION

With a rising pace of globalization, businesses need to make sure that they can adapt successfully to the relevant requirements and tastes of customers in the markets on which they operate. For global and multinational governments, competence in policy formulation and execution is essential. This needs continuous customer-oriented explanation and verifying where and when the related administrations are heading and how they may perform their intended future duties. In addition, such companies are both capable of accessing all the main and significant markets and of expanding in new and less advanced sectors and are ready to take advantage of them. Pricing problems are thus extremely important. Architectures of channels, promotion and worldwide marketing strategies must all be taken into consideration. Taking the previous concepts into consideration, the first section of this article examines the fundamental variables which influence market pricing in every market. Second, it analyzes and evaluates the elements that influence the channel architecture and tactics of global marketers more thoroughly in the variables that effect price decision-making. Finally, it analyzes and expands on the standardized versus localized issue as it relates to advertising.

Current analyses are carried out in detail on a current system. At the first level, there are four price conditions: new product, competitive, product line and cost-based. Second level are the price methods suitable for a particular situation. For example: experience curve pricing, penetration and skin. Methods that may be considered. The method contains 10 price approaches in total, then a number of variables that determine a company's cost, product, industry and expertise are defined and which price strategies in that situation are suitable[9].

The profitability of additional revenue, for example, is a unique element in the supplementary price strategy of a product line, except for a certain pricing situation (razor-and-blade pricing). How closely contemporary industrial pricing actions correspond with previous literature requirements were examined by using this background as a foundation for an examination of observations. The poll was attended by 270 people (27 percent response rate). In the process of producing products that are being sold in the US, more than half stated they used different pricing schemes[10].

5. CONCLUSION

Globalization may be regarded as a daily occurrence and a guiding force throughout the world. Reduced trade barriers between states and structural changes within countries have provided populist powers with enormous opportunity, as never before, to take advantage of global economic possibilities. In this constantly shifting and unpredictable economic environment, global markets must strive to translate their business strategy objectives into coordinated and successful marketing plans. From the foregoing, it should be clear that all elements of the marketing mix are connected and therefore interdependent.

The choice of pricing thus relies on whether the company is regional, standardized, or worldwide, depending on the intended Marketing strategy. Companies also select how, based on the information gathered and produced in market research, they reach the right international

markets, whether directly or via an intermediary. Most international businesses are forced to depend on market intermediaries. Calibration and adaptation issues can affect advertising and marketing. Transnational businesses are more likely to market and communicate their brands via worldwide promotional efforts.

Product marketing camps must still be regionalized and tailored to the cultural dynamics of local communities and other key national variables. In addition, since the marketing strategy suitability and execution in various sectors will vary, it is important for companies to carry out additional research in these domains, irrespective of whether particular countries exist or are expanding. In terms of future study, observational work, the various methods used in the different transnational and worldwide administrations in the issue would be a solid starting to start testing and comparing.

This explains the topics involved further and gathers more accurate data. The research focusing mainly on primary data collection and examination is defined as Empirical Science. Because of the relatively recent nature of the phenomena of globalization and the growing pace of global economic change, literature lacks significant information on different subject areas and techniques global marketers may discover.

REFERENCES

1. O. Haxthausen, "Customer focus," *Marketing Management*. 2008, doi: 10.4324/9781315862293-4.

2. S. T. Cavusgil, "Pricing for global markets," *Columbia J. World Bus.*, 1996, doi: 10.1016/s0022-5428(96)90033-2.

3. E. Musonera, "An Examination of Factors that Affect Pricing Decisions for Export Markets," *J. Int. Mark.*, 1999.

4. S. Onkvist and J. Shaw, *International Marketing : Analysis and Strategy*. 2014.

5. R. Abratt and L. F. Pitt, "Pricing practices in two industries," *Ind. Mark. Manag.*, 1985, doi: 10.1016/0019-8501(85)90023-9.

6. P. M. Noble and T. S. Gruca, "Industrial pricing: Theory and managerial practice," *Mark. Sci.*, 1999, doi: 10.1287/mksc.18.3.435.

7. D. Mitra and P. N. Golder, "Whose culture matters? Near-market knowledge and its impact on foreign market entry timing," *J. Mark. Res.*, 2002, doi: 10.1509/jmkr.39.3.350.19112.

8. R. Pappu, P. G. Quester, and R. W. Cooksey, "Country image and consumer-based brand equity: Relationships and implications for international marketing," *J. Int. Bus. Stud.*, 2007, doi: 10.1057/palgrave.jibs.8400293.

9. D. A. Aaker, "The Value of Brand Equity," *Journal of Business Strategy*. 1992, doi: 10.1108/eb039503.

10. D. A. Aaker, "Leveraging the Corporate Brand. (cover story)," *Calif. Manage. Rev.*, 2004.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

A REVIEW STUDY ON NATURAL PESTICIDES & ITS USES IN PEST MANAGEMENT

Shubham Sharma*

*Lecturer,
Department of Computer Application,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: sharma.shubham2812@gmail.com

DOI: 10.5958/2249-877X.2021.00111.9

ABSTRACT

Natural pesticides are pesticides made by organisms usually for their own defense, or are derived from a natural source such as plant, animal, bacteria, and certain mineral, use to control pest naturally with less effect or no effect. Examples of these natural pesticides are Rotenone (Derris sp.), carboxin, fluroacetate, nicotine, neem (Azadiractaindica), microbial pesticide Bacillus thuringiensis, and pyrethrins. Natural pesticides usually target specific sites in the insect such as nervous system, resulting in knock-down, lack of coordination, paralysis and death. Nicotine inhibits and compete with neurotransmitter by binding to acetylcholine receptors at the nerve synapses and causing uncontrolled nerve discharge. This paper focuses on new types of bio pesticides, examine the specificity to harmful pests, and the selectivity to beneficial animals. Many of the modern pesticides used today, persist in soil for years and compound the store of toxins in the soil, air and water. Botanical pesticides are generally highly bio-degradable, and they become inactive within hours or a few days and can easily be broken down by stomach acids in mammals, so toxicity to humans and animals is very low to non-target organisms and are ecofriendly. Since they are also very effective, natural pesticides should be the first choice for pest management, which in turn reduces the bioavailability of metal and noxious effect in the environment.

KEYWORDS: *Bio pesticides, Natural Pesticides, Nicotine, Pest Management, Toxicity.*

1. INTRODUCTION

During the past three decades, efforts have been made to reduce the exposure and human risk of pesticides, especially insecticides. There is great demand for selective and safe insecticides that spare natural enemies and non-target organisms. Some conventional pesticides have been replaced by newer bio-rational (Bio pesticides) or "low risk" pesticides. Natural pesticides are pesticides that are made by other organisms usually for their own defense, or are derived from a natural source such as plant, animal, bacteria, and certain mineral.

Pesticide exposure and human risk have been reduced over the last three decades, with an emphasis on insecticides. Selective and safe pesticides that don't harm natural adversaries or non-target species are in high demand. Newer bio-rational (Bio pesticides) or "low risk" insecticides have replaced certain traditional pesticides. Natural pesticides are pesticides produced by other species for their own defense, or pesticides obtained from natural sources such

as plants, animals, microorganisms, and minerals. As a consequence of run-off, about 80% of pesticides sprayed penetrate different natural resources, exposing animals, farmers, and agricultural product consumers to serious health risks. Natural pesticides, often known as "reduced risk" pesticides, are organic chemicals that efficiently manage insect pests while posing little harm to no target species including people, animals, natural enemies, and the environment. Because most natural pesticides degrade rapidly in sunlight, they should be kept in the shade to maintain their efficacy.

About 80% of pesticides applied enters various environmental resources as a result of run-off, exposing animals, and farmers as well as consumers of the agricultural produce to severe health problem. Natural pesticides or “reduced risk” pesticides are natural compounds that effectively control insect pests, with low toxicity to no target organisms such as humans, animals and natural enemies and the environment. Most of natural pesticides break down very quickly in sunlight so they should be stored in darkness for effectiveness. Both highly alkaline and highly acid conditions speed up degradation or break down these type of pesticides[1]–[5].

Plants and some microorganism produce many natural chemicals that they use for their own defense against insects and disease organisms. Natural pesticides for plants also are considered to be those chemical made from natural ingredients. People believe that natural pesticides are always safe and more eco-friendly than man-made or synthetic pesticides and while this is mostly true but it is not always so for example, nicotine as a natural pesticide in tobacco leaves, and the highly addictive component of cigarette smoke, but it is much more toxic than most modern synthetic or manmade pesticides. While some natural pesticides are also toxic many are actually much safe and more eco-friendly than synthetic pesticides. Since natural pesticides are also very effective, it should be the first choice for most home and farm pest control needs.

Chemicals assault or enters the body at almost every hour of the day. They may come through air, food, products use on the body, and in drinking water. Toxic buildup of these chemicals has been shown to cause several damage in the body and minimize health. Many modern pesticides (synthetic) used persist in soil for years and compound the store of toxins such as heavy metals in the soil, air and water. Natural pesticides are not products of chemical engineering and are return to the environment with less impact and reduced danger[6]–[10].

Pesticides for organic gardens must meet certain criteria set forth by the United States Department of Agriculture (USDA) and bear a logo stating they are certified for use. The benefits of using organic or natural pesticides for plants are their specific target range, a slow mode of action, shorter persistence, low residue levels and safe use than conventional or synthetic pesticides [5]. These attributes are a win-win for consumers and the earth alike, but strict attention to time and mode of application and the precautions have to be strictly followed. That doesn’t mean they are free from chemicals, just that the chemicals are derived from botanical and mineral sources. They must still be used carefully, but the chemicals break down more quickly than commercial sources and are deemed less threatening.

The recognized categories of bio-rational pesticides may be synthetic or natural compounds of microbial, plant protectant and biochemical (pheromones, hormones, natural growth regulators and enzymes) origins. Most bio pesticides are nerve poisons acting at specific target sites in the insect's nervous system. Some pesticides act similarly to the old nerve poisons that result in knock-down, rapid intoxication, lack of coordination, paralysis and death, and have higher

affinity to insect receptors than to mammalian. The other pesticides affect specific systems, such as the molting processes, metamorphosis and the pest endocrinology system.

Bio pesticides are third-generation pesticides that are environmentally friendly and closely resemble or are identical to chemicals produced in nature. The examples of bio pesticides are the microbial pesticide Bacillus thuringiensis (Kurstaki), Most of the bio pesticides show effectiveness against different strains of resistant species, with no evidence of cross-resistance; hence these can play an important role in integrated resistance management (IRM) strategies.

1.1.Pesticides :

Pesticides are chemical substance use to kill or retard the growth of pests that damage or interfere with the growth of crops, shrubs, trees, timber and other vegetation desired by humans. Practically all chemical pesticides, however, are poisons and pose a long-term danger to the environment and humans through their persistence in nature or body tissue. Most of the pesticides are non-specific and may kill life forms that are harmless or useful. Pesticides are classified in three ways generally: Based on chemical structures, According to their mode of action and According to their mode of entry i.e. ingestion, inhalation, contact absorption.

1.2.Natural pesticides:

Natural pesticides are naturally occurring chemicals extracted from plants. Natural pesticide products are available as an alternative to synthetic chemical formulations but they are not necessarily less toxic to humans. Some deadly, fast-acting toxins and potent carcinogens occur naturally.

1.3.Pest management:

Pest management is a means of reducing pest numbers to an acceptable or economical threshold. While IPM is a developed method or ways use to control pests without relying solely on pesticides. The IPM is a systematic plan which brings together different pest control tactics into one program. Management does not mean eradicating pest. It means finding tactics that are effective and economical, and that keep environmental damage to a minimum level.

1.4.Mode of action:

The mode of action or mechanism of action of pesticide is how the pesticide works. In other words, it is how the specific systems in the pest are affected by the pesticide. Mode of action refers to the specific biochemical interaction through which a pesticide produces its effect on the pest. Usually, the mode of action includes the specific enzyme, protein, or biological step affected. While most other classifications are the pests controlled, physical characteristics, or chemical composition, mode of action specifically refers to which biological process the pesticide interrupts.

Knowing the mode of action is integral for scientists to improve the quality and sustainability of a product. To understand how pesticides work (their mode of action), it is necessary to understand how the pests' targeted systems normally function. It is also helpful to understand how human systems function in order to know similarities and differences between humans and the pests we try to control. It is also very important to understand the modes of action of the pesticides we use is to prevent the development of pesticide resistance in the target pest(s). Using pesticides with same mode of action contributes to this problem by killing the susceptible pests

and leaving only those with resistance to the entire class of pesticides that work through similar mechanisms.

1.5.Uses of Bio Pesticides:

Bio pesticides give better control than conventional pesticides such as organochlorine, biopesticides are usually a narrow spectrum of activity; are cheaper, less toxic to workers or consumers; usually true to type, safer for the environment and for beneficial insects; and required for certified organic production surroundings. Bio pesticides may be applied shortly before harvest without leaving excessive residues, are less persistence in the environment and have reduced risks to non-target organisms.

They act very quickly in insect to stop feeding, they may not cause death for hours or days, but they often cause immediate paralysis or cessation of pests feeding. Most bio pesticides insecticides may have low to moderate mammalian toxicity. In the field, their rapid degradation and action as stomach poisons make them more selective in some instances for plant-feeding pest insects and less harmful to beneficial insects. Many bio pesticide are not toxic to plants, however, it is always best to test a new product on few plants first before applying on a large scale.

1.6.Various Types of Natural Pesticides:

The major categories of bio pesticides include botanicals, microbial, essential oil and minerals based, many of these come from plants themselves, insects, or naturally occurring minerals. Some of the more commonly used and effective natural pesticides are insect and mite growth regulators, Bacillus thuringiensis (Kurstaki), horticultural oils, insecticidal soaps, entomopathogenic nematodes and neem products. The advantage of using biological products is because they have less negative impact non-target organisms, including humans.

Nicotine is an alkaloid obtained from the foliage of tobacco plants (Nicotinetabacum) and related species, has a long history as an insecticide. Nicotine and two closely related alkaloids, nor nicotine and anabases, are synaptic poisons that mimic the neurotransmitter acetylcholine. As such, they cause symptoms of poisoning similar to those seen with organophosphate and carbamate insecticides.

Owing to the extreme toxicity of pure nicotine to mammals (rat oral LD50 is 50 mg kg 1) and its rapid dermal absorption in humans, nicotine has seen declining use, primarily as a fumigant in greenhouses against soft-bodied pests. However, there remains some interest in preparing stable nicotine fatty acid soaps, presumably with reduced bioavailability and toxicity to humans. Nicotine is a Pale yellow to dark brown liquid which is highly toxic to warm-blooded animals. Nicotine is a fast-acting contact killer for soft bodies but does not kill most chewing insects. Nicotine is highly lipophilic and can pass through dermal tissues as well as the blood brain barrier.

1.7.Neem Products (Azadirachtin):

Neem is derived from the neem tree (Azadiractaindica) of arid tropical regions, contains several insecticidal compounds. Neem (Azadirachtaindica) belonging to the Meliaceae family has emerged as a highly potent biopesticide. The main active ingredients is azadiractin, which both deters and kills many species of caterpillars, thrips and whitefly. Both seeds and leaves can be used to prepare the neem solution. Neem seeds contain a higher amount of neem oil. The leaves

of neem are available all year compared to the seed. A neem solution loses its effectiveness within about 8 hours after preparation, and when exposed to direct sunlight. It is most effective to apply neem in the evening, directly after preparation, under humid conditions or when the plants and insects are damp. High neem concentration can cause burning of plant leaves. Also, natural enemies can be affected by neem applications.

1.8.General Mode of Action of Natural Pesticides:

Mode of action is the sum of anatomical, physiological and biochemical interactions and responses that result in p toxic action of a chemical, as well as the physical (location) and molecular (degradation) fate of the chemical in the organism. These compounds have achieved several currently desired goals of pest managers and the greater public demands. These are very selective, targeting just the pest, usually do not persist in the environment, much safer to handle and apply when compared to most chemical pesticides, and tend to preserve beneficial organisms. The most of the bio-rational insecticides have diverse modes of action, show effectiveness against different strains of resistant species, with no evidence of cross-resistance, has assisted in managing resistance to insect pests and they can play an important role in IRM strategies. Most bio-rational pesticides are nerve poisons acting at specific target sites in the insect's nervous system. Some insecticides act

similarly to the old nerve poisons that result from knocking-down, rapid intoxication, lack of coordination, paralysis and death, and have higher affinity to insect receptors than to mammalian. The other insecticides affect specific systems, such as the molting processes, metamorphosis and the insect endocrinology system. All the bio-rational or low-risk insecticides have relatively low detrimental effect on the environment and its inhabitants, and have little or no adverse consequence for non-target organisms, thus rendering them among important components in IPM program.

1.9.Pest Management:

Pest management is a way to keep pests below the levels where they can cause economic damage. Management does not mean eradicating pests. It means finding tactics that are effective and economical, and that keep environmental damage to a minimum. The IPM is the managing of crops using many tactics to keep pest levels below an economic threshold.

IPM has been developing as a way to control pests without relying solely on pesticide. Integrated pest management is a systematic plan which brings together different pest-control tactics into one program. It reduces the emphasis on pesticides by including cultural, biological, genetic, physical, regulatory, and mechanical controls. To carry out an IPM program, you need to scout and monitor your fields, recognize abnormal conditions and identify their causes, understand the different control methods available, and determine the economic costs and benefits. A good IPM program requires planning, monitory and evaluation.

2. DISCUSSION

Pest management are very site-specific. Pest management is based on the identification of pests, accurate measurement of pest populations, assessment of damage levels, and knowledge of available pest management strategies or tactics that enable the specialist to make intelligent decisions about control. The IPM offers the possibility of improving the effectiveness of pest control programs while reducing some of the negative effects. Many successful IPM programs have reduced pesticide use and increased protection of the environment.

Plants producing the above-mentioned compounds are known by the farmer because most of the time they grow in the same general area. Eco-friendly safer for user/applicator, and very effective when used correctly. Often these plants also have other uses like household insect repellents or are plants with medicinal applications. The rapid degradation of the active product may be convenient as it reduces the risk of residues on food. Some of these products may be used shortly before harvesting. Since most of these products have a stomach action and are rapidly decomposed they may be more selective to insect pests and less aggressive with natural enemies.

3. CONCLUSION

Soil pollution, Air pollution has occurred from the use of synthetic pesticides and it takes years and sometimes decades for some of these chemicals to break down. These pesticides are also harmful to the animal, microorganisms, plants as well as human health. Luckily there are many Natural pesticides (Bio pesticides) that are also effective in pest control. People need to break the habit of using harmful pesticides and switch to bio pesticides which break down quickly in sunlight and in the soil. The faster a chemical breaks down, the sooner the soil can return to a healthy state. Most bio pesticides are also safe to use around people and pets. They can easily be washed from fruits and vegetables making them healthier for us and our family to eat.

REFERENCES:

1. J. C. van Lenteren, K. Bolckmans, J. Köhl, W. J. Ravensberg, and A. Urbaneja, "Biological control using invertebrates and microorganisms: plenty of new opportunities," *BioControl*, 2018, doi: 10.1007/s10526-017-9801-4.

2. N. Salliou and C. Barnaud, "Landscape and biodiversity as new resources for agro-ecology? Insights from farmers' perspectives," *Ecol. Soc.*, 2017, doi: 10.5751/ES-09249-220216.

3. P. B. Goodell, F. G. Zalom, J. F. Strand, C. A. Wilen, and K. Windbiel-Rojas, "Over 35 years, integrated pest management has reduced pest risks and pesticide use," *California Agriculture*. 2014, doi: 10.3733/ca.v068n04p153.

4. D. M. Pinto Zevallos, M. Pereira Querol, and B. G. Ambrogi, "Cassava wastewater as a natural pesticide: Current knowledge and challenges for broader utilisation," *Annals of Applied Biology*. 2018, doi: 10.1111/aab.12464.

5. N. E. Pore, K. N. Pujari, and S. P. Jadkar, "Organophosphorus poisoning," *International Journal of Pharma and Bio Sciences*. 2011, doi: 10.5005/jp/books/11952_56.

6. M. A. Ibrahim, P. Kainulainen, A. Aflatuni, K. Tiilikkala, and J. K. Holopainen, "Insecticidal, repellent, antimicrobial activity and phytotoxicity of essential oils: With special reference to limonene and its suitability for control of insect pests," *Agricultural and Food Science in Finland*. 2001, doi: 10.23986/afsci.5697.

7. S. O. Duke, C. L. Cantrell, K. M. Meepagala, D. E. Wedge, N. Tabanca, and K. K. Schrader, "Natural toxins for use in pest management," *Toxins*. 2010, doi: 10.3390/toxins2081943.

8. I. Ruiz, A. Morales, A. Barba, and J. Oliva, "Determination of natural pesticides in fresh fruits using liquid chromatography/mass spectrometry," *J. AOAC Int.*, 2012, doi: 10.5740/jaoacint.10-407.

9. R. Cochard, S. Maneepitak, and P. Kumar, "Aquatic faunal abundance and diversity in

relation to synthetic and natural pesticide applications in rice fields of Central Thailand," *Int. J. Biodivers. Sci. Ecosyst. Serv. Manag.*, 2014, doi: 10.1080/21513732.2014.892029.

10. R. Yang *et al.*, "Natural products-based pesticides: Design, synthesis and pesticidal activities of novel fraxinellone derivatives containing N-phenylpyrazole moiety," *Ind. Crops Prod.*, 2018, doi: 10.1016/j.indcrop.2018.02.088.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

DIGITAL MARKETING EDUCATION BRAND MANAGEMENT FOR ORGANIZATIONAL STRATEGIZING IN THE PRESENT- & POST-COVID-19 ERA

Dr. Jason Lee Carter*

*Assistant Professor, Faculty of Business,
City University of MACAU
Email id: jasonjlc@cityu.mo, jlcprofessional@gmail.com

DOI: 10.5958/2249-877X.2021.00100.4

ABSTRACT

The study is an examination of the digital marketing environment demands in Asian tertiary educational institutions due to the advancements and commitments to educational reform in the current and post-Coovid-19 era, with the goal of assessing current efficiency for digital learning and the future of those needs. A case study approach was used to assess current conditions of digital marketing from the users' (student) perspective to provide recommendations Asian tertiary education institutions can utilize in their marketing curriculum revision and development efforts. Findings showed a basic level of knowledge and awareness of digital marketing platforms' usefulness and applicability among participants, but a disconnected view on preferences or suggestions for improvement. Conclusions suggest findings serve as a baseline for future research that addresses deficiencies existing in user knowledge and awareness of digital educational platforms purpose and design that will specifically improve their digital marketing curriculum revision and development efforts.

KEYWORDS: *Brand Management Case Study Methodology, Covid-19 Pandemic, Digital Education, Digital Marketing, Organizational Management*

INTRODUCTION

The Covid-19 virus pandemic has brought digital marketing to the forefront of higher education curriculum and instructional development like never before since the adoption of digital technology usage in learning environments. Adequate awareness of the use of digital learning platforms is not only a significant issue for maintaining "customer" (students and their parents or guardians) satisfaction amid growing demand for online and digital learning necessities, but is fast becoming a mandatory component of branding strategy development due to increasing competition in the tertiary education market (Benedek et al., 2016; Boulton, Kent, & Williams, 2018; Hanafi, Said, Wahab, &Samsuddin, 2017). As the pandemic continues, tertiary education will face permanent changes to the overall learning environment in both curriculum design and teaching methodology that monumentally impacts the development of marketing curricula to meet these demands. The inherent focus then is whether the digital education platforms are adequate in their present configuration and availability, or if there are changes needed by tertiary institutions to remain competitive (Adzovie et al., 2020; Alawamleh, Al-Twait, & Al-Saht, 2020; Dwivedi et al., 2020).

The study centered on digital marketing as a course/degree program, since marketing subjects utilize digital learning in the form social media and digital advertising more readily and often than other tertiary subjects (Crittenden, & Peterson, 2019; Langan, Cowley, & Nguyen, 2019; Schiele, & Chen, 2018; Zahay et al., 2019). The main objective is determining if digital marketing education is prepared sufficiently for the demanding, changing learning environment from the current and post-pandemic perspective of the users of digital learning platforms, namely the students and professors.

The study's aim is to assess customer perception of digital learning platforms for marketing curriculum revision and development efforts affected by the increasing difficulties in the adaptation to online, digital learning mediums for tertiary education institutions in the Asian/east-Asian region (Alawamleh, Al-Twait, & Al-Saht, 2020; Dwivedi et al., 2020; Williamson, Eynon, & Potter, 2020). A case study method was selected using a qualitative questionnaire collecting opinions from participants in China (Mandarin/mainland), China (Cantonese/Macanese), Thailand, Cambodia, and Myanmar. Students and teachers are queried on their collective perspectives of digital learning and digital marketing platforms utilized not only in their immediate learning environment, but also of the specific functionality and practical integration into a tertiary learning environment. The results are expected to reveal tangible suggestions on digital platform utilization by tertiary institutions in Asian/east-Asian nations, and thereby fill the deficiency gap in existing literature on the region for digital marketing platforms utilization in tertiary education institutions.

Background

Digital marketing education is at the forefront of the technological hardware (i.e. laptops, PCs, mobile phones) and software (i.e. web-based applications [apps], mobile apps) development. Advances in such technologies comes a need to assess the impact developments have on the usefulness of existing hardware and software in tertiary learning environments (Adzovie et al., 2020; Alawamleh, Al-Twait, & Al-Saht, 2020; Dwivedi et al., 2020). The issue is dominant in the existing and post-pandemic (Covid-19) learning environment that has irrevocably changed tertiary education in favor of digital technological resources that strives to meet the demand of student engagement and learning environments (Alawamleh, Al-Twait, & Al-Saht, 2020; Dwivedi et al., 2020; Williamson, Eynon, & Potter, 2020). This is a critical consideration since the learners of today and tomorrow are keenly attuned and proficient to technological resources in their respective learning environments (Dwivedi et al., 2020; Pillai et al., 2020; Rodrigues, Franco, & Silva, 2020; Williamson, Eynon, & Potter, 2020). Compounding this issue is the developing economies in Asian/east-Asian that see increasing calls for technological usage outside and inside the classroom (Ali, 2020; Crawford et al., 2020; Handayani, &Handayani, 2020; Zhou et al., 2020).

Enhancing the digital marketing curriculum and instruction in Asian/east-Asian tertiary institutions is due to the increasing demand from international business operations that puts increasing numbers of firms in contact with global markets (Liu et al., 2019; Plungpongpan, Tiangsoongnern, &Speece, 2016; Palvia et al., 2018; Zhuang, Zhou, & Lin, 2017). The advancements in technology connecting producers to consumers, producers to retailers/wholesalers, and consumers to consumers carries the inherent need for a knowledgeable workforce capable of handling digital marketing efforts for successful results (Fierro, Cardona Arbelaez, &Gavilanez, 2017; Kusumawati, 2019; Lui, & Au, 2017; Zahay et al., 2019). The

study identifies a deficiency gap instudies identifying the specific methods or techniques for digital marketing demands in tertiary education that generate digital technologically competent workers post-graduation. The study aims to recognize digital learning mediums from a hardware and software perspective that are lacking in adequate empirical outcomes in the existing literature(Franceschini, &Nesossi, 2018; Lee, 2018; Skoric, Zhu, & Pang, 2016; Sinpeng, 2020; Suh, Vasi, & Chang, 2017; Xia, 2017) that serves asa foundational baseline for tertiary institutions can utilize to improve their curriculum revision and development efforts.

Research Methodology

A case study method was selected due to the relevancy in the changing environment of tertiary learning during the pandemic situation, and is therefore seen as an unprecedented circumstance (Alawamleh, Al-Twait, & Al-Saht, 2020; Ali, 2020; Crawford et al., 2020; Dwivedi et al., 2020; Handayani, &Handayani, 2020; Williamson, Eynon, & Potter, 2020; Zhou et al., 2020). A case study approach collects opinions and experiences by the dominant users of the said medium, and then compiles everything into common themes that clarify the more dominant themes usable in selecting optimal courses of action for a deeper understanding (Alawamleh, Al-Twait, & Al-Saht, 2020; Assunção Flores, & Gago, 2020; Crawford et al., 2020; Dhawan, 2020; Izumi et al., 2020) of the digital marketing learning usefulness and whether or not to keep progressing unimpeded, or to enact changes for enhancement.

Data collection was obtained with a questionnaire designed and distributed using SurveyPlanet.com® containing four questions between 19 August 2020 and 19 September 2020, and then disseminated via the researcher's professional email account, Facebook account, LinkedIn portal, and WeChat mobile interface to current and former students, as well as current and former colleague lecturers and professors, throughout China (Mandarin/mainland), China (Cantonese/Macanese), Thailand, Cambodia, and Myanmar. The targeted total population (*N*) of 305 participant candidates obtained a sample (*n*) collected 32 responses, with a 10.49% response rate, and when compared with the rule of a five multiplier per number of questions (Abbas, 2018; Berkowitz, 2019), the resulting 20 recommended responses is well under the $n = 32$ responses actually collected, and validates the participant response rate.

The *n* responses were analyzed collectively, ignoring any varying demographics between participants due to the aforementioned unprecedented nature of the phenomena and increased demand for digital platform(s) implementation insisting on a homogenous case perspective from both students and professors, lecturers, instructors, and teachers. An explorative approach determined the similarities of *n* that exist by relative association with the aim of enhancing digital marketing curriculum revision and development that does not hold a mutually exclusive association. This factor gives the analysis a deeper comprehension aspect of participant perspectives digital marketing current and future states that can be assessed for practical recommendations. Results establish a baseline for continuing studies to work with when targeting specific demographic groups for outcomes in future quantitative studies.

Research Questions

Considering the gap in available studies and literature focusing on digital marketing platforms in Asian/east-Asian tertiary learning, the resulting overarching hypothesis query is therefore: Are the current digital marketing technological platforms in east-Asian tertiary digital marketing education adequate for meeting the needs of students as customers, or are changes necessary to

meet the goals of student engagement leading to greater satisfaction and greater student enrollment, and what are the recommended model(s)?

The questionnaire was designed with four open-ended questions posed. Each questionnaire encouraged more descriptive responses, but left this optional in order to prevent bias avoidance in participating. All questionnaires were distributed with the proviso of complete autonomy and any personal data would be kept confidential by this researcher. The four questions are thusly:

RQ1: Do you think existing online/digital learning platforms like MS Teams, DingTalk, etc. are adequate to meet digital learning? Why or why not?

RQ2: What are your preferred online/digital platforms for learning? (e.g. social media such as LinkedIn or Facebook, mobile apps such as WeChat or WhatsApp, etc.) Why?

RQ3: What type of digital marketing messaging platforms do you consider acceptable or engaging? (e.g. email, social media, mobile media, etc.)

RQ4: If there are no acceptable or engaging digital marketing platforms and messaging suitable to marketing education currently in existence, which recommendations do you have for future learning needs?

FINDINGS & DISCUSSION

RQ1 Results and Selected Participant Transcriptions

RQ1 was a two-part query assessing a confirmation of existing online/digital learning platforms posed with suggestive models like MS Teams, DingTalk, etc. as a query into whether or not such digital applications are adequate to meet digital learning, and then providing an opportunity for explanation of this confirmation opinion. Of the responses received, 16 (50%) of the answers were *yes* current platforms are adequate, and of those 16 responses 4 of them provided explanations that were variations of a positive response confirmation and no real insight was provided.

An unexpected 16 (50%) responses were *no* that current platforms were adequate, but good insight was provided with 7 of the 16 negative responses providing further explanation, for which most were quite different. Participant 5 (P5) stated, "*I think the learning platforms are lacking in examination supervision functions*," and participant 14 (P14) similarly stated, "*Some functions like make some examinations have not been added in these APP*." P8 had a similar view aligned to the effectiveness of the interaction between student and teacher rather than exam supervision: "*Not so adequate. I think the interaction between teachers and students may not be so prompt and effective*." P13 seemed to agree with P8 on student-teacher interaction, though with the concession that the software is adequate regardless of a poor student-teacher interaction: "*Those software meet basic teaching needs, but needs to be improved in terms of classroom interaction and student supervision*." As the participant's response began with a confirmed 'no'answer, this is still categorized as a negative despite the affirmative view of the software applicability to the learning environment.

P21 focused on the pandemic impacts as significant to the learning environment effectiveness: "*Not with the new 'normal' post Pandemic as More people will work from home*." This was a similar response with a more extensive explanation from P24 and reiterated the student-teacher interaction that is comparing to be a major factor from overall responses: "*These platforms were doing well in past few months when the covid19 broke and everyone was in quarantine. But i*

don't think they are well enough. Set aside the problem of internet is up and down sometimes, i think the interacions between teachers and students are far less than in real class. And there can just be a single person talk at one time, otherwise nobody else can clearly hear what's going on, which somehow restrains the potential debate occur." P23 provided the negative response, but without personal experience that suggests a slightly less-than-reliable response: "*No, however let me qualify. Have not used either. My experience with online learning is that when a team is trying to do something, if something is a project and everyone should participate, things can move forward without someone getting an opportunity for input before a given time*." While the opinion is welcomed, use as a reliable view can be negated since the participant has no real experience with digital learning.

RQ2 Results and Selected Participant Transcriptions

RQ2 was a query into the preferences digital platforms of the users for whatever reason they might have for these opinions. Of the responses, 17 (53.125%) showed the greatest rate of preference with the Chinese Tencent platform of WeChat. Of those responses, only participant P14 provided an explanation: "*WeChat or some other Apps like it. They can be used on both mobile phone and computer at the same time. By the way, I don't need to spend more time to prevent the terrible internet speed*." Other applications included the LinkedIn Learning platform that was nominated three times, and the MS Teams, Coursera, and YouTube applications were nominated twice. Single nominations were received for Zoom, Dingding, Edx, Facebook, Facebook Messenger, MarcoPolo, Line, Codecademy, Freecodecamp, Curiositystream, Nebula, Moodle, and Repl.it. A generalized call for mobile apps was offered three times, sometimes alongside specific platforms and sometimes not, and only one participant failed to respond to RQ2. The preliminary indication is that the WeChat platform is most preferred when it concurs with the predilection that younger generations have with technology-based platforms utilizing standard PC and mobile connectivity, as outlined in several studies in other regions (Dwivedi et al., 2020; Pillai et al., 2020; Rodrigues, Franco, & Silva, 2020; Williamson, Eynon, & Potter, 2020).

RQ3 Results and Selected Participant Transcriptions

RQ3 was a strictly qualitative response mechanism that queried the type of digital marketing messaging platforms participants consider acceptable or engaging. A greater share of participants focused on social media as the primary concern, with mobile media as the secondary, but for which both social and mobile media were not mutually exclusive and some of those responses included other nominations, while others were only for one or the other. This outcome prompted another categorization based on the variations:

a. Mobile Media Only: Four participants indicated mobile media as their sole preference for the digital platform learning medium.

b. Email and Mobile Media: Only one participant indicated the preference for email communication and mobility as the sole response.

c. Social Media and Mobile Media: The combination of social media and mobile media was expressed only twice.

d. Three or More Nominations: Combinations of email, social media, and print press was nominated once, while the triple combination of email, social media, and TikTok was also expressed once.

e. Email Only: The nomination of email as a digital marketing learning platform was expressed only once.

f. Social Media Only: The social media preference received the greatest number of participant nominations at 6 of the 32 responses.

Viewed separately, social media received the highest nominations with 37.5% of participant responses, mobile media received the second highest nominations at 21.875%, email receiving the third highest nominations at 18.75%, and with print press and TikTokboth coming in equally at 3.125% of responses. But, of all the responses for RQ3, none of them gave any clarifying explanations as to why those nominated preferences were chosen. The result of RQ3 and the lack of clarification of *n* could very well suggest future studies could explore this specific issue in greater detail for the criteria or influencing factors that digital marketers in general could utilize not only for education but for other aspects of the digital marketing and education research paradigm.

RQ4 Results and Selected Participant Transcriptions

RQ4 determined any recommendations from participants if there are no acceptable or engaging digital marketing platforms and messaging suitable to marketing education currently in existence, of which 5 failed to answer RQ4 entirely. But, from the answers that were received for RQ4, the responses resulted in the most diverse and informative of all four questions on how the digital marketing learning could or should progress. At 15.625% of *n*, the preference for offline learning and expressing a dislike of online learning in general was most significant. After that, the responses had significantly fewer similarities negating a collective percentage impact on the response body whole. P2 expressed the preference of learning via prerecorded videos: "*making videos to teach*." P5 expressed improving the available technology used for digital platforms: "*My ideal learning platform is that many people can share online real-time video without freezing and there will be regular learning or review reminders and programs that can self-test knowledge points*." P30 also agreed with these sentiments: "*live streaming*" and P4 stated that the current platform arrangement was "*acceptable*" and gave no further alliteration on improvements could be made. P6 points to further enhancing the interaction between teacher and students: "*a platform that allows more immediate interaction between teachers and students*." But, there does not seem to be any suggestive response on how to improve communication, whether it be process or methodology centric, or be it hard or software focused. This sentiment was shared by P10 that stated, "*interaction is the most important thing, and it also need to be easy and stable to use*" and P14 reiterated these sentiments: "*The teacher and students will need more chance to communicate and talk about these topics. In this way, the students may learn more*." P7 expressed, "*I hope there will be more convenient online teaching*" but again as with P6, there does not seem to be any suggestion on what is needed or how to address the issue. P17 seemed to have a similar view: "*Be able to launch more user-friendly features*" but, yet again, without any specific suggestions what is needed or how to address it. This is also a similar expression from P19, "*I hope there has a platform which can make it easier to get the resource of knowledge*."

P8 came up with a unique take by stating, "*Build the foundation of the marketing course and share internal and external resources by using other acceptable platforms with each other after class*." This suggests that whatever improvements are made to the foundational marketing course and/or instruction, the key variable is the sharing of teaching processes or resources outside of

the learning environment. This is a particular comment that deserves greater exploration in further studies to determine what type, method, environment, etc. the respondent is referring to for "*after class*" sharing mentioned.

While P15's response was more focused on stepping outside of the traditional classroom environment, it is nevertheless more relevant to the post-class sharing suggestion offered by P8: "*i assume that we can go outside and do something with our professor's help. because this way we can learn it better. otherwise we learn business in the class,may be feel bored and don't know how to use it in social*." P9 stated: "*Learning from the real lives. By other experienced people or good quality of data*." The implication is that the subject should be augmented by industry professionals and/or anecdotal experiential cases that enhance the unit's lesson objective. P27 states, "*I think the digital education of marketing needs to be carried out in combination with the current reality. Maybe some e-commerce related content can be added*." The message is clear; the curriculum content needs to be updated and inclusive of digital environments of the modern world, for which future graduates undoubtedly will be face with in greater consideration than previous generations of marketing graduates.

CONCLUSIONS & RECOMMENDATIONS

The goal of this study was to ascertain the role of digital marketing education in light of the increased demand of digital learning mediums from increasing technology usage and demand by the target customer (*N*), the students, as well as the radical changes in learning mediums due to the Covid-19 pandemic impacts. In that regard, the evidence from the participants reveals two clear outcomes deficiencies in knowledge and awareness of digital marketing for Southeast/East Asian tertiary institutions: One, the comprehension of the usefulness and context of digital marketing is lacking a cohesive, homogenic understanding among educational customers (i.e. students) and practitioners (i.e. professors) for digital learning and digital marketing; and two, the ideas and suggestions on improving the digital learning/marketing environment is also lacking a cohesive and homogenous understanding on what and how to improve anything due to their unfamiliarity of the topic mentioned in the first deficiency.

Yet, the results of the participant responses, while being consistent in recognizing the need for improvement despite the lack of consistency in precisely how and what needs to be improved, nevertheless provided valuable insights into the problem. The recommendations for tertiary institutions in the Asian/east-Asian region for digital marketing curriculum revision and development are detailed below.

In RQ1, half of the responses agreed with existing digital formats while the other half did not agree, but still gave no consistent responses on what or how to improve. Such lacking in consistency reinforces the notion that not enough knowledge or information is readily available in Southeast/East Asia regional learning about the extent and capabilities of digital learning environments, and less on digital marketing. This outcome emphasizes the need for tertiary institutions in the Asian/east-Asian region to use studies such as this one as a baseline from which to focus more specific research initiatives in how to increase the knowledge and awareness of digital marketing and online learning environments to the average user of the target population (*N*). Community outreach programs older generations, i.e. parents or guardians, are advisable, as well as increasing exposure of digital marketing capabilities and necessities to educate the public using social media and mobile app platforms are recommended for younger

generations, i.e. students, that comprise the primary *N* targeted for this study and tertiary institutional branding efforts.

RQ2 focused on the specific digital platforms recommended or preferred for enhancing digital marketing and learning environments. Of the four research questions, RQ2 provided a slightly more consistent view with the greater share of Southeast/East Asian learners and instructors, as well as the minor participating western respondents, into the mediums relevant and/or useful to digital learning. The outcomes of RQ2 give a specific recommendation for Southeast/East Asian learners' preference for Tencent platforms in digital marketing contexts, and thereby offer the greatest suggestive improvement efforts that institutional and regional learning goals can utilize in their curriculum revision and development initiatives. The challenge to such focus on the Tencent/WeChat platform is the whether or not this would be an applicable platform outside of the mainland Chinese user, a platform that apparently is rarely used by the other targeted participants in Southeast Asia such as Thailand, Cambodia, Myanmar, etc. (Luo, & Yang, 2016; Plantin, & de Seta, 2019; Ruan et al., 2016). The outcome of RQ2, therefore, has the greatest need of all the research questions for further study by tertiary institutions in the Asian/east-Asian region that quantitatively differentiates the suggested platforms throughout the region for specific applicability to targeted locations' preferences *and* technological relevance for the WeChat application in both digital learning subject context and reliability of service.

RQ3 was inconsistent in suggestive responses usable for curriculum revision and development efforts of either digital marketing or generalized digital learning environments. The identification of social media and mobile media as the preference for the type of digital marketing messaging platforms participants consider acceptable or engaging does reinforce the outcomes of RQ1 and RQ2 that is digital platforms for educational purposes should be inclusive of appropriate hardware and digital accessibility, but the lack of mutual exclusivity with various differing responses for specific or generic apps makes the usefulness of RQ3 outcomes strained by institutional efforts in enhancing digital marketing and learning curriculum revision and development goals. Such concerns are the focal point for many other studies seeking to understand how to integrate and/or improve digital platforms in tertiary education (Hayashi, Garcia, &Maddawin, 2020; Hinings, Gegenhuber, & Greenwood, 2018; Oravec, 2019; Teräs et al., 2020; Tulinayo, Ssentume, &Najjuma, 2018; Williamson, Bayne, & Shay, 2020; Wong, & Chu, 2020). What is needed from this study's base understanding for tertiary institutions in the Asian/east-Asian region is further studies determining more exact and precise suggestions in applications that are directly relatable to social media platforms to compare with applications for mobile media, and querying whether or not such results would have differences that can contribute to higher costs in revision and development goals, or similarities that help to decrease such concerns surrounding the vast arey of studies for the rest of the world (Chugh, &Ruhi, 2019; de Reuver, Sørensen, &Basole, 2018; Kleis-Nielsen, &Ganter, 2018; Gomber, Koch, &Siering, 2017; Graham, Hjorth, &Lehdonvirta, 2017).

RQ4 was anticipated to reveal the most recommendations for improvements, applications, and general feedback of participants on the nature of digital marketing and education curriculum revision and development efforts that tertiary institutions in the Southeast/East Asia region could utilize in their enhancement goals (Assunção Flores, & Gago, 2020; Berchin et al., 2018; Li, Wong, & Ye, 2018; Wong, & Chu, 2020). For this purpose, RQ4 can be considered successful since the respondents gave clear and concise responses that any tertiary in the region can use in their improvement goals. Conversely, the lack of consistency and homogeneity in responses for

suggestive improvements make RQ4 another definable topic for future studies determining precisely how tertiary institutions in tertiary institutions in the Asian/east-Asian region can revise and develop their digital marketing curriculum to be more relevant to digital marketing demands of any industry.

The preferences of the targeted *N* showed the anticipated preference types for offline learning, greater technological reliability, increased communication and interaction between student and instructor, and a variety of specific applications, but all from a heterogeneous perspective. The lack of clarity in responses towards each of the question topics on what it is or how to use it implies the region as a whole does not possess enough precise recognition of digital marketing even is, let alone how to use in a learning environment. To reiterate, the focus for tertiary institutions in the Asian/east-Asian region is to increase the level of awareness of digital marketing and digital learning platforms in recognition of how vital the digital platforms are becoming to tertiary institutional efficiency of learning objectives, regardless of the lacking in cohesive voice of what it is or how to use it for learning objectives. That outcome is the driving ambition future studies in the region should focus on so as to clarify the components tertiary institutions can utilize with more efficiency in their revision and development efforts.

REFERENCES

Abbas, J. How many respondents are required for conducting a research paper?, ResearchGate, 2018; Online forum post: https://www.researchgate.net/post/How_many_respondents_are_required_for_conducting_a_research_paper#:~:text=As%20a%20rule%20of%20thumb,%3D%20150%20responses%20(minimum)

Adzovie, D. E., Jibril, A. B., Adzovie, R. H., &Nyieku, I. E. E-learning resulting from Covid-19 pandemic: A conceptual study from a developing country perspective. In 7thEuropean Conference on Social Media ECSM, 2020; 19

Alawamleh, M., Al-Twait, L. M., & Al-Saht, G. R. The effect of online learning on communication between instructors and students during Covid-19 pandemic, Asian Education and Development Studies, 2020

Ali, W. Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic, Higher Education, 2020; 10(3), 16-25

Alsheikhidris, M. A. A. Challenges for moving Chinese language courses online, Education and Quarterly Reviews, 2020; 3(3)

Assunção Flores, M., & Gago, M. Teacher education in times of COVID-19 pandemic in Portugal: National, institutional and pedagogical responses, Journal of Education for Teaching, 2020; 1-10

Benedek, A., Horváth, C. J., Teixeira, A. M., Szűcs, A., &Mázár, I. New methods in the digital learning environment: Micro contents and visual case studies, In Re-Imaging Learning Environments: Proceedings of the European Distance and E-Learning Network 2016 Annual Conference. Budapest: European Distance and E-Learning Network, 2016; 27-34

Berkowitz, J. Sampling and sample size: Sample size estimation. [Online lecture notes], Columbia University, 2019

Boulton, C. A., Kent, C., & Williams, H. T. Virtual learning environment engagement and learning outcomes at a 'brick-and-mortar' university, Computers & Education, 2018; 126(1), 129-142

Berchin, I. I., Sima, M., de Lima, M. A., Biesel, S., dos Santos, L. P., Ferreira, R. V., ... &Ceci, F. The importance of international conferences on sustainable development as higher education institutions' strategies to promote sustainability: A case study in Brazil, Journal of Cleaner Production, 2018; 171(1), 756-772

Chugh, R., &Ruhi, U. Social Media for Tertiary Education, Encyclopedia of Education and Information Technologies, 2019

Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., ... & Lam, S. COVID-19: 20 countries' higher education intra-period digital pedagogy responses, Journal of Applied Learning & Teaching, 2020; 3(1), 1-20

Crittenden, V., Peterson, R. A. Digital disruption: The transdisciplinary future of marketing education, Journal of Marketing Education, 2019; 41(1), 3-4

de Reuver, M., Sørensen, C., &Basole, R. C. The digital platform: A research agenda, Journal of Information Technology, 2018; 33(2), 124-135

Dhawan, S. 8 Ways to create a digital strategy that attracts & engages students, DMIblog, 2020

Dwivedi, Y. K., Hughes, D. L., Coombs, C., Constantiou, I., Duan, Y., Edwards, J. S., ... & Raman, R. Impact of COVID-19 pandemic on information management research and practice: Transforming education, work and life, International Journal of Information Management, 2020; 10(2), 211

Fierro, I., Cardona Arbelaez, D. A., &Gavilanez, J. Digital marketing: A new tool for international education, Pensamiento&Gestión, 2017; (42), 241-260

Franceschini, I., &Nesossi, E. State repression of Chinese labor NGOs: A chilling effect?, The China Journal, 2018; 80(1), 111-129

Gomber, P., Koch, J. A., &Siering, M. Digital Finance and FinTech: current research and future research directions, Journal of Business Economics, 2017; 87(5), 537-580

Graham, M., Hjorth, I., &Lehdonvirta, V. Digital labour and development: impacts of global digital labour platforms and the gig economy on worker livelihoods, Transfer: European Review of Labour and Research, 2017; 23(2), 135-162

Hanafi, H. F., Said, C. S., Wahab, M. H., &Samsuddin, K. Improving students' motivation in learning ICT course with the use of a mobile augmented reality learning environment, IOP Conference on Service Materials & Scientific Engineering, 2017; 226(1), 12-114

Handayani, F., &Handayani, N. D. The potential of online writing tools for EFL university students during the Covid-19 pandemic, JEE (Journal of English Education), 2020; 6(1), 9-9

Hayashi, R., Garcia, M., &Maddawin, A. Online Learning in Sri Lanka's Higher Education Institutions during the COVID-19 Pandemic, Asian Development Bank, 2020

Hinings, B., Gegenhuber, T., & Greenwood, R. Digital innovation and transformation: An institutional perspective, Information and Organization, 2018; 28(1), 52-61

Izumi, T., Sukhwani, V., Surjan, A., & Shaw, R. Managing and responding to pandemics in higher educational institutions: Initial learning from COVID-19, International Journal of Disaster Resilience in the Built Environment, 2020

Kleis-Nielsen, R., &Ganter, S. A. Dealing with digital intermediaries: A case study of the relations between publishers and platforms, New Media & Society, 2018; 20(4), 1600-1617

Kusumawati, A. Impact of digital marketing on student decision-making process of higher education institution: A case of Indonesia, Journal of e-Learning and Higher Education, 2019

Langan, R., Cowley, S., & Nguyen, C. The state of digital marketing in academia: An examination of marketing curriculum's response to digital disruption, Journal of Marketing Education, 2019; 41(1), 32-46

Lee, A. Invisible networked publics and hidden contention: Youth activism and social media tactics under repression, New Media & Society, 2018; 20(11), 4095-4115

Li, K. C., Wong, B. T. M., & Ye, C. J. Implementing learning analytics in higher education: the case of Asia, International Journal of Services and Standards, 2018; 12(3-4), 293-308

Liu, Q., Allard, B., Lo, P., Zhou, Q., Jiang, T., &Itsumura, H. Library user education as a window to understand inquiry-based learning in the context of higher education in Asia: A comparative study between Peking University and the University of Tsukuba, College & Research Libraries, 2019; 80(1), 8

Lui, R. W., & Au, C. H. Designing simulation games for information systems education – A case study in teaching for digital marketing, 2017 IEEE 6th International Conference on Teaching, Assessment, and Learning for Engineering (TALE), 2017; 290-295

Luo, H., & Yang, C. Using WeChat in teaching L2 Chinese: An exploratory study, Journal of Technology and Chinese Language Teaching, 2016; 7(2), 82-96

Oravec, J. A. Academic metrics and the community engagement of tertiary education institutions: Emerging issues in gaming, manipulation, and trust, Tertiary Education and Management, 2019; 1-13

Palvia, S., Aeron, P., Gupta, P., Mahapatra, D., Parida, R., Rosner, R., & Sindhi, S. Online education: Worldwide status, challenges, trends, and implications, Journal of Global Information Technology Management, 2018; 21(4), 233-241

Pillai, S. V., Mathew, L. S., Daniel, A., & Abhilash, V. S. Technology enabled online learning in a digital age, Asian Journal of Management, 2020; 11(3), 266-274

Plantin, J. C., & de Seta, G. WeChat as infrastructure: The techno-nationalist shaping of Chinese digital platforms, Chinese Journal of Communication, 2019; 12(3), 257-273

Plungpongpan, J., Tiangsoongnern, L., &Speece, M. University social responsibility and brand image of private universities in Bangkok, The International Journal of Educational Management, 2016; 30(4), 571-591

Rodrigues, M., Franco, M., & Silva, R. COVID-19 and disruption in management and education academics: Bibliometric mapping and analysis, Sustainability, 2020; 12(18), 7362

Ruan, L., Knockel, J., Ng, J. Q., & Crete-Nishihata, M. One App, Two Systems: How WeChat uses one censorship policy in China and another internationally, Citizen Lab Research Report No.84, University of Toronto, 2016

Schiele, K., & Chen, S. Design thinking and digital marketing skills in marketing education: A module on building mobile applications, Marketing Education Review, 2018; 28(3), 150-154

Sinpeng, A. Digital media, political authoritarianism, and internet controls in Southeast Asia, Media, Culture & Society, 2020; 42(1), 25-39

Skoric, M. M., Zhu, Q., & Pang, N. Social media, political expression, and participation in Confucian Asia, Chinese Journal of Communication, 2016; 9(4), 331-347

Suh, C. S., Vasi, I. B., & Chang, P. Y. How social media matter: Repression and the diffusion of the Occupy Wall Street movement, Social Science Research, 2017; 65, 282-293

Teräs, M., Suoranta, J., Teräs, H., &Curcher, M. Post-Covid-19 education and education technology 'solutionism': A seller's market, Postdigital Science and Education, 2020; 1-16

Tulinayo, F. P., Ssentume, P., &Najjuma, R. Digital technologies in resource constrained higher institutions of learning: a study on students' acceptance and usability, International Journal of Educational Technology in Higher Education, 2018; 15(1), 36

Williamson, B., Bayne, S., & Shay, S. The datafication of teaching in higher education: Critical issues and perspectives, Teaching in Higher Education, 2020; 25(4), 351-365

Williamson, B., Eynon, R., & Potter, J. Pandemic politics, pedagogies and practices: Digital technologies and distance education during the coronavirus emergency, Learning, Media and Technology, 2020; 45(2), 107-114

Wong, W., & Chu, M. Digital Governance as Institutional Adaptation and Development, China Review, 2020; 20(3), 43-70

Xia, S. E-governance and political modernization: An empirical study based on Asia from 2003 to 2014, Administrative Sciences, 2017; 7(3), 25

Zahay, D., Altounian, D., Pollitte, W., & James, J. Effective resource deployment in digital marketing education, Marketing Education Review, 2019; 29(3), 182-192

Zhou, L., Wu, S., Wu, Z., Fangmei, M., & Ming, L. School's out, but class on: The largest online education in the world today: Taking China's practical exploration during the COVID-19 epidemic prevention and control as an example, Best Evidence on Chinese Education, 2020; 4(2), 501-519

Zhuang, C., Zhou, Y., & Lin, F. Analysis of digital marketing strategies of overseas universities in China with University of the West of Scotland as an example, International Conference on Transformations and Innovations in Management, 2017; 1002-1008

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

AN OVERVIEW ON SOCIAL MEDIA INFLUENCER MARKETING

Dr. Vipin Jain*

* Professor,
Department of Finance & Account,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: vipin555@rediffmail.com

DOI: 10.5958/2249-877X.2021.00112.0

ABSTRACT

Influencer marketing has risen in popularity, but many businesses are still confused how to harness social media superstars' influence to develop efficient marketing strategies and raise brand awareness through social media. This article proposes and investigates the use of social media influencer marketing to gain a better knowledge of how content brand strategy is implemented through events. A marketing campaign can be seamlessly integrated into an existing brand or product marketing plan. The article looks at event marketing tools and formats, as well as how marketers use them in their campaigns. The article also discusses how to measure the impact of social insights in a specific event marketing strategy. The final study focuses on identifying dominating strategies related to specific events marketing campaigns by measuring and mapping influencers' impact. Social media and influencer marketing have been discovered to have a substantial impact on brand strategy. Influencer marketing's key goals, according to the research, are to increase brand awareness and attract new audiences.

KEYWORDS: *Content Marketing, Customer Insight, Event Marketing, Influencer Marketing, Social Media.*

1. INTRODUCTION

Social media is a group of digital platforms whose growing popularity has transformed the way people interact, prompting businesses to develop online communication strategies that combine online and social media communication. In 2017, content marketing continued to have an impact and grew in sophistication in terms of strategy. Material marketing is a popular marketing method that involves developing and sharing content online, primarily on social media, in order to build consumer relationships. Last year's trend was a major move to video marketing, customization in content marketing, and campaign marketing automation. Companies are putting greater effort into online social networking to communicate with customers. Social graphs are provided by online social networking sites, and marketing communication content must be tailored. Because to the advancement of digital technologies, the majority of the world's population now uses social media. Marketing managers are seeking for the most cost-effective plan, which has led to the development of a new marketing strategy that involves celebrities. Influencer marketing, in comparison to prior techniques, focuses on using prominent leaders to spread a brand's message to a bigger audience and is a recent phenomenon. The goal of this study is to gain a better understanding of how we may use a creative and engaging brand event

marketing approach to communicate a brand and later a product[1]. The study is divided into two sections.

To begin, the essay explains the fundamentals of a social event marketing campaign. It is common for this form of event promotion to have both an online and offline component. The campaign is divided into two parts: a social media campaign and a festival event. Second, using event marketing communications, this study examines the impact of the chosen influencer on the firm's customers. In addition, a literature review and secondary data analysis are contingent on publication by January 2018. Finally, the authors address the consequences for future academic research and marketing practice. Influencer marketing is a relatively new concept that has quickly shown to be a successful means of promoting products. This thesis will examine the concept of influencers and how businesses may maximize their working to provide a better grasp of how to employ influencer marketing. Influencer marketing has been given numerous meanings in the previous few years, despite being a relatively new idea. The technique of discovering persons who have influence over a target audience is known as influencer marketing[2].

Are more precise, defining influencer marketing as "a process of discovering and engaging individuals who have influence over a certain target demographic or media in order to be part of a brand's campaign to improve reach, sales, or engagement?" “Companies try to motivate influencers to endorse their products and thereby build up their image among influencers' typically large base of followers, a strategy known as influencer marketing,” according to their definition. In this analysis, the term "definition" was used. Influencer marketing can then be deemed to be built on the foundation of eWOM, based on the prior criteria. Influencer marketing is the study of how one person can influence others through the dissemination of information, ideas, and support. It's also about recognizing the people who have the most power.

Finally, it's about maximizing the use of important persons to promote a company's product or brand. The top 14 fashion influencers aren't just some unknown person flaunting their expensive outfits; instead, they imply that fashion influence spreads through social networks among like-minded peers[3]. There are many various ways to measure the impact of social media marketing, and considerable study has been done on how to measure social media's intrinsic influence and diffusion. Researchers looked at Twitter, Facebook, and other online social networks, with a variety of results in terms of how to quantify and which characteristics to look at. It's difficult to effectively measure social media networks in order to identify the most important person. The issue arises from the fact that researchers use a variety of metrics while studying various factors. An article compiled all of the most recent Twitter influence measurements. They focused on centrality, which is the concept of determining the most important (or influential) node in a network, i.e. an influencer. An influencer who, like an opinion leader, focuses on the internalization process of influence.

They imply that the influence is exerted by a trustworthy influencer who possesses qualities such as honesty, sincerity, originality, credibility, competence, and trustworthiness. Furthermore, when the customer is in a low-stress environment and has time for a higher level of engagement, it is advantageous for an opinion leader in terms of influence. Their research is useful for revealing distinct keys of influence because they share many qualities with an opinion leader. The type and quality of content published by an influencer has an impact on the level of engagement. Possible determinants of brand post popularity were investigated in order to

determine what content was responsible for the high number of likes and comments on social media. Various tactics showed to have different results based on the purpose of the post, such as the amount of likes or comments. Vivid content, such as a video or a contest, was found to have a favorable impact on the amount of likes, however highly interactive content, such as a question, was found to have a negative impact. "An inquiry necessitates a response, which cannot be provided by liking a brand post." In retrospect, questions were a good way to increase the number of comments because they inspire followers to give a response by posting on the post. The followers' reaction to the content being posted was also crucial, as comments could affect other followers who were participating in the same activity[4]. Positive comments were observed as increasing the attractiveness of the content, which would lead to a larger dissemination.

1.1 Identifying Influencers Based on Their Characteristics:

Influencers are divided into two categories. The first is the specialist who is relying on their knowledge. The micro-celebrity, on the other hand, depends on their character. The source credibility paradigm and the big 5 personality traits will be utilized to create a list of qualities that can be used to distinguish the two[5].

1.2 Identifying Influencers:

While the necessity of recognizing social media influencers has been emphasized, the study is ultimately restricted to the exact details of what characteristics define an influencer. Identifying influencers is a question of reach ability, as determined by the amount of followers, and diffusion, as measured by the impact fulness of the message conveyed ("power of retweet"). Identifying influencers entails locating people who have made an effort to improve their personal branding. Furthermore, influencers can be identified by observing how they write and behave when communicating with their followers, as this is a common element. They imply that they frequently and freely communicate their thoughts and sentiments, whether positive or bad, on social media[6]. Leaders serve as de facto influencers, while celebrities and public figures serve as the most powerful influencers. Influencers are described as micro-celebrities, with the importance of a large network mentioned, but no specific influencer qualities are mentioned[7].

1.3 Optimizing the Collaboration with an Influencer:

The remainder of the presentation will discuss major reasons for creating engaging content and how organizations can use it to their advantage, as well as the concepts of influencer marketing and the many sorts of influencers. The first section discusses engagement drivers, which is concerned with how the correct material can lead to increased interaction. Second, the question of how such content can be developed is raised[8].

2. REVIEW OF LITERATURE

The marketing industry is changing at the same time as the online revolution, and social media influencer marketing could be a great option to other methods of marketing, according to Nam et al. The writers did a study in Ho Chi Minh City and reviewed the material on social media Influencer marketing. The authors discover that consumers have a high level of trust in influencer marketing, and that four factors, including the influencer's trust, the quality of content, the relevance of the endorser to the product, and the consumer's participation, have a significant impact on the consumer's purchasing intention. The findings suggest that influencers trust is an important aspect of influencer marketing[9].

Morgan Glucksman was a student who was interested in learning more about Influencer marketing is an emerging concept in public relations that involves discovering, engaging, and supporting people who initiate discussions with a brand's customers. In recent years, this strategy has shifted to a focus on social media, giving firms the ability to sell through social media influencers. The author used nodes are usually analysis as well as descriptive qualitative analyses of postings by social influencers to study this issue. The use of social media influencer marketing in public relations projects has broken down the barrier between the consumer and the company, changing the way the two interact, according to the findings[10].

3. DISCUSSION

3.1Measuring the Results of Influencer Marketing:

It's critical to examine the match and connection with an influencers before engaging with them in order to create the ideal conditions for a successful result. It's more vital to focus on measurable facts to analyze the accuracy and outcome after collaborating with an influencer. Return-on-investment (ROI) estimates are commonly used to assess the success of a social media campaign. Marketers consider social media ROI to be a cost calculation, similar to the cost of starting a blog. The return on investment (ROI) via social media is distinct from traditional ROI. In other words, social media initiatives should be viewed as a long-term investment in establishing your brand and raising awareness, not as a one-time expenditure. Influencers can co-create worth through their influencers on social media, which should be considered when analyzing the results of your digital marketing initiatives. This could be how an influencer interacts with their followers in terms of likes, comments, reach, and other factors. Crucial aspects to consider while evaluating social media findings analyze the reach, impressions, engagement, and conversions of the influencers' marketing message to determine the success of your influencer marketing efforts. This reflects what's vital to track, namely reach and engagement. When it comes to measuring results, the study will focus on these two factors.

3.2 Definition of an Influencer:

An influencer is a person who has created a high level of credibility within a field or a famous and smoothly consumed image of themselves on social media and is able to influence, try and convince, or shape both these people's attitudes through their large following, according to the definition used in this study. Several meanings were presented based on the interviews. Nicole defined an influencer as someone who has the power to affect or influence a large group of people. This is related to the term "influencer," which refers to persons who have the ability to convince or shape the opinions of others. Jasmin assumed it was a person with a large social media following who has earned the trust of those who follow them. A individual who has developed a high level of credibility is referred to be an influencer. An influencer is defined as a person who has the ability to influence others through the use of a digital channel or platform.

3.3 Factors that Make an Influencer Successful:

As a key node in a network, a successful influencer. Degree, proximity, eigenvector, PageRank, and h-index were among the metrics used to explain social media's effect and importance. When asked about successful influencers, the respondents provided responses that differed significantly from what scholars believe to be a successful influencer. Despite the obvious mismatch, this demonstrates the necessity of a good fit between the organization and the influencer. Nicole went on to say that personality contributes to credibility and trust, while George stated that great

influencers must also be business savvy. This is in sharp contrast to what researchers believe constitutes a successful influencer. In the context of effective influencers, the respondents never mentioned factors like the number of followers, high engagement, or other objective criteria. The respondents said that what mattered was how influencers performed in real campaigns and subjective measurement, rather than network statistics or figures. This emphasizes the fact that successful influencers are born and raised in terms of how they portray themselves and how they, as a social media personality, behave on social media in order to build trust and credibility among their followers as well as the companies with which they collaborate.

4. CONCLUSION

Many discrepancies between theory and practice have evidently been noted. Furthermore, whereas theory and practice mostly focus on the same topics, they value them differently. Theory focuses on the physical and quantitative parts of influencer marketing, such as the amount of likes, followers, and comments, as well as how to link influencer marketing to other theories, such as the consumer decision-making process. As a result, practitioners tend to place a greater emphasis on intangible factors such as fit and relationships. While there may be no difference in effectiveness or reach between the two categories of influencers, businesses must choose carefully which influencers to work with. The number of followers, likes, comments, hashtags, or any other numerical metric is irrelevant. What matters most is the influencer's identity and how it corresponds to the brand and/or business attempting to establish a relationship with the influencer. Consumers today are a lot sharper than they used to be, so finding the right fit between a brand and a business with an influencer is critical, according to George. Customers will perceive that the promotion is not real if the fit is bad, and they will not trust it as a result. Nicole emphasized the value of trustworthiness while also emphasizing the importance of exclusivity. She was implying that some influencers take every opportunity to collaborate, which has an impact on the content's credibility and raises the question of whether an influencer's account is a method of sharing their life or a commercial platform. Nicole returned to the researchers' classification of influencers, stating that an influencer who has built a following through their personality may be a victim of cyberbullying if their social media platforms contain too much commercial content. Followers demand material from influencers, and if that expectation is breached by too many promotions, the followers may regard the influencer as abusing a personal relationship.

The interviews have revealed that practitioners employ classification, but not in terms of qualities, but rather in terms of purpose. This makes logical, given that the effectiveness and reach of opinion leaders and micro-celebrities were identical. The classifications suggested in the thesis were just too broad to be useful in classifying influences in practice. Influencer decisions were made at a more comprehensive level. Although the categorization was ineffective in terms of categorizing influencers in terms of efficacy and distribution, distinguishing between influencers may be valuable in other ways. This could be in terms of fit, for example. Assume you're a company seeking to advertise a new apparel line. The target demographic is trendy young females between the ages of 20 and 28, who live in a large, sophisticated metropolis. Businesses should not look for influencers based on their personality or competence when looking for someone to work with. Instead, the corporation should choose a 73 influencer whose identity and fan base are compatible with the brand and the message it is attempting to express. This explains why influencers are not classified as opinion leaders or micro-celebrities by practitioners. It would be an unnecessary step because the effectiveness of an influencer is

determined by the fit between the influencer's identity and the brand's identity. However, as previously said, practitioners continue to categorize in some way. However, this classification is predicated on separating influencers based on their campaign utility rather than their personality or skill. With the knowledge that fit is the most important factor, the methodology's first process must be adjusted accordingly.

REFERENCES

1. M. Glucksman, "The Rise of Social Media Influencer Marketing on Lifestyle Branding : A Case Study of Lucie Fink I . Introduction II . Literature Review," *Elon J. Undergrad. Res. Commun.*, 2017.

2. M. Guruge, "Comparison between Attributes related to Celebrity Endorsement and Social Media Influencer Marketing: A Conceptual Review," *Sri Lanka J. Mark.*, 2018.

3. A. Slivka, "5 Steps To Take Before Starting An Influencer Marketing Campaign On Social Media.," *Forbes.com*. 2018.

4. M. Ranga and D. Sharma, "Influencer Marketing - A Marketing Tool in the Age of Social Media," *Abhinav Int. Mon. Ref. J. Res. Manag. Technol.*, 2014.

5. R. Hobson, "The integration of influencer marketing into social media strategies," *Grad. Sch. Bus. Univ. Cape T.*, 2016.

6. M. Nguyen, "INFLUENCER MARKETING via SOCIAL MEDIA The Perceptions of Vietnamese Consumers," *Bachelor's thesis Bus. Adm.*, 2018.

7. J. Ge and U. Gretzel, "Emoji rhetoric: a social media influencer perspective," *J. Mark. Manag.*, 2018, doi: 10.1080/0267257X.2018.1483960.

8. T. Albus and S. Sharma, "Influencer Marketing Strategies for Indie, Mass and Luxury Brands," *Glob. Cosmet. Ind.*, 2017.

9. L. G. Nam and H. T. Dân, "Impact of social media Influencer marketing on consumer at Ho Chi Minh City.," *Int. J. Soc. Sci. Humanit. Invent.*, 2018, doi: 10.18535/ijsshi/v5i5.10.

10. Morgan Glucksman, "The Rise of Social Media Influencer Marketing on Lifestyle Branding: A Case Study of Lucie Fink," *Elon J. Undergrad. Res. Commun.*, 2017.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

AN ANALYSIS OF WEED MANAGEMENT IN INDIA

Praveen Kumar Singh*

*Assistant Professor,
Department of Agricultural Sciences,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: dr.pksnd@gmail.com

DOI: 10.5958/2249-877X.2021.00113.2

ABSTRACT

Weeds are the most significant impediment to the development of long-term crop production. Weeds control the majority of crop production practices and cause huge losses (37%) as a result of their interference. Farmers use a variety of methods to manage weeds in various crops/cropping systems, the most common of which is the use of herbicides, which is currently at the top of the list due to labor shortages. Environmental, social, and economic concerns about global competition, production costs, soil erosion, environmental pollution, and concerns about the quality of rural life are all raising questions about the systems' long-term viability. The central thesis in new weed management paradigms will be to improve crop competitiveness through preventive methods, cultural practices, mechanical methods, plant breeding, biotechnology, biological control, and crop diversification. Integration of the aforementioned techniques will be critical for long-term weed control that maintains or improves crop productivity, profitability, and environmental quality. The goal of this review is to make it easier to develop environmentally friendly alternative weed management methods that will support crop production systems that use less tillage, herbicide, and other inputs. To achieve this goal, crop ecology research and the development of ecologically based weed management technologies must be dramatically expanded. Adoption of sustainable agricultural practices reduces the intensity of soil manipulation, making it more difficult for weed seeds to germinate, as well as reducing organic matter depletion and soil erosion. As a result, sustainable approaches to weed and soil management may be an option for ensuring long-term crop production.

KEYWORDS: *Agriculture, Food, Management, Plant, Weed.*

1. INTRODUCTION

As the world's population grows, the food demands imposed on agricultural production systems will put existing agricultural methods to the test. Furthermore, sufficient food production in the future can only be accomplished by using sustainable growing methods that limit environmental damage and resource conservation while maintaining high yield and profitability in cropping systems. This article demonstrates how certain unique characteristics of sustainable agriculture point to the necessity for an effective weed management strategy. It's critical to have a long-range plan in place to assist anticipate and prevent future weed issues. Maintaining agricultural production requires effective weed control. Weeds may decrease agricultural production and

quality by competing for light, water, space, and nutrients, resulting in billions of dollars in yearly crop losses. Weeds are almost difficult to eradicate from any particular field due to their capacity to survive and spread via repeated reproduction and dispersion of latent seeds/ vegetative propagules.

The fact that herbicides account for the vast majority of pesticides used in agriculture, far outnumbering inputs for all other major insect groups, demonstrates the significance of weed control to successful cropping. The effectiveness and long-term viability of our weed control methods has a significant impact on the success and viability of agriculture as a whole. Weeds are a significant restriction in agricultural production systems because they operate at the same tropic level as the crop, capturing a portion of the available resources required for plant development. Allowing weeds to grow unchecked will, sooner or later, result in significant agricultural output losses and higher production costs. Weed management by hand is labour demanding, limiting the producing area. Due to a dwindling labour force as a result of male population outmigration, it has become more difficult to recruit labour for weeding and other agricultural tasks in many rural Indian villages. As a consequence, agricultural activities are often pushed back, and labour expenses have risen. For sustained crop production, the scenario necessitates labour-saving weed control techniques. Depending on the weed type and crop weed competition, it can reduce yield by up to 96.5 percent, and some researchers have reported total crop failures[1].

Crop rotation, tillage, and seed washing have been used to control weeds in agriculture from the dawn of agriculture until the advent of herbicides. In the decades after World War II, the increasing availability and acceptance of extremely powerful and selective synthetic herbicides shifted weed researchers' and managers' attention away from nonchemical weed control. Weeds were not considered components of agro-ecosystems in this setting, thus sustainability problems were easily overlooked, and preventative or suppressive weed management methods were dismissed. Weeds have become a significant issue due to a lack of study on various weed management alternatives, especially when chemical weed control has been avoided. Herbicidal control was one of the main catalysts for the intensification of agricultural production systems in the 1940s, which was marked by a massive rise in labour productivity, but the excessive dependence on chemical weed control is today deemed undesirable. For starters, a high level of dependence indicates widespread usage of chemicals that may have severe consequences for food safety, public health, and the environment. Second, agricultural systems that are solely focused on herbicide control are becoming more susceptible, since herbicide resistance is often resulting in circumstances where chemical control of a portion of the weed population is no longer possible.

Finally, the growing popularity of organic agriculture necessitates the development of new weed-control strategies. As a consequence, a variety of paths have emerged, the first of which is a more efficient use of herbicides. This approach may be applied via advancements in application technology, factor adjusted doses, and patch spraying, all of which increase herbicide efficiency and save time. A second approach is to place a greater emphasis on curative control technologies such as cultural, biological, and mechanical weed control. Any change or alteration to the general management of the crop or cropping systems that contributes to the regulation of weed populations and minimizes the negative effect of weeds on crop production is known as preventive and cultural control. Because biological control alternatives are limited, a full dependence on mechanical or agronomical control is undesirable, and herbicidal control is

banned in organic agriculture, cultural control seems to be especially important. Despite the availability of a wide range of cultural control methods, weeds are still cited as the primary productivity barrier in sustainable agriculture. In addition, despite the aim to decrease the heavy dependence on chemical control, cultural management has yet to gain traction in traditional agriculture. Furthermore, the long-term viability of our food production systems, as well as the health and environmental implications of pesticide usage, are quickly becoming major worldwide concerns, reigniting interest in ecological weed control methods[2].

1.1 Preventive methods:

Weed prevention refers to any actions used to prevent new weeds from entering and establishing themselves in an area that has not previously been infected. This may be accomplished via the use of weed-free crop seeds, seed certification, weed regulations, and quarantine laws, among other things. Clean seed legislation, cleaning agricultural equipment and product, cleaning irrigation water, cleaning sand and gravel, and decreasing the quantity of weed seeds returned to the soil may all help to decrease weed spread within a nation. Weeds may be avoided in crop fields by using weed-free seed, avoiding using fresh or partly decomposed FYM or compost, cleaning farm equipment thoroughly before sowing, and maintaining the farm bund and irrigation/drainage channel clear of weeds[3].

1.2 Cultural methods:

By decreasing weed establishment and enabling quicker crop growth to smother weeds, cultural techniques provide crops a competitive edge against weeds. Stale seedbed techniques, crop rotation, increase the competitive ability of the crop, time of seeding and irrigation, inclusion of cover crops, and intercropping, conscious use of crop interference, use of cropping pattern, and tillage systems; employing time, method, rate of sowing, rate of fertilizer, and tillage systems; employing time, method, rate of sowing, rate of fertilizer, and tillage systems; employing time, method, rate of sowing and rate of fertilizer[4].

1.3 Stale seedbed technique:

After seedbed preparation, the field is watered and left unsown to enable weeds to sprout and be destroyed either by a non-selective herbicide or by tillage before to planting in the stale seedbed method. This method slows the emergence of weeds, delaying early crop-weed competition and reducing the weed seed bank. The success of a stale seedbed is determined by a number of variables, including seedbed preparation, emerged weed control methods, weed species, stale seedbed duration, and environmental conditions[5].

1.4 Crop rotation/crop diversification:

Through varied planting and harvest dates, rotating crops with distinct life cycles may disrupt the formation of weed crop associations, limiting weed establishment and therefore weed seed generation, mostly through smothering and allopathic effects. The weed seedbank and quantity of broadleaf weeds are reduced when wheat, maize, and soybeans are grown in rotation. Palmaris minor and other weeds were decreased in population and soil seed bank when the rice-wheat sequence was changed to rice-potato, rice-potato-wheat, or any other sequence. Weed density and weed dry matter output are reduced when the rice-wheat cropping scheme is altered. Rice-wheat-green gram sequence had the smallest population among the three weed groupings, followed by rice-wheat, rice-chickpea, and rice-pea sequences. Diversified cropping systems, the use of different grain crops, forage legumes as green manure, and livestock manure to provide

organic sources of nutrients and organic matter that can reduce weeds by affecting weeds through suppression and the release of allele chemicals, or by providing substrates for other organisms that inhibit weed seedling growth and potentially influence the colonization of an area[6].

1.5 Sowing/planting time:

Although sowing time is a non-monetary input, it has a significant impact on crop production. Early planting gives adapted crop cultivars a competitive advantage against weeds since the crop emerges before the weeds, depriving the weeds of adequate sunlight for emergence and development. Several studies have indicated that seeding rice after the beginning of the monsoon resulted in greater grain production and lower weed density, while late wheat planting reduced Phalaris minor infection[7].

1.6 Cultivars:

Over the last several years, the function of crop genotype in weed control has gotten a lot of attention. Competitive cultivars may reduce weed seed production, restrict future weed infestations, and provide a safe, ecologically friendly, and low-cost weed control technique. Weed suppression and weed tolerance are key characteristics to look for when identifying weed-controlling cultivars. Within a species, cultivars vary in their ability to compete with weeds. This phenomenon is caused by morphological and physiological variations between types, and it may also be influenced by external influences. Seedling emergence, canopy establishment, early fast growth, maximum number of leaves, tall stature, and more tillering capacity are all traits that cultivars with faster seedling emergence, canopy establishment, early fast growth, maximum number of leaf, tall stature, and more tillering capacity have a better competitive ability against weeds[8].

1.7 Sowing/planting methods:

Crop sowing and planting techniques have a major impact on weed population and dry weight. In wheat, zero-till and FIRB sowing produced lower weed density with higher grain yield than conventional tillage and strip till drill system over conventional ill age and flatbed system, and in lentil, zero-till and FIRB sowing produced lower weed density with higher grain yield than conventional tillage and strip till drill system over conventional ill age and flatbed system. This is due to the weed not finding favourable moisture conditions at the surface to germinate due to the avoidance of soaking the entire cultivated soil surface in bed planting. Seeds laying at lower depths did not sprout in zero till seeding by Happy Seder machine with stubble mulching, undisturbed inter row space, and it saves time and energy. In comparison to flatbed and ridge furrow techniques, the BBF method of sowing offers a favourable environment for crop growth and development while also decreasing weed population. In wheat, bidirectional sowing produces less weeds than unidirectional planting, despite the same seed rate. Transplanting under puddle conditions harmed weed growth and resulted in the lowest producer of weed dry weight compared to direct sowing with zero till drill under unpuddled wet seed bed, direct drum seeding of pre-germinated seeds under puddle conditions, unpuddled transplanting, SRI, whereas drum seeding + green manure significantly reduced weed density in direct seeded rice over drum[9].

1.8 Intercropping:

Weed management may be accomplished via intercropping. Planting a variety of plant species together improves weed management by collecting a larger proportion of available resources and

boosting shade and crop competition with weeds in tighter crop spacing. Intercropping also lowers weeding costs and increases the system's overall production and monetary rewards. Intercropping, or selectively spreading several kinds of crops, such as legumes, cucurbits, and sweet potatoes, helps to create a quicker and denser ground cover, which inhibits weed development and minimizes erosion. However, due of the varying canopy coverage, this method is insufficient to guarantee effective weed management. Where intercropping offers a stronger competitive impact against weeds in light, time, or area than monocropping, evidence of improved weed suppression was quite apparent. Over solo sugarcane, sugarcane + black gram, and sugarcane + okra intercropping, sugarcane + green gram intercropping had the lowest weed dry weight and the greatest cane yield[10].

1.9 Planting pattern:

2 Planting pattern, which modifies the crop canopy structure

3 and micro climate, in combination with weed management

4 practices, may influence the weed infestation to a great extent

5 (Dwivediet al., 2012) and hypothesized that increased crop

Planting patterns, which alter crop canopy structure and microclimate, in combination with weed management practices, may have a significant impact on weed infestation. It is hypothesized that increasing crop density, reducing row spacing, and increasing spatial uniformity can improve weed suppression by improving crops' competitive ability with weeds. Competition with weeds begins sooner in a completely uniform grid design, where the distance between individual crop plants inside the row and between the rows is equal, than in a row pattern, where competition between individual crop plants is postponed as long as feasible. Due to a fast canopy closure, crop competitiveness for limited resources will increase, decreasing weed seedling development and soil weed seedbank. Bi-directional row orientation had the lowest dry matter of weeds in wheat, followed by North-South row orientation, cross sowing at 22.5x22.5 cm, and standard 22.5cm. This may be due to a superior smothering effect.

1.10 Cover crops/green manures:

Growing cover crops, have potential as an important component of a system oriented ecological weed management strategy for sustainable agriculture, because it conserve soil and moisture, enhancing soil nutrient status, total biomass production and lowering temperature within the crop canopy, suppress weed growth due to allopathic effects or by shading . Besides the allopathic effects, crop covers reduce the sunlight exposure of weeds and compete with the weeds for water, nutrient and space. Use of the cover crops and organic amendments promotes the fungal, bacterial and mycorrhizal communities that may be detrimental to weeds and beneficial for the crops. Growing of non-legume crops in the rotation as a cover crop utilize the surplus nitrogen from the soil that prevent nitrate nitrogen removal and also reduce the available nutrients for weed germination and its growth.

2. DISCUSSION

Weed management technologies can be used to control weeds in a variety of ecosystems. The available technologies must be fine-tuned to meet the specific needs of the farming community and others in their specific locations. There is a need to expand infrastructural facilities for weed control research, extension, and adoption. The need of doing need-based fundamental research

on weed biology and ecology in order to develop location-specific integrated weed control methods via collaborative research with other agricultural disciplines should be highlighted. Indian scientists must collaborate more with foreign institutions and weed experts from across the globe to solve weed control issues in the face of climate change. The private sector's role in large-scale adoption of integrated weed management programs in various crops is critical. They must realize that herbicides are just one weapon in the fight against weeds, and that there are many other variables to consider when planning and implementing a weed management strategy. Small farmers in India will benefit from a system-based weed control approach that includes strong cultivars, adequate agronomy and land management, appropriate application technology, and correct herbicide rotation.

3. CONCLUSION

India's agroclimates and soil types are diverse. Different kinds of weed issues plague the vast array of agricultural and fanning systems. Weeds reduce agricultural yields by 10 to 80 percent, as well as lowering product quality and posing health and environmental risks. Agriculture, forestry, and the aquatic environment are all hampered by invasive alien plants. Problematic weeds unique to a crop (weedy rice in rice) are developing as a challenge to agriculture, impacting crop yield, product quality, and farmer revenue. Weed management in India has always relied heavily on human weeding. Increased labor scarcity and expenses, on the other hand, are pushing farmers to use labor and cost-cutting methods. Herbicides are one of them, with a 15 percent yearly growth rate. Indian farmers use integrated weed management (IWM), with different degrees of acceptance from one farm to the next. Resistance has evolved in Phalaris minor Retz as a result of continuous application of iso-proturon along with mono-cropping rotation of rice-wheat. In India's northwestern region. Conservation agriculture has been adopted as a component of IWM in the rice-wheat cropping system as a result of efforts to control herbicide resistance. Herbicide effectiveness is the focus of most weed control research in India. Herbicides, used alone or in combination, have long been considered as critical tools for controlling weeds in a variety of environments. IWM is promoted in agricultural production systems, as well as aquatic and forest environments, and comprises preventive, mechanical, cultural, chemical, and biological approaches. HR transgenic crops have the potential to enhance weed control efficiency and promote CA adoption in India, assuming that the hazards related with such crops are well investigated before to their acceptance and commercialization. Newer weed management methods must be created to account for the danger of HR weeds, as well as the recurrence and persistence of weeds, as well as the need to reduce weed control costs to increase farmer profit while preserving the environment. Understanding weed ecology and biology, as well as the use of information technology, should all be part of creating and disseminating efficient, cost-effective, and environmentally friendly IWM methods in India. This article discusses a detailed overview of weeds and weed control in India.

REFERENCES:

1. J. H. Westwood *et al.*, “Weed Management in 2050: Perspectives on the Future of Weed Science,” *Weed Sci.*, 2018, doi: 10.1017/wsc.2017.78.

2. P. Neve *et al.*, “Reviewing research priorities in weed ecology, evolution and management: a horizon scan,” *Weed Research*. 2018, doi: 10.1111/wre.12304.

3. K. Ramesh, A. Matloob, F. Aslam, S. K. Florentine, and B. S. Chauhan, “Weeds in a

changing climate: Vulnerabilities, consequences, and implications for future weed management," *Front. Plant Sci.*, 2017, doi: 10.3389/fpls.2017.00095.

4. V. Nichols, N. Verhulst, R. Cox, and B. Govaerts, "Weed dynamics and conservation agriculture principles: A review," *Field Crops Research*. 2015, doi: 10.1016/j.fcr.2015.07.012.

5. B. Baraibar, M. C. Hunter, M. E. Schipanski, A. Hamilton, and D. A. Mortensen, "Weed Suppression in Cover Crop Monocultures and Mixtures," *Weed Sci.*, 2018, doi: 10.1017/wsc.2017.59.

6. J. Salonen, T. Hyvönen, and H. Jalli, "Weed flora and weed management of field peas in Finland," *Agric. Food Sci.*, 2005, doi: 10.2137/145960605774826037.

7. P. J. Pieterse, "Herbicide resistance in weeds–a threat to effective chemical weed control in South Africa," *South African J. Plant Soil*, 2010, doi: 10.1080/02571862.2010.10639971.

8. R. E. Engel and R. D. Ilnicki, "Turf weeds and their control," in *Turfgrass Science*, 2015.

9. D. D. Buhler and R. G. Hartzler, "Weed biology and management," in *Soybeans: Improvement, Production, and Uses*, 2016.

10. H. Watanabe, "Development of lowland weed management and weed succession in Japan," *Weed Biology and Management*. 2011, doi: 10.1111/j.1445-6664.2011.00419.x.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

REVIEW ON STUDIES ON USER GENERATED CONTENT

Ankit Kumar*

* Associate Professor,
Department of HR & Financial Management,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email Id: ankit.management@tmu.ac.in

DOI: 10.5958/2249-877X.2021.00115.6

ABSTRACT

The paper gives a comprehensive assessment of communication research on user-generated material, with a focus on content analysis. The current state of research on this relatively new and fast evolving area is thoroughly discussed, and deficiencies are identified. The assessment is based on a content analysis of nine peer-reviewed articles that cover relevant approaches. It contains editions of the journal from 2004 to 2012. The research concludes from the findings that user created information is studied by scholars from a range of perspectives and provides opportunities for interdisciplinary collaboration, but that various issues highlighted by the constantly changing nature of the content are not adequately addressed. Feedback, also known as User-Generated Content (UGC), occurs when past buyers post their experiences online for other people to read, including new buyers. This research presents a paradigm to investigate the impact of user-generated content (UGC) on consumers' online product purchase intentions based on a thorough literature analysis. The findings of this study are likely to add to the body of knowledge on user-generated content and aid marketers and online company owners.

KEYWORDS: *Content Analysis, Methods, Produsage, Systematic Review, User Generated Content.*

1. INTRODUCTION

User generated content (UGC) applications such as Twitter, weblogs, and social networking sites have become major areas of study in communication research, owing to technology advancements and growing user acceptance. A variety of areas are interacting with the analysis of media involvement by taking diverse views and employing different approaches. Media sociology, journalism research, media content research, and reception and impacts research are examples of such fields. The UGC research is yielding results on a phenomena that is only a few years old but has already had a significant important role in the communication landscape. A comprehensive review of empirical communication studies on UGC published in international publications serves as the focus of this paper.

Researchers must refer to current information to rectify methodological flaws, confirm results, and fill research gaps as part of the cumulative process of making scientific advancement. In this context, systematic reviews of research can help by providing an overview of the scope of existing research, the prevalence of methodologies utilized, and the problems encountered. The

goal is to use a systematic technique to reveal the current state of research on a relatively young and fast developing research object, as well as to establish the scientific system's priorities[1].

1.1 Applications with User-Generated Content:

Intelligent web services based on new technology have enabled media users to contribute to media content generation and user engagement from the beginning of the twenty-first century. Rather than producing media material, the platform operator now provides users with the tools to create and collaborate on content, as well as the tools to share, personalize, rate, and develop it to a far higher extent than ever before. Authors have used terminology like social media, Web 2.0, participatory web, user created content, and others to describe this phenomenon. Furthermore, the subject's ambiguity contributes to the difficulty of agreeing on a definition. We shall use the phrase "user generated content" in the context of the Internet in this review and define it using the following criteria[2].

UGC is distinguished by a high level of personal involvement. Users must create their own material; simply obtaining or sharing content, as well as comparable activities, do not qualify. Commenting within the context of current services (e.g. online letters to the editor, user comments to online articles, or comments on blogs), researching and producing information (e.g. Wikinews), and contributing individual text, photos, and audio files are all examples of such contributions (e.g. blog posts, forum posts, and photo and video platforms). Only those applications that can (at least theoretically) be utilized for the exchange of opinions are eligible for the analysis. This means that the services must allow for feedback and comments. The assertions of opinion must go beyond a mere rating or declarative statement so that an explanation can be provided (at least hypothetically).

UGC must be made public. The applications must be accessible to the public or to a group in order to (at least theoretically) facilitate an overall conversation across society or within a group. This criterion is applied in principle in the current research to social networking sites and weblogs, despite the fact that some of these may have access restrictions. Bilateral communication, such as e-mail or instant messaging, is, however, prohibited. As a result, studies relevant to the field of communication research that examine one of the following social web applications are included in the systematic review: online responses, online editorials, discussion boards, Usenet, newsgroups, email lists, video and photo societies, amateur reporters, social media sites, Twitter, weblogs, and wikis.

Whether or not an application allows for participatory journalism or citizen journalism, as defined by the aforementioned distinction, has no bearing on its inclusion in the review. For communication scholars in a variety of topics, UGC services might be examined. They're judged on their production environment, relationship to and influence on traditional media creation, content and design, intended audience, and a variety of other factors. The empirical survey addressed the study contexts in which UGC is analyzed and the specific analyses of usage patterns in order to organize this brief review, provide the quantitative relevance of the many domains, and identify less prevalent research backdrops[3].

When conducting UGC content analyses, there are always hurdles to overcome. In order to provide meaningful, reliable results, the content analysis approach must continue to develop in line with technical potential and adapt to the information to be evaluated.One of the most important methodologies in communication research is content analysis, and its critical, cautious

use and ongoing improvement are important jobs in the field: "Given the importance of content analysis in communication research (and hence theory), it would seem reasonable to expect communication researchers to be among the most, if not the most, adept and rigorous in their application of this method".

Despite the fact that the design of every content analysis is associated with unique research goals, scholars undertaking online content analysis, and specifically UGC analysis, face a number of general challenges. One such challenge is that, due to the medium's high dynamic nature, online content is not permanent, but rather transitory. As a result, the statistical populations of many online content analyses are unknown and change on a regular basis. The writers of content analyses rarely employed amateur communicators as a selection basis, that is, they chose people and asked them to share the social web material that they had used and created.

Because of the procedure's limited scope, the users' unique surfing habits were rarely used to guide the selection of the evaluated content. As a result, the research could only account for a small portion of UGC's reactivity and personalization. As a result, it's unclear whether the studies were able to look at the material in its whole and with an eye for the differences that set it apart from traditional media content. Furthermore, the potential for UGC content analysis to be used as a supplement to reactive survey findings is being squandered. Word-of-mouth (WOM) and User-Generated Content (UGC) are not new research areas, with several studies dating back to the 1960s and early 2000s, respectively[4]. UGC is an activity in which online users express themselves by giving their thoughts, ideas, and reviews about products or services they have consumed or utilized[5].

The contents are frequently shared on social media because the authors feel that sharing the knowledge would help others make better purchasing selections. People seeking information to assist themselves in making a purchasing decision and sharing their opinions on other people's videos on YouTube, but rarely on other social media platforms, were the topic of prior studies. As a result, the purpose of this proposed study is to determine how user-generated content (UGC) can inspire Instagram users to purchase products that have been promoted and reviewed on the platform, as well as if content supplied by unknown users can affect one's purchasing decision.

Given the current economic situation, which includes an uncountable number of Instagram sellers, feedback from others will undoubtedly affect a person's decision to buy. Surprisingly, the number of procedures involving hypothesis testing did not rise over time, as one might assume. Many studies, it appears, adopted an exploratory approach to dealing with novel applications. However, few research went the extra mile to categorize these new applications using a theory-driven strategy rather than a topical approach. Weblogs, discussion forums, social networking sites, and online comments were the focus of the empirical studies. All of the other applications were given merely a cursory look.

This is most likely owing to the fact that weblogs and forums are older applications that have previously attracted a lot of research. It's safe to predict that the number of people publishing on social media will continue to rise. Weblogs and forums, on the other hand, have a more linear structure than social networks, allowing for easier analysis. The majority of the research used UGC outside of a professional editing structure. Less than a third of respondents addressed the issue of participation in what are referred to be conventional media in this context[6]. This

finding is also consistent with the reality of a situation in which the bulk of involvement occurs without the use of professional editorial media services.

These citizen journalism services, on the other hand, can act as a catalyst for professional editorial journalism participation. However, in 12% of the data, it was unable to determine if the authors were looking into participatory journalism or citizen journalism applications. This makes it difficult to comprehend the findings and compare them to other studies, therefore thus must be considered a flaw in the research objects' presentation. In terms of methodological approach, the researchers preferred quantitative-standardized approaches in the publications they chose.

As a result, while hypothesis-based theory testing is limited, scholars avoid open investigation in favor of generalizable, quantifiable results. This mindset isn't unique to social media research; it can be present in other reviews as well. The most commonly used approaches were content analysis and surveys, followed by qualitatively oriented text analyses and qualitative interviews. The content analysis clearly drew on the ability to investigate directly the knowledge and opinions expressed by media consumers. This can help to decrease the distortions that sometimes occur in surveys.

Not only has technological advancement altered Internet communication. It has also posed new issues for social science research, such as online content analysis and, in particular, UGC analysis. The current systematic review demonstrates that communication research requires a separate discussion on the nuances of selecting and assessing digital, transient, and dynamic media information. The promise of internet media and user-generated content (UGC) has yet to be completely realized. The writers tended to rely on traditional text analytics while overlooking multimedia applications[7].

The investigations only accounted for one notable exception: links. Auditory and visual aspects, on the other hand, were rarely used. As a result, the study was unable to capture the potential of internet media. Because producers employ extra sign systems as a regular component of their communication, it's dubious that the studies were able to correctly account for their expressions. The investigations were dominated by political UGC and the information-oriented behavior of the users in a second area where the research has a one-sided focus. However, this is only a small part of the social web's diversified usage patterns. The social web provides producers with new chances to create their own personalities and include them in (partially) public communication. The potential for easy digital and transnationally available content acquisition is not being completely realized[8].

1.2 Intention of Making an Online Purchase:

Consumers today typically utilize social media to gather product information and comments from prior customers before making a purchase decision, as they rely more on material created by other users, particularly on Instagram. This is because other users are likely to have firsthand knowledge of the things being considered for purchase, which will help potential purchasers make an informed selection. On Instagram, there are countless photographs and videos of the merchandise. The reviews are either uploaded by the merchants or other users. Consumers are more likely to buy something after reading through all of the personal information created by other users on the platform and being convinced by what they've seen. Increased Consumer Trust — Research has proven that word-of-mouth and other peer recommendations are more trustworthy, memorable, and influential than standard brand copy.

Increased loyalty, conversion, and even purchases are all influenced by trust. This is especially significant for items with higher ticket prices. Increased Brand Affinity and Engagement - Consumers are drawn to UGC possibilities for a variety of reasons, including a desire to be a thought leader, a desire to be a part of a community, a desire to show off their creativity, and, in some cases, a desire to obtain prestige or cash benefits. An engaging UGC campaign can result in greater time spent on the site as well as higher satisfaction with the site or the brand "sponsor." More traffic can lead to more paid advertising on a publisher's site. Additional Earned Media - UGC initiatives are perfect for earned media opportunities, bringing in more visitors, both repeat and new. Improved SEO — User-generated content (UGC) has been shown to be an excellent approach to boost search engine indexing, especially when used in conjunction with a social SEO effort.

Listening to what customers have to say in UGC environments can help marketers and media planners improve and develop their marketing and media plans. This information can be used to develop strategy, media planning, and competitive intelligence. There are numerous technologies available to assist publishers/brands in listening to the UGC dialogue and maybe acting on it in real time. Customer service is included in this. Low-cost Content Pipeline — developing enough high-quality content to fill the pipeline can be difficult in this era of content marketing. UGC is both cost-effective and cost-efficient, with the primary cost being the manpower required to monitor UGC activities. Content can also include user-generated content (UGC) that can be used in digital, print, television, or out-of-home (OOH) advertising campaigns, potentially saving money on production[9].

2. LITERATUREREVIEW

According to Kanget al. The term "omnichannel retailing" refers to a method of combining several retail channels in a fluid and integrated manner. Consumers in omnichannel retail are showing interest in showrooming and webrooming. The goal of this study was to see if omnichannel consumers' psychographic characteristics (i.e., information seeking, compare prices, human engagement, obtainment trying to seek, and simplicity seeking) influenced showrooming and webrooming, which in turn influenced Omni - channel customers' intention to create user-generated content on social media, and whether the omnichannel customers' psycho - graphic characteristics (i.e., information seeking, compare prices, human engagement, assortment seeking, and convenience seeking) influenced showrooming and webrooming A total of 680 omnichannel customers with showrooming and webrooming expertise from a ’s consumer panel were surveyed online. This study discovered that showrooming and webrooming by omnichannel consumers had a favorable impact on user-generated content creation intention on social media. Showrooming was positively influenced by omnichannel consumers' information acquisition, pricing comparison, and social interaction. Webrooming was positively influenced by information acquisition, social connection, and assortment seeking. The SoLoMo experience mediated the relationship between webrooming and the aim to create user-generated material on social media. The ramifications for managers were examined[10].

3. DISCUSSION

The current systematic review gives an overview of the current state of communication research on UGC. Any interpretation, however, must take into account the study's limitations. To begin with, the review's conclusions can only show distributions as they exist in the articles that were included. Any approach of picking journals, however, has inescapable limitations. The addition

of more publications in the future is most likely to gradually alter the image that has emerged so far. Second, the review's definition of UGC has a substantial impact on the examination's structure. Nonetheless, the study used a broad definition that encompasses most of the applications that are commonly associated with the word UGC.

The majority of studies looked at UGC in terms of prod usage, or the design process as seen by amateurs in general. The majority of publications concentrate on non-institutional communicators' ongoing co-creation and use. In other words, the authors altered their approach within the theoretical frameworks of their empirical investigations to address the new phenomena of the intersection between creation and usage that is unique to UGC. The fact that researchers analyze UGC in the context of political communication research, media sociology, and reception studies demonstrates its broad relevance for many various scholarly subjects. It's especially highlighted by the fact that researchers looked into it from a variety of angles, including traditional journalism, interpersonal communication, and more. What makes it unique is the connection between questions linked with communicator research and those associated with recipient research. This not only raises new research problems, but it also makes interdisciplinary collaboration possible and necessary.

4. CONCLUSION

Overall, the systematic review revealed that UGC is a study object that is compatible with various domains of communication research and is widely used by researchers. UGC, on the other hand, allows for a more in-depth investigation. One might assume that the examination techniques, which appear to be geared toward content analysis of conventional media in a variety of ways, are the result of a lack of proven transferrable instances and an incomplete debate on methodological standards. By providing an overview of existing practices, this systematic review hopes to contribute in some way to overcoming these obstacles. Its findings are clearly dependent on the journal sample used, and a continual study of the fast evolving issue will unavoidably be required.

REFERENCES

1. K. Crowston and I. Fagnot, “Stages of motivation for contributing user-generated content: A theory and empirical test,” *Int. J. Hum. Comput. Stud.*, 2018, doi: 10.1016/j.ijhcs.2017.08.005.
2. G. Akehurst, “User generated content: The use of blogs for tourism organisations and tourism consumers,” *Serv. Bus.*, 2009, doi: 10.1007/s11628-008-0054-2.
3. T. K. Naab and A. Sehl, “Studies of user-generated content: A systematic review,” *Journalism*, 2017, doi: 10.1177/1464884916673557.
4. S. Ransbotham, G. C. Kane, and N. H. Lurie, “Network characteristics and the value of collaborative user-generated content,” *Mark. Sci.*, 2012, doi: 10.1287/mksc.1110.0684.
5. D. C. Ukpabi and H. Karjaluoto, “What drives travelers’ adoption of user-generated content? A literature review,” *Tourism Management Perspectives*. 2018, doi: 10.1016/j.tmp.2018.03.006.
6. T. Tang, E. Fang, and F. Wang, “Is neutral really neutral? The effects of neutral user-generated content on product sales,” *J. Mark.*, 2014, doi: 10.1509/jm.13.0301.

7. H. Kumar, M. K. Singh, and M. P. Gupta, "Socio-influences of user generated content in emerging markets," *Mark. Intell. Plan.*, 2018, doi: 10.1108/MIP-12-2017-0347.

8. J. C. Kurian and B. M. John, "User-generated content on the Facebook page of an emergency management agency: A thematic analysis," *Online Inf. Rev.*, 2017, doi: 10.1108/OIR-09-2015-0295.

9. J. Kim, "The institutionalization of youtube: From user-generated content to professionally generated content," *Media, Cult. Soc.*, 2012, doi: 10.1177/0163443711427199.

10. J. Y. M. Kang, "Showrooming, Webrooming, and User-Generated Content Creation in the Omnichannel Era," *J. Internet Commer.*, 2018, doi: 10.1080/15332861.2018.1433907.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

SPATIAL DATA MINING FEATURES BETWEEN GENERAL DATA MINING

Mohit Rastogi*

*Assistant Professor, Department of Finance,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: mohit.management@tmu.ac.in

DOI: 10.5958/2249-877X.2021.00116.8

ABSTRACT

Data mining is often described as the process of finding, analyzing, and sifting through vast quantities of data in order to discover connections, patterns, or statistical correlations. The practice of finding interesting, valuable, non-trivial patterns of information or knowledge from big geographical datasets is known as spatial data mining (SDM). Due to the complexity of geographical data types, spatial connections, and spatial auto-correlation, finding interesting and meaningful patterns from spatial datasets must be more challenging than extracting the equivalent patterns from conventional numeric or categorical data. Emphasis was placed on the distinctive characteristics that differentiate geographic data mining from traditional data mining, as well as the significant achievements of spatial data mining research. In precision agriculture, community planning, resource finding, and other fields, extracting intriguing patterns and rules from spatial information, such as remotely sensed images and related ground data, may be useful.

KEYWORDS: *Connection, Data Mining, KDD, Software, SDM.*

1. INTRODUCTION

In general, data mining (also known as data or knowledge discovery) is the act of evaluating data from many angles and synthesizing it into valuable information - information that may be utilized to generate revenue, reduce expenses, or both. Data mining software is one of several analytical techniques available for data analysis. It enables users to examine data from a variety of perspectives, classify it, and describe the connections discovered. Data mining is the process of discovering patterns or correlations in hundreds of variables in big relational databases[1]–[5].

The automated, exploratory examination and modelling of massive data repositories is known as Knowledge Discovery in Databases (KDD). The systematic process of finding legitimate, new, valuable, and comprehensible patterns from vast and complicated data sets is known as knowledge discovery.The heart of the KDD process is Data Mining (DM), which entails inferring algorithms that examine the data, build the model, and uncover previously undiscovered patterns. The model is used to explain phenomena based on a variety of facts, as well as to analyze and forecast outcomes.

Knowledge discovery and Data Mining have become more important and necessary because of the accessibility and quantity of data available today. For all situations, no one technique is better

than the others are. The purpose of this article is to provide performance assessment methodologies and techniques, as well as to illustrate the usage of various methods in the spatial data-mining field using examples and software tools. The process of finding valid, innovative, valuable, and comprehensible patterns from big geographical datasets is known as spatial knowledge discovery in databases (SKDD).

The heart of the SKDD process is Spatial Data Mining (SDM), which entails inferring algorithms that investigate geo-data, build models, and find important patterns - the essence of usable information. The rapid increase of geographical data and extensive usage of spatial databases highlights the need for automated spatial knowledge discovery. The process of finding intriguing and previously unknown, but possibly valuable patterns from a set of geographical datasets is referred to as spatial data mining. Traditional Data Mining methods for extracting geographical patterns are limited by the complexity of spatial data and inherent spatial connections.

Statistical Data Miner and SAS Enterprise Miner are general-purpose data mining tools for analyzing big business datasets. Due to the complexity of geographical data types, spatial connections, and spatial auto correlation, finding interesting and meaningful patterns from spatial data sets is more challenging than extracting comparable patterns from conventional numeric and categorical data[6].

Our fuzzy classifiers' classification performance was similar, but in most instances inferior, to that of the support vector machine. This trend was particularly noticeable when the number of class data points was minimal. My research focus has moved away from fuzzy classifiers with strong generalization potential and toward support vector machine–based classifiers. To identify regularities and relationships between data points, data mining employs a huge quantity of computer power applied to a big collection of data. To search big datasets automatically, algorithms that utilize statistics, machine learning, and pattern recognition methods are employed. Knowledge-Discovery in Databases is another name for data mining (KDD)[7]–[9].

1.1 Additional Information on Spatial Data Mining:

What distinguishes geographical data mining from other types of data mining?

To begin, a spatial pattern includes the following features: Location prediction models, Spatial clusters (such as hotspots of global safety, Location as attribute (Location as attribute in spatial data mining), and so on are examples of spatial outliners.

Second, spatial data mining is utilized in a variety of applications, including Earth scientific data (such as the Earth Observing System), crime mapping, census data, transportation, social health, and public safety. For instance, we may respond to the following questions. How is the global Earth system evolving utilizing geographical data mining technology?

What is the Earth system's main forcing? What are the effects of natural and human-caused changes on the Earth system? What are the ramifications for human civilisation of changes in the earth system?

How effectively can we forecast changes in the Earth system in the future?

Finally, since data is distinct in the two main types of data mining, the related words, such as data, information, and knowledge, are also different. In the mind, many spatial connections between geographic things are not formally recorded. Different degrees of granularity allow for

the construction of a mental representation appropriate for addressing a particular spatial issue at the granularity level.

1.2 Spatial Data Mining System Components:

There are five main components to data mining:

- Load transaction data into the data warehouse system by extracting, transforming, and loading transaction data.
- Use a multidimensional database system to store and manage the data.
- Give business analysts and information technology expert's access to data.
- Use application software to analyze the data.
- Present the information in a logical manner, such as a graph or table.

Spatial data mining systems may be split into input, output, and computing process components, much like any other general-purpose data mining system. When data is entered into a data-mining program, it may be used to create a table with numerous columns representing each characteristic of a carton geographical feature. Figure 1 shows the raster and vector data for a campus.

Figure 1: The above figure shows the raster and vector data for a campus.

For example, tid: a feature's identifier; fi: spatial characteristics of the feature that are spatially linked; and non-spatial attributes such as conventional relational database.

The data in this database table may be divided into two main types: non-spatial and spatial.

Non-spatial data includes:

- data in conventional data mining
- Numerical, category, ordinal, Boolean, and other types of information. For example, the name of the city and the population of the city.

Spatial attribute:

- Spatially referenced, scope, and neighbourhood, such as feature location, e.g., longitude, latitude, and elevation.
- Methods for spatial data representation in the Raster data structure model, grid space, and in Vector, point, line, polygon, or Graph, node, edge, path, and so on.

Measurement may be used to determine a distance: Extended objects (buffer-based), Graph (shortest route), and Point (Euclidean) Due to the various data structures, transaction types have Circles centered at reference features, Gritted cells, Min-cut partitions, and Voronoi diagram space partitions.

1.3 Spatial Data Mining Methods

Because of the huge quantity of apprehension data utilized in this research, the data reduction technique of categorization may be able to uncover patterns that would otherwise be obscured by noise. The decision tree algorithm is a common classification method. The trained modal can find the smallest variables that may be used to explain certain occurrences. It also helps in focusing on smaller regions and identifying variable relationships. A part of a trained classifier mode is shown in the diagram below[10]–[12].

Clustering analysis may identify groups of points with similar magnitude values as well as outlier points, which are points that are not found in clusters. For example, the variable "Apprehension age" shows that the many low right points have comparatively low index values when it comes to apprehension age. This implies that these individuals' apprehension ages are vastly different. If the index value is positive, on the other hand, that subject's values should be comparable to those of its neighbours.

1.4 Spatial Data Mining Visualization

Visualization is crucial in multi-dimensional inference since it aids in the construction of hypotheses. Revisualization provides data pattern hints, which are subsequently used to drive data mining queries. The data mining findings are then displayed, resulting in more hints and more concrete study ideas. In our applications, this dynamic and interactive data pattern-searching technique has proved to be successful.

In our research, visualization is very important. Several tools have been put to the test to see whether they are suitable for the data type. A well-known collection of indices, such as mean, variance, and range, may be used to describe tables. It is critical to be able to characterize the potential connections between the values and ultimately identify clusters of data when working with big and multivariate datasets, as we did in our research.

It is possible to map multivariable GIS datasets into 3D views with Common GIS, a free Java program for geographic and geostatistical analysis, and overlay the findings with additional layers and information.

This has shown, for example, that when illegal immigrants are between the ages of 18 and 27, they prefer to enter the US from the interior. The majority of elderly and younger people are stopped closer to the border.

The depiction of the geographical distribution of the density of apprehension events over time is another intriguing use of GIS technologies and statistical analysis. Furthermore, by combining

various periods, it is possible to construct animations showing density change over a longer period, utilizing weekly or monthly data as frame units.

Some popular graph techniques have been used to show the change and variability in time of the overall number of apprehensions or of repeated people, such as bar charts, line graphs, pie charts, and so on. The following findings may be allocated to a spatial sector of the area of research using GIS tools. For instance, a series of bar charts may be shown over a map of Mexican states to show how migration patterns have changed over time in each state.

1.5 Exploration of spatial data

The application of data mining techniques to spatial data is known as spatial data mining. The goal of spatial data mining is to discover patterns in data that are related to geography. Until now, data mining and Geographic Information Systems (GIS) were two distinct technologies with their own methodologies, traditions, and approaches to data presentation and analysis. Most modern GIS, in particular, only offer extremely limited spatial analysis capabilities. The massive influx of geographically referenced data brought on by technological advancements, digital mapping, remote sensing, and the worldwide adoption of GIS highlights the need of creating data-driven inductive methods to geographic analysis and modelling.

For GIS-based applied decision-making, data mining has a lot of promise. The challenge of merging these two technologies has recently become essential, particularly as many public and commercial sector organizations with large databases of thematic and spatially linked data recognize the enormous potential of the data contained within. These are some of the organizations involved:

- Offices that need geo-referenced statistics data analyzed or disseminated.
- Public health officials are looking for reasons for illness clustering.
- Environmental authorities are assessing the effect of shifting land-use patterns on climate change.
- Customers are segmented depending on their geographic location by remarketing firms.

Problems with Spatial Mining: Large geospatial data stores are common. Furthermore, current GIS datasets are often fragmented into feature and attribute components, which are then preserved in hybrid data management systems.

2. DISCUSSION

The author discussed about the data mining, Database systems for the administration of spatial data are known as spatial database systems. Geographical data mining techniques are critical for detecting implicit regularities, rules, or patterns buried in huge spatial datasets, such as for traffic management or environmental research. In general, predictive analytics (also known as data or feature learning) is the process of analyzing data from a variety of perspectives and synthesizing it into useful information, which may be used to create income, cut costs, or do both. For data analysis, data mining software is one of many analytical methods accessible. It allows users to look at data from different angles, categorize it, and explain the relationships they find. The technique of finding patterns or correlations in millions of variables in large relational databases is known as data mining.

3. CONCLUSION

The author has concluded about the data mining, Database systems for the administration of spatial data are known as spatial database systems. Relational (attribute) data management and topological (feature) data management have quite different algorithmic needs. The variety and diversity of geographic data formats, which offer distinct difficulties, is related to this. Beyond the conventional "vector" and "raster" forms, the digital spatial data revolution is spawning new data formats. Irregularly organized data, such as photography and geo-referenced multi-media, is increasingly being included in geographic data repositories. Geographical data mining techniques are critical for detecting implicit regularities, rules, or patterns buried in huge spatial datasets, such as for traffic management or environmental research.

REFERENCES

1. R. Tamilselvi and S. Kalaiselvi, "An Overview of Data Mining Techniques and Applications Keywords: Data mining Techniques; Data mining algorithms; Data mining applications 1. Overview of Data Mining," *Int. J. Sci. Res.*, 2013.

2. P. VIKRAMA, P and Radha Krishna, "Data Mining Data mining," *Min. Massive Datasets*, 2005.

3. F. A. Hermawati, "Data Mining Data mining," *Min. Massive Datasets*, 2005.

4. A. Twin, "Data Mining Data mining," *Min. Massive Datasets*, 2005.

5. B. A. B. Ii, "Data Mining Data mining," *Min. Massive Datasets*, 2005.

6. Y. Chen, D. Hu, and G. Zhang, "Data mining and critical success factors in data mining projects," in *IFIP International Federation for Information Processing*, 2006, doi: 10.1007/0-387-34403-9_39.

7. K. M. Raval, "Data Mining Techniques | Data Mining Articles," *Int. J. Adv. Res. Comput. Sci. Softw. Eng.*, 2012.

8. T. L. Yang, P. Bai, and Y. S. Gong, "Spatial data mining features between general data mining," in *2008 International Workshop on Education Technology and Training and 2008 International Workshop on Geoscience and Remote Sensing, ETT and GRS 2008*, 2008, doi: 10.1109/ETTandGRS.2008.167.

9. E. T. L. Kusrini, "Data Mining Data mining," *Min. Massive Datasets*, 2005.

10. D. J. H. N. M.Adams, "Data Mining Data mining," *Min. Massive Datasets*, 2015.

11. G. Wang, J. H. Si, and C. F. Yang, "Research of data mining system," *Beijing Gongye Daxue Xuebao / J. Beijing Univ. Technol.*, 2005, doi: 10.2991/ameii-15.2015.78.

12. H. Petersohn, "Data-Mining-Anwendungsarchitelctur," *Wirtschaftsinformatik*, 2004, doi: 10.1007/BF03250992.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

A STUDY ON ARTIFICIAL INTELLIGENCE IN PRODUCTION MANAGEMENT

Satyendra Arya*

*Associate Professor,
Department of General Management/Production and Operation,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: satyendra.management@tmu.ac.in

DOI: 10.5958/2249-877X.2021.00118.1

ABSTRACT

Artificial intelligence and intelligent devices are becoming more prevalent in our daily lives. This tendency does not spare industry or production, implying the potential for traditional managerial functions to be gradually replaced. Despite the fact that the number of Ai technologies in operation continues to rise, the articles do not appear to give much thought to the long-term ramifications. This report offers the findings of a thorough literature evaluation on artificial intelligence in production management over the previous two decades, based on 74 articles in 5 sources. Process monitoring and implementation, as well as scheduling, are found to be high-interest applications in this regard, according to the review. Both jobs fall under the umbrella of typical managerial functions, and are thus likely to be handled by autonomous systems in the future. According to our findings, there are currently no management models available to portray the growing reliance on cyber-technical systems, and researchers must solve this issue in order to make way for tomorrow's production planning.

KEYWORDS: *Artificial Intelligence; Production Management; Operations Management; Machine Learning; Data Mining; Management Model.*

1. INTRODUCTION

Production management, along with finance and marketing, is one of the three core roles of a corporation. The value-adding process of development inside a service delivery system is governed by production management as a dispositive element. Their job is to convert data into decisions in order to manage and lead the production process toward meeting predetermined performance goals. Production management can be thought of as the control element of a feedback control system that evaluates the transformation process' performance against super ordinate goals and enforces corrective actions when deviations occur. Volatile global markets are dramatically increasing the complexity of manufacturing enterprises, despite the fact that they are critical to society as job creators and value adders. Production technology and management have already gone through three industrial revolutions — mechanization, electrification, and automation – and are now facing the fourth. Rapid technological advancements answer a demand that has arisen as a result of increasing organizational complexity[1].

As a result, we are currently witnessing the gradual fusion of the virtual and real worlds of production management. Following the foregoing lines of reasoning, a good question for the

future is to what degree production management jobs can and will be replaced by artificial intelligence (AI) technology in the future. However, the widespread substitution of production management activities presents several important concerns, including: what is the technological optimum between human-made and machine-made decisions? Who will be responsible for setting performance goals? What kind of skill sets will be needed? Who is responsible for mistakes? And, maybe most significantly, how much decision-making will remain entirely human? The fourth industrial revolution is supposed to move work in manufacturing contexts toward decision-making and creative tasks.

However, just as the societal effects of technical advancements are unpredictable, so are the managerial duties and activities that may develop as automated decision-making and partially automated decision support become more common[2]. Artificial intelligence (AI) techniques are increasingly being used as alternatives to traditional methods or as components of larger systems. They've been utilized to address difficult practical problems in a variety of fields, and they're getting increasingly popular presently. They can learn from examples, are fault tolerant in the sense that they can deal with noisy and incomplete data, can solve nonlinear problems, and can predict and generalize at fast speeds once taught. Because of their symbolic reasoning, adaptability, and explanatory capabilities, AI-based systems are being developed and used in a wide range of applications around the world. AI has been employed in a variety of fields, including engineering, economics, medicine, military, and maritime[3]. They've also been used for complex system modeling, identification, optimization, prediction, forecasting, and control. By addressing a number of difficulties in solar systems application, the study gives a knowledge of how AI systems work. Forecasting and modeling of meteorological data, sizing of solar systems, and modeling, simulation, and control of photovoltaic systems are among the issues discussed. The material reviewed in this paper demonstrates AI's promise as a design tool for solar systems.

Academia and practitioners now have a once-in-a-lifetime chance to plan, lead, and influence this shift. The image of an integrated management is a necessity for achieving this. At the moment, there are no models for such integrated management, and their absence makes it difficult to successfully guide organizational change initiatives. A follow-up study was done by the same authors from 2005 to 2009. The authors added Data Mining as a fifth AI approach due to its increasing use in applications. They found that Fuzzy Logic, Case-Based Reasoning, and their combinations were employed far less frequently than Neural Networks and Genetic Algorithms, which accounted for over half of the papers in the disciplines of Scheduling and Process Planning and Control, respectively. Furthermore, the authors discovered that research on Knowledge-Based Systems is declining, and they concluded that these methods have been thoroughly researched and are no longer considered unique. They report a low use of 59 articles for this time period when it comes to the new Data Mining approach. In contrast, a recent assessment of 47 publications on the topic of Data Mining in Production Management looked at 47 publications published between 2010 and 2017.

The authors discovered that quality improvement (23), scheduling, and defect diagnostics (each with seven applications) were the most common. The following ten publications were all in the defect analysis and other applications category. The reviews offered to this purpose cover a period of more than 32 years (do not state the period under examination, but the oldest article included was published in 1985). The employment of AI approaches in quality improvement, process planning and control, and especially scheduling appears to be a common denominator in

all reviews. A similar tendency may be seen in this review. Six of the remaining nine publications, excluding the aforementioned five reviews, dealt with AI scheduling algorithms. However, because they had already been accounted for in the most recent assessment, they have been excluded. Case-Based Reasoning was used to create a learning scheduler. That is, previous industry experience has been enshrined in a repository from which to draw.

With this information, shop-floor scheduling may be done in both a reactive and proactive manner to avoid delays caused by disruptions. To optimize execution-production order through information interchange between agents, use genetic algorithms in a multi-agent method. The method establishes upper and lower constraints for transitory times, allowing for more precise scheduling and, as a result, a reduction in overall make span. Both scheduling and costing assistance are handled in this section[4]. The authors propose methods for analyzing and discovering information from data in a manufacturing execution system so that it can be integrated into it. Different machine learning approaches are investigated, with Kernel and Ada Boost proving to be the most effective for the specific budgeting problem. However, due to a lack of data, classification was impossible for scheduling. Two references were found in terms of process quality improvement. To begin, determine the principles that govern the relationship between malfunctions/failures and corresponding delays in the production of oil and gas drilling. They use association rule mining to find linkages in massive databases between failure kinds and subsequent process delays. Second, build the groundwork for automated assembly system optimization: the study use genetic algorithms to optimize the simulation of a variety of manufacturing pull-type control policies (e.g. Kanban).

While the findings were satisfactory, the authors recognized that the algorithm they chose required a lot of manual tweaking. The approach is almost immediately usable for automated process control when combined with real-world data and machine learning techniques. Extreme learning machines were used in risk management to uncover hidden threats in industrial production environments and avert mishaps. The extreme learning machine employs neural networks and buffers incremental data in the hopes of contributing suitable weights to represent the current state of production. The authors find that this approach is more dependable in terms of accuracy and stability based on case study data. Finally, while it does not deal with production management in heavy engineering contexts, it does provide a comprehensive overview of application alternatives for the forest sector based on multi-agent topology.

Many applications, such as mill operation, supply chain planning, and risk management, have a lot in common with heavy engineering[5]. As a result, this piece is included to highlight AI's cross-industry applicability. This analysis has revealed that artificial intelligence (AI) is a recurring, and even developing, theme in production management. In general, based on the above data, academics have shown the most interest in process planning, process control, including quality improvement, and scheduling concerns, including machine operation plans and machine operator staffing. These are the most important aspects of production management. According to the references provided, AI approaches have been widely used to support these functions. When looking at the vision 2040 graphic again, it appears that scheduling and process planning and control are on the verge of shifting from phase 2 to phase 3 or higher, indicating that they have a good chance of eventually reaching autonomous decision-making.

Another major finding of this analysis is that all of the research and studies offered are limited to a single, very specific scenario or problem to be handled. However, a slew of scientific findings

have the potential to break new ground in the field of production management. Despite this, no publication addresses the long-term consequences of their technological applications or advancements. This obviously supports the review paper's initial hypothesis. While academics and practitioners increasingly recognize AI's potential in the sphere of production, any long-term consequences of its implementation are being overlooked. As a result, we argue that, in light of the possibility of a step-by-step, gradual substitution of work at the managerial level, novel management models will be required in the future to capture ongoing cyber-centric developments and to protect the role of human decision-making in production management[6].

1.1 Trends in Artificial Intelligence:

The breakthrough of teaching machines how to learn from experience, referred to as machine learning (ML), by sifting through massive datasets and uncovering hidden patterns, resurrected AI in the previous few decades. While IBM's "Deep Blue" computer, which defeated world chess champion Garri Kasparow, was not an artificial intelligence in the sense of a learning machine, AlphaGo, which defeated the world's top Go-Player 19 years later, was. Experts were taken aback by this incident since AlphaGo demonstrated intuition, which had been thought to be an intractable problem for decades. By now, ML, which "sits at the intersection of computer science, statistics, and decision-making under uncertainty," has established itself as the method of choice within AI for a wide range of applications and has spread across a wide range of scientific fields, including particle research, communications psychology, genomics, astrophysics, and chemical synthesis.

Supervised and unsupervised learning algorithms, as well as reinforcement learning, are the most common ML methods. Furthermore, substantial research has been done on how to emulate human learning (i.e. learning associated skills), human cognition, and how to teach machines human preferences so that human intervention and control resources are reduced. While such rapid advancements suggest that machine learning will be one of the most transformative technologies of the twenty-first century, some mechanisms behind machine-made decisions, such as those made by deep neural networks, are still unknown and are being investigated in a field known as AI Neuroscience. Even apocalyptic scenarios are being addressed by scientists, who are highlighting important hazards and so-called accidents (defined as unplanned and bad behavior) associated with AI that must be addressed in a proactive manner. Who built safely interruptible agents that will not recognize an effort to shut them down outside, but will assume they shut themselves down, is one method to avoiding AI from seceding[7].

Models of Management (1.2):

Objectives and Management by Exception are socially driven and human-centered, focusing on mutual agreement on performance goals and the following monitoring and control of those goals. Although it has been suggested that Management by Objectives can be used as a performance review technique in highly digitalized industrial firms, there is little data to back this up. Instead, one may argue that when confronted with sincerely obedient, self-governing manufacturing systems and processes, these models will lose their utility. Forecast, plan, organize, command, co-ordinate, and control are the six distinct roles of management in general. We are currently witnessing the possibility of machines taking over the majority of these functions, rendering management textbooks obsolete. Work systems are considered a nexus of social and technological subsystems that are linked by the specification of a task in sociotechnical methods,

which presume mutual interaction between social and technical subsystems, leading to the imperative that both can be maximized jointly.

The relationship between social and technical subsystems manifests itself in many forms of function division and human-machine interaction. As a result, it has been proposed that secondary duties such as system preservation (upkeep, training) and system regulation (detailed production planning, comprehensive production control, material placement, and so on) will become more important as sophisticated technologies are implemented. For the development of such a task orientation to occur, two requirements must be met: the working person must have control over operating cycles and auxiliaries, and the task must be constructed in such a manner that it elicits power to complete or continue their work. As a result, socio-technical techniques tend to presuppose a synergetic balance between technical and social systems, favoring the social over the technical. The 2040 vision, on the other hand, assumes that the technical subsystem will take over primary production management tasks, transferring a significant amount of control from humans to machines and granting it the ability to self-optimize independently of the social subsystem, a point that socio-technical approaches appear to be unable to capture at the moment[8].

1.3 A Production Management Vision for 2040:

While great effort is invested into AI research, it appears that the AI stream does not lend itself to production management. At the same time, no current academic effort that draws on AI literature to substantially address existing management paradigms has been uncovered. That is, there are major gaps in the state of the art of management literature and artificial intelligence, as well as their respective overlaps, that need to be filled in order to develop an integrated management model that includes cyber-centric aspects[9]. As a result of technological revolutions, a new form of production management will emerge at the point of interaction between human and artificial intelligence, as traditional management models are unable to cope with the growing reliance on information technology, massive amounts of data beyond human perception abilities, and non-human resources entering the workforce on a broad scale. The latter feature, in particular, has sparked debate in society, as intelligent machines are frequently associated with apocalyptic scenarios of deserted factories and entire towns ravaged by unemployment. As a result, future corporate success will necessitate a radical new management paradigm, one that shifts the focus from social to socio-technical perspectives while allowing human employees unrestricted reason for being[10].

2. DISCUSSION

A third of the papers considered relevant for this research are type reviews: evaluate 762 Internet of Things (IoT) business cases between 2009 and 2012 and indicate that RFID as the foundation for IoT is widely employed in operational functions for asset management and production management. Despite the nature of this study does not provide immediate information on management automating manual, the IoT dispersion examined here lays the groundwork for data mining activities that will eventually enable information for decision - making or autonomous decision-making, and is so included in this evaluation. They study the use of Knowledge-Based Systems, Case-Based Reasoning, Fuzzy Logic, and Neural Networks in various business operations and provide an overview of AI in OR. The authors find that Fuzzy Logic and Case-Based Reasoning have gotten much less attention than the other AI approaches, with scheduling receiving the most attention. Later, build on this review and take a more systematic approach to

the study question: Between 1995 and 2004, they looked at over 1200 papers. According to their findings, Fuzzy Logic, which had previously received little attention, had gained in popularity, particularly for scheduling purposes, whereas Case-Based Reasoning remained underutilized. In the past, neural networks were commonly utilized in process planning and control. They also saw a drop in academic interest in Knowledge Based Systems.

3. CONCLUSION

This paper looked at 74 references from the last 20 years that were spread among five databases. The goal was to see if artificial intelligence has been applied in production management and if so, how. Based on 13 full-text articles, this study concluded that AI has primarily been applied to scheduling, process planning, and control. This suggests that these jobs are already receiving sufficient attention to transfer to the next level of machine help in our vision 2040, which is a steady substitution of management decision-making tasks up to autonomous machine-made decision-making. This review summarizes a large number of current research contributions on integrating AI into modern manufacturing systems. At the same time, no contribution to high-level assessments on the potential consequences of increasing the use of artificial intelligence systems in manufacturing was found. This backs up our initial hypothesis that future production management will necessitate new models capable of depicting a more cyber-centric production system.

REFERENCES

1. J. Hynynen, "Using artificial intelligence technologies in production management," *Comput. Ind.*, 1992, doi: 10.1016/0166-3615(92)90004-7.

2. C. Bravo, J. A. Castro, L. Saputelli, A. Ríos, J. Aguilar-Martin, and F. Rivas, "An implementation of a distributed artificial intelligence architecture to the integrated production management," *J. Nat. Gas Sci. Eng.*, 2011, doi: 10.1016/j.jngse.2011.08.002.

3. L. Pun, "Pertinence and utility of artificial intelligence techniques for production management systems," *Comput. Ind.*, 1990, doi: 10.1016/0166-3615(90)90116-7.

4. M. L. Krichevsky, S. V. Dmitrieva, and J. A. Martynova, "Instruments of artificial intelligence in management of high technology production," *Int. J. Eng. Technol.*, 2018, doi: 10.14419/ijet.v7i3.14.17024.

5. L. Pun, "Utilisation of artificial-intelligence techniques for the design of production management systems," *Comput. Ind.*, 1990, doi: 10.1016/0166-3615(90)90081-Y.

6. C. Bravo, L. Saputelli, J. A. Castro, A. Ríos, F. Rivas, and J. Aguilar-Martin, "Automating the oilfield asset-artificial-intelligence-based integrated-production-management architecture," 2011, doi: 10.2118/1011-0091-jpt.

7. C. Bravo, L. Saputelli, J. A. Castro, A. Ríos, F. Rivas, and J. Aguilar-Martin, "Automation of the oilfield asset via an artificial intelligence (AI)-based Integrated Production Management Architecture (IPMA)," 2011, doi: 10.2118/144334-ms.

8. C. Bravo, J. Aguilar-Castro, A. Ríos, J. Aguilar-Martin, and F. Rivas, "Distributed artificial intelligence based architecture applied to the integrated industrial production management," *RIAI - Rev. Iberoam. Autom. e Inform. Ind.*, 2011, doi: 10.1016/j.riai.2011.09.013.

9. J. P. Laurent, J. Ayel, A. Lanusse, P. Roux, and B. P. Panet Graphael, "Distributed artificial intelligence: a necessary paradigm for supervising production management activities," 1989.

10. L. Qiu and L. Zhao, "Opportunities and Challenges of Artificial Intelligence to Human Resource Management," *Acad. J. Humanit. Soc. Sci.*, 2017.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

WORD OF MOUTH AS A NEW ELEMENT OF THE MARKETING COMMUNICATION MIX: ONLINE CONSUMER REVIEW

Dr. Vipin Jain*

* Professor,
Department of Finance & Account,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: vipin555@rediffmail.com

DOI: 10.5958/2249-877X.2021.00117.X

ABSTRACT

Customer online product reviews are an emerging market phenomena that is playing an increasingly crucial part in customers' buying decisions as a novel type of word-of-mouth knowledge. This authors argue that online consumer reviews, a sort of product details created by users depending on individual usage experience, can serve as a new variant in the marketing communications mix, acting as free "sales assistants" to assist consumers in identifying products that best suit their unique usage conditions. This study proposes a normative methodology to solve a number of critical strategic concerns about customer evaluations. First, we explain when and how a seller's marketing communication plan should be adjusted in response to customer feedback. Our findings show that if review information is sufficiently useful, the two types of product information, namely seller-created positive product data and buyer-created literature review, will communicate. When the product price is minimal and/or there are enough expert (more intelligent) users, for example, the two types of information are complementary, and the seller's best reply is to boost the number of product attribute message provided via marketing communications after the reviews are accessible. When the product cost is high and there are a large number of rookie (less sophisticated) product users, the two types of information are substitutes, and the seller's best reaction is to minimize the quantity of product attribute information it contains, even if it is free.

KEYWORDS: *Online Consumer Review, Word-Of-Mouth, Product Review Information, Marketing Communications, Social Interactions*

1. INTRODUCTION

Consumers can now share their product evaluations online thanks to the Internet and information technology. In 1995, Amazon.com began allowing customers to provide product reviews on the company's website. Amazon.com currently boasts around 10 million customer reviews across all product categories, and these reviews are one of the most popular and successful elements of Amazon.com. BevMo.com, BN.com, cduniverse.com, circuitcity.com, GameStop.com, computer4sure.com, c-source.com, half.com, goodguys.com, wine.com, and others have all taken a similar tactic in recent years. These online vendors enable consumers of their products to provide personal product reviews on their websites or provide consumer review information

from third-party sources such as Epinions.com to their customers. Many product categories, such as books, electronics, games, films, music, beverages, and wine, have an abundance of online consumer reviews. Consumer reviews, according to recent studies, have become increasingly crucial for consumer buying decisions and product sales.

Online book reviews have a big impact on book sales, according to data from Amazon.com and BN.com. Consumer reviews on the Yahoo Movies website have a considerable impact on box office sales. However, not all online retailers allow customers to leave evaluations on their sites. Three product categories, for example: MP3 players, PDAs, and video games. They compiled a list of 68 online retailers from my Simon. com's referral list on June 18, 2003, and discovered that 46 of the 68 online sellers did not provide consumer feedback. Consumer reviews on the internet are a new source of product information that is gaining in popularity and value. Practitioners and popular presses have given it a lot of attention[1]. When it comes to consumer review data, sellers must make a number of critical strategic considerations.

When consumer evaluations exist, for example, should a seller's communication strategy be adjusted to best respond to such a consumer-created information channel, and how? What are the benefits to the seller of supporting the generation and dissemination of such user-based review material by allowing customers to leave comments on the vendor's own website (e.g., Amazon.com)? More academic research is urgently needed to better understand the underlying significance of this new information channel in the marketplace and its strategic implications for online marketers. Several recent research have begun to look into the information reliability of online consumer-created information. Because information credibility is frequently positively related to the reliability of the information source, consumer-created information is likely to be more credible than seller-created information.

The relationship between online customer feedback and the reputation of an unknown supplier. The believability of advertising messages in online chat rooms, as well as the impact of such new information channels on the profitability of vendors. Furthermore, according to several recent studies, consumer-created data permits the seller to employ some marketing methods that would otherwise be untrustworthy (e.g., probabilistic selling, service cancellation). These researches have improved our comprehension of consumer-generated data. The degree of relevancy of consumer evaluations is an important but underappreciated component of consumer reviews[2]. We suggest that online consumer reviews can be used as a new ingredient in the marketing communications mix, acting as free "sales assistants" for online sellers, assisting customers in finding products that best suit their needs.

We first give an empirical analysis to show how this developing information source differs from other types of product information, such as third-party product reviews, in order to analyze such a matching function of online customer reviews. We then create a normative model to answer numerous particular issues about a company's strategic decisions in relation to customer feedback. Unlike third-party product reviews, which focus on a product's performance based on its technical specifications, our research reveals that user reviews focus on a product's ability to match the consumers' personal usage conditions. Several key insights emerge from our strategic study. First, we explain how the two types of data—consumer reviews and seller-created product attribute data—can work together or separately.

When the review information is sufficiently informative, there is such interaction. The features of the product and market define the direction of interaction (complementary or substitutive).

The two types of product information are complementary when the product cost is cheap and/or there are enough expert (more sophisticated) users. When consumer reviews become available, the seller should enhance the amount of its own product characteristic information presented to potential consumers. The two types of product information are alternatives when the product cost is high and there are enough naïve (less sophisticated) product users. When consumer reviews become accessible, the vendor should reduce the amount of product characteristic information available.

Furthermore, we show that if a seller can predict the availability of consumer evaluations, it can use a proactive technique to change its marketing strategies even before the reviews are published. Second, depending on the product/market conditions, allowing customers to publish user-based product reviews on the seller's website might enhance or decrease earnings. We show that providing consumer reviews is harmful to a seller unless the information is sufficiently helpful. We also discovered that providing online consumer feedback is more useful to the vendor when there are a significant number of inexperienced buyers (e.g., for technology-intensive products). Finally, our findings show that, even though the seller can choose when to publish user evaluations at the individual product level, it may not necessarily be best to do so at the very beginning of a new product launch, even if such reviews are accessible[3].

1.1 A New Element in the Marketing Communications Mix:

As consumer-created information, online consumer review is likely to be more relevant to consumers than seller-created information. Seller-created product information is more likely to be product oriented, because it often describes product attributes in terms of technical specifications and measures product performance by technical standards. In contrast, the consumer-created product information is, by definition, user oriented. It often describes product attributes in terms of usage situations and measures product performance from a user's perspective. Consumers have different information-processing capabilities in inferring benefits from product attribute information due to different levels of expertise. For this reason, seller-created product information may be more useful to more sophisticated consumers (i.e., experts). Consumer-created product information, however, can help less-sophisticated consumers (i.e., novices) in finding their best-matched products. As a result, consumer reviews can be deployed as a new element in the marketing communications mix and can work as an online seller's free "sales assistants" help consumers to identify products that best match their needs[4].

1.2 Traditional (Offline) Word-of-Mouth vs. Online Consumer Reviews:

User-generated product information, such as online consumer reviews, might be considered a unique type of WOM). Unlike conventional word-of-mouth, which is often limited to a local social network, the influence of online consumer reviews can extend well beyond the local community, as consumers from all over the world can access a review over the Internet. Furthermore, traditional WOM is not a direct decision variable for the seller in most cases. However, thanks to recent technological advancements, a seller can now successfully launch and promote consumer online evaluations via its own website[5]. A vendor can also obtain consumer reviews from third parties (such as Epinions.com) and determine when to make them available on its website (e.g., c-source.com). Given the pervasive influence of consumer reviews, this article examines how businesses should adapt their marketing communication strategies to address this new source of WOM data. Our study adds to the body of knowledge on word-of-mouth marketing by looking at a new and potentially effective option for a seller to assist

customers in creating and disseminating their own personal opinions about the seller's items. We examine the advantages and disadvantages of encouraging or discouraging this type of WOM information, as well as how companies decide when and how to publish user feedback[6].

1.3 Online Consumer Reviews vs. Product Reviews by Third Parties:

Third-party product reviews are another source of information closely tied to online customer reviews (e.g., CNET.com, caranddriver.com, PC Magazine, PC World). Product information is mainly based on lab tests or expert evaluations in third-party product reviews. Because such information is easier to define and evaluate, third-party product reviews tend to focus on product attribute information (e.g., performance, features, and reliability). As a result, third-party review ratings are likely to be linked to these attributes' performance. Online consumer reviews, unlike third-party reviews, are written by users based on their own personal experiences, which are influenced by their taste preferences and usage scenarios[7]. As a result, customer reviews are more likely to focus on whether or not a product suits a certain person's preferences and usage conditions[8].

1.3 Buyers and Sellers:

A monopoly seller with a multiattribute product is considered. Let c stand for the product's marginal cost. Consumer heterogeneity is allowed on two levels: preference and competence. First, we give customers the option of expressing their preferences for the seller's product. Some consumers will find that a product meets their preferences better than others for a specific product. Consider a product with two characteristics, a1 and a2. There is an equal likelihood that a particular attribute will match a consumer's desire, which is known to both the supplier and the buyer. The two attributes have separate consumer preferences. A video game, for example, frequently contains two fundamental characteristics:

- genre, which defines the game's nature (e.g., role-playing game or strategy game); and
- storyline difficulty, which indicates how challenging the game is for the players.

The term "independence of preference" refers to the fact that a consumer's choice for a game's kind is not always tied to her desire for the game's difficulty (i.e., a role-playing game lover may prefer difficult or easy games)[9].

Online consumer product reviews, which Chen et al defined as a new type of word-of-mouth information, are an emerging market phenomena that is playing an increasingly crucial part in customers' buying decisions. This paper argues that online consumer reviews, a type of product details user - generated depending on individual customer experiences, can end up serving as a new element in the marketing communications mix, acting as free "sales assistants" to assist consumers in identifying products that best suit their unique usage conditions. This study proposes a normative methodology to solve a number of critical strategic concerns about customer evaluations. First, we explain when and how a seller's marketing communication plan should be adjusted in response to customer feedback.

Our findings show that if review information is sufficiently useful, the two types of product details, namely seller-created product attribute data and purchaser review information, will interact. When the product cost is low and/or there are enough expert (more sophisticated) users, for example, the two types of information are complementary, and the purchaser's best response is to raise the amount of product attribute message provided via marketing communications after

the reviews are available. When the product cost is high and there are a large number of rookie (less sophisticated) product users, the two types of information are substitutes, and the seller's best reaction is to minimize the quantity of product attribute information it provides, even if it is free.

We also determine the specific conditions under which the seller might maximize profit by adopting a proactive strategy, i.e., modifying marketing methods even before consumer reviews are published. Second, we identify product/market scenarios in which the seller gains from supporting buyer-created information (for example, by allowing customers to write user-based product reviews on the seller's website). Finally, we show how the timing of the introduction of consumer reviews as a strategic variable is important, and how postponing the availability of consumer reviews for a given product can be helpful if the number of expert (more sophisticated) product users is big and the product cost is low. Word-of-mouth; product review information; marketing communications; social interactions are some of the key words used in this study. Jagmohan S. Raju, marketing, accepted the proposal; it was received on June 21, 2005. The authors worked on this manuscript for 11 1 2 months and through two revisions[10].

DISCUSSION

Recent advancements in information technology have substantially increased the information capacity of internet sellers. In this study, we look at a new research area: online consumer reviews and how they affect a company's marketing strategies.

We look at the marketing function of consumer reviews and three information decisions that an online seller must make:

- the best marketing communication response to consumer reviews,
- the decision to actively facilitate the creation and dissemination of consumer reviews using its website as a medium, and
- The best timing for supplying consumer reviews.

Consumer reviews, as opposed to seller-created attribute information, are more user-oriented and have an advantage in assisting consumers in finding products that match their interests. If only seller-created product attribute information is available, unsophisticated consumers (i.e., novices) will be less likely to acquire the seller's product. This sales assistant, on the other hand, is not free. The seller creates a new information channel for consumers by allowing customers to publish their own product reviews, removing the seller's power to control the flow of product information (e.g., providing full vs. partial information to consumers).

We offer four major strategic implications for online retailers' consumer review decisions: Consumer reviews, being an independent source of product knowledge, may serve a different marketing purpose than third-party product reviews. The seller must design a one-of-a-kind strategic reaction to customer feedback. This study offers some recommendations for such a strategic response. For different sorts of products, the seller's best response to customer feedback may change. In response to consumer reviews, the seller would increase product attribute information for low-cost products while decreasing it for high-cost products. For “exciting” products (e.g., vanity products, original products) or products targeted to “talkative” segments (e.g., college students), the seller can use a proactive response strategy, in which the seller adjusts its marketing strategies.

CONCLUSION

For a seller, the timing of the introduction of consumer review information might be a critical strategic component. Delaying the availability of customer evaluations for a certain product when a seller has the flexibility to select such scheduling at the individual product level can be useful if the size of the expert sector is relatively large and the product cost is modest. Although this study adds to our knowledge of online consumer reviews and their consequences for business marketing tactics, many other intriguing aspects remain unresolved and need to be investigated further. First and foremost, our empirical research is in its early stages. It's a first step toward understanding the difference between consumer evaluations and third-party expert reviews experimentally.

Future research may need to combine archive statistical data analysis, qualitative ethnographic investigation, and maybe experimental testing to provide more in-depth insights into this topic. Second, we investigate a monopoly model with an emphasis on the online consumer review matching function. Other purposes of online consumer reviews could be studied in the future, as well as the implications for corporate rivalry. Third, while the fundamental trade-offs discussed in our model apply to both direct-selling manufacturers and distributors, it will be fascinating to see how the decision to provide consumer reviews and the optimum response to consumer reviews differs across different types of sellers (e.g., manufacturers versus retailers). Fourth, future research might look at customer review intermediaries like Epinons.com from the standpoint of their best marketing methods. Finally, it's worth noting that the seller might provide its own product-matching information that resembles customer reviews.

When compared to user evaluations, seller-created product-matching information is more expensive because the seller must pay for the creation and dissemination of the information. With increasing product-matching complexity, such a cost disadvantage is projected to grow. Because consumer evaluations are "produced by users for users," increasing the degree of matching complexity implies that the review material will naturally comprise more conceivable usage scenarios (see, for example, the digital camera instances addressed in 2). Empirically investigating firms' consumer review supply decisions and assessing the impact of consumer reviews on a firm's marketing strategy will be an essential area of future research. Future empirical investigations can employ the matching complexity between product attribute space and customer usage condition space as a proxy variable for review in formativeness when testing our model conclusions.

REFERENCES

1. R. E. Bucklin, O. J. Rutz, and M. Trusov, “Metrics for the new internet marketing communications mix,” *Rev. Mark. Res.*, 2009, doi: 10.1108/S1548-6435(2008)0000005011.

2. N. I. Bruce, N. Z. Foutz, and C. Kolsarici, “Dynamic effectiveness of advertising and word of mouth in sequential distribution of new products,” *J. Mark. Res.*, 2012, doi: 10.1509/jmr.07.0441.

3. T. Beauvisage, J. S. Beuscart, V. Cardon, K. Mellet, and M. Trespeuch, “Online consumer reviews,” *Réseaux*, 2013, doi: 10.3917/res.177.0131.

4. M. L. Meuter, D. B. McCabe, and J. M. Curran, “Electronic Word-of-Mouth Versus Interpersonal Word-of-Mouth: Are All Forms of Word-of-Mouth Equally Influential?,” *Serv. Mark. Q.*, 2013, doi: 10.1080/15332969.2013.798201.

5. Y. Arslan and A. Yilmaz, "Online word of mouth versus personal word of mouth: An application on smart phone users," in *Contextual Approaches in Communication*, 2015.

6. "Word-of-Mouth Marketing: An Integrated Model," *Ekon. a Manag.*, 2010.

7. E. Keller, "Unleashing the Power of Word of Mouth:," *J. Advert. Res.*, 2007.

8. G. Iuliana-Raluca, "Word-of-mouth communication: a theoretical review," *Mark. Manag. Innov.*, 2012.

9. H. Wiener, "Social Goals and Word of Mouth," *Adv. Consum. Res.*, 2013.

10. Y. Chen and J. Xie, "New Element of Marketing Communication Mix," *Manage. Sci.*, 2008.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

CURRENT RESEARCH TRENDS ON PLASTIC POLLUTION AND ECOLOGICAL IMPACTS ON THE SOIL ECOSYSTEM: A REVIEW

Dr. Manjula Jain*

* Sr. Professor,
Department of Finance & Marketing,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: jainmanjula76@gmail.com

DOI: 10.5958/2249-877X.2021.00106.5

ABSTRACT

The issue of plastic contamination in the environment is now gaining international attention. The improper disposal of unused or abandoned plastic trash pollutes the environment. The disposal of municipal wastewater effluent, sewage sludge landfills, and plastic mulch generated by agricultural operations, in particular, is a significant problem and a major source of soil contamination. In contrast to plastic contamination in the marine and freshwater environments, soil pollution has received less attention. We addressed plastic pollution in the soil ecosystem and looked at studies on the impacts of plastic wastes, particularly microplastics, on the soil ecosystem in this study. We discovered that earthworms are often employed as test organisms in studies of the impact of soil plastic contamination on organisms. To fully comprehend the impacts of plastic pollution on the entire soil ecosystem, further study into the effects of plastic on other species models is needed. Furthermore, we provide additional insights for future studies on plastic pollution and soil ecotoxicity of plastic wastes, as well as a study path.

KEYWORDS: *Ecological, Ecosystem, Plastic, Pollution, Soil.*

1. INTRODUCTION

1.1 Concerns about plastic contamination in the soil environment are growing:

Because many species, including people, rely on the soil for life, soil contamination is a major concern, even affecting human food safety. Concerns about plastic pollution have grown as industrial growth has advanced and the production and disposal of plastics has risen. People were recently inspired to concentrate on the problem of microplastic (MP) contamination in soil and terrestrial ecosystems. Figure 1 shows the Schematic of the flow of plastic wastes in the soil environment and their distributions and fate in soil.

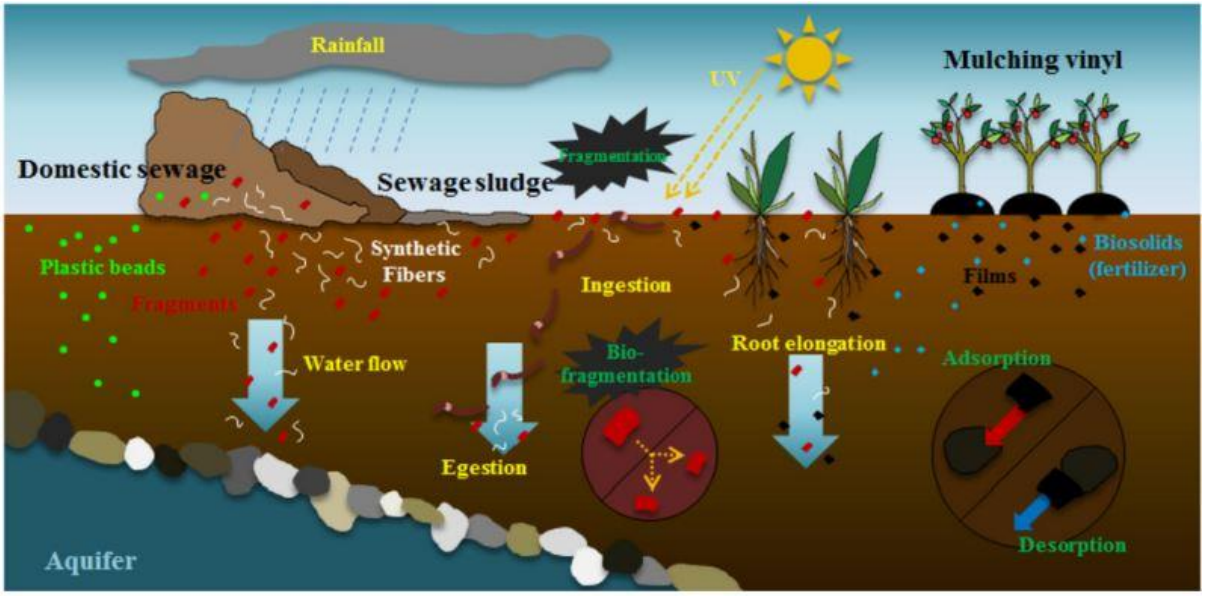

Figure 1: The above figure shows the Schematic of the flow of plastic wastes in the soil environment and their distributions and fate in soil.

Several research have calculated the concentrations of MPs in dry sludge deposited in landfills following wastewater treatment. In comparison to techniques for extracting and analyzing small plastics such as MPs from other media such as seawater and beach sand, the development of techniques for extracting and analyzing small plastics such as MPs from soil media has only recently begun. Previously, density differences of these media were achieved by separating them with solutions ranging from pure water (1.0 g cm3) to NaCl, CaCl2, or NaI (1.2e1.6 g cm3)[1]–[3].

KOH, NaOH, or H2O2 have all been extensively employed in the digestion or extraction process. Several studies employed acids (H2SO4, HNO3, or HCl), however these acids have the drawback of degrading a variety of polymers. Various filters with pore dimensions ranging from 0.45 to 300 mm were also utilized. Finally, Fourier Transformed Infrared Spectrometry (FTIR) and Spectroscopy depending on the locations.

1.2 Pollution of the soil environment with microplastics:

Various sources of plastics that pollute the environment have been. Domestic sewage, which contains fibers from clothing and microplastic beads from personal care products, fertilizers, landfills from urban. These polymers infiltrate the soil environment, settle on the surface, and penetrate deep into the subsoil. Several researchers have begun to concentrate on these anthropogenic elements that reach the soil ecosystem via a variety of pathways. Habib et al. focused on fibers from municipal wastewater in 1998; they discovered synthetic fibers generated from washing machines in effluent water and sewage sludges, and utilized polarized light microscopy to examine the fibers. They also discovered that effluents from wastewater facilities with final microfiltration stages contain less synthetic fibers than effluents from plants without. Various test settings, counted the quantity of fibers, and proposed composite pictures of synthetic fibers recovered from sludge products. They conducted a simple experiment to recover fibers from the sludges[4]–[6].

Both of these investigations found that synthetic fibers may be transmitted to the soil and that effluent applied to land can contaminate soil ecosystems. Even after these investigations, there has been renewed interest in plastic contamination of the soil environment by tiny plastics. Rillig (2012) reignited interest in microplastic pollution in the soil ecosystem after a three-year hiatus, and many studies have since proceeded to investigate and highlight microplastics in the soil environment. The presence of chronic plastic pollution in the soil environment has been indicated in recent research. UV light and high temperature may cause plastic fragmentation in the surface soil. These fragmented plastics may be tiny MPs (less than 5 mm). Earthworm burrowing operations, according to Rillig (2012), may absorb plastics on the soil surface into the deep soil. The actions of soil organisms such as collembolans, insects, and plants may transfer the mixed fragmented plastics and MPs in surface soils to deeper layers of the soil. Furthermore, despite the fact that no study has shown that microplastics are transferred or exist in groundwater, many researchers have warned of the possible dispersion and transportation of MPs into groundwater and the hypothetic zone based on prior studies on MP transportation. Microplastics may move through the soil profile and reach groundwater[7]–[9]. Nano plastics or colloids may penetrate through macrospores and coarse soil. Microplastics are more likely to be transmitted to groundwater in regions with a high groundwater table and coarse soils. Despite this, the process is mainly unclear due to the fact that there have been few research on plastic contamination in the soil environment.

1.3 Microplastics' effects on soil organisms:

Many academics are now focused on the effects of MPs in the environment, and their toxicities and consequences have been widely researched. Most research; however, concentrate on MPs in the aquatic environment since water contamination by MPs has been identified as one of the most significant worldwide problems. Only a few research have focused on plastic pollution originating from landfill sludge and agricultural plastic mulch in soil ecosystems. MPs in soils may be swallowed and transmitted to soil organisms.The effect and impact of microplastics on soil organisms[10].

Used different exposure scenarios (bio solid or PBDE-containing polyurethane foam micro particles) to mimic the exposure of polybrominated diphenyl ether (PBDE) to the earthworm. The author discovered that PBDEs leached from polyurethane foam (75 mm) accumulated in earthworm bodies. This is a significant discovery, indicating that MP-derived chemicals may penetrate the soil ecosystem and accumulate in soil invertebrate species. Additives or dangerous compounds in MPs, such as PBDEs, may be transmitted to other environments and species, not only in the marine ecosystem but also in the soil ecosystem. After 14 and 60 days of exposure to low density polyethylene (LDPE) MPs (150 mm), mortality, growth, tunnel development, location in the microcosm, and MP intake in earthworm Lubricousterrestrosin. After 4 days of exposure, the mortality, growth rate, intake rate, and accumulation were all examined.

1.4 The authors speculated on various possibilities based on their findings:

- When earthworms were exposed to high concentrations of MPs (28, 45, and 60% w/w microplastics in litter), their health was affected.
- MPs have the potential to be preferentially retained in earthworms and transferred to other organisms in the soil ecosystem through the food chain.

- MPs concentrated by earthworms could be transported to deeper layers of the soil ecosystem through the food chain.

1.5 Prospects for further research:

Plastic contamination in the soil ecosystem has gotten a lot of attention lately, and active research on the subject have just recently begun. Investigating the contamination and negative impacts of plastic wastes on soil ecosystems is challenging due to the specific features of soil media. Two tasks are required to enhance research on plastic contamination in the soil ecosystem. First, improved methods and approaches for sampling, extraction, and detection of plastic wastes in soil medium must be developed.

Several recent research have established techniques for extracting and sorting plastic wastes from soil medium. Several limitations remain, however: size detection, difficulties in analyzing small plastics with high density or disintegration during the oxidation of organic matter lack of standard protocol, and high cost.

Furthermore, no sampling method can accurately reflect the average amounts of microplastic in soils vs water samples. The second objective is to determine the current status of plastic contamination in soils. Several studies have measured microplastic concentrations in soils from an Australian industrial site and Swiss floodplain soils. However, only a small amount of data has been gathered thus far. Understanding the present status of plastic pollution in the soil environment is now the most essential job for suggesting effective ways to solve existing issues connected to plastic pollution.

We propose a number of future missions, with a focus on soil ecotoxicity caused by plastic waste. Future research must address the following issues in order to study and understand the effect of plastic pollution on organisms in the soil environment.

Too far, earthworms have been the most often employed test species. Earthworms are model organisms in soil ecosystems, and there are several advantages to using them as test species: they are large enough to be easily identified, convenient for conducting experiments, provide enough endpoints to assess the effects of test materials, and there are established guidelines for using them as test species (Ma and Bodt, 1993; Paoletti, 1999). They also consume plastic trash directly in the soil medium, and the negative consequences of this ingestion may be readily evaluated. The soil ecosystem, on the other hand, is a complex ecosystem with many physical, chemical, and biological variables and a diverse range of species (Oades, 1988; Phillips, 1998; Arias-Estevez et al., 2008). As a result, additional species, such as plants, invertebrates, insects, and microbes, must be investigated in order to determine the effect of plastic pollution on the soil ecosystem. This will help researchers better understand the processes (ingestion and egestion, ecological impact, transmission, and so on) by which plastic wastes affect each soil organism, as well as the overall impact of plastic pollution on the soil ecosystem.

The author have concentrated on PE fragments and spheres, although effluents from wastewater treatment facilities include a variety of polyester and polyacrylic fibers. These different polymers have the potential to be transferred into the soil environment during the sludge dumping process. Furthermore, agricultural plastic mulch does not come in the shape of spheres, but rather uneven fragments or films. While utilizing spherical microplastics in studies is easy and offers a rudimentary knowledge of plastic toxicity in the soil environment, doing so in a laboratory

setting is not relevant to real-world situations. Plastics of different sizes, forms, compositions, and origins are required to mimic actual and realistic circumstances.

Future study should take into account a variety of real-world situations, such as trophic transmission and generational effects. In actual settings, interactions between organisms may occur via the food chain, and long-term exposure to plastic wastes can damage the reproductive system. Food chains and trophic transfers are significant in the environment and ecosystem because they may influence community structure, population dynamics, and individual performance at higher trophic levels Plastic additives (plasticizers, retardants, antioxidants, and

The growing quantity of plastic trash in the environment, as well as the danger it poses to ecosystems and human health, can no longer be ignored. As a result, it is past time to take plastic contamination in the soil environment seriously. Previous studies on plastic contamination in marine and freshwater ecosystems may be used to future study for this aim.

2. DISCUSSION

The author has discussed about the current research trends on plastic pollution and ecological impacts on the soil ecosystem, even after these studies, there has been continued interest in the issue of small plastics contaminating the soil environment. After a three-year break, Rillig (2012) revived interest in microplastic contamination in the soil ecosystem, and numerous research have followed to study and highlight residues in the soil environment. Recent study has shown the prevalence of chronic plastic contamination in the soil environment. UV radiation and high temperatures may cause plastic breakage in the soil layers. These broken plastics may be microscopic MPs (less than 5 mm). According to Rillig (2012), earthworm-burrowing activities may absorb plastics from the topsoil into the deep soil. Soil creatures like collembolans, insects, and plants may move mixed fragmented plastics and MPs from the surface to the deeper layers of the soil. Moreover, despite the fact that no study has proven that substances are transferred or exist in bedrock, several researchers have warned of the possibility of MP dispersion and transportation into aquifer and the hypothetic zone based on previous MP transportation studies. Microplastics have the potential to go through the soil profile and into groundwater.

3. CONCLUSION

The author has concluded about the current research trends on plastic pollution and ecological impacts on the soil ecosystem,In particular, the dumping of sludge treatment effluent, sewage sludge dumps, and plastic mulch produced by agricultural activities is a major cause of soil pollution. Environmental contamination has attracted less attention than plastic waste in the aquatic habitats ecosystems. In this research, we looked at studies on the effects of plastic wastes, especially microbeads, on the soil ecosystem and addressed environmental degradation in the soil ecosystem. Earthworms are often used as test organisms in investigations of the effects of soil plastic pollution on species, we found. More research on the effects of plastic on other species models is required to completely understand the impacts of plastic pollution overall soil ecosystem.

REFERENCES

1. T. Bourdrel, M. A. Bind, Y. Béjot, O. Morel, and J. F. Argacha, “Cardiovascular effects of air pollution,” *Archives of Cardiovascular Diseases*. 2017, doi: 10.1016/j.acvd.2017.05.003.

2. J. Rembiesa, T. Ruzgas, J. Engblom, and A. Holefors, “The impact of pollution on skin and

proper efficacy testing for anti-pollution claims," *Cosmetics*. 2018, doi: 10.3390/cosmetics5010004.

3. Y. Chae and Y. J. An, "Current research trends on plastic pollution and ecological impacts on the soil ecosystem: A review," *Environmental Pollution*. 2018, doi: 10.1016/j.envpol.2018.05.008.

4. K. K. Lee, M. R. Miller, and A. S. V. Shah, "Air pollution and stroke," *Journal of Stroke*. 2018, doi: 10.5853/jos.2017.02894.

5. K. Maduna and V. Tomašić, "Air pollution engineering," *Phys. Sci. Rev.*, 2017, doi: 10.1515/psr-2016-0122.

6. K. Aunan, M. H. Hansen, and S. Wang, "Introduction: Air Pollution in China," *China Quarterly*. 2018, doi: 10.1017/S0305741017001369.

7. F. Rajé, M. Tight, and F. D. Pope, "Traffic pollution: A search for solutions for a city like Nairobi," *Cities*, 2018, doi: 10.1016/j.cities.2018.05.008.

8. P. Villarrubia-Gómez, S. E. Cornell, and J. Fabres, "Marine plastic pollution as a planetary boundary threat – The drifting piece in the sustainability puzzle," *Mar. Policy*, 2018, doi: 10.1016/j.marpol.2017.11.035.

9. D. Ierodiakonou *et al.*, "Ambient air pollution," *J. Allergy Clin. Immunol.*, 2016, doi: 10.1016/j.jaci.2015.05.028.

10. T. M. Karlsson, L. Arneborg, G. Broström, B. C. Almroth, L. Gipperth, and M. Hassellöv, "The unaccountability case of plastic pellet pollution," *Mar. Pollut. Bull.*, 2018, doi: 10.1016/j.marpolbul.2018.01.041.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

DIGITAL TRANSFORMATION CHANGES IN THE PRODUCER CONSUMER RELATIONSHIP

Vivek Devvrat Singh*

* Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India
Email id: vivekdevvrat.management@tmu.ac.in

DOI: 10.5958/2249-877X.2021.00119.3

ABSTRACT

The goal of this article is to look at how the increasing usage of digital technology has changed the producer consumer relationship. The goal of this research is to determine how this connection is fundamentally changing, as well as the role of digital technology in this shift. As a result, we provide a current state-of-the-art assessment of information systems and management literature utilizing grounded theory analytical methods. The findings of our research show that digital density, digital interconnectivity, and consumer-centricity are significant drivers of shifts in the producer–consumer connection. Our research provides with ramifications for information technology and business managers, giving them ideas on how to cope with this issue, given the increasing importance of digital technologies in both society and organizations. Finally, our research establishes a foundation for future multidisciplinary research in this area.

KEYWORDS: *Consumer, Digital Transformation, Digitalization, Producer–consumer, Relationship.*

1. INTRODUCTION

Many areas of our social and economic life are undergoing substantial and unexpected changes as a result of recent developments in digital technology. Digital technologies, including such social media, mobile devices, analytics, and cloud computing, are regarded to be a mix of information, processing, communications, and connection technologies. These consumer-driven technologies have been ingrained in every office and household, profoundly altering the way we interact, consume, and create. Given the rate at which digital tools are growing, the world is projected to have 20 billion linked gadgets by 2015; this, of course, has an effect on how consumers interact with information and, as a result, producers. Consumers are defined as individuals who utilize a product or service, while producers are defined as organizations that create or provide goods or services for sale. The producer–consumer connection is described as "an exchange relationship in which each side exchanges one kind of value for another".

Consumers may participate to innovations that will make their way into the business world by not only knowing what is accessible in the market exact pricing and characteristics of available products but also by contributing to innovations that will find their way into the modern corporate world. Traditional companies, such as banks and the automobile sector, are being compelled to adapt to such changes in customer behavior, and are concentrating on digital efforts to better meet shifting consumer demands(1). Volvo Vehicles Corporation, for example, is concentrating on mobility technology (e.g., linked cars), social media, and smart embedded

devices to create a more direct connection with the end customer and enhance the customer experience. Despite the fact that many companies are utilizing digital devices to enhance client interactions, they are still failing to use them to increase consumer engagement and value. Furthermore, digital efforts are often ineffective because companies have insufficient understanding of the changing dynamics of customer demands and behavior in the digital world.

As a result, in order to improve interactions and value exchange, a better knowledge of the changes in the producer–consumer relationship is critical. Shifts in society and businesses as a result of increased usage of digital technology are seen to be the driving force behind the phenomenon known as digital transformation(2). The Current State of Digital Transformation. An in-depth examination of the publications was conducted to see how the writers described digital transformation. The definition, features, causes, effects, and changed regions as defined by the authors were identified using retrieved publications. A concept centered matrix was created to keep track of the many variables for each construct as they were discovered. Despite the fact that a lot of work is being done in this area, this study shows that research in this field is still in its early stages. There are signs of a developing literary landscape, as well as a lack of comprehension of the phenomena. Throughout this search, we came across a few literature review articles on digital transformation. As a result, we advocate for the expansion of literature that explains and articulates the phenomena of digital transformation, including what it is, how it behaves, what drives it, what effects it has, and where those impacts are felt.

We think that a strong foundation is needed for this phenomena. A thorough literature study is conducted to this aim, and an idea centered matrix is created. A more comprehensive and broad definition is created using this matrix. The terms included in this thorough definition of digital transformation are discussed, as well as possibilities for future study. Digital Transformation's Defining Characteristic(s): The term "evolutionary process" refers to the fact that digital transformation is a long-term process. While digitalization has been referred to as a radical change rather than an evolution development, we presume that an evolutionary process is a more inclusive term that captures the fact that digital transformation evolves over time and that the impacts of this evolvement brought about a drastic change in the organization. Information devices, as major drivers of digital transformation, are also changing by their very nature. While previous types of digital transition included the implementation of laptop systems and transaction processing, today's digital transformation focuses on the acceptance and use of emerging technologies, which are inherently changing. Digital Transformation Motorists: Digital Capabilities states that in order to succeed in a digital transformation path, businesses must have a digital skill set, mindset, and culture.

To get the greatest digital transformation outcomes, we believe that appropriate skill sets and culture - digital capabilities - should be combined with digital technology. The absence of a unified definition and basic components of the literature remains a significant problem. Many current studies see digital transformation as something quite different. For example, although some writers consider a minor technology-enabled shift such as the implementation of a new ERP System to constitute digital transformation, others think it is a more radical and progressive process that occurs over time. Some academics link digitalization to business models and strategy, while others see it as a paradigm or a process. Many current studies see digital transformation as something quite different. For example, although some writers consider a minor technology-enabled shift such as the implementation of a new ERP System to constitute digital transformation, others think it is a more radical and evolutionary process that occurs over

time. The application of new digital technology to achieve substantial business advances is known as digital transformation. Prior information systems (IS) research on digital transformation has mostly focused on managerial problems, with the goal of assisting both technology and non-technology companies in creating differentiated business value in the digital environment(3).

1.1 Theoretical Background: Technology-Driven Transformation:

People's engagements with digital goods are shifting away from assessing performance and toward studying experience. This shift is due in part to greater connection, mobility, and domestication of digital goods and services, which reflects the growing importance of digital devices in problems of lifestyle and how individuals choose to express themselves. Daily artifacts with embedded computer capabilities (e.g., mobile goods and services) offer digitally mediated experiences embodied in everyday activities(4). Computing via such technologies is often not a user's main focus; rather, computing occurs on the outskirts of daily activities like jogging, driving, and talking. Digital technologies have elevated social life from the present moment, separating time and place and altering how people live, interact, work, and consume.

Utilizing the following criteria to describe technology-driven change in organizational contexts: "By redefining company capabilities and/or (internal or external) business processes and connections, it significantly alters conventional methods of conducting business." It may include strategic acquisitions in order to gain new skills or enter a new market. It exemplifies the use of information technology to significantly alter how activities are performed, and it is regarded as a critical step in allowing the company to compete in new markets, service new consumers, and gain significant competitive advantage by doing things differently. The development of process virtualized concept, which explains the shift from a physically to a virtual process in which the physical contact between people and/or things has been removed, paid special emphasis to the component of transformation in processes (e.g., electronic commerce, online distance learning, online banking) Process virtualization is similar to the phenome- none of digitization, which is the technical process of converting analog signals to digital ones. Digitalization, on the other hand, is defined as "a sociotechnical application process digitizing methods to wider social and institutional settings that renders digital technology infrastructure." In addition, the phenomenon of digitalization has recently been considered in the context of digital transformation in imposed managerial literature(5).

2. REVIEW OF LITERATURE

Gebayew et al. discussed the inclusion of digital technology into all aspects of a business, fundamentally altering how you perform and provide value to customers, is known as digital transformation. It has an effect on business models, operating procedures, and the customer experience, among other things. Furthermore, as the digital transformation has spread to all aspects of business, some sectors have a better chance of developing more scenarios in the future than others. The primary goal of this paper is to provide a comprehensive review of the literature on digital transformation from a previous study to the last five years. In order to meet their objectives, organizations should adapt their business plans or policies to a new digital business model, according to the findings. This is most evident when operation and process management are used. It was difficult to identify all of the opportunities and challenges of digital transformation in this study, but these issues also occurred in the previous study(6–10).

Nonprofit organizations (NPOs) are critical to the quality of life in many communities, according to Nahrkhalaji et al., not only because of the valuable services and social impact they provide, but also because of the positive economic impact they have on local communities. NPOs, like for-profits, must innovate in response to changing customer demands and lifestyles, as well as take advantage of opportunities provided by technology and shifting marketplaces, structures, and dynamics. In order to be a differentiator in today's highly competitive environment, digitalization is required to fuel NPO innovative thinking. In this paper, we first conduct a review to identify the challenges of digital transformation, and then we look at some of the difficulties that the nonprofit sector faces when implementing digital transformation projects(11–15).

Zaoui et al. conducted research on because it changes customer relationships, internal processes, and value creation, digital transformation is a worldwide topical issue of critical importance for all companies in all sectors. The stakeholders in this transformation are most concerned with defining a vision and roadmap that will guide them forward. So, how can businesses drive digital transformation successfully? In this respect, the paper's goal is to assist businesses in their digital transformation journeys by launching a reflection on digital transformation processes that employs a literature study to better grasp the idea and discover several digital transformation roadmap alternatives. Pre-selecting articles based on a number of keywords related to digital transformation processes is the method used in this study. Finding and analyzing scientific and white papers that offer a clear and exploitable digital transformation method. Identifying the processes required to digitally change a business and categorizing them into stages on which we may build a digital transformation plan. This study enabled for the strategic nature of the digital transformation to be highlighted, as well as the multidimensional reach of it to be grasped. The goal is to encourage discussion on how to digitize a company and to supplement our vision with current roadmaps in order to provide an alternative to digital transformation(16–20).

Morakanyane et al. discussed on Digital Transformation has piqued the interest of academics and practitioners alike. While there is evidence of a lack of general awareness of this notion, extant literature shows increased levels of academic interest in the subject and how corporate executives have participated in digital transformation initiatives. The basic ideas of digital transformation do not have an united perspective in both study and practice. We show how a comprehensive literature study was used to conceptualize this phenomena in this respect. We explain the latest state of the art literary works of the concept by describing it in terms of what it is, the characteristics, drivers, impacts, as well as changed areas, using a theory centric framework. There are inconsistencies in the definition as well as other factors that have been identified. We argue for the rapprochement of the literature and suggest a new overall and inclusive digital transformation definition in order to provide a more understandable approach to understanding this phenomenon. Additional research avenues for digital changes to business associations are also discussed(21–25).

3. DISCUSSION

The report Components of Digital Transformation: Digital Capabilities states that in order to succeed in a digital transformation path, businesses must have a digital skill set, mindset, and culture. To get the greatest digital transformation outcomes, we believe that appropriate skill sets and culture - digital capabilities - should be combined with digital technology. With the increasing importance of digital technologies in both society and business, our research has a

number of practical implications for assisting businesses in determining the source of changes in the producer–consumer relationship and developing strategies to better deal with the digital consumer. Empowered customers may have a significant effect on an organization's image, therefore both technology and nontechnology companies must be prepared to react to and welcome them. Business and IT executives must recognize that the more empowered customers are, the higher the amount that technology-enabled goods and services can create for both consumers and businesses. We also provide a few recommendations for further study. In order to experimentally evaluate our suggested paradigm, further empirical research is needed.

As a result, a case-study examination of changes in the producer–consumer interaction in both technology and non-technology companies would be suggested. Consumers are also taking a more active part in co-production, co-creation, and issue resolution, according to our research. Overall, it reminds us of the debate about "prosumers."The report Components of Digital Transformation: Digital Capabilities states that in order to succeed in a digital transformation path, businesses must have a digital skill set, mindset, and culture. To get the greatest digital transformation outcomes, we believe that appropriate skill sets and culture - digital capabilities - should be combined with digital technology.

With the increasing importance of digital technologies in both society and business, our research has a number of practical implications for assisting businesses in determining the source of changes in the producer–consumer relationship and developing strategies to better deal with the digital consumer. Empowered customers may have a significant effect on an organization's image, therefore both technology and nontechnology companies must be prepared to react to and welcome them. Business and IT executives must recognize that the more empowered customers are, the higher the amount that technology-enabled goods and services can create for both consumers and businesses. We also provide a few recommendations for further study. In order to experimentally evaluate our suggested paradigm, further empirical research is needed. As a result, a case-study examination of changes in the producer–consumer interaction in both technology and non-technology companies would be suggested. Consumers are also taking a more active part in co-production, co-creation, and issue resolution, according to our research. Overall, it reminds us of the debate about "prosumers."

4. CONCLUSION

We conducted a literature study in order to better understand how the producer–consumer interaction is changing as a consequence of the growing usage and availability of digital technology. Digital density, digital interconnectivity, and consumer-centricity may all be viewed as significant drivers of changes in this relationship, according to our findings. This suggests that customers have raised their expectations for information quality, response speed, and ways to engage with businesses. Furthermore, the producer–customer relationship has shifted in favor of the consumer. Organizations reacting to (digital) changes in consumer behavior by concentrating on individually tailored and hyper differentiated goods and services, trying to meet the specific requirements of their individual customers, are striving to provide value to their customers. By giving an overview of current knowledge of the nature of changes in the production company interaction, which is an essential driver of digital transformation in companies, we want to add to IS research on digital transformation. Furthermore, given the aforementioned changes in the producer–consumer interaction, which are facilitated by new digital technologies, further study on “prosumerization” as a driver of digitalization should be considered. There is a constant

discussion in IS regarding our identity and how we define our research emphasis. The phenomena of digitalization exemplify the possibility for developing a new IS theory that can be used as a cross-disciplinary reference.

REFERENCES:

1. Ebert C, Duarte CHC. Digital Transformation. IEEE Softw. 2018;

2. Piccinini E, Gregory RW, Kolbe LM. Changes in the Producer – Consumer Relationship – Towards Digital Transformation. 12th Int Conf Wirtschaftsinformatik. 2015;

3. Dementiev VE, Ustyuzhanina E V., Evsukov SG. Digital Transformation of Value Chains: «Smail Curve» Can Become «Scowling». J Institutional Stud. 2018;

4. Doyle G. Digitization and Changing Windowing Strategies in the Television Industry: Negotiating New Windows on the World. Telev New Media. 2016;

5. Moreno Sardà A, Molina Rodríguez-Navas P, Simelio Solà N. CiudadaniaPlural.com: From digital humanities to plural humanism. Rev Lat Comun Soc. 2017;

6. Gebayew C, Hardini IR, Panjaitan GHA, Kurniawan NB, Suhardi. A Systematic Literature Review on Digital Transformation. 2018 Int Conf Inf Technol Syst Innov ICITSI 2018 - Proc. 2018;260–5.

7. Kaushal G, Singh H, Prakash S. Comparative high temperature analysis of HVOF-sprayed and detonation gun sprayed Ni-20Cr coating in laboratory and actual boiler environments. Oxid Met. 2011;

8. Gaurav A, Yadav MR, Giridhar R, Gautam V, Singh R. 3D-QSAR studies of 4-quinolone derivatives as high-affinity ligands at the benzodiazepine site of brain GABAA receptors. Med Chem Res. 2011;

9. Kaur G, Oberoi A. Novel Approach for Brain Tumor Detection Based on Naïve Bayes Classification. In: Advances in Intelligent Systems and Computing. 2020.

10. Kehwar T, Chopra K, Rai D. A unified dose response relationship to predict high dose fractionation response in the lung cancer stereotactic body radiation therapy. J Med Phys. 2017;

11. Nahrkhalaji SS, Shafiee S, Shafiee M, Hvam L. Challenges of Digital Transformation: The Case of the Non-profit Sector. IEEE Int Conf Ind Eng Eng Manag. 2019;2019-Decem:1245–9.

12. Shaida MN, Singla S. Global biomedical waste management issues and practices. Int J Innov Technol Explor Eng. 2019;

13. Bilal M, Singh N, Rasool T. A model supported biomedical waste for the enhancement of mechanical properties of concrete. Model Earth Syst Environ. 2021;

14. Singh G, Siddique R. Abrasion resistance and strength properties of concrete containing waste foundry sand (WFS). Constr Build Mater. 2012;

15. Mir MA, Verma P. Use of polyethylene waste with stone dust in flexible pavement. Int J Sci Technol Res. 2019;

16. Zaoui F, Souissi N. Roadmap for digital transformation: A literature review. Procedia

Comput Sci. 2020;175:621–8.

17. Arora M, Som S, Rana A. Predictive Analysis of Machine Learning Algorithms for Breast Cancer Diagnosis. In: ICRITO 2020 - IEEE 8th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions). 2020.

18. Sharma Y, Kumar S. Effect of power avaricious attack on MANET routing protocols. In: ICECT 2011 - 2011 3rd International Conference on Electronics Computer Technology. 2011.

19. Kumar A, Jain RK, Yadav P, Chakraborty RN, Singh BK, Nayak BK. Effect of gamma irradiation on the etching properties of Lexan and Makrofol-DE polycarbonate plastics. J Radioanal Nucl Chem. 2013;

20. Sharma S, Sharma AD, Arif Naseer MD, Singh R. Formulation and evaluation of self emulsifying drug delivery system of ibuprofen using castor oil. Int J Pharm Pharm Sci. 2011;

21. Morakanyane R, Grace A, O'Reilly P. Conceptualizing digital transformation in business organizations: A systematic review of literature. 30th Bled eConference Digit Transform - From Connect Things to Transform our Lives, BLED 2017. 2017;427–44.

22. Kumar AU, Sachar A. Evaluation of correlation's between Cbr using Dcp with laboratory Cbr at varying energy levels. Int J Adv Sci Technol. 2020;

23. Shikha D, Kaur R, Gupta R, Kaur J, Chandan, Sapra BK, et al. Estimation of indoor radon and thoron levels along with their progeny in dwellings of Roopnagar District of Punjab, India. J Radioanal Nucl Chem. 2021;

24. Sehgal A, Kaushik AK, Choudhary S, Saini S. Prewett Edge Detector Method for Content Extraction in Moving Pictures or Images. In: 2019 2nd International Conference on Power Energy Environment and Intelligent Control, PEEIC 2019. 2019.

25. Al-Bahri B, Noronha H, Pandey J, Singh AV, Rana A. Evaluate the Role of Big Data in Enhancing Strategic Decision Making for E-governance in E-Oman Portal. In: ICRITO 2020 - IEEE 8th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions). 2020.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

A REVIEW ON INTELLECTUAL PROPERTY IN INDIA

B. R. Maurya*

*Department of Law,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India
Email id: brmourya.mourya321@gmail.com
DOI: 10.5958/2249-877X.2021.00121.1

ABSTRACT

Intellectual property rights (IPR) are intangible in nature and provide an inventor or creator with exclusive rights to their valued innovation or work. IPR is a focus point in global trade practices and lifestyle throughout the globe in the current globalisation situation. These rights encourage innovation by providing recognition and financial rewards to creators or inventors, while a lack of IPR knowledge and poor execution may stymie the nation's economic, technological, and social progress. As a result, every country must prioritize the spread of IPR information and its proper application. The current article discusses different IPR terminology such as patents, trademarks, industrial designs, geographic indications, copyright, and so on, as well as its associated laws, regulations, and importance and function in the Indian context. In addition, the status of India's involvement in IPR-related activities across the globe was briefly addressed.

KEYWORDS: *Intellectual Property Rights, WIPO, Patents, Trademarks, Industrial Designs, Geographic Indications.*

1. INTRODUCTION

In the wake of globalization, it is critical to stay ahead of the curve in terms of innovation and creativity in order to compete in the technological and commerce markets. India is well-known for its intellectual prowess(1) in software engineering, missile technology, lunar or Jupiter missions, and other technical disciplines. In terms of registered patents, industrial designs, trademarks, and other IPR assets, India, on the other hand, lags behind(2). According to a recent study by the US Chamber of Commerce, India ranked 29th out of 30 nations in the global IP index. It is a highly concerning situation for policymakers as well as the country as a whole(3).

Any society's growth is inextricably linked to intellectual property rights and the policies that govern them.Inventions died; there was a high danger of infringement, economic loss, and the end of an intellectual age in the nation due to a lack of IPR knowledge(4). As a result, there is an urgent need for IPR information to be disseminated in order to promote local innovations and technological advances(5).Various intellectual property rights are highlighted in the preceding part of this article(6).In the context of India, with their associated laws, regulations, and needs, as well as their function in society.

1.1 Intellectual Property Rights and their Classification:

The phrase "intellectual property"(7) refers to the use of the human brain for innovation and creativity. To develop or produce anything new, many efforts in terms of people, time, energy,

expertise, money, and so on are needed. The final idea that led to the innovation or creation is an intangible property of the individual who put out the effort to make it happen. As a result, legal rights or monopoly rights are granted to the inventor or innovator by law in order for them to reap the economic advantages of their innovation or production. Similar to physical property, intellectual property rights (IPR) (8)are territorial rights that allow an owner to sell, acquire, or lease his Intellectual Property (IP). To receive benefits, one must register IPR with a legal body in a presentable or tangible form. Each kind of IPR grants a unique set of rights to the innovator or creator in order to maintain and reap economic advantages, which in turn encourages talent and social advancements.

Intellectual property rights are classified(9) as follows based on the type of invention and creation of the human mind and their applications: I patents, ii) trademarks, iii) industrial designs, iv) layout design of semiconductor integrated circuit, v) geographic indications of source, vi) copyright and related rights (literary and artistic works, musical work, artistic works, photographic work, motion pictures, computer programmers and performing arts and broadcasting work).

1.2 WIPO:

The Globe Intellectual Property Organization (WIPO)(10) was founded in Stockholm in 1967 to defend intellectual property rights throughout the world. 8, 16 Later, in 1974, it becomes a United Nations agency. WIPO creates frameworks and regulates different IPR regulations throughout the world. WIPO's primary goal is to promote economic, social, and cultural growth while preserving biodiversity and traditional knowledge via a balanced and effective international IP system. In addition, it is responsible for harmonising disparities across countries, particularly between rich and developing countries, by modifying international regulations so that each of them has an equal chance in the growing globe.

1.1.1 Patent

Patent(11) is an intellectual property right granted to invent or by concerned government office for his novel technical invention. The term invention means solution of any problem in terms of development of a product or a process. Among the different types of IPR, patents are considered the most valuable and rightly so. The patentability of any invention needs to fulfil following criteria:

- *Usefulness:* Invention must have industrial applicability or applied for practical purpose.
- *Novelty:* invention must be new technology which has not been published or available in prior art of the country or elsewhere in the world before the date of patent filing.
- *Non obviousness:* Invention which can be done by any ordinary skilled person is obvious and cannot be patentable. Hence invention must not be obvious for patentability.

i. Industrial Design:

Industrial design (12) is the creative process of giving mass-produced goods or articles a decorative or aesthetic look. Two-dimensional or three-dimensional shapes may be used to convey the design. The United Kingdom's Design Act of 1949 defines design as a characteristic of form, arrangement, pattern, or decoration(13). Industrial design encompasses the form, surface, pattern, lines, color, and other appearance-related characteristics of industrial goods such as watches, automobiles, mobile phones, laptop computers, various household appliances,

buildings, textile patterns, and handicraft products(14). Apart from technical excellence and other factors, the aesthetic worth of a thing, or how it appeals, is the most important consideration in marketing(15).

An industrial design must be fresh or unique, and non-functional, in order to be protected under most national laws(16). As a result, industrial design is primarily concerned with aesthetic characteristics, and the design registration does not protect any technological features or aspects of the object to which it is applied. Although, if the technological elements are unique, they may be protected by a patent (17). In addition to this, design that is literary or creative in nature, such as a cartoon, label, pamphlet, map, dressmaking pattern, and so on, is covered by copyrights rather than industrial design.

Industrial design rights can last anywhere from 10 to 25 years depending on the country. Industrial designs in India are protected for ten years under the Design Act of 2000. This period may be extended for an additional five years(18).By fostering more visually appealing goods for society, industrial design promotes innovation and skill development among individuals and the manufacturing industry. The form and shape of a product not only creates an attractive look, but it is also indirectly linked with ergonomics and plays a significant part in the comfort of consumers in the case of machines, furniture, automobiles, and so on.

ii. Trademark:

In the ancient world, trademarks(19) were already in use. Around 3000 years ago, Indian craftsmen used to carve their mark on their jewellery or creative creations. The trademark has become a significant element in the contemporary world of international commerce as a result of industrialization. A trade mark is a unique symbol or emblem that indicates that a certain item is manufactured or supplied by a specific person, industry, or business(20). Service marks, like trademarks, help to differentiate service providers from their rivals. A business may have numerous kinds of trademarks for its varied goods, but trade names are used to differentiate itself from other companies or enterprises(21).

Trademarks or trade names assist businesses in gaining consumer awareness, reputation, and trust. In most instances, customers depend on trademarks since inspecting a product or service rapidly to establish its quality is difficult. A certain section of consumers is extremely concerned about the brand and will pay a premium for the brand's prestige, even if the quality is equal, in order to stand out from the crowd(22).

To identify one company or service from another, a trademark/service mark consists of words (name, surname, geographical name, slogan, etc.), letters and numbers, drawing, logo, symbol, phrase, picture, design, or a combination of these components. Aside from these, there are a few more ‘non-traditional' trademarks(23):

The fragrance of fresh cut grass for tennis balls, the odor of beer for dart flights, and the scent of flowers for tyres have all been registered in the United Kingdom. In the United States, a fresh floral smell evocative of Plumeria flowers was trademarked for sewing thread and embroidery yarn. Sound Markings or Audible Signs: Sound Marks are distinct sound marks in the form of a musical note that may be recorded. In 1950, the musical notes were successfully registered as a trademark for NBC's radio broadcasting services. MGM has a registered sound trademark for the lion's roar. In the ancient world, trademarks were already in use(24). Around 3000 years ago, Indian craftsmen used to carve their mark on their jewellery or creative creations. The

trademark has become a significant element in the contemporary world of international commerce as a result of industrialization. A trade mark is a unique symbol or emblem that indicates that a certain item is manufactured or supplied by a specific person, industry, or business. Service marks, like trademarks, help to differentiate service providers from their rivals. A business may have numerous kinds of trademarks for its varied goods, but trade names are used to differentiate itself from other companies or enterprises.

2. DISCUSSION

Trademarks or trade names assist businesses in gaining consumer awareness, reputation, and trust. In most instances, customers depend on trademarks since inspecting a product or service rapidly to establish its quality is difficult. A certain section of consumers is extremely concerned about the brand and will pay a premium for the brand's prestige, even if the quality is equal, in order to stand out from the crowd.

To identify one company or service from another, a trademark/service mark consists of words (name, surname, geographical name, slogan, etc.), letters and numbers, drawing, logo, symbol, phrase, picture, design, or a combination of these components. Aside from these, there are a few more ‘non-traditional' trademarks9:

The fragrance of fresh cut grass for tennis balls, the odor of beer for dart flights, and the scent of flowers for tyres have all been registered in the United Kingdom. In the United States, a fresh floral smell evocative of Plumeria flowers was trademarked for sewing thread and embroidery yarn. Sound Markings or Audible Signs: Sound Marks are distinct sound marks in the form of a musical note that may be recorded. In 1950, the musical notes were successfully registered as a trademark for NBC's radio broadcasting services. MGM has a registered sound trademark for the lion's roar. Important Criteria of Trademark Registration. As per UK Trademarks Act, 1994, the three main requirements for registering trade mark areas follows:

- The trademark should be asignor anything that can convey information.
- The sign should be capable of distinguishing products or services of one undertaking from that of another. This is clearly a requirement of distinctiveness of trademarks.
- The trade mark is capable of graphical representation to provide precise identification in the trade mark registry.

Broadly Followed Rules of Trademark Registration

- The word “apple” or an apple device cannot be registered for apple as in this case it is not distinguish able. But it is registered being highly distinctive in case of computers.
- Similarly Camel trade mark is registered for cigarettes. The generic term like “furniture” cannot be registered as trade mark for chair, table, orsimilarty peofitems.
- In case of use of letters or numerals, in certain countries registration is allowed only when at least few numbers of letters and/ or numerals are combined or in case of letters the combination of word is pronounceable.
- Similarly, common surnames are not registered in some countries as they are not distinctive in nature.
- Beside these, deceptive sign or trade mark which is misleading or violates the public order

or morality is not qualified for registration.

- The signs which are reserved for state, public institution, organization or international body cannot be registered as trademark.

Indian Trademarks Act

Any unique mark capable of distinguishing products and services of one enterprise from those of another and capable of being graphically depicted may be trademarks, according to the Indian trademarks legislation(25).There is no need to restrict the validity of trademarks since they do not provide exclusive rights that may be utilized. However, without a temporal restriction, trademark validity would result in an excessive quantity of registered trademarks with no use. 11 The original period of trademark registration in India is ten years, after which it must be renewed on a regular basis.

2.1 Geographical Indications

Using geographical or locality origin to identify goods for commercial reasons is not uncommon. WIPO coined the term Geographical Indication (GI)(26) to encompass all existing means of protecting such names and symbols, regardless of whether they indicate that a product's qualities are due to its geographical origin (such as appellations of origin) or simply indicate that a product's qualities are due to its geographical origin (such as indication of source).

Champagne, Havana, Darjeeling tea, Arabian horses, Alphanso mango, Nagpur orange, Basmati, and other well-known names for products of exceptional quality and recognized as GI include Champagne, Havana, Darjeeling tea, Arabian horses, Alphanso mango, Nagpur orange, Basmati, and other well-known names for products of exceptional quality and recognized as GI include Champagne, Havana, Darjeeling tea, Dar.

Creators of that ability from a certain region or location with the best atmosphere A tribe or region passes the ability down down the generations with considerable care and compromise. Dhaka muslin, Venetian glass, China silk, Mysore silk, Chanderi sari, Kanchipuram silk saree, Kullu shawls, Solapur chaddar, Solapur Terry Towel, Kashmiri handicrafts, and other well-known examples of Geographical indicators for state-of-the-art workmanship include

3. CONCLUSION

Intellectual property rights are critical for progressive social development in a knowledge-based economy. IPR is a fundamental need for participating in local and worldwide competitive commerce, since it is difficult to create a creative environment without disseminating and implementing IPR information. It is critical for policymakers to include intellectual property rights into the fundamental educational system and to encourage inventors and creators to register their inventions. In terms of accessible raw materials, low-cost labor, and inventive and creative committed people, India has it all. Without a doubt, India and other developing nations will explore Intellectual Property Rights in order to increase their proportional part of global commerce.

REFERENCES:

1. Deep R, Narwal KP. Intellectual Capital and its Association with Financial Performance: A Study of Indian Textile Sector. Int J Manag Bus Res. 2014;

2. Singh G, Garg S. Fuzzy Elliptic Curve Cryptography based Cipher Text Policy Attribute based Encryption for Cloud Security. In: Proceedings of International Conference on Intelligent Engineering and Management, ICIEM 2020. 2020.

3. Saini S, Singh D. Reckoning with the barriers to Lean implementation in Northern Indian SMEs using the AHP-TOPSIS approach. J Sci Technol Policy Manag. 2021;

4. Farooq U, Singla S. Impact of aggregate and fly ash filler types on asphalt and control mix designs. Int J Sci Technol Res. 2020;

5. Sheikh RQ, Yadav V, Kumar A. Stabilization of red soil used as a sub-base material. Int J Sci Technol Res. 2020;

6. Zargar K, Singla S. Impact of pet plastic waste on mechanical properties of mix concrete design. Int J Sci Technol Res. 2020;

7. Alimov A, Officer MS. Intellectual property rights and cross-border mergers and acquisitions. J Corp Financ. 2017;

8. Handa S, Bhatt K. Intellectual Property Rights (IPR) in Digital Environment : an Overview in Indian Digital Environment. Int J Digit Libr Serv. 2015;

9. Sakao T, Öhrwall Rönnbäck A, Ölundh Sandström G. Uncovering benefits and risks of integrated product service offerings - Using a case of technology encapsulation. J Syst Sci Syst Eng. 2013;

10. Singh J. World intellectual property organization. Indian Journal of Pharmacology. 2004.

11. Clarke NS. The basics of patent searching. World Pat Inf. 2018;

12. Agarwal V. IPR registration in fashion industry of India. J Intellect Prop Rights. 2019;

13. Sharma SK, Ghai W. A neural based allocation architecture of mobile computing. Int J Sci Technol Res. 2020;

14. Wani AB, Singla S, Sachar A. A case study of integrated land use planning for sustainable infrastructure. Int J Sci Technol Res. 2020;

15. Mushtaq Z, Yadav EV, Kumar EA. Effect of carbon fiber in rigid pavement partially replacing cement with marble dust. Int J Sci Technol Res. 2020;

16. Mathur G, Ghai W, Singh RK. A totalitarian technique for wormhole detection using big data analytics in iot network. Int J Sci Technol Res. 2020;

17. Mir MA, Verma P. Use of polyethylene waste with stone dust in flexible pavement. Int J Sci Technol Res. 2019;

18. Singh H, Oberoi A. An efficient romanization of gurmukhi punjabi proper nouns for pattern matching. Int J Recent Technol Eng. 2019;

19. Sharma B. Trademark. In: Pharmaceutical Medicine and Translational Clinical Research. 2017.

20. Irshad U, Singla S. Impact of road conditions on traffic management-a case study of chenab valley. Int J Sci Technol Res. 2019;

21. Sethi V, Tandon MS, Dutta K. A path model of antecedents of green purchase behaviour among Indian consumers. Int J Public Sect Perform Manag. 2018;

22. Siddiqi MA, Tandon MS, Ahmed O. Leader member exchange leading service employee desired job outcomes and performance: An Indian evidence. Int J Serv Oper Manag. 2019;

23. Sofat Y. Strategy of advertising agencies in india for evaluating advertising effectiveness across experience. Indian Journal of Marketing. 2011.

24. Aulakh SS, Gill JS. Lean manufacturing-A practitioner's perspective. In: 2008 IEEE International Conference on Industrial Engineering and Engineering Management, IEEM 2008. 2008.

25. Ansari MH. Indian Trademark Law and Parallel Imports. SSRN Electron J. 2012;

26. Garcia DL, Silva GF da, Souza ALG de, Bisneto JPM, Silva E de S. Geographical Indication. Int J Innov Educ Res. 2019;

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

A STUDY ON THE EFFECTIVENESS OF DIGITAL MARKETING

Avinash Raj Kumar*

*Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India
Email id: avinashtmimt1982@gmail.com

DOI: 10.5958/2249-877X.2021.00122.3

ABSTRACT

In this digital era, marketers are confronted with new problems and possibilities. The use of online media by advertisers to push goods or services into the market is referred to as digital marketing. Digital marketing's primary goal is to attract consumers and enable them to engage with the business through digital media. The significance of online marketing for both marketers and customers is the subject of this essay. We look at how digital marketing affects a company's revenues. In this article, the contrasts between conventional marketing and digital marketing are also discussed. This research examines the different types of digital marketing, their efficacy, and the influence they have on a company's sales. The sample for this study is made up of 150 companies and 50 executives who were chosen at random to demonstrate the efficacy of digital marketing. The collected data was examined using a range of statistical tools and methods.

KEYWORDS: *Digital Marketing, Promotion, Effectiveness, Customer Reach*

1. INTRODUCTION

Digital marketing is a kind of marketing that is often used to promote goods or services and reach out to customers through digital media. Digital marketing includes methods that do not need the use of the web in addition to online marketing. Cellphones (including SMS and MMS), social media marketing, display ads, search engine optimization, and a variety of other digital media are all part of it. Consumers may obtain information via digital media at any time and from any location. Consumers may now not only depend on what the business says about its brand, but also on what the media, relatives, organizations, neighbors, and others are talking about it, thanks to the existence of digital media(1)(2). Digital marketing is a wide phrase that refers to a variety of promotional methods that use digital technology to reach consumers. In addition to mobile and conventional TV and radio, digital marketing encompasses a wide range of service, product, and brand marketing strategies that primarily utilize the Internet as a primary promotional channel. Canon image Gateway allows users to exchange digital pictures with friends via the internet. Lancôme, an L'Oréal brand, utilizes email newsletters to stay in contact with consumers and therefore attempts to build brand loyalty(3)(4)(5).

To increase re-subscription rates, magazine publishers may use e-mails and SMS messages to activate and push their consumers to the Internet. Marketers are bringing brands closer to their customers' daily lives. Customers' evolving position as value coproduces is becoming more significant(6). Electronic marketing (EM) is the transmission of products or services from seller to customer using one or more electronic means or media.), technologies plays a critical part in enhancing the quality of services offered by business units. In the nineteenth century, telegraphs

were used to start e-marketing. Electronic media has been the main marketing force with the development and widespread adoption of the telephone, radio, television, and later cable television. McDonald's utilizes the internet to reinforce brand messaging and build connections with customers. They've created online communities for kids, such as the Happy Meal website, which has educational and fun activities to keep consumers connected(7)(8)(9)(10).

Over time, the number of mailing attempts made by the business is positively related to the company's financial performance. The main benefits of social media marketing are cost savings and increased reach(11)(12)(13). A social media platform is usually less expensive than traditional marketing channels, such as face-to-face advertising or sales via intermediaries or distributors. Furthermore, social media marketing enables businesses to contact consumers that would otherwise be unavailable owing to the time and geographic constraints of traditional distribution channels. The primary benefit of social media is that it allows businesses to expand their reach while lowering expenses. Encourage consumer contact on the corporation's own website or via its social media presence L is what social media marketing entails. Companies may utilize social media to disseminate their messages to their target audience without paying for the publishers or distributors that are typical of conventional marketing, which is one of the most significant techniques in digital marketing. Digital marketing, electronic marketing, e-marketing, and Internet marketing are all words that relate to online marketing, whether it is done via websites, online advertising, sign - up emails, interaction kiosks, digital Tv, or mobile phones. Customer information satisfaction (CIS) for online marketing can be thought of as a collection of affective responses of varying intensity that occur after consumption and are triggered by sales activities, information systems (websites), digital products/services, customer support, after-sales service, and company culture(14)(15)(16)(17).

Many Asian nations are benefiting from e-commerce through opening up, which is critical for encouraging competition and the spread of Internet technology. Currently, e-commerce is driving shoppers in urban India: these customers are booking trips, purchasing consumer goods, and purchasing books online. Despite the fact that average expenditure per online buyer remains modest, 59 percent of online customers in urban India make at least one purchase each month. E-marketing is defined as the use of digital technologies - online channels (web, e-mail, database systems, and furthermore mobile/wireless & electronic TV) to support marketing efforts directed at accomplishing profit obtaining and retaining customers (within a multi-channel buying practices and customer lifecycle) by enhancing customer understanding (of their profiles, behavior patterns, valuation, and loyalty drivers) and further delirium (within a multi-channel buying practices and customer life - cycle) by enhancing customer insight (of their profiles, behavior, The relationship marketing idea stresses that the company model, not technology, should drive e-marketing. All forms of social media allow businesses to promote themselves or their goods to dynamic groups and people who may be interested. For social media marketers, the online marketing environment presents a number of possibilities as well as difficulties(18).

This paper's primary goal is to determine the efficacy of digital marketing in a competitive market. The following are the supporting objectives:

- To demonstrate the many aspects of digital marketing;
- To concentrate on the fundamental differences between conventional and digital marketing;

- Discuss the impact of different types of digital marketing on the company's sales and other operations;
- To demonstrate to consumers the many benefits of digital marketing.

1.1 A Theoretical and Conceptual Framework:

1.1.1 Traditional Marketing vs. Digital Marketing:

Traditional marketing is the most well-known kind of advertising. Traditional marketing is a non-digital method of promoting a company's goods or services(19). Digital marketing, on the other hand, is the promotion of goods or services via the use of digital platforms to reach customers. The following are some distinctions:

Promotional efforts conducted through the Online, social networks, cell phones, electronic billboards, and also digital television and radio channels, may all be utilized as part of a company's digital marketing plan(20). Digital marketing is a subset of conventional marketing that uses contemporary digital channels to put goods, such as downloaded music, and to communicate with stakeholders, such as customers and companies, about the brand, products, and development of the company.

1.2 Different aspects of digital marketing

Digital marketing is made up of a number of components. Electronic gadgets are used in all kinds. The following are the most essential aspects of digital marketing:

1.2.1 Online marketing:

The importance of online advertising in digital marketing cannot be overstated. It's also known as online advertising, and it's a way for a business to spread the word about its goods or services. Consumer interests are best served by internet-based advertising, which delivers the most relevant information and advertisements. Publishers provide information about their goods or services on their websites so that customers or users may learn more about them for free. Advertisers should use the internet to put more effective and relevant advertisements. The business is able to keep a tight grip on its budget and schedule by using online advertising(21).

1.2.2 Email marketing:

Email marketing is described as sending a message about a product or service to a current or prospective customer through email. Direct digital marketing is used to deliver advertisements, increase brand and consumer loyalty, increase customer trust, and raise brand recognition. This aspect of digital marketing allows businesses to simply advertise its goods and services. In comparison to advertising or other kinds of media exposure, it is quite inexpensive. By developing an appealing combination of images, text, and links on goods and services, a company can capture the customer's full attention(22).

2. REVIEW OF LITERATURE

Fawad Siddiqui et al discussed about the goal of this exploratory study is to illustrate Pakistani attitudes about digital marketing. Academics and scholars in Pakistan and abroad have seldom addressed this problem. Digital marketing criteria were utilized in this research to assess the awareness and efficiency of digital marketing among Pakistani marketing professionals. This academic activity drew approximately 200 marketing experts. Data was examined in a variety of

methods, including descriptive statistics and factor analysis to summarize the data. The research revealed four main perception groups: a) Skeptical, b) Enthusiast, c) Utilitarian, and d) logically consistent. The findings indicate that Pakistani professionals are more suspicious of digital marketing techniques and ideas. They are unaware of the advantages of digital marketing in terms of growth and cost efficiency. Finally, the research presents the investigations' limitations and results(23).

Goel et al studied about Marketers are confronted with new problems and possibilities on a daily basis in the digital era. Marketers mostly use electronic media to advertise all products and services available on the market. Knowing how to convince someone and coming up with methods to attract and keep potential consumers is one of the main difficulties that a marketer faces. The problem may be readily addressed by requiring or enabling consumers to engage with or discuss the brand through digital media. The researcher will concentrate on and discuss the significance of digital marketing for both consumers and marketers in this study. The goal of this study is to figure out why digital marketing is more successful than conventional marketing and what the main distinctions are between the two. The researcher used primary and secondary data, as well as closed-ended questionnaires, to choose a sample of 105 people(24).

Dara et al. studied about the digital era, marketers are confronted with new problems and possibilities. Digital marketing uses the power of the internet to create demand and then fulfills it in new and creative ways. To put it another way, digital marketing is the use of digital communication by marketers to advertise and sell products in the market. Digital marketing may provide value in the form of customer time, engagement, and support. Traditional marketing concepts are built on and adopted by digital marketing strategies, which take use of the possibilities and difficulties presented by the digital media. The significance of digital marketing for both marketers and customers is the subject of this article. The differences between conventional and digital marketing are also discussed in this article(25).

3. DISCUSSION

Digital marketing has altered consumers' purchasing habits as a result of fast technology advancements. It has provided customers with a number of benefits, keep up with new goods or services. Consumers may keep up to speed on business information via digital marketing tools. Many consumers may now access the internet from anywhere at any time, and businesses are constantly updating information about their goods and services. Consumers may interact with the company's different operations via digital marketing. Consumers may go to the company's website to learn more about the goods or services, make online purchases, and give comments. Consumers receive clear information about goods or services via digital marketing. There is a small risk that information obtained from a salesperson at a retail shop may be misinterpreted. The Internet, on the other hand, offers complete product information on which consumers may base their purchasing decisions. Because many businesses are attempting to advertise their goods or services via digital marketing, it is becoming the biggest benefit to the consumer in terms of allowing customers to compare products or services from other suppliers in a cost-effective and time-efficient manner. Customers do not need to go to a variety of different retail locations to learn about the goods or services. Shopping 24 hours a day, 7 days a week because the internet is accessible 24 hours a day, there is no time limit on when a consumer may purchase a goods online. Digital marketing allows visitors to share the product or service's content with others.

One may quickly transmit and get knowledge on the qualities of a product or service to others via digital media.

4. CONCLUSION

In marketing, the digital channel has become an important component of many businesses' strategies. Even small company owners may now advertise their goods or services in a highly cost-effective and efficient manner. There are no limits to what can be done with digital marketing. To advertise the business and its goods and services, the company may utilize any device such as smartphones, tablets, computers, TVs, gaming systems, digital banners, and media such as social networks, SEO (search engine optimization), videos, content, e-mail, and more. If user requirements are prioritized in digital marketing, it is more likely to succeed. Digital marketing outcomes will not come without effort and experiment, just as Rome was not created in a day (and error). All digital marketing efforts should include the watchwords "test, learn, and develop." To determine the best path for increasing online advertising campaigns, companies should create inventive user experiences and specific media strategies.

REFERENCES

1. Sharma TK, Prakash D. Air pollution emissions control using shuffled frog leaping algorithm. Int J Syst Assur Eng Manag. 2020;

2. Jain M, Agarwal RP. Capacity & coverage enhancement of wireless communication using smart antenna system. In: Proceeding of IEEE - 2nd International Conference on Advances in Electrical, Electronics, Information, Communication and Bio-Informatics, IEEE - AEEICB 2016. 2016.

3. Kaushik BK, Agarwal RP, Sarkar S, Joshi RC, Chauhan DS. Repeater insertion in crosstalk-aware inductively and capacitively coupled interconnects. Int J Circuit Theory Appl. 2011;

4. Sharma V, Sharma S, Verma OP, Bhardwaj B, Sharma TK, Pachauri N. Prediction and optimization of abrasive wear loss of ultrahigh strength martensitic steel using response surface methodology, Harris Hawk and artificial neural network. Int J Syst Assur Eng Manag. 2021;

5. Duksh YS, Kaushik BK, Sarkar S, Singh R. Performance comparison of carbon nanotube, nickel silicide nanowire and copper VLSI interconnects: Perspectives and challenges ahead. J Eng Des Technol. 2010;

6. Yasmin A, Tasneem S, Fatema K. Effectiveness of Digital Marketing in the Challenging Age: An Empirical Study. Int J Manag Sci Bus Adm. 2015;

7. Yadav CS, Yadav M, Yadav PSS, Kumar R, Yadav S, Yadav KS. Effect of Normalisation for Gender Identification. In: Lecture Notes in Electrical Engineering. 2021.

8. Ghai W, Kumar S, Athavale VA. Using gaussian mixtures on triphone acoustic modelling-based punjabi continuous speech recognition. In: Advances in Intelligent Systems and Computing. 2021.

9. Anand V. Photovoltaic actuated induction motor for driving electric vehicle. Int J Eng Adv Technol. 2019;8(6 Special Issue 3):1612–4.

10. Goswami G, Goswami PK. Artificial Intelligence based PV-Fed Shunt Active Power Filter

for IOT Applications. In: Proceedings of the 2020 9th International Conference on System Modeling and Advancement in Research Trends, SMART 2020. 2020.

11. Gupta S, Kumar R. Effectiveness of digital marketing a descriptive analysis. Int J Appl Bus Econ Res. 2017;

12. Kumar M, Sharma A, Garg S. A study of aspect oriented testing techniques. In: 2009 IEEE Symposium on Industrial Electronics and Applications, ISIEA 2009 - Proceedings. 2009.

13. Randhawa R, Sohal JS. Comparison of optical network topologies for wavelength division multiplexed transport networks. Optik (Stuttg). 2010;

14. Kaushal G, Singh H, Prakash S. Cyclic oxidation behavior of detonation gun sprayed Ni-20Cr coating on a boiler steel at 900°C. In: TMS Annual Meeting. 2010.

15. Singh B, Singh J, Ailawalia P. Thermoelastic waves at an interface between two solid half-spaces under hydrostatic initial stress. Arch Mech. 2010;

16. Kumar M, Sharma P, Sadawarti H. Measuring testability of aspect oriented programs. In: ICCAIE 2010 - 2010 International Conference on Computer Applications and Industrial Electronics. 2010.

17. Kaushal G, Singh H, Prakash S. High temperature corrosion behaviour of HVOF-sprayed Ni-20Cr coating on boiler steel in molten salt environment at 900°C. Int J Surf Sci Eng. 2011;

18. NEGRICEA CI, PURCAREA IM. Digital intelligence and digital marketing effectiveness. … Mark Manag J. 2017;

19. Ng'ang'a CM. Effectiveness of Digital Marketing Strategies on Performance of Commercial Banks in Kenya. Univ Nairobi. 2015;

20. Gaitniece E. Digital Marketing Performance Evaluation Methods. Cbu Int Conf Proc. 2018;

21. Vol I. Performance and Growth of Marketing Through Digitization . Int Res J Manag Sociol Humanit. 2016;

22. Muniraju M, Bhojaraja. Challenges and Opportunities in Digital Marketing. Iaetsd J Adv Res Appl Sci. 2018;

23. Khan F, Siddiqui K. The importance of digital marketing. An exploratory study to find the perception and effectiveness of digital marketing amongst the marketing professionals in Pakistan. J Inf Syst Oper Manag. 2013;

24. Goel R, Sahai S, Krishnan C, Singh G, Bajpai C, Malik P. An empirical study to enquire the effectiveness of digital marketing in the challenging age with reference to indian economy. Pertanika J Soc Sci Humanit. 2017;

25. Dara S. Effectiveness of Digital Marketing Stratigies. IjirmfCom. 2016;

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

A REVIEW ON HUMAN RESOURCE MANAGEMENT AND PERFORMANCE

Aditya Sharma*

*Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India
Email id: adityahr2018@gmail.com

DOI: 10.5958/2249-877X.2021.00123.5

ABSTRACT

An increasing amount of research suggests a link exists between superior efficiency or high commitment human resource management (HRM) practices and different metrics of organizational performance. However, the reason for this connection remains unknown. This article argues that we need to enhance our conceptual and analytical frameworks in three main areas in order to offer a compelling explanation for this relationship. The nature of HRM, particularly the reason for the specie lists of Hrm activities; the nature of organizational effectiveness; and the connection between Organizational culture and performance are the topics covered. A model is provided within which these connections may be investigated. In light of this approach, the current literature on HRM and performance is evaluated in order to identify significant knowledge gaps and assist to concentrate research objectives. The purpose of this article is to identify and answer a number of theoretical and operational problems related to HR systems. In theory, HR systems should influence (1) knowledge of employees, skill sets, and qualities, (2) employee motivation and hard work, and (3) possibilities for employees to contribute by trying to influence.

KEYWORDS: *Employees, Human Resource Management, Motivation, Performance, Strategic Integration.*

1. INTRODUCTION

The effect of human resource management practices on performance has emerged as the field's most important study topic. There has been a rash of studies that demonstrate a positive role of human resource management (HRM) and achievement, providing encouragement to those who have long argued for a unique field of human resource management. While these research shows that progress is being made, statistical sophistication seems to have taken precedence over theoretical rigor. As a consequence, except in a very broad sense, the investigations are non-additive(1,2)(3)(4). The purpose of this article is to propose a research plan that aims to bring theory into the empirical discussion while also reviewing some of the current empirical findings. Contribute. We need a theory about HRM, a theory about performance, and a theory about how they are connected if we are to enhance our knowledge of the effect of HRM on performance. The involvement in HRM and performance stems in part from a perception that HRM theoretical discussions had become too introspective and dull. Perhaps it is only when actual evidence starts to surface that we understand the significance of the theory. I'll start by briefly summarizing where we are on HRM, performing, and the connection between HRM and performance ideas.

Then, using a basic framework, I'll go through some current literature. Finally, I'll discuss some of the issues raised by this review, as well as some of the theoretical and practical developments that will be required if we are to enhance our understanding of HRM and performance(5)(6).

1.1 Human Resource Management Theories:

All empirical investigation requires a clear understanding of the independent variable. We appear to be in a state of disarray right now. There states that there are three main aspects of HRM theory, as well as a plethora of more clear and specific theories about specific law and policy areas, like as excellence, integrity, and performance-related compensation. Strategic, descriptive, and normative theories are the three types of theory(7)(8)(9)(10).

1.1.1 Strategic theories of HRM:

These are largely concerned with the interaction between HRM policy and practice and a variety of probable external factors. The goal was to identify and categorize important environmental factors on HRM. HRM policy and practice, in a way, becomes the dependent variable in their activity, graded on how well it matches the setting. The underlying yet unproven theory is that a good fit is linked to better performance. Rather than analyzing any link to performance, researchers looked at the context, establishing an inner context (inside the organization) and an outside context (within the wider environment), and seeing how HRM changed to changes in context. In the United States, increased emphasis has been placed on identifying different forms of HR strategy, which is frequently based on existing business strategy frameworks. They claim that each of four strategic sorts of firm will require a unique set of HRM rules, and they are rather specific about some of the differences. The idea is that businesses with a link between their company strategy, structure, and HRM practices and policies will perform better(11)(10)(12)(13).

1.1.2 Descriptive theories of HRM:

These aim to provide a complete description of the field, with an attempt to convey the vast scope and explore some of the interconnections. According to Beer and colleagues, this entails identifying four main areas of HRM policy and practice, as well as four key outcomes. the level-to-level interdependencies Both are primarily purely descriptive, charting the area and categorizing inputs and outputs. Both can be evolved into theories, but only at a high level of generality. The emphasis on an open systems approach, which may properly represent an aspect of reality but lacks specificity, is both a strength and a drawback in this regard. These models provide a wide classification of the content of HRM and a range of consequences by connected to different maps of the discipline. Both are helpful in taking a stakeholder approach and identifying a variety of outcomes that are important to different stakeholders. They are, however, fundamentally employee relations models that focus on the manager's job in balancing opposing interests, stressing the scope for choice, and recognizing some of the influences on those decisions. Despite the writers' implied preferences, they are essentially non-prescriptive because they provide a range of options rather than endorsing specific ways. As a result, any examination of the link between HRM and performance has no obvious emphasis(14)(15)(16)(17).

1.1.3 HRM normative theories:

This type of models and theories takes a more prescribed stance, expressing the belief that either a sufficient body of information exists to provide a foundation for recommended practice or that a value system indicates excellent practice. These two viewpoints are frequently mixed together.

Catch some of the essence of this method by attempting to present it inside a consistent framework and outlining some of the relationships so that the final model may be examined – and possibly disproved(18)(19). The primary hypothesis is that greater worker performance will follow if a skills to be able of HRM practices is used with the purpose of fulfilling the normative goals of strong organizational commitment, good quality, and adaptability. This, it is assumed, will have a good influence on firm performance. Unlike other perspectives, this normative approach asserts that specific behaviors and HRM goals will always be preferable. This perspective on HRM has a lot of flaws. One is that it concentrates almost entirely on HRM's internal factors rather than larger strategic challenges(20). It is taking a significant risk in claiming that there is just one best approach by doing so, and by recommending a best set of procedures while neglecting the variety of constraints and resulting strategic plans.

1.2 Theory about Performance:

There is no such thing as a broad theory of success. Furthermore, we have a number of methodologies and models that help us better understand and classify measures of quality, many of which are based on specialized disciplinary views such as finance, psychology, or production control. This isn't a simple task. The criteria problem is a term used in the field of organizational behavior to express the problem of measuring performance. We might be persuaded to apply this to HRM research. By emphasizing a few distinctions, we can start to make sense of performances. First, we can concentrate on difficulties relating performance content. Second, we can think about the different forms of data. Third, we can evaluate linkages in the context of a broader understanding of performance, allowing us to begin to investigate causal relationships between Organizational culture and performance(21).

1.3 The Content of Performance and Outcomes:

The topic of what forms of data are of interest coincides with the nature of data. That are the investors in performance, and are they the same as the ones who care about the outcomes? Productivity is clearly a corporation criterion, but outcomes have the potential to be far broader. Environmental concerns, employment satisfaction, and participation in community activities are just a few examples. When looking at organizationally set performance criteria, there's a chance that some of these difficulties will be overlooked. It may be argued that this is irrelevant if the goal is solely for firm profitability. On the other hand, if the implicit premise of HRM is that results are accomplished via organization. Human resource management rather than exploitation, they could be extremely essential. Even so, this may not be sufficient, since we know from a slew of studies that there is only a slender correlation between job satisfaction and productivity.

1.4 A Conceptual Framework:

A growing number of research are attempting to establish a correlation between Organizational culture and performance. (Of course, there are hundreds that look into specific aspects of HRM and performance.) They are only additive in the broadest sense because they are not all gazing at the same item. Many attempts to theorize about HRM revolve around the concept of "fit" or "integration," so it seems like an amazing manner to go. They basically propose that the various varieties of HRM t can be categorized along two dimensions: Internal–External and Criteria particular or Guideline free. There are four basic options, one of which is further subdivided. I've made a number of changes to the descriptions in both of the prior papers: Fit as complex interplay reflects the conventional strategic approach and aims to link HR practices to the

external situation. One of the most important points is that we have a choice in how we respond to and interact with the world. Once that decision has been made, Strategic plan and behavior must reflect that decision. The notion is that organizations with the proper response as well as the right matching will outperform their competitors.

Examining the link between the Miles and Snow strategic categories, as well as the HRM practices connected with each, and relating this to some measure of performance, is a common test. The level of theoretical specification means that financial factors will be used to assess performance. Fit as a condition represents the classic contingency approach, implying that firms with more flexible HR policies and practices to external events will perform better. The nature of the market, legal changes, or characteristics of the specific sector are examples of external variables. This approach assumes that a specific result will always be superior, but it does not identify the type of reaction or any class of responses, despite the fact that there is no reason why this could not be done.

1.5 The Empirical Studies of HRM and Performance:

Several research linking HRM and productivity have been released; others have been submitted as conference proceedings or as working papers. They are primarily cross-sectional, but not solely. The studies vary in quality, especially when it comes to measuring HRM policy and practice, but they all have a tendency to be statistically sophisticated. While some cover a wide range of industries, others focus on a single industry.

2. LITERATURE REVIEW

David E. et al. studied about There has been a significant development in theories and practice about human resource management practices on performance over the last 20 years. This report assesses progress by recognizing a number of stages in the evolution of relevant theories and practice. It then identifies a number of future challenges in the areas of theory, management, and research approach. The review's principal conclusion is that we are still unable to address basic concerns concerning the relationship between human resource management practices on performance despite more than two decades of considerable research. This is due to the lack of survey design that has been able to examine the linkages between HRM and performance as well as investigate the administration of HR implementations(22).

Hamid et al. discussed about Human resources are one major source of competitive advantage in a continually increasing market environment. Human resource systems can help a company maintain a competitive advantage by allowing the development of firm-specific competences. The construction of a relationship between the overall strategic goals of the organization and the human resource strategy and implementation is the focus of strategic human resource management. The majority of published data shows a favorable statistical association between increased HR practice adoption and improved business success. Because of the causal link between HR and organizational performance, HR managers will be able to create programs that will result in improved operational results, allowing them to achieve organizational effectiveness. After underlining the importance of human resources as a source of competitive advantage, strategic human resource management is defined in this study. The conclusion is that how an organization manages its human resources has a strong link with the organization effectiveness, as evidenced by specific instances from academic study on the influence of human resources management methods on organizational performance(23).

Buller et al. discussed about This study relies on past theories and practice on strategy & management of human resources to establish key links between a company's strategy, human resources, and outcome variables. First, we go over the relevant literature, with a focus on the role of human resources in gaining a competitive edge. We then show how human resource strategies can successfully match organization, team, and individual characteristics with the organization's strategy using a multi-level model. Line of sight is defined as the synchronization of organizational processes and culture, group competences and norms, and person KSAs, motivation, and opportunity with one other and with the organization's plan. Furthermore, we believe that such alignment helps to build human and social capital, both of which are required for achieving and maintaining outstanding performance. The report concludes with several recommendations for future research and practice(24).

Paillé et al. studied about the connection between strategic human resource management, corporate environmental issue, citizenship behaviors for the environment, and environmental performance was explored in this field study. The present study was unique in that it linked human resource management with environment management in terms of China. 151 matching surveys from top members of the management team, chief executive officers, and frontline workers were used to compile the data. The main findings show that organizational environmental citizenship behavior mediates the relation between strategic human resource management and environmental performance, and also that internal environmental concern moderates the impact of human resource management on organizational environmental organizational citizenship behavior(25).

3. DISCUSSION

Human Resource Management has made several changes to Performance Management, which has resulted in the elimination of some Performance Management flaws. In this day of fierce competition, the corporation must prioritise personnel and put their requirements at the top of its priority list. Human Resource Management has been instrumental in putting an end to the habit of treating employees like machines. Setting explicit and measurable work objectives is the goal of performance management, which is a significant management and human resource tool. Staff will have clear job objectives and ample of opportunity for feedback and conversation with their supervisor if their performance management system is quite well. HRM ensures that an organization runs smoothly. Job modeling and analysis, recruiting & retention, learning & support, pay and reward, performance appraisal, administrative relations, and labor relations are some of the key functions of HRM.

4. CONCLUSION

Only once we've gotten a handle on measuring the independent and dependent variables can we start paying attention to how they're connected. The studies now show a positive relationship between HRM and results, but we are not yet in a position to claim cause and effect. To construct precise hypotheses regarding links, we need to develop theory that combines features of strategy and strategic integration with something like anticipation theory. Case study research can assist in the generation of some insights that can be further tested. Studies of certain activities or challenges, such as quality or dedication, might also benefit from more specialized theory. We also need continuous research designs to show correlations, ideally with some type of intervention to change HRM practices. In conclusion, we must enhance our theory and empirical testing on all three fronts: the character of HRM, the nature of the results, and the nature of the

links. We'll need to find the correct mix of survey-based and case-study-based research, as usual. We also need to make sure that the research isn't limited to the United States. We can now declare with greater certainty that HRM is effective. However, because this is a skeletal discovery, we will need to add a lot of flesh to the bones.

REFERENCES

1. Stojkovikj S, Oklevski S, Jasuja OP, Najdoski M. Visualization of latent fingermarks on thermal paper: A new method based on nitrogen dioxide treatment. Forensic Chem. 2020;

2. Stojkovikj S, Oklevski S, Prakash Jasuja O, Najdoski M. Corrigendum to "Visualization of latent fingermarks on thermal paper: A new method based on nitrogen dioxide treatment" (Forensic Chemistry (2020) 17, (S2468170919300931), (10.1016/j.forc.2019.100196))>. Forensic Chemistry. 2020.

3. Solanki MS, Sharma DKP, Goswami L, Sikka R, Anand V. Automatic Identification of Temples in Digital Images through Scale Invariant Feature Transform. In: 2020 International Conference on Computer Science, Engineering and Applications, ICCSEA 2020. 2020.

4. Goswami L, Kaushik MK, Sikka R, Anand V, Prasad Sharma K, Singh Solanki M. IOT Based Fault Detection of Underground Cables through Node MCU Module. In: 2020 International Conference on Computer Science, Engineering and Applications, ICCSEA 2020. 2020.

5. Priyadharshini SK, Kamalanabhan TJ, Madhumathi R. Human resource management and firm performance. Int J Bus Innov Res. 2015;

6. Singh D. Robust controlling of thermal mixing procedure by means of sliding type controlling. Int J Eng Adv Technol. 2019;

7. Israr M. A survey and analysis of the relationship between human resources management and organizational performance. Int J Mech Eng Technol. 2017;

8. Chhabra JK, Gupta V. Towards spatial complexity measures for comprehension of Java programs. In: Proceedings - 2006 14th International Conference on Advanced Computing and Communications, ADCOM 2006. 2006.

9. Bhandari A, Singh M. On the ontology-based description of temporal services interfaces in asynchronously communicating services. In: Proceedings - 2011 International Conference on Communication Systems and Network Technologies, CSNT 2011. 2011.

10. Sethi V, Tandon MS, Dutta K. A path model of antecedents of green purchase behaviour among Indian consumers. Int J Public Sect Perform Manag. 2018;

11. Zehir C, Gurol Y, Karaboga T, Kole M. Strategic Human Resource Management and Firm Performance: The Mediating Role of Entrepreneurial Orientation. Procedia - Soc Behav Sci. 2016;

12. Irshad U, Singla S. Impact of road conditions on traffic management-a case study of chenab valley. Int J Sci Technol Res. 2019;

13. Mir MA, Verma P. Use of polyethylene waste with stone dust in flexible pavement. Int J Sci Technol Res. 2019;

14. Hoque K. Human resource management and performance in the UK hotel industry. Br J Ind

Relations. 1999;

15. Tabash MI, Albugami MA, Salim M, Akhtar A. Service quality dimensions of E-retailing of Islamic banks and its impact on customer satisfaction: An empirical investigation of Kingdom of Saudi Arabia. J Asian Financ Econ Bus. 2019;

16. Sharma PK, Srivastava R, Munshi A, Chomal M, Saini G, Garg M, et al. Comparison of the gross tumor volume in end-expiration/end-inspiration (2 Phase) and summated all phase volume captured in four-dimensional computed tomography in carcinoma lung patients. J Cancer Res Ther. 2016;

17. Chandra N, Parida S. Quantum entanglement in photon-induced electron spectroscopy of atoms and molecules its generation, characterization, and applications. In: Advances in Imaging and Electron Physics. 2016.

18. Virk JK, Kumar S, Singh R, Tripathi AC, Saraf SK, Gupta V, et al. Isolation and characterization of quinine from Polygonatum verticillatum: A new marker approach to identify substitution and adulteration. J Adv Pharm Technol Res. 2016;

19. Kumar S, Wahi AK, Singh R. Synthesis, computational studies and preliminary pharmacological evaluation of 2-[4-(aryl substituted) piperazin-1-yl]-N-benzylacetamides as potential antipsychotics. Arab J Chem. 2016;

20. Singh NR, Kassa B. The impact of human resource management on organizational performance - A Study on Debre Brehan University. Int J Recent Adv Organ Behav Decis Sci. 2016;

21. Lu CM, Chen SJ, Huang PC, Chien JC. Effect of diversity on human resource management and organizational performance. J Bus Res. 2015;

22. Guest DE. Human resource management and performance: Still searching for some answers. Hum Resour Manag J. 2011;

23. Hamid M, Maheen S, Cheem A, Yaseen R. Impact of Human Resource Management on Organizational Performance. J Account Mark. 2017;

24. Buller PF, McEvoy GM. Strategy, human resource management and performance: Sharpening line of sight. Human Resource Management Review. 2012.

25. Paillé P, Chen Y, Boiral O, Jin J. The Impact of Human Resource Management on Environmental Performance: An Employee-Level Study. J Bus Ethics. 2014;

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

A REVIEW MANAGEMENT OF CEREAL CROP RESIDUES FOR SUSTAINABLE RICE-WHEAT

Vineet Kumar*

* Department of Agricultutal Sciences,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India
Email id: vineet.agriculture@tmu.ac.in

DOI: 10.5958/2249-877X.2021.00124.7

ABSTRACT

The Indo-Gangetic Plains' rice-wheat (RW) farming pattern has contributed significantly to India's food security. However, owing to declining soil quality, increasing strain on natural resources, and looming climate change concerns, the long-term viability of this key agricultural system is in jeopardy. Conservation agriculture, which includes zero- or minimal-tillage and crop residue management (CRM) technologies to prevent straw burning, should help farmers achieve sustainable production while reducing fertilizer and water inputs and reducing climate change risk. The irrigated RW system's high yields have resulted in massive amounts of agricultural wastes (CRs). Rice straw burning is widespread in India's northwestern states, resulting in nutritional losses and severe air quality issues that endanger human health and safety. Mulch is an excellent alternative for managing rice residue throughout the wheat crop, particularly if no tillage is used. Mulch may boost production, water economy, and profitability while also lowering weed pressure. The leftover wheat crop residue may be put into the paddy fields with no negative impact on rice production. In anaerobic flooded soil, residue breakdown significantly increases methane emission compared to residue removal. Long-term residue recycling studies have shown increases in soil's physical, chemical, and biological health. Because CRs contain large amounts of plant nutrients, their continued use will improve fertilizer management in the RW system. Another viable CRM alternative is to utilize a part of excess residue to make biochar (and co-produce bio-energy) for use as a soil amendment to enhance soil health, boost nutrient usage efficiency, and reduce air pollution. The authors of this paper addressed existing problems and potential solutions for managing CRs in the RW cropping system.

KEYWORDS: *Bioenergy, Crop Residues, Decomposition, Rice-Wheat System, Straw Mulch.*

1. INTRODUCTION

In India, the rice (Oryza sativa L.) - wheat (Triticum aestivum L.) (RW) cropping system was created by introducing rice into traditional wheat-growing regions and vice versa. RW emerged as the main production system spanning an area of 10 million hectares distributed over the Indo-Gangetic Plains (IGP) of India in the mid-1960s, thanks to Green Revolution technology. This area produces about one-third of India's total grains(1) The two NW states of Punjab and Haryana currently form a very productive RW zone in the IGP, producing approximately 69 percent of the country's total food production (about 84 percent wheat and 54 percent rice), and

this area is known as the "food bowl of India." Several issues have arisen in the area as a result of the RW system's expansion during the past four decades, posing a danger to the system's long-term viability(2,3)(4).

Low levels of soil organic matter, the emergence of multiple nutrient deficiencies as a result of over-mining from soils, and poor management of crop residues (CRs), which leads to their burning, are just a few of the major factors contributing to the region's declining RW productivity. To feed India's anticipated population of 1.35 billion in 2025, agricultural output, particularly rice and wheat (India's main crops), will need to rise by around 25%. Furthermore, agricultural production in Punjab, Haryana, and western Uttar Pradesh may not be sustainable unless significant improvements in groundwater management and water use efficiency are made. Adopting conservation agricultural concepts in conjunction with improved bet crop management techniques will increase system productivity and total resource-use efficiency, leading in increased profitability and RW system sustainability(5–7)(8).

Every year, India produces about 500 million tons (Mt) of agricultural leftovers. Increased rice and wheat output has resulted in a significant rise in residue production. The production of CRs varies greatly, and their use is dependent on the crops grown, cropping intensity, and productivity in different parts of India. Cereal crops (rice, wheat, maize, millets) account for 70% of total CRs (352 Mt), with rice accounting for 34% and wheat accounting for 22%. Nearly one-fourth of India's total CRs are generated via the RW method. The excess CRs (i.e., total residues generated less the quantity utilized for different reasons) are usually burnt on-farm. India's excess CRs are projected to be between 84 and 141 Mt each year, with cereal crops accounting for 58 percent. Nearly 70 MT (44.5 Mt rice straws and 24.5 Mt wheat straws) of the 82 Mt of excess CRs are burnt each year(9–11)(12).

1.1. Crop Residues as a Plant Nutrient Source:

CRs are essential components for the stability of agricultural ecosystems because they are excellent suppliers of plant nutrients, the main source of organic matter (since C makes up approximately 40% of total dry biomass), and the primary source of organic matter supplied to the soil. At maturity, around 40% of the nitrogen, 30-35 percent of the phosphorus, 80-85 percent of the potassium, and 40-50 percent of the sulfur ingested by rice remains in the vegetative portions. Similarly, wheat residue retains approximately 25-30% of N and P absorption, 35-40% of S, and 70-75 percent of K uptake. On a dry weight basis, rice straw typically contains 5-8 kilogram N, 0.7-1.2 kg P, 12-17 kg K, 0.5-1 kg S, 3-4 kg Ca, 1-3 kg Mg, and 40-70 kg Si per ton of straw. A ton of wheat residue includes 4-5 kg of nitrogen, 0.7-0.9 kg of phosphorus, and 9-11 kg of potassium. According to the study, rice straw contains 6.2 kilogram N, 1.1 kg P, and 18.9 kg K per ton, based on numerous observations(12)(13).

Potassium content is usually greater (up to 25 kg per ton) in rice straw of NW IGP than that from other areas of the India or other nations(14). The amount of nutrients in CRs is determined by soil conditions, crop management, variety, season, and other factors. In India, the quantity of NPK in rice and wheat residues produced (197 Mt) is about 4.1x 106 Mt. Given that 90% of rice straw and 30% of wheat straw are excess in Punjab, the yearly quantity of NPK recycled would be about 0.54 MT. A ton of rice and wheat residues contains approximately 9-11 kg S, 100 g Zn, 777 g Fe, and 745 g Mn in addition to NPK. Despite the dominance of chemical fertilizers in crop production, CRs continue to play a significant role in nutrient cycling. Under conventional fertilization methods, continuous removal and burning of CRs may result in net nutrient losses,

resulting in greater nutrient cost input in the near term and a decrease in soil quality and productivity in the long run(15,16)(17).

1.2. Crop Residue Management Options:

The RW cropping method in NW India produces a large amount of CRs. On NW India, the majority of rice and wheat is harvested by combine, leaving leftovers in the field. While approximately 75% of wheat straw is gathered as animal fodder using a special cutting equipment, which involves extra work and expense, rice straw is considered poor animal feed owing to its high silica concentration. Rice straw varies from other straws in that it contains more silica (12-16 percent vs. 3-5 percent) and less lignin (6-7 vs. 10-12 percent). Rice straw stems are more digestible than leaves due to their lower silica concentration; thus, if the straw is to be given to animals, the rice crop should be cut as near to the ground as possible. Rice straw management, rather than wheat straw management, is a significant issue due to the short turnaround time between rice harvest and wheat planting and the absence of appropriate recycling technologies. Baling/removal for use as feed and bedding for animals, in situ absorption in the soil with tillage, and complete/partial retention on the surface as mulch utilizing zero or reduced tillage methods are among the CRM choices accessible to farmers (including burning). CRs may also be utilized for paper and ethanol manufacturing, bioconversion, and engineering uses once they have been bailed. Farmers are hesitant to spend in cleaning the field using a chopper since rice straw has little economic value and labor is scarce. This procedure necessitates a second surgery, which adds to the expense. Farmers in NW India have found that burning is the cheapest and simplest method to remove huge quantities of rice leftovers so that the wheat crop may be established quickly following rice. Currently, the famers burn more than 80% of the entire rice straw generated yearly in three to four weeks in October and November. When rice straw is burned, gaseous emissions include 70% CO_2, 7% CO, 0.66 percent CH_4, and 2.09 percent N_2O. Field burning of CRs contributes significantly to poor air quality (particulates, greenhouse gases) and has a negative effect on human and animal welfare, both medically and via traumatic road accidents in NW India owing to decreased visibility. Furthermore, burning CRs results in the loss of organic matter and valuable nutrients, including N and S. The yearly burning of rice residue in nearby fields corresponds with a surge in asthmatic patients in hospitals in NW India. Despite the fact that district judges in India's northwest have imposed a legal prohibition, farmers continue to burn CRs. In Punjab alone, about 20 Mt of rice and wheat residues are burned in situ annually, out of a total of 37 Mt, resulting in a loss of about 8 Mt of carbon equivalent to a CO_2 load of about 29 Mt per year and a loss of about 1 x 105 tons of nitrogen, as well as loss of S and destruction of beneficial soil microflora.

Removal of CRs for different off-farm uses (excluding composting and fodder) may have significant impacts on nutrient delivery, resulting in a short-term economic loss, but it will have a long-term detrimental impact on soil quality, water quality, and agricultural sustainability, as numerous studies have shown. In the long run, extra nutrient (NPK) fertilization will be required to restore harvested residue nutrients lost owing to residue removal(18).

1.3. Decomposition and Release of Nitrogen from Crop Residues:

In the sandy loam, total N release from buried residue by maximum tillering stage was approximately 6 kilogram N ha–1 (15 percent of original) and 12 kg N ha–1 (27 percent of initial) By the booting stage, the quantity of nitrogen produced from the buried residue on the sandy loam had risen to 12 kilogram ha-1, and by maturity, it had increased to 26-28 kg ha-1.

Because N treatment after maximal tillering has a little impact on wheat grain production, the extra N released after booting may have no effect on grain output. During the wheat growing season, however, no N was released (rather, N was immobilized) from the leftovers on the soil surface, and the developing wheat crop received no N benefit. According to another research, the total quantity of nitrogen released by various rice straw decomposition treatments throughout the wheat crop's life span (150 days) varied from 6 to 9 kg N ha–1. With such tiny quantities of nitrogen released from integrated residue, substantial fertilizer N reductions are improbable. Furthermore, in the majority of experiments with incorporated residue, crops receive recommended or adequate amounts of fertilizer N, P, and K, implying that the increased yields of crops with incorporated rice residue were most likely unrelated to the contribution of macronutrients contained in the residue(19).

1.4. Crop Residue Management on the Farm:

Because of the shorter window between rice residue integration and wheat planting, and the sluggish rate of breakdown of rice straw due to high silica content and low temperature, recycling rice residue causes greater difficulties for succeeding wheat than wheat straw does for the next rice crop(20).

1.5. Rice Straw Incorporation in Situ:

While soil absorption of CRs is advantageous in terms of nutrient recycling, plowing under takes energy and time, results in temporary immobilization of nutrients (e.g., N), and the high C:N ratio must be adjusted by adding additional fertilizer N at the time of residue integration. In the near term, microbial immobilization of soil and fertilizer N causes N shortage in a crop produced shortly after residue assimilation. The amount of net N immobilization and net N supply from CRs to a future crop is determined by the decomposition time before planting the following crop, residue quality, and soil environmental conditions. In a long-term research, the inclusion of CRs shortly before planting the following crop reduced rice and wheat yields compared to the residue removal treatment(21)(14).

Rice straw may be effectively handled in situ by providing enough time (10-20 days) between its inclusion and wheat crop planting to prevent N shortage due to N immobilization. However, due to high integration costs and energy and time demands, only a few farmers have embraced in situ rice straw inclusion as an alternative to burning. Incorporating rice residue prior to wheat planting also causes a 2-3 week delay in sowing. In the rice-wheat system, three crop residue management techniques were used: residue removal, residue burning, and residue integration. The findings revealed that rice and wheat wastes may be safely integrated without causing any harm to the rice or wheat crops produced soon after inclusion. Rice residue application to wheat has a little impact on wheat yields in the first three years, but with the addition of straw in the fourth year, the effect becomes noticeable(22).

1.6. Wheat Rice Straw Mulching:

Mulching with rice straw in no-till wheat and incorporating combine-harvested or even manually harvested (as in the Middle and Lower IGP) wheat straw and stubble (1-2 t ha–1) in rice are emerging CRM alternatives in the IGP to prevent burning. CRs that are left on the soil surface help to save soil and water while also increasing crop production. In many semiarid settings, soil and water conservation is critical for agricultural production. In certain regions, up to 50% of a crop's total evapotranspiration may be lost due to evaporation from the soil surface. Mulching is

the sole technique that decreases evapotranspiration by reducing evaporation, apart from altering the growth time of crops, as has been done for rice in the Indian Punjab. The aforementioned advantages are lost if all CRs are utilized as animal feed or eliminated for other reasons. As a consequence, it becomes more difficult to maintain soil production. Using suitable alternative practices, such as preserving partial residues, replenishing nutrients extracted in grain and CRs, producing forages that substitute for CRs, and implementing CA techniques, it is feasible to maintain crop output. Improvements in crop management that result in higher CR production may enable enough residues to be restored to fields and some to be removed without negatively impacting the soil ecosystem(23)(24).

In the NW IGP, zero-till wheat has been implemented on a large scale in the RW system, with good results in terms of wheat production, profitability, and resource efficiency. With tine-type openers, it has proven impossible to control CRs in no-till systems. Owing to the presence of loose straw in the seed drill furrow openers, the seed metering drive wheel loses traction, and the depth of seed placement is non-uniform due to frequent lifting of the implement under heavy trash circumstances, the depth of seed placement is non-uniform. Only when no-till is practiced consistently and the soil surface is covered by at least 30% of previous CR can the full advantages of no-till be achieved. Conservation agriculture will become more widely adopted in the area as a result of the usage of new-generation planters (Happy seeder). The Happy seeder works well for direct drilling in both standing and loose residues as long as the residues are evenly distributed. The weighted average wheat yield for HS seeded plots was substantially higher (3.24 percent) than the conventionally planted wheat, according to data from 154 on-farm experiments performed in various regions of Punjab between 2007 and 2010. When compared to no mulch, researchers found that rice straw mulch enhanced wheat grain production, reduced crop water consumption by 3-11 percent, and improved WUE by 25%. Mulch generated 40% larger root length densities in lower levels (>0.15 m) than no-mulch, owing to better soil moisture retention in deeper layers. Reduced tillage and in-situ absorption of rice crop residues (5 Mg ha–1), together with 150 kg N ha–1, were shown to be the most effective in achieving high wheat after rice yields in sandy loam soils of India's Indo-Gangetic plains. Wheat yields, on the other hand, were harmed by ZT owing to soil compaction, perhaps due to a lack of oxygen in the root zone, which hampered robust plant development.

2. DISCUSSION

Traditional agronomic methods are incapable of achieving the triple goals of:

1. Providing enough food to feed an ever-increasing population
2. Reducing the destruction of natural resources caused by agriculture
3. Ensuring the quality of the environment and ecosystem services.

CRs provide sustainable and environmentally friendly options for addressing agricultural fertilizer needs while also enhancing soil and environmental quality. Rice residue may be integrated into the soil with suitable equipment 10-20 days before planting of following wheat with no negative impact on the crop. Tillage to integrate rice residue, on the other hand, is expensive and time intensive, and it increases the danger of late wheat planting. Recent advancements in equipment (Happy Seeder) enable zero-till seeding of wheat using rice waste as surface mulch while preserving yield, reducing tillage costs and time, and eliminating the need for burning. It has been shown that using CR as a mulching material is advantageous since it

lowers the maximum soil temperature and conserves water. Direct drilling wheat into rice residue with HS is a beneficial agronomic technique for wheat, as it helps to minimize soil organic matter loss while also increasing soil health. Owing to the decreased interaction with the soil, residues degrade slowly, and SOM breakdown is further slowed in wheat due to minimal tillage. Additional managerial skill requirements, fear of decreased crop yields and/or economic returns, unfavorable attitudes or views, and institutional limitations are all factors that prevent some farmers from adopting CRM systems. CRM makes nutrition management more difficult owing to increased residue levels and fewer choices for nutrient administration technique and timing. The difficulties of N fertilizer management in no-tillage with residue mulch systems point to the need for further study into better and more efficient fertilizer N use. In reality, a full bundle of activities (fertilizer, irrigation, weed control, pest management, and so forth) for CRM systems is required. It is necessary to investigate genetic variation in Si content in rice straw under various soil and water management conditions. To investigate various problems (genotypes with greater root biomass, equipment, insects, diseases, weeds, phytotoxicity, soil health, and economics) related with CRM, long-term research combining interdisciplinary methods are required. For fertilizer drilling, the HS has to be refined further, lowering its power requirements and increasing its capacity to operate in wet straw. Burning of CRs should be discouraged via reward and punishment in order to promote CR recycling on a wide scale. Subsidized machinery must be provided, as well as low-interest financing. During the awareness-raising phase, subsidies were a critical component in making the technology accessible.

3. CONCLUSION

Only if the management option is viable under a specific set of soil, climatic, and crop management circumstances, is compatible with existing equipment, and is socially and economically acceptable will the intended goals of adopting a certain CRM option be met. Future study should focus on the differences between above- and below-ground decomposition processes for a broader variety of CRs and nutrients, with a focus on both short- and long-term nutrient recycling. The impacts of CRM on pests and diseases in the RW cropping system have gotten little attention, and further study with various management methods is required. Because the flooded season may limit the survival of upland crop pathogens, there may be fewer mulch-related disease issues in the RW rotation than in a rotation of two distinct upland crops. Supporting on-farm adaption of CRM technology in both large and dispersed small fields, as well as providing targeted institutional and regulatory support, including suitable incentives, is needed in the IGP.

REFERENCES:

1. Singh A, Singla S, Garg R, Garg R. Performance analysis of Papercrete in presence of Rice husk ash and Fly ash. In: IOP Conference Series: Materials Science and Engineering. 2020.
2. Singh Y, Sidhu HS. Management of cereal crop residues for sustainable rice-wheat production system in the Indo-Gangetic Plains of India. Proceedings of the Indian National Science Academy. 2014.
3. Kumar S, Paritosh K, Pareek N, Chawade A, Vivekanand V. De-construction of major Indian cereal crop residues through chemical pretreatment for improved biogas production: An overview. Renewable and Sustainable Energy Reviews. 2018.
4. Chaudhary P, Khati P, Chaudhary A, Maithani D, Kumar G, Sharma A. Cultivable and

metagenomic approach to study the combined impact of nanogypsum and Pseudomonas taiwanensis on maize plant health and its rhizospheric microbiome. PLoS One. 2021;

5. Das TK, Saharawat YS, Bhattacharyya R, Sudhishri S, Bandyopadhyay KK, Sharma AR, et al. Conservation agriculture effects on crop and water productivity, profitability and soil organic carbon accumulation under a maize-wheat cropping system in the North-western Indo-Gangetic Plains. F Crop Res. 2018;

6. Choudhary M, Jat HS, Datta A, Yadav AK, Sapkota TB, Mondal S, et al. Sustainable intensification influences soil quality, biota, and productivity in cereal-based agroecosystems. Appl Soil Ecol. 2018;

7. Choudhary KM, Jat HS, Nandal DP, Bishnoi DK, Sutaliya JM, Choudhary M, et al. Evaluating alternatives to rice-wheat system in western Indo-Gangetic Plains: Crop yields, water productivity and economic profitability. F Crop Res. 2018;

8. Sandhu M, Jayanand, Rawat B, Dixit R. Biologically important databases available in public domain with focus on rice. Biomedicine (India). 2017.

9. Laik R, Sharma S, Idris M, Singh AK, Singh SS, Bhatt BP, et al. Integration of conservation agriculture with best management practices for improving system performance of the rice-wheat rotation in the Eastern Indo-Gangetic Plains of India. Agric Ecosyst Environ. 2014;

10. Singh J. Overview of electric power potential of surplus agricultural biomass from economic, social, environmental and technical perspective - A case study of Punjab. Renewable and Sustainable Energy Reviews. 2015.

11. Wang X, Yang L, Steinberger Y, Liu Z, Liao S, Xie G. Field crop residue estimate and availability for biofuel production in China. Renewable and Sustainable Energy Reviews. 2013.

12. Sandhu M, Sureshkumar V, Prakash C, Dixit R, Solanke AU, Sharma TR, et al. RiceMetaSys for salt and drought stress responsive genes in rice: A web interface for crop improvement. BMC Bioinformatics. 2017;

13. Harinder V, Jyoti S, Amolkumar S, Singh GP, Jasdeep P. Isolation and characterization of stress inducible protein (TaSti/Hop) from heat-tolerant wheat cultivar C306. Res J Biotechnol. 2019;

14. Vishwakarma H, Junaid A, Manjhi J, Singh GP, Gaikwad K, Padaria JC. Heat stress transcripts, differential expression, and profiling of heat stress tolerant gene TaHsp90 in Indian wheat (Triticum aestivum L.) cv C306. PLoS One. 2018;

15. Babu S, Rana DS, Yadav GS, Singh R, Yadav SK. A review on recycling of sunflower residue for sustaining soil health. Int J Agron. 2014;

16. Bitew Y, Alemayehu M. Impact of crop production inputs on soil health: A review. Asian Journal of Plant Sciences. 2017.

17. Singh S, Shrivastava AK. In silico and wet-lab study revealed cadmium is the potent inhibitor of HupL in Anabaena sp. PC C 7120. Arch Microbiol. 2016;

18. Singh S, Shrivastava AK, Singh VK. Arsenic and cadmium are inhibitors of cyanobacterial dinitrogenase reductase (nifH1) gene. Funct Integr Genomics. 2014;

19. Bhandari A, Singh M. Towards formalization of ontological descriptions of services interfaces in services systems using CL. In: Communications in Computer and Information Science. 2011.

20. Sharma M, Singh M, Walia K, Kaur K. Comprehensive Study of Routing Protocols in Adhoc Network: MANET. In: 2019 IEEE 10th Annual Information Technology, Electronics and Mobile Communication Conference, IEMCON 2019. 2019.

21. Gupta V, Bhatt V, Chandra S. RF magnetron sputtered aluminum oxide films for MEMS. In: Proceedings of the 14th International Workshop on the Physics of Semiconductor Devices, IWPSD. 2007.

22. Mangla SK, Bhattacharya A, Yadav AK, Sharma YK, Ishizaka A, Luthra S, et al. A framework to assess the challenges to food safety initiatives in an emerging economy. J Clean Prod. 2021;

23. Sinha A, Jayanand, Kumar V. Role of green silver nanoparticles in suppressing various human pathogenesis. Rev Adv Mater Sci. 2017;

24. Dey YN, Wanjari MM, Srivastava B, Kumar D, Sharma D, Sharma J, et al. Beneficial effect of standardized extracts of Amorphophallus paeoniifolius tuber and its active constituents on experimental constipation in rats. Heliyon. 2020;

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

MANAGEMENT: USING INTUITION AS A BRAIN SKILL

Dr Vipin Jain*

* Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India
Email id: vipin555@rediffmail.com

DOI: 10.5958/2249-877X.2021.00120.X

ABSTRACT

According to a number of futurists, we are approaching an era of upheaval in which the economic and political environment will be marked by fast change, crises, and significant structural dislocations. Technological progress is likewise anticipated to be enormous. If these predictions are close to being accurate, future managers are likely to be confronted with the reality of having to make important choices under very challenging conditions on a regular basis. To begin with, tomorrow's top executives will have to deal with very complicated management issues. Second, they will often be forced to deal with these issues in situations where full data bases required for "left brain" (analytical, deductive) processing are either unavailable or too expensive to collect in a timely manner. Third, in order to meet their employees' growing expectations for a larger involvement in the decision-making process, top managers will need to make choices in a "high touch" way under these circumstances.

KEYWORDS: *Brain Skill, Executive Skills, Intuition, Intuitive Cognitive, Management Skill.*

1. INTRODUCTION

The brain skill intuition is getting increasing attention in prominent journals such as The Wall Street Journal, Harvard Business Review, Public Management, and The Bureaucrat in this developing management environment." Even prestigious business institutions, such as Stanford University's, are testing a new MBA course aimed at helping MBAs improve intuitive decision-making abilities (1–3). Intuition is a talent that requires deduction. It's the capacity to "see the big picture," to feel the possibilities and ramifications of any given circumstance or prospective action by looking at the entire issue rather than its individual components. It's the capacity to come up with a practical solution to an issue even when the evidence needed to make that choice is insufficient or unavailable." More precisely, your system analyzes a broad range of data on many levels and provides you with an immediate signal on how to proceed(4–6). Even if you don't comprehend all of the procedures or all of the data your system analyzes to provide you with this signal, you have the solution. Intuition, according to Lawrence R.

Sprecher, a senior associate at Public Management Associates in Oregon, is a subspecies of logical reasoning in which the stages of the process are concealed in the subconscious mind. "Wouldn't we be more comfortable utilizing intuition if we regarded it as an extension of the logical?" he wonders. When a manager is faced with a crisis or emergency situation, where new trends are emerging that differ from previous patterns, and where data is insufficient, unavailable, or inappropriate for the situation at hand, intuition is a brain skill that can be particularly useful as a tool in decision-making. When chief executive officers' performance in

the private sector is compared, many leading executives readily admit to relying on intuition to make some of their most successful decisions(7–10). Recent research has found that the ability to use intuition is positively correlated with a higher profit record. The author planned and performed a large research in 1981-82 to evaluate managers' capacity to utilize intuition since intuition seems to be a potentially essential talent that may be helpful in management decision-making(11).

Over 2,000 managers were assessed throughout the nation in both the public and commercial sectors, in a range of organizational contexts (enterprise, government, education, military, and health), at all levels of management responsibility, and in a variety of occupational specialties. The Myers-Briggs Type Indicator (MBTI) intuition section was chosen as the test instrument because it has been used widely in the area of psychology for over forty years and has an established track record for both reliability and validity(12–15). The aim was to see how intuitive real managers seemed to be, as well as to see whether there was any substantial difference from organization to organization and by management level, as well as by sex, ethnic origin, and occupational specialization. The specific groups examined were chosen, first and foremost, to reflect a broad horizontal range of various organizations and situations. This was done so that, whatever the findings came out to be, more specific comments could be made regarding the circumstances under which the results seemed to be true in organizational life or did not appear to be valid in organizational life. Second, in each of the organizations chosen, an effort was made to obtain a representative sample of the total management structure so that meaningful (statistically significant) statements about the level of intuitive ability in each organization could be made from the findings. Third, access also played a role in the organizations chosen(16).

A significant peer leader or top manager in each management group examined supplied the required access to ensure that the questionnaire instrument was disseminated and returned at a high rate. The management groups that were really put to the test were as follows: To begin, 5000 questionnaires were sent to a random sample of public administration professionals throughout the nation (excluding academics who are members of the American Society for Public Administration). Nearly 1700 questionnaires (34%) were returned. A total of 800 questionnaires were also distributed to managers from three of the country's largest states (including private sector CEOs, emergency preparedness military personnel, community college presidents, state health and rehabilitative services managers, city managers, and state legislators/staff) (California, Florida, and Michigan). Sixty-five percent (458) of the questionnaires in this sample were returned. Because peer leaders sent cover letters describing the test instrument and encouraging each manager to submit the questionnaire, the response rate for all of the groups examined was very high(17).

For scoring the answers, an intuition scale was created. The scale has a maximum score of 12 and a lowest value of O. Each manager (and group) may be rated from top to bottom based on their individual scores as well as how they compared to other managers who took the exam. Key variables such as level of management (top, middle, and lower), level of government (national, state, county, and local), sex, occupational specialization (as defined by the American Society for Public Administration membership classification system), and ethnic background were used to stratify responses. All of the answers were computer-analyzed, and the results presented below all passed statistical significance tests. Using the One-Way Anova (analysis of variance) statistical test method, the mean differences in scale scores observed between management level, sex, occupational specialty, and ethnic background were at the.05 level or below(18). The

findings show that intuitive ability varies by management level, government service level, gender, occupational specialization, and ethnic origin to some extent. As one climbs the corporate ladder, intuition seems to be a more important ability. In every sample group examined, top managers scored better than middle/lower level managers in their ability to make choices based on intuition(19–21). It also seems that when one rises through the ranks of government service (from county to national), one's capacity to utilize intuition grows.Based on these results, it seems that intuitive ability may be one of the talents that top managers depend on to make critical choices(22).

2. DISCUSSION

Women score higher on the scale that evaluates their capacity to utilize intuition than males, indicating statistically significant differences between the sexes. The mean scale scores of the vocations show statistically significant variations once again. This shouldn't come as a big surprise. Certain professions, such as law enforcement and financial management, have traditionally prioritized "left brain" analytical, quantitative, and deductive decision-making methods above managerial abilities that need "right brain" inductive talents such as intuition(23). Executives are likely to choose a career that emphasizes the cognitive talent or style they like or excel in. Higher scale scores are likely to be found in the other two occupational specialities (general administration/policy and health), on the other hand. This is due to the fact that general administration and policy have a wider reach. The problems that a manager is more likely to confront are going to be much more complicated.

Uncertainty and fast change, as well as a diverse array of customer groups seeking contradictory services, may be more frequent issues that must be handled. In this case, intuitive abilities would seem to be very helpful. Only three ethnic groups - Whites, Asians, and Blacks - have enough data gathered to conduct statistical significance tests. Scores differed by ethnic origin for these three groups, with the Asian sample scoring the highest. The fact that Asians scored highest on the scale may be due to the fact that managers raised in Asian families were socialized from birth to emphasize and practice the Oriental approach to life, which emphasizes the development of "right brain" skills such as intuition over analytical/deductive "left brain" skills. One of the practical consequences of these results is that CEOs from Asian ethnic origins may be more successful in managerial situations that need intuitive abilities (e.g., crisis management, "brain storming"). The national manager testing described here is the first of its kind in the world. As a result, it should be considered an exploratory research.

However, it's worth briefly discussing some of the results' potential practical implications for enhancing organizational management in the future. An overview of a few instances and a case study illustration follow. Intuition as a cognitive talent may be especially helpful in a variety of managerial settings (e.g., future projections, crises, and problem-solving). One approach to put these test results into practice and boost organizational productivity is to create a bespoke team or problem-solving group capable of tackling any given issue (e.g., assessing the influence of technology on an organization's future path).In addition to testing over 2,000 managers throughout the country in the past three years, the author has also led seminars and assisted with the implementation of programs in a broad range of companies(24). These programs were created to help people develop and utilize right-brain abilities like intuition in order to make better management choices. A case study of how such a program may be utilized to boost productivity can be seen below. One of these seminars was recently attended by senior

executives from the city of Phoenix, Arizona. Following initial testing for brain skills and management styles, several major patterns emerged, which were later used to design a completely new way of using existing brain skills/management styles in city management, as well as a new ongoing training program that outlined how to use intuition in daily decision-making.

Top managers, in particular, were seen to be working in positions where their intuitive and other brain talents could be put to the best use. It was also often discovered that some managers were completely ignorant of important elements of their underlying ability (for example, creativity) that might be systematically "brought on line" to enhance their performance - especially in critical management situations like crisis decision-making. Following up with the people in issue, various career adjustments were made, which seemed to enhance both performance and work happiness. Another significant result was that managers were not allocating people to deal with problem-solving problems in the most efficient way possible. The standard procedure was to assign managers to a certain department for the sole purpose of dealing with a problem. Managers from other departments were seldom, if ever, called in to provide feedback. A more successful method was developed using the findings of the brain skill/management style data. Managers who scored well on the right brain skill intuition were first placed together outside of regular department hours and instructed to come up with a list of potential new solutions to the problem of "improving media coverage of the police" - an issue that the city managers themselves chose to solve. This method offers a number of benefits. Managers that are intuitive are more likely to be innovative. They are more perceptive and capable of identifying new methods of doing things. They also favor a collegial, informal decision-making approach that allows them to work beyond traditional boundaries of authority.

Following this initial stage, a separate group of left brain managers was provided with the list of possible solutions produced by the right brain management group. This method also offers a number of benefits. Managers with a left brain are more analytical and critical. They are also better at evaluating the feasibility and pertinent facts of another manager's suggestion than they are at coming up with fresh ideas on their own. They also have a tendency to dismiss fresh and innovative ideas too fast, impairing the capacity of right brain managers to work in tandem with them. The last stage was to bring the two sets of managers together in a third meeting, which would be led by a manager with strong integrative brain abilities. The integrative manager is best able to recognize the worth of the various ideas presented (whether from the left or the right) and combine parts of each into a workable plan of action.

Another possible use for brain talent assessment is the development of management training programs. Diagnostic testing provides a better picture of the current and prospective cognitive abilities accessible to both the person and the business. Training programs for improvement may therefore be developed more effectively. Managers who want or need more comprehensive "left brain" skill development (i.e., deductive thinking and analytical capacity) may be sent to specific courses, seminars, or clinics where this can happen. Managers who want to learn how to improve their "right brain" talents (e.g., intuition) and apply them to real-world issues they face in the workplace may be directed to programs that help them fully develop and actualize these abilities. Managers who want to acquire "integrative" brain abilities (i.e., the ability to utilize "left" and "right" brain skills interchangeably) will be exposed to training materials that will help them achieve this goal. It's becoming clearer that "right brain" abilities like intuition can be utilized to

make choices in companies, and that these skills are only going to become more important in the future.

There are already signs that top management education programs are developing courses to better enhance this skill. By 1990, the author predicts that the country's top management training programs (both public and private) would put equally as much emphasis on the development of "right brain" abilities (intuitive, precognitive) as they do on "left brain" skills (deductive and analytical) in order to make choices. As a consequence of this trend, organizational productivity is expected to improve. Intuition is based on the recognition of important patterns that reveal the dynamics of a situation via the application of experience. People often cannot explain what they really observed or how they evaluated a scenario as typical or unusual since the patterns seen in real-life settings may be complex and obscure. Klein is quick to warn out that intuition isn't perfect, and our experiences may lead us astray, causing us to make mistakes. Such experience, on the other hand, has the ability to contribute to our knowledge and skill base (both implicit and explicit), thus aiding in the continuous development of expertise.

He referred to the possibility of somatic markers as an explanation for this occurrence, but did not go into detail. The overall trend among management scholars in the 1990s was to ignore significant theoretical developments in the foundation disciplines. Instead, management scholars were more interested in asking questions about the role of intuition in managing contemporary companies and, depending on their results, prescribing when and when not to utilize it based on a skewed view of the scientific foundation of intuitive cognition. Burke and Miller drew a picture of intuition in action based on their findings and advised executives on when intuition should be used, such as when time is of the essence, when explicit cues or guidance are lacking, when uncertainty reigns, and when a check-and-balance on quantitative analyses is required. By the end of the 1990s, intuition research as it applied to management and organization had come full circle, reiterating, confirming, or expanding on a number of the insights offered by Barnard over half a century earlier (e.g., what intuition is, its nature and origins, and the circumstances and job roles to which it is relevant).

The overall trend among management scholars in the 1990s was to ignore significant theoretical developments in the foundation disciplines. Instead, management scholars were more interested in asking questions about the role of intuition in managing contemporary companies and, depending on their results, prescribing when and when not to utilize it based on a skewed view of the scientific foundation of intuitive cognition. BDT saw not just acknowledgment of the importance of affect in decision making in general and intuitive judgment in particular around the turn of the century, but also a systematic effort to explain for it by integrating ideas from neurology (i.e. the SMH) with pertinent insights from dual-process theory. In the early 2000s, empirically based innovations relied on ideas from BDT and dual-process theories, and moved beyond the reporting of frequencies and percentages that defined the descriptive and prescriptive work of the 1990s. Instead, many groups of researchers in the United States, Europe, and elsewhere used multivariate statistical methods in medium- to large-sample cross-sectional studies to investigate connections between intuition, behavior, and performance, as well as construct validation problems.

3. CONCLUSION

We have provided our understanding of the historical events that make up the history of intuition research in management in this review. Until the turn of the century, notable advances in

intuition research took place mostly outside of management disciplines. The image was often muddled and conflicting within management research: for example, there was no clear explanation of the now well-established difference between insight and intuition. One result of this conceptual ambiguity was that organizational learning researchers' models lacked clarity. It is evident that management intuition researchers have embraced the integration project and achieved significant progress; however, it is unclear if such development would have happened sooner if management intuition researchers had adopted a more holistic approach. However, there is little question that theoretical advances are continuing apace, and empirical data from the psychology sciences is quickly collecting with regard to a broader range of intuitive processes, including implicit attitudes.

REFERENCES:

1. Laub JA. Assessing the servant organization; Development of the Organizational Leadership Assessment (OLA) model. Dissertation Abstracts International,. Procedia - Soc Behav Sci. 1999;

2. Kaur G, Oberoi A. Novel Approach for Brain Tumor Detection Based on Naïve Bayes Classification. In: Advances in Intelligent Systems and Computing. 2020.

3. Gaurav A, Yadav MR, Giridhar R, Gautam V, Singh R. 3D-QSAR studies of 4-quinolone derivatives as high-affinity ligands at the benzodiazepine site of brain GABAA receptors. Med Chem Res. 2011;

4. 4. Nathan M. Intuition in Organizations: Leading and Managing Productively. Acad Manag Rev. 1991;

5. 5. Bhardwaj S, Singhal N, Gupta N. Adaptive neurofuzzy system for brain tumor. In: Proceedings of the International Conference on Innovative Applications of Computational Intelligence on Power, Energy and Controls with Their Impact on Humanity, CIPECH 2014. 2014.

6. Hasan MR, Hassan N, Khan R, Kim YT, Iqbal SM. Classification of cancer cells using computational analysis of dynamic morphology. Comput Methods Programs Biomed. 2018;

7. Jourden FJ. Intuition in Organizations: Leading and managing productively. Agor, W. H. (ed.). Newbury Park. CA: Sage. 1989 (paperback). J Behav Decis Mak. 1994;

8. Gupta S, Mishra T, Varshney S, Kushawaha V, Khandelwal N, Rai P, et al. Coelogin ameliorates metabolic dyshomeostasis by regulating adipogenesis and enhancing energy expenditure in adipose tissue. Pharmacol Res. 2021;

9. Arora M, Som S, Rana A. Predictive Analysis of Machine Learning Algorithms for Breast Cancer Diagnosis. In: ICRITO 2020 - IEEE 8th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions). 2020.

10. Tripathi L, Kumar P, Singh R. Role of chelates in magnetic resonance imaging studies. Journal of Cancer Research and Therapeutics. 2009.

11. Polzer JT, Diekmann KA, Neale MA. Intuition in Organizations: Leading and Managing Productively Weston H. Agor (ed.), Sage Publications, 1989. No. of Pages: 285. J Organ Behav. 1992;

12. Yogev-Seligmann G, Hausdorff JM, Giladi N. The role of executive function and attention in gait. Movement Disorders. 2008.

13. Isha, Rana P, Saini R. Performance of different bit loading algorithms for OFDM at PLC channel. In: Proceedings - 2012 2nd International Conference on Advanced Computing and Communication Technologies, ACCT 2012. 2012.

14. Senapati R, Nayak B, Kar SK, Dwibedi B. HPV Genotypes distribution in Indian women with and without cervical carcinoma: Implication for HPV vaccination program in Odisha, Eastern India. BMC Infect Dis. 2017;

15. Mir MA, Verma P. Use of polyethylene waste with stone dust in flexible pavement. Int J Sci Technol Res. 2019;

16. Cragg L, Keeble S, Richardson S, Roome HE, Gilmore C. Direct and indirect influences of executive functions on mathematics achievement. Cognition. 2017;

17. Chan RCK, Shum D, Toulopoulou T, Chen EYH. Assessment of executive functions: Review of instruments and identification of critical issues. Arch Clin Neuropsychol. 2008;

18. Daly M, McMinn D, Allan JL. A bidirectional relationship between physical activity and executive function in older adults. Front Hum Neurosci. 2015;

19. Kearney FC, Harwood RH, Gladman JRF, Lincoln N, Masud T. The relationship between executive function and falls and gait abnormalities in older adults: A systematic review. Dementia and Geriatric Cognitive Disorders. 2013.

20. Kumar S, Wahi A, Singh R. Synthesis and preliminary pharmacological evaluation of 2-[4-(aryl substituted) piperazin-1-yl]-N-phenylacetamides: Potential antipsychotics. Trop J Pharm Res. 2011;

21. Ahuja R, Purnima, Haque MJ, Tanwar S, Gautam N, Rana A. Secure and Robust Watermarking Scheme based on Motion Features for Video Object. In: ICRITO 2020 - IEEE 8th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions). 2020.

22. Miyake A, Friedman NP, Emerson MJ, Witzki AH, Howerter A, Wager TD. The Unity and Diversity of Executive Functions and Their Contributions to Complex "Frontal Lobe" Tasks: A Latent Variable Analysis. Cogn Psychol. 2000;

23. Zargar K, Singla S. Impact of pet plastic waste on mechanical properties of mix concrete design. Int J Sci Technol Res. 2020;

24. Cha SH, Son JH, Jamal Y, Zafar M, Park HS. Characterization of polyhydroxyalkanoates extracted from wastewater sludge under different environmental conditions. Biochem Eng J. 2016;

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

A REVIEW PAPER ON BENEFITS OF TEA CONSUMPTION

Manjeet Kaur*

*SOP,
Sanskriti University, Mathura, Uttar Pradesh, INDIA
Email id: manjeet.pharmacy@sanskriti.edu.in

DOI: 10.5958/2249-877X.2021.00125.9

ABSTRACT

Using phytochemicals to boost the immune system or fight infections has been around for a long time. Tea and its constituents are an important element of these strategies for maintaining health and reducing the incidence of a variety of malignancies. Tea, as well as its contents, are an important part of these measures for maintaining health and lowering the risk of many cancers. Nutritional support is a developing innovation in the areas of diet-based treatments, and tea and its ingredients are a key component of these efforts to preserve health and lower the risk of many cancers. Apart from water, tea is the most extensively consuming beverage on the planets. The leaves of the Camellia sinensis plant are used to make the three most common forms of tea: green, black, and oolong. Tea is high in antioxidants, antihypertensive compounds, anti-inflammatory compounds, antibacterial compounds, cholesterol-lowering compounds, neuroprotective compounds, as well as thermogenic compounds. Tea as well as its bioactive polyphenolic components have been connected to a multitude of health's benefits, including the prevention of cancer, cardiovascular disease, diabetes, arthritis, stroke, genital warts, and obesity, according to extensive scientific research, epidemiological studies, and meta-analyses. There are still debates concerning the advantages and hazards of tea use, but the many health benefits greatly outweigh the few known drawbacks. With the rise of scientific research on the roles of tea in human life's, this review aims to emphasize the benefits as well as hazards of tea usage.

KEYWORDS: *Black Tea, Benefits, Cardiovascular Health, Green Tea, Tea Consumption.*

1. INTRODUCTION

The phrase "functionally foods" was 1st used in Japan in 1980. Functional foods are described as "any foodstuff having components that offer physiological advantages in addition to meeting basic nutritional needs." Plant and animal sources are both used to make functional foods. One of the most essential functional foods is tea. Tea is the second most popular beverage in the planet. For over 50 millennia, tea has been made entirely from the leaves of the Camellia sinensis plant[1]. Tea is a plants that originated in Southeast Asia and is now produced in over 30 countries across the world. Every year, 3 billion kilograms of tea are produced and consumed. Tea is classified into three types depending on how it is treated throughout the manufacturing process. Black tea, which is extensively consumed in Western countries, accounts for 78percentage points of worldwide tea productions, while green tea, which is largely consume in

Asian countries, versions for 20 percent, and oolong tea, which is primarily produced in southern China, accounts for two percent[2].

The production methods for the three main kinds of tea, black, green, as well as oolong, vary. Green tea is made by steaming's or pan frying newly collected leaves to inactivate the enzymes polyphenol oxidase, which prevents fermentations and produces a dehydrated, steady beverage. New leaves are allowable to wither till their moistures level is lowered to the point when natural polyphenols are transformed to polymeric chemicals termed theaflavins as well as thearubigins, reducing catechin concentration[3]. Tea (Oolong)is made by drying the leaves as well as burning them soon after they have been rolled to stop the oxidation. Oolong tea is said to be around half as agitated as black tea. Simple polyphenols are oxidized to more complex condensed polyphenols during the fermentation process, giving black as well as oolong teas their distinct hues and tastes. The polyphenol concentration is reduced, while the caffeine level is increased, as a result of the prolonged fermentation. When compared to green tea, black tea comprisestwo to three times the amount of caffeine[4]–[6].

In the past several decades, in vitro animalsas well as in the vivo research have shown the endless advantages of tea. The existence of PPs has been linked to positive health outcomes. Its function in the prevention of congenital deficits, cardiovascular illness, cancer, neurodegenerative disorders, depressions, as well as a variety of others illnesses has been addressed in many publications. Because there has been little discussion regarding the risky factors connected with tea, the goal of this study is to concentrate on the potentials for tea to have both positive and negative impacts, as well as to increase awareness of the uncommon but underestimated dangers[7].

1.1 Profits of Tea Consumption:

1.1.1 Cardiovascular Health as well as Tea:

Cardiovascular diseases (CVDs) is the world's important cause of mortality. The development and pathophysiology of CVDs are influenced by a number of intrinsic and extrinsic variables. Excessive cholesterol, atherosclerosis, arterial calcification, higher homocysteine, as well as many other variables have been classified by the American Heart Association (AHA) as risk factors for CVDs. Tea (Green)catechins, particularly EGCG, have a beneficial effect on endothelial as well aslargely vascular functioning, according to growing data from animal, human, as well as cell culture models. A lot of epidemiological studies have looked at the link among tea intake as well as the risk of cardiovascular disease. Since the levels of PPs used in this research are identical to those founds in 1 liter of tea, regular use of black and green tea may give practically complete protection against HTN.

1.1.2 Atherosclerosis:

Only a few human researches have looked at the link among tea or the flavonoid consumption as well as atherosclerosis. Carotid plaques were shown to be less common in women who drank more tea. In middle-aged Finnish males, Mursu found a link between increased flavonoid consumption and reduced carotid atherosclerosis. Though, a vast amount of research has been done using animal models to investigate the link among flavonoid-rich meals or extract and the development of atherosclerosis. Researchers studied the effects of flavonoid-rich meals or extracts on the development of atherosclerosis in apolipoprotein E deficient mice and hamsters. In ApoE-deficients mice, tea and tea-derived flavonoids, isolated quercetin, red wine-derived

PPs, as well as a pure phenolic acids derivative from honey have all been shown to prevent atherosclerotic plaque growth.

1.1.3 Functions of Endothelial:

The endothelium, which lines all blood arteries on the inside, serves as a partially permeable barrier among blood and tissues. It produces a number of chemicals that regulate vasomotor tone, leukocyte adhesion, platelets activities, and vascular smooth muscle cell proliferation, including NO, among the most important substances produced by the endothelium and a key regulator of arterial wall tone. The absence of normal endothelium-dependent and NO-mediated vasodilation in the artery causes endothelial dysfunction. Endothelial dysfunction is thought to be a precursor to the development of cardiovascular disease and events.

Function of Endothelial may be measured in many ways. The effects of possibly vasoactive drugs have been studied in vitro using isolated arteries from animals. Tea as well as tea flavonoids induce NO as well as endothelium reliant onvasorelaxation of rat aortic rings, according to the findings of numerous in vitro investigations. The flow mediated dilatations of the brachial artery has been quantity using ultrasonography in humans. FMD is a noninvasive method that evaluates NO-dependents arterial vasodilations in reply to increased blood flow-induced shear stress.

1.1.4 Antioxidant Belongings of Tea:

The anti-oxidatives characteristics of tea polyphenols contribute to the possible fitness benefits of tea consumptions. In cell-free systems, tea preparations entrap reactive oxygen species such as superoxide, hydroxyl, as well as peroxyl radicals, as well as nitric oxide, nitrogen dioxide, singlet oxygen, and peroxynitrite, reducing damage to lipid membranes, proteins, and nucleic acids. The most effective catechin in tea is EGCG, which interacts with the majority of reactive oxygen species. In vitro, both green and black tea have been found to block the oxidation of lipoproteins caused by Cu2+, suggesting that they may help prevent atherosclerosis and other cardiovascular illnesses. In a number of clinical studies, a single dosage of tea has been shown to increase plasma antioxidant capacity in healthy adults within thirty to sixty minutes. Another study discovered that drinking tea and encapsulated tea extracts on a regular basis for one to four weeks decreases oxidative status markers. Green tea has more antioxidants than black tea. Tea phenols boost antioxidant capacity and defend against harmful reactive oxygen species in a well-balanced diet.

Tea phenols bind reactive oxygen species such as peroxyl radical, singlet oxygen, as well as hydroxyl radical in a cell-free environment, protecting lipid membranes, protein, and DNA from ROS-mediated damage. Catechins have antioxidant capabilities owing to their vicinal dihydroxy or trihydroxy structure, which may chelate metal ions and prevent free radical production. This structure's strong reactivity to quench free radicals is further enhanced by its electron delocalization.

1.1.5 Absence of Toxicity:

Puerh black tea, a kind of black tea made by drying and fermenting raw green tea leaves, was used as a health drink in Japan, China, and Taiwan for about 2000 years. A research on tea extract toxicity in Sprague-Dawley rats found no treatment-related effects for dietary administration, indicating that high-dose black tea extract as a dietary supplement is safe for both animals as well as humans.

1.1.6 Anti-inflammatory Effect:

Tea as well as its extracts have been exposed to having anti-inflammatory, anti-cancer, as well as anti-cardiovascular disease belongings. Several epidemiological studies have linked high levels of uric acidsas well as C-reactive protein to an increased risk of cardiovascular disease. According to a research, tea supplementation substantially lowered various degrees of risk by lowering UA as well as CRP levels due to the synergistic actions of tea phenolics. Inflammations has a role in many diseases like arthritis, diabetes, cancer, heart disease, as well as obesity, thus this may have a big impacts on public health.

1.1.7 Cancer and Tea:

Tea's widespread use has sparked interest in its potential application in the chemopreventions of the carcinogenesis as well as its associated phenomena is mutagenesis. Numerous population founded research back up tea's cancer-preventive properties. The oxidative damage produced by cigarette smoking is the most common cause of cancer. Tea polyphenols, according to researchers, are strong anti-oxidants that activate phase-two detoxifying enzymes, which decrease the hazard of cancer by decreasing DNA injury in cells and cancer activation, which leads to malignancy.

1.1.8 Prostate cancer inhibition:

Prostate cancer the 2nd leading reason of cancerconnected deaths in the United States, is the greatest often studied non cutaneous cancer. Tea extracts and TFs have been shown in studies to inhibit androgen-sensitive human prostate cancer cells.

1.1.9 Skin Cancer:

Tea and tea polyphenols have been proven to prevent skin carcinogenesis in many investigations. Oral supervision ofblack tea, green tea, or EGCG inhibits or, in few instances, regresses the growth of well-established skin cancers. Mice with papillomavirus exhibited full retardation. When tumor-bearing mice were given black tea, the formation of squamous cell carcinomas, nonmalignant tumors, as well as tumor volume were significantly decreased. Apoptosis was enhanced as well, whereas DNA synthesis was slowed.

2. LITERATURE REVIEW

Naghma Khan et al. discussed a review on Tea and Human[8].Tea is the second greatest inexpensive beverage drunk by humans, behind the water. Tea intake has been regarded to be good to one's health since ancient times. Thanks to recent medical studies, this concepts has a solid basis. With each new research published in the scientific literature, the evidence supporting the health advantages of tea use becomes stronger. Camellia sinensis, the tea plant, has been farmed for thousands of years, and its leaves have been used for medical purposes. Tea is a widely consumed beverage across the globe, and its ingredients are being studied for therapeutic purposes. Green tea has been exposed to have cancer-preventives properties in cell culture, animal research, and human studies, which is promising. There's growing evidence that black tea has comparable health benefits.

Tea has also been shown to help prevent a number of serious human disorders, including cardiovascular and metabolic problems. Polyphenolic compounds presents in green as well as black tea have been associated to benefits in the preventions of cardiovascular disorders, comprising atherosclerosis as well as coronary heart disease, in numerous studies. Tea

consumption is also connected to anti-diabetic, anti-aging, as well as a plethora of other health advantages. The principal polyphenolic compounds contained in green as well as black tea, respectively, are catechins as well as theaflavins, which are responsible for the majority of tea's physiological advantages. The findings of clinical as well as epidemiological studies on the effects of tea consumption on the preventions of chronic illnesses like cancer and cardiovascular disease, as well as general health promotion, are discussed in this article.

RajjuPriya Soni et al. discussed a review on Tea[9].After water, tea is the most popular beverage. Camellia sinensis leaves are used to make it (family: Theaceae). Oolong, green, black, and Ilex teas are among the many kinds of tea produced, contingent on the region's post-harvested treatmentsas well as palatability. Tea, which is higher in natural antioxidants, is said to help against malignancies of the colon, esophagus, and lungs, as well as urinary stones and dental cavities. Tea, which has been shown to be anticariogenic,anti-inflammatory, antimicrobial, anti-carcinogenic, as well as anti-oxidant, may be used as a preventative measure.

Sabu M Chacko et al. discussed a review on beneficial effect of green tea[10]. Green tea has been demonstrated to provide health benefits in the treatment of a variety of conditions, including cancer, heart disease, particularly liver disease. Green tea's catechin content, namely (-)-epigallocatechin-3-gallate, is connected to several of its health advantages. In vitro and in animals, the underlying mechanisms of green tea catechins and their biological effects have been explored. Metabolic syndrome, which encompasses obesity, type two diabetes, and cardiovascular risk factors, has also been treated with green tea catechins in human studies. Tea catechins may protect against obesity as well as type two diabetes induced by a high-fat diet, as well as reduce the risk of cardiovascular disease, when consumed over time. Green tea's pharmacological and clinical effects should be monitored, and its mechanisms of action should be elucidated, in accordance with international standards.

3. DISCUSSION

Tea is the most widely consumed beverage on the earth, second only to water. Herbal tea is sometimes mistaken for tea, which is only a marketing trick. Herbal tea, on the other hand, is made from plants other than Camellia sinensis. On a routine trip to the grocery store, one may discover a range of tea preparations supplemented with various extracts of mango, strawberry, pomegranate, lemons, as well as other fruits and vegetables, at least in US markets, due to the popularity of tea. As a consequence of these marketing strategies, tea products have gained appeal among non-tea consumers. Tea extracts are also used in cosmetics and other products that are sold to the public.

Nowadays, healthy foods that include active free radical scavengers are extremely popular. Polyphenols, caffeine, and amino acids are the main chemical components of green tea. Tea also includes flavonoids, which are anti-oxidant chemicals with a variety of health benefits. It is generally recognized that some foods' phenolic chemicals may have health advantages. Polyphenols, which are found in tea, have been related to positive benefits on human health. India is one of the world's biggest tea producers, exporters, and consumers. The current study emphases on the productions, configuration, as well as health benefits of tea intake.

4. CONCLUSION

Tea have recognized as a Nature's rewards for improving health’s of human, according to current study over the past 30 years. The quantity of experimental data pertaining to the characteristics

of tea and its components is steadily increasing. As a result, endogenous and external variables that affect the occurrence as well as progressions of many chronic illnesses have been better identified and recognized. Tea has a wide variety of phytochemicals that are digested, absorbed, and extensively metabolized by the body, and the effects of tea components may be felt at the cellular level, according to research. Tea's status as a functional food validates long-held ideas among tea users. Tea is now being contested as to whether it is beneficial or hazardous to human health.

It is regarded safe and beneficial against many malignancies, cardiovascular disorders, and diabetes mellitus because to its widespread and lengthy usage. However, numerous instances of hepatotoxicity, neurological diseases, and other side effects have been recorded after consuming high quantities or concentration preparations of the C. sinensis. Upcoming study should focus on determining the true scope of health advantages, determining the safe range of tea intake related with these profits, as well as elucidating possible mechanisms of the actions. To better understand the impacts of tea on people, new experimental systems must be established. Tea is a popular beverage across the globe, and further research into its usage and polyphenol content is needed to determine its involvement in the primary and secondary prevention of chronic illnesses.

REFERENCES:

1. K. Hayat, H. Iqbal, U. Malik, U. Bilal, and S. Mushtaq, "Tea and Its Consumption: Benefits and Risks," *Crit. Rev. Food Sci. Nutr.*, 2015, doi: 10.1080/10408398.2012.678949.

2. W. Wang, Y. Yang, W. Zhang, and W. Wu, "Association of tea consumption and the risk of oral cancer: A meta-analysis," *Oral Oncol.*, 2014, doi: 10.1016/j.oraloncology.2013.12.014.

3. C. W. Pan, Q. Ma, H. P. Sun, Y. Xu, N. Luo, and P. Wang, "Tea consumption and health-related quality of life in older adults," *J. Nutr. Heal. Aging*, 2017, doi: 10.1007/s12603-016-0784-0.

4. Y. J. Gu *et al.*, "Tea consumption is associated with cognitive impairment in older Chinese adults," *Aging Ment. Heal.*, 2018, doi: 10.1080/13607863.2017.1339779.

5. X. Dong *et al.*, "Tea consumption and the risk of depression: A meta-analysis of observational studies," *Aust. N. Z. J. Psychiatry*, 2015, doi: 10.1177/0004867414567759.

6. H. Huang, G. Y. Han, L. P. Jing, Z. Y. Chen, Y. M. Chen, and S. M. Xiao, "Tea consumption is associated with increased bone strength in middle-aged and elderly Chinese women," *J. Nutr. Heal. Aging*, 2018, doi: 10.1007/s12603-017-0898-z.

7. X. Li *et al.*, "Tea consumption and risk of ischaemic heart disease," *Heart*, 2017, doi: 10.1136/heartjnl-2016-310462.

8. N. Khan and H. Mukhtar, "Tea and Health: Studies in Humans," *Curr. Pharm. Des.*, vol. 19, no. 34, pp. 6141–6147, 2013, doi: 10.2174/1381612811319340008.

9. R. P. Soni, M. Katoch, A. Kumar, R. Ladohiya, and P. Verma, "Tea: Production, Composition, Consumption and its Potential as an Antioxidant and Antimicrobial Agent," *Int. J. Food Ferment. Technol.*, vol. 5, no. 2, p. 95, 2015, doi: 10.5958/2277-9396.2016.00002.7.

10. S. M. Chacko, P. T. Thambi, R. Kuttan, and I. Nishigaki, "Beneficial effects of green tea: A literature review," *Chin. Med.*, vol. 5, pp. 1–9, 2010, doi: 10.1186/1749-8546-5-13.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

A COMPREHENSIVE REVIEW ON TURMERIC BENEFITS

Dr. Vishal P Balaramnavar*

*SOP,
Sanskriti University, Mathura, Uttar Pradesh, INDIA
Email id: hod.sprc@sanskriti.edu.in

DOI: 10.5958/2249-877X.2021.00126.0

ABSTRACT

Turmeric, a spice with medicinal properties, has grabbed the interest of medical and scientific experts, as well as culinary fanatics, since it is the principal sources of the polyphenol curcumin. It assistances in the treatment of oxidative as well as inflammatory illnesses, as well as arthritis, anxiety, metabolic syndrome, as well as hyperlipidemia. It may also help cure exercise persuaded inflammations as well as muscle soreness, letting athletes to recover more quickly and perform better. Furthermore, even if a person does not have a known health problem, a small dose of the complex may be beneficial to their health. Its antioxidant and anti-inflammatory qualities account for the bulk of these benefits. Due to its low bioavailability, which appears to be due to poor absorption, fast metabolism, as well as rapid elimination, ingesting curcumin does not result in the associated health benefits. Bioavailability may be improved in a number of ways. Piperine, for example, is the main active ingredient in black pepper, and it has been proven to improve bioavailability by 2000% when mixed with curcumin in a complex. When mixed with other boosting agents, curcumin offers a wide range of health advantages. The goal of this study is to provide a concise review of the substantial research on the health benefits of curcumin.

KEYWORDS: *Anti-Inflammatory, Antioxidant, Curcumin, Polyphenol, Turmeric.*

5. INTRODUCTION

Turmeric is a interest that has captivated the attention of medical as well as scientific experts, and the culinary worlds. Turmeric (Curcuma longa) is a perennial rhizomatous herbaceous ginger plant[1]. Curcumin's medical qualities have been known for thousands of years, but determining the specific mechanism(s) of action and identifying the bioactive components has only lately been possible. Curcumin (one, seven-bis (four-hydroxy-three-methoxyphenyl)-one, six-heptadiene-three,five-dione) is a natural polyphenol found in the rhizomes of Curcuma longa (turmeric) as well as other Curcuma species, also known as diferuloylmethane. Because of its antioxidant, anti-inflammatory, antimutagenic, antibacterial, as well as anticancer characteristics, Curcuma longa has been utilized as a medicinal plant in Asian nations for millennia[2].

Curcumin, an poly phenol, has been found to target a range of signaling molecules as well as have cellular action, suggesting that it has many health effects. It has been shown to aid with inflammatory disorders, metabolic syndrome, and pain, as well as the treatment of both inflammatory and degenerative eye conditions. It has also been shown to be beneficial to the kidneys. Curcumin supplementation seems to provide a number of therapeutic effects, the

majority of which are linked to its antioxidant and anti-inflammatory properties. Curcumin has a limited bioavailability, despite its anti-inflammatory and antioxidant properties, which seems to be owing to insufficient absorption, fast metabolism, as well as excretion. Many substances have been explored to increase curcumin bioavailability by targeting these distinct routes. The majority were developed to increase curcumin bioavailability by inhibiting its metabolic pathway.

Curcumin will be well and used all over the world for its potential benefits of health in a numbers of conducts[3]. It includes curcumin, is utlized in curries in the India, tea in Japan, cosmetics in Thailand, beverages in Korea, colorants in China,antiseptics in Malaysia, anti-inflammatory agents in Pakistan, as well ascheese, mustard sauce, butter, and chips in the United States. Curcumin is accessible in a variety of forms, counting capsules, ointments, tablets, soaps, energy drinks, as well as cosmetics[4].The goal of this study is to provides a quick summary of the multitude of research on curcumin's possible health benefits[5]. We chose to concentrate on the advantages linked with certain common health issues and benefits in healthy people rather than examining the massive research related to cancer and other sickness states due to the breadth of the material. The root of turmeric is seen in Figure 1[6].

Figure 1: The above diagram shows the root of turmeric[7]**.**

1.1 Antioxidant:

Curcumin's anti-oxidant as well as anti-inflammatory characteristics account for the bulk of its impact on the many illnesses discussed in this study. Curcumin has been exposed to helps the body's oxidative stresses signs. It has been proven to boost the activities of antioxidants likes' superoxide dismutase in the bloodstreams (SOD). Curcuminoids supplementation had aimportantconsequence on all studied oxidative stress parameters, including plasma SOD and catalase activities, as well as serum glutathione peroxidase concentrations, according to a recent systematic review and meta-analysis of randomized control data on the effectiveness of purified curcuminoids supplementation on oxidative stress parameters. It's worth noting that every study in the meta-analysis used few kind of formulation to address bioavailability issues, with piperine showing in four of the six. The capacity of curcumin to neutralize free radicals is mediated in a variety of ways. It may scavenge multiple forms of allowed radicals, likes reactive oxygen as well as nitrogen species, controls the activity of free radical-neutralizing enzymes likes catalase, GSH, as well as SOD, and inhibit ROS-producing enzymes likes' lipoxygenase as well as xanthine hydrogenase. Curcumin is also a lipophilic molecules, making it a good peroxylradicasl

scavenger. As a consequences, curcumin is regarded as a chain-breaking antioxidant, similar to vitamin E.

1.2 Anti-Inflammatory:

Oxidative stress has been connected to a numbers of chronic illnesses, as well as its pathological processes are similar to those of inflammations in that one may readily be caused by the others. In actuality, at the site of inflammations, inflammatory cells are known to generate a range of reactive species, subsequent in oxidative stress, establishing the relationship among oxidative stress as well as inflammation. A numbers of reactive oxygen species may also activates an intracellular signaling cascade that increases the productions of pro-inflammatory genes. A vast spectrum of chronic diseases as well as syndromes have been associated to inflammation. Parkinson's disease, Alzheimer's disease, , cerebral injury, arthritis, renal ischemia, multiple sclerosis, cardiovascular disease, epilepsy metabolic syndrome, obesity, depression, cancer, colitis, allergy, asthma, bronchitis, psoriasis, diabetes, fatigue, as well as acquired immune deficiency syndrome are just a fewer of the conditions that can affects people. AIDS is only one of the illnesses that have been discussed.

1.3 Arthritis:

Osteoarthritis (OA), a chronic joint ailment, is one such illness linked to inflammation, both chronic and acute. It affects approximately 250 million individuals globally, resulting in higher healthcare expenditures, impairment in daily activities (ADL), and, as a result, a worse excellence of life. Though OA was previously thought to be mainly a degenerative as well as non-inflammatory disease, it is now known to include inflammatory features, such as increased cytokine levels, and to be linked to systemically inflammations. While there is no cure, there are a number of pharmacological alternatives for therapy; unfortunately, many are expensive and come with unwanted side effects. As a result, alternative therapies such as nutritional supplements and herbal medicines are becoming more popular.

1.4 Metabolic Syndrome:

Because systemic inflammation has been related to a range of disorders affecting multiple organ systems, curcumin’s ability to lower it has implications beyonds arthritis. Metabolic syndrome is characterized by hyperglycemia, hypertension, insulin resistance, lower higher density lipo proteins cholesterol; raised lower-density lipoprotein cholesterols raised triglyceride levels, as well as obesity, especially visceral obesity. Curcumin has been shown to improve insulin sensitivity, reduce adipogenesis, and reduce blood pressure, inflammation, and oxidative stress, all of which are MetS symptoms. Curcuminoids seem to impact gene expression as well as the activity of enzymes involved in lipoprotein metabolism, resulting in lower plasma triglyceride and cholesterol levels and higher HDL-C levels. Obesity and overweight are linked to chronic low-grade inflammation; although the exact mechanisms are unknown, pro-inflammatory cytokines are known to be produced. Because these cytokines are regarded to be at the root of diabetes and cardiovascular disease, it's critical to manage inflammation.

1.5 Healthy Peoples:

The mainstream of curcumin research in persons has so far been done on patients who already have health problems. This might be because studies on healthy persons are harder to do since the advantages may not be as quick and quantifiable if biomarkers are normal from the outsets. As a consequences, longitudinal studies may give the most vision into any possible health’s

advantages in healthy individuals, however these studies may be time over whelming as well asexpensive. Cross evaluations across the fewer studies that have been complete may be problematic due to the uses of various dosages, characteristically as higher as one g. It's worth noting that this is only considered a higher dosages since it's more than most people could get from eating the spice alone. An eighty mg/day dosage of a lapidated version of curcumin was utilized in one investigations on healthy people aged fourty to sixty years. For four weeks, subjected were administered either curcumins (N = nineteen) as well as placebo (N = nineteen).

The treatment consisted of 400.00 mg of powder each and every days, comprising eighty mg of curcumin. Blood as well as saliva samples were taken before as well as after the 4 weeks. Curcumin reduced triglyceride levels considerably, but not total cholesterol, HDL levels. Both nitrous oxides as well as soluble intercellular adhesion molecule one, an atherosclerosis-related molecule. Myeloperoxidase levels rose as a result of inflammation-related neutrophil action, but not c-reactive proteins. There were decreases in salivary amylase activity, a stress signal, as well as increases in salivary radical scavenging capacities and plasma antioxidant enzyme catalase, but no alterations in superoxide dismutase or glutathione peroxidase. Both beta amyloid plaque, a measure of aging in the brain, and plasma alanine amino transferase activity, a sign of liver damage, were decreased. This implies that a little dosage of curcumin may help those who don't have any ailments.

1.6 Side Impacts:

Curcumin has a lengthy track record of being a safe supplement. According to JECFA as well as EFSA findings, the Allowable Daily Intake (ADI) for curcumin is zero to three mg/kg body weight. Curcumin's safety and effectiveness have been shown in a variety of healthy person's trials. Despite the fact that the drug's safety has been verified, there have been occasional reports of undesirable side effects. Seven participants who took 500.00–12,000.00 mg as well as were observed for seventy two hours had headache, diarrhea, rash, as well as yellow stool in a dosage response trial. In another trial, participants who took 0.45.00 to 3.6.00 g of curcumin per day for four to one months had nausea as well as diarrhea, as well as higher levels of blood alkaline phosphatase and lactate dehydrogenase.

6. LITERATURE REVIEW

Betül Kocaadam et al. discussed a review on Curcumin[8]. Turmeric is a ginger family herb that is widely grown in tropical Asia's southern and western areas. Turmeric is commonly used as a spice in Malesia,Iran, China, India's, Polynesia, as well as Thailand, as well as has an influences on the nature, colors, and flavor of the foods. Turmeric has been used for millennia in India as well as China to treat a variety of maladies, infection, counting dermatologic disorders, as well as depression. Curcumin, a lipophilic polyphenol molecule produced from the herb's rhizomes as well as orange and yellow in color, is largely responsible for turmeric's health's benefits. Curcumin has recently been revealed to haveanti-inflammatory, antioxidant, as well as anticancer qualities, as well as to play a key roles in the preventionsas well as treatments of a wide ranges of diseases, counting cancer, cardiovascular,autoimmune, neurological, as well as diabetic problems. It is also envisaged that producing curcumin analogues would improves the biological activity as well as physiological effects of curcumin on the body. This page discusses the history of curcumin, its chemical as well as physical characteristics, physiological activity mechanisms, analogues, metabolites, as well as health repercussions.

VahidSoleimani et al. discussed a review on Turmeric and its major components[9]. Turmeric's main ingredient is curcumin. Turmeric has long been used as a culinary spice and for medicinal purposes, having anti-inflammatory, anti-hyperlipidemic, and antibacterial properties. Turmeric and curcumin have no mutagenic or genotoxic properties. At some levels, oral turmeric and curcumin did not cause reproductive harm in mice. Curcumin was shown to be safe when taken orally for four to seven weeks at a dosage of six grams per day. However, certain side effects, such as gastrointestinal issues, are possible. Furthermore, at dosages of 500.00 mg twice daily for 30 days, oral bioavailable formulations of curcumin were shown to be safe for humans, but further research is needed, especially on nanoformulations, which should be addressed in a separate publication. Curcumin is also regarded as a drug that is usually considered to be safe. The safety and toxicity of turmeric and curcumin in medicine are discussed in this review. People may safely ingest turmeric and curcumin, particularly when administered orally. Animals are also safe when it comes to turmeric and curcumin. In animals, they are nonmutagenic and safe during pregnancy, although further research in humans is required.

Si Qin et al. discussed about Efficacy and safety of turmeric[10]. In the general population, dyslipidemia is a significant and prevalent cardiovascular risk factor. Turmeric and curcumin have yet to be shown to have lipid-lowering effects. The effectiveness and safety of turmeric and curcumin in decreasing blood lipids in people at risk of cardiovascular disease were investigated in a meta-analysis. Methods: A comprehensive literature search was conducted on PubMed, Embase, Medline, Ovid, as well as the Cochrane Library databases to find randomized controlled trials that looked at the effects of turmeric and curcumin on blood lipid levels such as total cholesterol, high-density lipoprotein cholesterol, lower-density lipoprotein cholesterol, and triglycerides. The effect was measured using a pooled standardized mean difference with a 95% confidence range. The research had seven publications that were appropriate for inclusion in the analysis (649 patients). Turmeric and curcumin were shown to be fully safe in all investigations, with no major side effects identified. Conclusions: Turmeric and curcumin may help patients who are at risk of cardiovascular disease by lowering blood cholesterol levels. Curcumin is a safe and effective dietary supplement that may be used in combination with other therapies. Curcumin dosage form as well as prescription frequency are all unknowns that need to be investigated further.

7. DISCUSSION

Curcumin, a yellow polyphenolic pigment derived from the rhizome of Curcuma longa L., has been utilized in Ayurveda and Chinese medicine for millennia as a culinary and food coloring agent, as well as a component in a variety of medicinal formulations. Their biological functions have been intensively explored in recent decades. It helps with metabolic syndrome, arthritis, anxiety, and hyperlipidemia, as well as oxidative and inflammatory diseases. It may also help athletes recover faster and perform better by reducing exercise-induced inflammation as well as muscle discomfort. Linked to its low bioavailability, which seems to be due to poor absorption, quick metabolism, and rapid elimination, ingesting curcumin does not results in the associated medical benefits. Bioavailability may be boosted by a number of factors.

8. CONCLUSION

Curcumin, a yellow-colored compound found in turmeric, is the plant's primary coloring agent. Curry powder, turmeric, as well as, to a lesser degree, ginger all contain curcumin, a yellow pigment. Curcumin has received a great deal of attention owing to its many health benefits,

which seem to be mostly due to its anti-oxidant and anti-inflammatory properties These advantages are particularly noticeable when curcumin is taken with drugs like piperine, which dramatically boost its bioavailability. Curcumin may aid in the treatment of oxidative as well as inflammatory illnesses, metabolic syndrome, anxiety, and hyperlipidemia, according to research. It may also help athletes recover faster and perform better by reducing exercise-induced inflammatory and muscle discomfort. Furthermore, even if a person does not have a recognized health problem, a little amount may be beneficial to their health.

REFERENCES:

1. K. Vigyan Kendra et al., "Medicinal properties of turmeric (Curcuma longa L.): A review," ~ 1354 ~ Int. J. Chem. Stud., 2018.

2. B. B. Aggarwal, W. Yuan, S. Li, and S. C. Gupta, "Curcumin-free turmeric exhibits anti-inflammatory and anticancer activities: Identification of novel components of turmeric," Molecular Nutrition and Food Research. 2013, doi: 10.1002/mnfr.201200838.

3. A. R. Vaughn, A. Branum, and R. K. Sivamani, "Effects of Turmeric (Curcuma longa) on Skin Health: A Systematic Review of the Clinical Evidence," Phytotherapy Research. 2016, doi: 10.1002/ptr.5640.

4. S. C. Gupta, B. Sung, J. H. Kim, S. Prasad, S. Li, and B. B. Aggarwal, "Multitargeting by turmeric, the golden spice: From kitchen to clinic," Molecular Nutrition and Food Research. 2013, doi: 10.1002/mnfr.201100741.

5. A. Kumar et al., "Interaction of turmeric (Curcuma longa L.) with beneficial microbes: a review," 3 Biotech. 2017, doi: 10.1007/s13205-017-0971-7.

6. U. J. Eke-Okoro, R. B. Raffa, J. V. Pergolizzi, F. Breve, and R. Taylor, "Curcumin in turmeric: Basic and clinical evidence for a potential role in analgesia," Journal of Clinical Pharmacy and Therapeutics. 2018, doi: 10.1111/jcpt.12703.

7. "ArticleViewerPreview." https://journals.lww.com/nutritiontodayonline/fulltext/2020/01000/turmeric__potential_health_benefits.9.aspx (accessed Aug. 17, 2017).

8. B. Kocaadam and N. Şanlier, "Curcumin, an active component of turmeric (Curcuma longa), and its effects on health," Crit. Rev. Food Sci. Nutr., 2017, doi: 10.1080/10408398.2015.1077195.

9. V. Soleimani, A. Sahebkar, and H. Hosseinzadeh, "Turmeric (Curcuma longa) and its major constituent (curcumin) as nontoxic and safe substances: Review," Phytotherapy Research. 2018, doi: 10.1002/ptr.6054.

10. S. Qin et al., "Efficacy and safety of turmeric and curcumin in lowering blood lipid levels in patients with cardiovascular risk factors: A meta-analysis of randomized controlled trials," Nutrition Journal. 2017, doi: 10.1186/s12937-017-0293-y.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

AN ANALYSIS ON IMPACT OF CLIMATE ALTERATION ON SEAFOOD & THEIR CONSUMPTION

Namrata Arya*; Krishna Raj Singh**

*SBAS,
Sanskriti University, Mathura, Uttar Pradesh, INDIA
Email id: namrata.sobas@sanskriti.edu.in

**SBAS,
Sanskriti University, Mathura, Uttar Pradesh, INDIA
Email id: hodbio-tech@sanskriti.edu.in

DOI: 10.5958/2249-877X.2021.00127.2

ABSTRACT

Most significant challenge for fisheries sector's development is difficulties similar to economical losses caused by fish illnesses & infections. Current research focuses on use of immune stimulants to cure fish illnesses sincere is currently no effective rapy for a few fish diseases, & rapies sometimes entail extra stress for fish. Climate alteration is one of world's most pressing concerns today. Greenhouse gases, chemicals, & heavy metals have increased as a result of human activity, & have played a major part in global warming. As a result, global levels, oxygen content, & water salinity have altered, as have viruses & harmful algae. Climate alteration will ultimately affect aquaculture & fisheries industries since seafood is susceptible to alteration in aquatic environments. Climate alteration will also put safety, variety, quantity, & worth of seafood, along with illnesses caused by seafood, at jeopardy. As a result, fish consumption will decline, & seafood producing industry will suffer. To prevent se harmful consequences, governments must develop collective food safety initiatives in addition to lowering greenhouse gas emissions & supporting environmental technology. Hazards that have arisen as a consequence of climate alteration must be addressed via Hazard Analysis & Critical Control Points (HACCP) programs.

KEYWORDS: *Climate Change, Fish diseases, Fisheries, Global Warming, Seafood.*

1. INTRODUCTION

Climate alteration refers to alteration in features & averages of climate. Climate alteration is most serious environmental issue, affecting living regions, food chain, biodiversity, economy, & human existence. In order to identify alteration in climatic conditions as "climate alterationde", such alteration need be monitored consistently & persist for decades or more. Climate alteration is being triggered by gradual global warming & associated physical alteration, along with an increase in frequency of extreme wear events. Climate alteration is instigating glaciers to melt, sea levels to rise, forests & agricultural has to shrink, extreme wear events to become more frequent & intense, desertification, hurricanes, floods, & erratic rainfall; infectious illnesses are on rise. unfavourable circumstances that will develop as a consequence of climate

alteration would negatively impact food & livelihoods by putting social &economical strain on natural resources & ecosystems(1).

Inadequate food supplies, which are a major consequence of climate change, are anticipated to exacerbate diseases such as respiratory tract disorders, heart disease, allergies, nausea, & diarrhea as a result of climate change. Climate alteration is one of most pressing issues of our day because of severe repercussions that might jeopardize humanity's existence. As a result, worldwide organizations have been established to better understand causes of climate alteration& to develop agreements, plans, & recommendations to evaluate & enforce measures that might be done to combat it(2). Studies on reducing greenhouse gas emissions & creating more environmentally friendly systems & technologies have grown more significant in recent years.

1.1 Main Impacts of Climate Change:

Over last 30 years, global temperature has increased by 0.6°C. Worldwide warming is now recognized as a global danger that will be felt substantially in future years, particularly given fast rise observed in recent years [4]. Reefs, glaciers, & varied ecosystems are all experiencing significant difficulties as a result of global warming's impacts. Because of greenhouse effect & warming, a warm & humid environment will develop in Arctic nerve layers of atmosphere, cloudlessness will rise, & storm seasons will begin earlier & continue longer. Climate alteration will have an impact on big living populations in many geographical areas. According to reports, global warming has a significant impact on human existence along with environmental degradation. In this respect, global warming has potential to alter ecosystems(3).

1.1.1 Pollutants:

Global industrialization has provided humanity with a great deal of convenience, but it has also resulted in an increase in environmental contamination. As a consequence of human activities, many chemical pollutants are released into environment. Persistent natural pollutants including polycyclic aromatic hydrocarbons (PAHs), which are generated or by-products of industrial or agricultural activities, hazardous metals like mercury, lead, cadmium, copper, zinc, & organic syntic compounds are among m. Chemical pollutants reach an aquatic environment via l&-based runoff, river-water pollution, aerosol deposition from local or distant sources, & ships. Some poisons persist in soil for extended periods of time, eventually reaching high quantities in food chain's top predators, posing a risk to human health. Climate alteration is predicted to increase precipitation levels, along with quantity of pollutants in waterways. Methyl mercury, on or h&, is most dangerous. Toxic metals in aquatic materials cause tissue damage, loss of regeneration capacity, developmental problems, genetic material such as DNA damage, growth & growth alterations in se species by interfering with diverse physiological processes. Temperature & salinity increase are both affected by pesticide toxicity. Size of impact is determined on organism's life stage along with pollution levels. Yes, harmful impact of pesticide & fungicide on Palaemonetes pugio is enhanced when salinity & temperature are both increased. Toxicity is determined by chemical pollutant & organism's living level. Toxins' negative effects are valued more since y might be passed on to children(4).

1.1.2 salinity of water:

entry of salt water into subterranean water basins will be enhanced as a result of rising sea levels, & increasing salinity in groundwater & brackish waters will have an impact on human

drinking water, agriculture, & coastal ecosystems. Millions of impoverished people in developing nations will be forced to utilize water sparingly owing to an increase in salt in drinking waters as a result of rising sea levels due to climate change. Alteration in precipitation in se areas, on or h&, will impact salinity & living creatures by affecting quantity of streams entering coastal seas & river mouths. Exposure to variations in salinity of valuable & significant human products in terms of food chain & human consumption is essential in terms of consumption & fishing, along with economical& ecological issues(5).

1.2 Effect of climate alteration on seafood:

Climate alteration is expected to have a negative impact on quantity, volume, & value of seafood in both marine & freshwater settings. On diverse kinds of fish farming, impacts of global warming might be summarized as follows. Impacts on inl& small areas: When environmental conditions alter, many fish species behave as heavier, deeper, or deeper waters. Cold water fishing will decline as water temperatures rise, but temperature sensitivity rises, resulting in an imbalanced & unidirectional population in se seas.

Wide inl& areas & effects on coastal fishing: most endangered species in se areas are those that nest& dwell in coastal wetl&s. Crabs, karides, & a variety of economically important fish species thrive in lagoons & marshes along coasts. Majority of reproductive activities take place in open areas of this kind at depths of 15-30 m, & features of se habitats will be lost if water level rises furr. Sound species such as mussels & oysters in coastal regions will be vulnerable to predator assault when water levels rise. Fish mortality might be caused by increasing water levels, rising water temperatures, & decreasing oxygen levels in bays. Tuna, lilies, mackerel, & or species might also be found on shelf.

Impacts on ocean fishing: Deep-sea fishing is expected to be less affected by climate alteration than fish in or settings. However, according to ocean experts, global warming causes fishing variations, El Nino, & or natural disasters. High temperatures are expected to enhance fisheries in many places since overall biological activity is greater at high temperatures. In this case, since medium has a large quantity of nutrients, fish will develop quicker & reach sexual maturity.

following table summarizes impacts of climate alteration on aquaculture in general:

Distribution of many fishery populations is expected to be influenced by rising sea water temperatures. Some species might be able to adjust high temperatures & perish as consequence of climate change, while ors might need to migrate to regions with better circumstances. Due to impact of climatic circumstances caused by global warming, fish species in so urn hemisphere are expected to be driven into norrn hemisphere.

Alteration in environment owing to climate alteration might cause mutations, deformations, & survival consequences in aquaculture, which is particularly susceptible to environmental impacts throughout larval & embryological phases of development.

By reducing dissolved water oxygen & boosting species variety, higher water temperatures in atmosphere might induce physiological stress to organisms.

Due to short winter & high water temperatures, transport of nutrients from soil to surface in water column might be limited or abolished. This might result in a gradual stratification, lowering productivity of ocean's food chain.

Chemicals transferred to marine environment as a consequence of rising seawater levels are likely to harm coastal fish.

Variations in freshwater flow & lake levels as a result of precipitation alterations will have a negative impact on living & reproductive activities in se regions.

In tiny rivers & lakes in areas with significant temperature & precipitation fluctuations, distribution of stocks & quantity of catchable fish is anticipated to be adversely impacted. Fishing activities in major rivers & lakes, along with lagoon & offshore fishing, will be impacted. Conservation of fisheries is jeopardized by climate alteration.

1.3 Effects on seafood as food:

Following is a summary of influences of climate alteration on seafood consumption & seafood production:

Aquaculture & health, food commerce fisheries, , meat & feed production & processing will all suffer as a result of climate alteration. Economical, environmental, cultural& consequences, along with public health consequences, might all result from such events.

Climate alteration has a detrimental effect on food safety, causing unhealthier fisheries products to be processed & harvested, resulting in increased food leftover& food related illnesses. Because this disease might negatively impact customer's impression of fish, it might lead to a reduction in seafood intake.

At higher temperatures, parasite growth will cause issues with aquaculture consumption & processing, which will involve m more.

Rising contaminants in water, such as pesticides & heavy metals, will also be a significant hindrance to eating nutritious seafood.

Food supplies & variety that people will consume will diminish as fisheries & aquaculture sectors are negatively impacted by rising environmental variables as a consequence of climate alteration.

As a consequence of acidity, calcification might diminish, resulting in shellfish not growing, developing, & becoming undetectable on tables.

Food-borne illnesses will become more common as temperature & precipitation rise, increasing frequency & prevalence of bacteria, viruses, parasites, & fungus.

Climate alteration will affect certain seasonal processes which are biological, along with marine & freshwater food chains, resulting in increase in invading species & illnesses associated with transportation.

1.4 Prevent climate alteration& reduce impacts:

Every year, worldwide climate alteration conferences are held in most areas of globe, & required actions are determined by discussing what has been accomplished & what can be done about it. Climate alteration& global warming represent a serious danger to life on Earth. This is a problem that has to be brought to attention of whole globe, & scientific study & preventative measures should be implemented as soon as feasible. Reduction of carbon dioxide emissions is critical for limiting global warming induced by climate alteration. Reduced emissions of greenhouse gases into atmosphere should be a key approach for preventing global warming. In

next 10-20 years, a strong & early start toward decreasing greenhouse gas emissions should be made. It is predicted that worldwide CO2 emissions must be decreased by 20-50 percent to minimize global warming & effects it will bring. Around 70% of human CO2 emissions are linked to use of fossil fuels, & pollution will be mitigated via, conservation, energy efficiency& alternative energy sources including geormal wind, , & solar energy planning.

Increasing fossil fuel tax, encouraging public transportation, reducing use of automobiles, using energy-efficient technology, construction, & deforestation are all contributing to high level of CO2 in atmosphere, with forest burning to open farming areas accounting for about 20 percent of carbon emissions which were human-generated. As a result, danger of global warming will be reduced, & forests will be protected. Because climate alteration is increasing frequency of harmful algae bursts, & because eruption-causing algae can create a maritime environment, governments must develop shell & micro-algae monitoring programs, along with take regular & planned action to generate comprehensive toxicological data. Additional study on physical, biochemical, & geological distribution of aquatic creatures is needed to underst& impacts of warming & ocean acidity on pollutant bioaccumulation, structure, & distribution in aquatic organisms(6).

re are few research looking at effects of upcoming climate alteration on aquatic biota, such as how aquatic production can alteration, what nutrient supply will alter, how water temperature will react to increasing temperature, CO2, pollution, toxic algae, illness, & a low oxygen environment. With se multidisciplinary research, effect of climate alteration on public health & food safety must be talked more widely. Countries will improve FAO/WHO food safety management systems in areas such as coordination & management, supervision, legislative framework, evaluation, experimental & monitoring facilities, education, information, & communication. When integrating proper hygiene practices into HACCP plans, it's important to understand frequency & prevalence of chemical & microbiological risks that are influenced by climate alteration& or variables. When purchasing raw materials from areas where impacts of climate alteration are more visible, seafood processing industry must be more cautious &aware of fisheries products that have been subjected to pesticides, toxic algae, & heavy metal pollution(7).

2. LITERATURE REVIEW

Matsuda H et al. discussed an better methodology for computing nitrogen foot mark of seafood in which y explained how every year, activities of human produce extra reactive nitrogen than is produced by natural process. Extra reactive nitrogen in environment foundations eutrophication, acidification climate alteration, , & human health issues, among or things. Fertilizers & animal & human waste produced by food production & consumption are primary sources of excess nitrogen. As a result, our dietary choices have a significant impact on nitrogen load in environment. Consumption-depending accounting technique acknowledged nitrogen footprint was lately created to estimate burden. Seafood is currently estimated as a single category in current nitrogen footprint models, utilizing same basic assumptions as cattle. Seafood, on or h&, comes in a wide range of kinds & manufacturing techniques. Furrmore, global fish consumption per capita is expected to increase. In article, author offer novel nitrogen footprint model for assessing effect of seafood in more depth, show findings of model's application to Japan as case study, &enlighten key factors required to properly assess burden of seafood intake. Our approach considers distinctions among fed aqua cultured seafood, non-fed aqua cultured seafood,

& captured seafood when tracking feeding stages. Japanese food nitrogen footprint of fed aqua cultured fish is estimated to be 0.7 kg-N/capita/year, or around 45 percent of that of total seafood, according to our model, while prior model estimated it to be 3.36 kg-N/capita/year. amounts of fed aquaculture & plant protein in feed are most important variables in determining nitrogen load of seafood, according to our findings(8).

Richard S. J. Tol discussed how Climate alteration is more of all externalities: it is bigger, more complicated, & riskier than any other ecological issue. Greenhouse gas emission have a broader range of origins than any or environmental issue. Each farm business, , & home produces greenhouse gases. Likewise, significances are widespread. Wear has an impact on agriculture, energy consumption, health, & many or elements of nature, all of which have an impact on everything & everyone. Climate alteration has many causes & repercussions, & people in low-income nations who contribute least to it are most susceptible to its impacts. Climate alteration is a long-term issue as well. Some greenhouse gases have a tens of those-year life span in atmosphere. amount of emissions involved is massive. In year 2000, carbon dioxide emissions (excluding l& use alteration) were 24 billion metric tons(9).

Tobey J et al. discussed economical effects of climate alteration on world agriculture in which y explained how economical consequences of a doubling of atmospheric carbon dioxide concentration on global agriculture are experimentally evaluated under two diverse crop response scenarios. Alterations in agricultural commodity pricing as a result of alterations in local agricultural yields, along with alterations in economical well-being as a result of altered worldwide patterns of agricultural commodity consumption and production, are examples of se effects. Impacts on national economical well-being are demonstrated to be negligible in both cases, with a few outliers. Agricultural commodity prices, on or hand, are likely to rise dramatically in a more pessimistic scenario. Increased agricultural prices reduce consumer surplus and reduce climate alteration benefits that might or wise be gained by specific countries with expected favourable yield impacts(10).

De Moraes G et al. discussed Climate alteration, agriculture & economical all effects on diverse regions of Brazil. In this article, y use a comprehensive regional economical information from 2005 to evaluate possible economical impacts of climate alteration on Brazilian agricultural scenarios in various areas in a general equilibrium framework. Simulated are two distinct climate alteration effect scenarios. This paper contributes to Brazilian literature in three ways: it considers detailed shocks by product and region; it emphasises inter-regional connections among potential impacts of climate alteration on agriculture and labour markets; and it specifies links among agricultural climate alteration forecasts and household expenditures. Climate alteration impacts on Brazilian agriculture would have a little overall economical impact on Brazilian economy, but would have significant regional repercussions, suggesting that losses would be concentrated in poorest areas and for poorest employees and households in those regions.

3. DISCUSSION

While Western diet has been shown to have negative climate & health effects, role of fish & seafood in climate-friendly & healthy diets remains uncertain. We address this issue using a model that simulates how a rational consumer who is encouraged to eat more fish might alteration his diet. An epidemiological model & life-cycle analysis coefficients are used to convert se alterations into health & climate consequences. Effect of encouraging customers to eat more fish vs pushing m to eat less beef is compared in application to France & Finl&.

Raising fish consumption provides greater health advantages than reducing meat consumption for same percentage shift, along with climate benefits. Fish consumption promotion is also very cost-effective, & it should be emphasized above meat consumption promotion. Rar than stigmatizing meat eaters, climate-friendly & healthy diet suggestions might convey a more positive message encouraging people to eat more fish.

4. CONCLUSION

Climate alteration will have significant influence on aquaculture, hunting, and marketing industries, along with manufacturing sector; all countries should take general and specific measures to mitigate factors that contribute to this, as it might pose a threat to safe seafood production and consumption. Examining ecological challenges, along with ir ramifications and research into fisheries resource protection, is vital. It is necessary to examine and investigate influence of climate alteration on dependability and quality of seafood to be ingested in order to minimize negative consequences. Se determinants, along with dangers that might occur in processing sector's HACCP protocols, should be evaluated during raw material procurement.

REFERENCES:

1. Department of Energy and Climate Alteration(DECC). Estimated impacts of energy and climate alterationpolicies on energy prices and bills. Dep Energy Clim Chang. 2014;

2. Stern review on economical effects of climate change. Population and Development Review. 2006.

3. Tol RSJ. Correction and update: economical effects of climate change. J Econ Perspect. 2014;

4. Nelson GC, Valin H, Sands RD, Havlík P, Ahammad H, Deryng D, et al. Climate alterationeffects on agriculture: Economical responses to biophysical shocks. Proc Natl Acad Sci U S A. 2014;

5. Yalew AW, Hirte G, Lotze-Campen H, Tscharaktschiew S. Climate change, agriculture, and economical development in Ethiopia. Sustain. 2018;

6. Wabnitz CCC, Cisneros-Montemightor AM, Hanich Q, Ota Y. Ecotourism, climate alterationand reef fish consumption in Palau: Benefits, trade-offs and adaptation strategies. Mar Policy. 2018;

7. Tate RD, Benkendorff K, Ab Lah R, Kelaher BP. Ocean acidification and warming impacts nutritional properties of predatory whelk, Dicathais orbita. J Exp Mar Bio Ecol. 2017;

8. Oita A, Nagano I, Matsuda H. An improved methodology for calculating nitrogen footprint of seafood. Ecol Indic. 2016;

9. Tol RSJ. economical effects of climate change. J Econ Perspect. 2009;

10. Kane S, Reilly J, Tobey J. An empirical study of economical effects of climate alterationon world agriculture. Clim Change. 1992;

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

AN ANALYSIS OF CLIMATE-SMART AGRICULTURE AND ITS MANAGEMENT

Dr. Ashok Kumar*

*SOA,
Sanskriti University, Mathura, Uttar Pradesh, INDIA
Email id: dean.soa@sanskriti.edu.in

DOI: 10.5958/2249-877X.2021.00128.4

ABSTRACT

The need for the feed is growing in tandem with the population growth. Agriculture has a critical part in supplying food to people all over the globe. Agricultural industries are the most well-known sectors, and they also contribute to a country's economic growth. The agricultural sector is facing a significant problem as a result of global climate change. Changeable weather patterns, shorter growing seasons, drought, severe temperatures, and increased exposure to pests and crop diseases are causing significant difficulties for farmers all over the globe. Farmers will be able to adapt and prepare for the effects of climate change by using climate-smart practices. The main goal of climate-smart agriculture is to increase agricultural output while also making farms more adaptable to climatic changes and lowering greenhouse gas emissions from agricultural products. As a result of the lack of information regarding climate-smart agricultural methods, as well as a lack of resources, socio-economic constraints at the farm level, and so on, climate-smart agriculture techniques face certain difficulties. To overcome all of these obstacles, government authorities, institutions, and key stakeholders should support climate-smart agriculture by offering different educational programs, financial assistance, and instruments. Farmers should be supplied with equipment that allows them to detect climate changes in real time and choose the best crop based on this information. It may be used to transmit messages to farmers in the future after sensing the quantity of water needed for crop growth.

KEYWORDS: *Agriculture, Climate, Farmers, Land, Management, Productivity.*

1. INTRODUCTION

Agriculture is the world's biggest industry in terms of land use, and it is the sole source of human food, occupying about 40% of all available land. It plays a critical role in the country's economic development. Crop food products provide for approximately 78 percent of the world's average per capita energy needs, while other food sources such as milk, eggs, and meat account for another 20%. As a result, the expanding population's food demand is the primary necessity, which can only be met by increasing agricultural production(1). Natural and agricultural components make up ecological development elements. The success or failure of many companies has been determined by the health of its plant organizations. The scientific community has declared unequivocally that global temperatures will increase as a consequence of climate change, which will have a direct detrimental impact on agricultural output. As a result,

climate-smart agriculture is gaining popularity around the world as a way to improve and secure the agricultural sector.

Climate-smart farming practice is a term that refers to a collection of actions that have been used in the past in the fields of ecology, environmental protection, climate change, and farming practice. On the other hand, the link between farming and climate variation is underappreciated, particularly given the sector's dual behavior (i.e., farming methods contribute significantly to global anthropogenic GHG (greenhouse gas) release while also being vulnerable to climate variation jerks and pressures). Climate change has a dramatic impact on farmers' livelihoods. Random climate patterns, shorter rising times, scarcities, hazardous temperatures, and increased vulnerability to pest and crop disease pose significant difficulties for the world's small farmers, particularly in tropically populated areas where there is a greater reliance on typical resources. Climate-smart agriculture practices may help planters adapt and prepare for the effects so that they can preserve and perhaps regain their livelihoods(2).

1.1 Objective of Climate-Smart Agriculture practices:

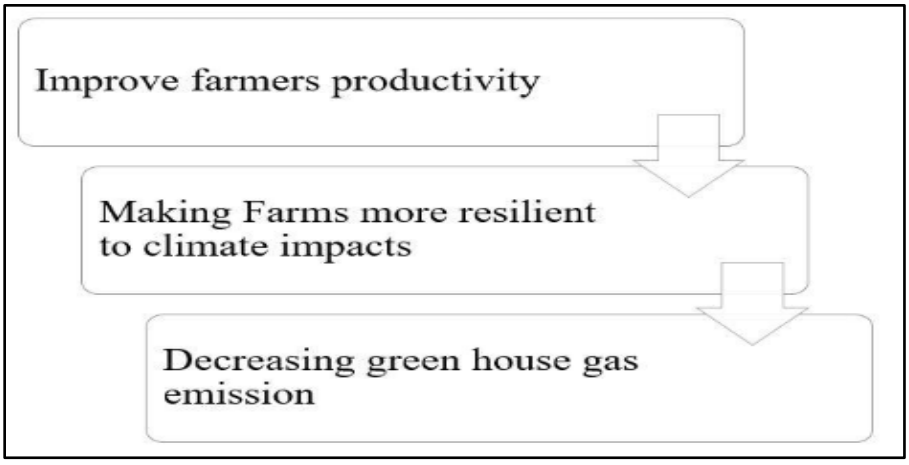

Figure 1: Representation of several objectives of Climate-Smart Agriculture practices.

Figure 1 represents several objectives of Climate-Smart Agriculture practices. Climate-smart agriculture (CSA) practices have three main goals: increasing agricultural productivity to increase income and food security for farmers, making farms more resilient to climate impacts by increasing adaptive capability at various levels, such as farmland to country, and reducing greenhouse gas emissions(3).

1.2 Three pillars of Climate-Smart Agriculture:

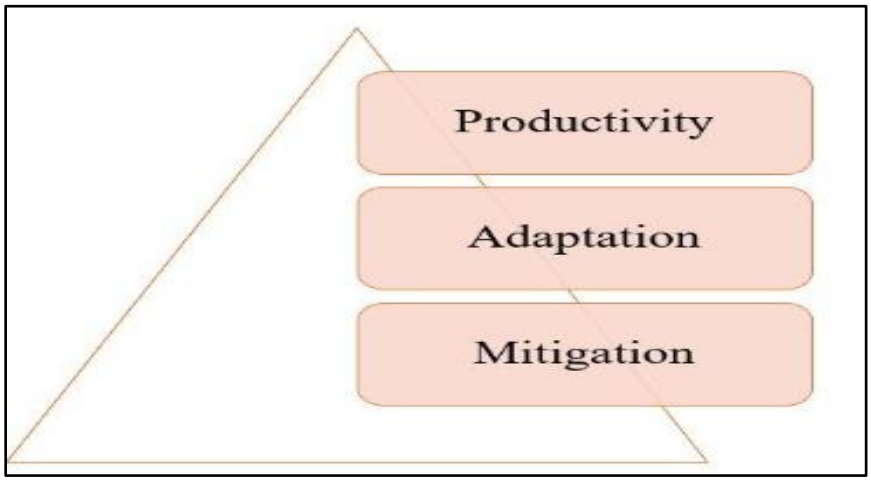

Figure 2: Representation of Three Different Pillars Associated With Climate-Smart Agriculture.

CSA, by definition, must have a lot more to offer than just assisting in the achievement of local sustainable development goals. A number of issues, however, hindered the execution and efficacy of the CSA strategy. The CSA's three pillars work at different scales in terms of geo-economics, geography, and institutions. CSA is seen differently by different parties according on their political beliefs, and it is influenced by a range of funding provisions, decision-making procedures, and business and trade barriers. The proportional importance of the CSA pillars changes depending on native descriptions. The agriculture sector's wide range of mitigation and adaptation methods at different levels reflects the present CSA split(4).

1.2.1 Productivity:

The goal of CSA is to improve agricultural and farm revenues in a sustainable way that does not harm crops, animals, or fish. As a result, food quality and safety will improve. An important idea for improving productivity is sustainable intensification.

1.2.2 Adaptation:

The CSA aims to reduce farmers' exposure to short-term hazards and improve their flexibility by improving their capacity to adapt to shocks and longer-term pressures and flourish. The preservation of ecological services supplied to farmers and others receives particular emphasis. These facilities are required to maintain production while also adapting to changes in the climate.

1.2.3 Mitigation:

CSA strives to reduce or eliminate greenhouse gas (GHG) emissions whenever and wherever feasible. This implies that for every calorie or kilogram consumed, we decrease emissions from food, fiber and gasoline. That is, to prevent agricultural deforestation, we manage soil and trees in ways that maximize their ability to serve as carbon sinks and absorb carbon dioxide from the atmosphere.

1.3 Areas for the Implementation of Climate-Smart Agriculture:

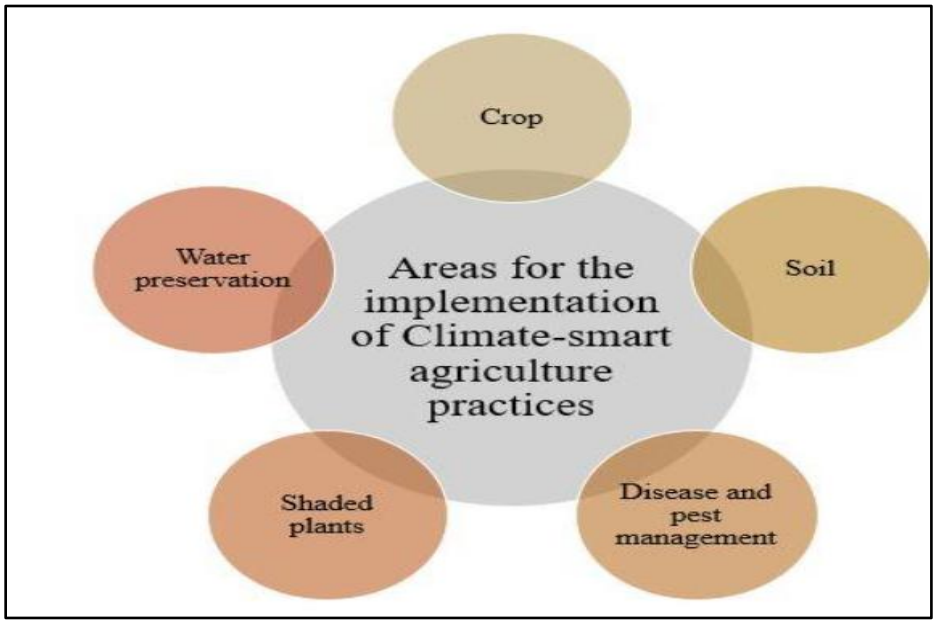

Figure 3: Representation of Areas for the Implementation of Climate-Smart Agriculture.

Figure 3 depicts all of the key areas where climate-smart agriculture may be applied, including soil, crop, disease, and pest management, water conservation, and shaded plants.

- *Crop Management:* Once climate effects and risks have been evaluated, climate smart solutions tailored to a particular countryside, rural population, or even individual acreage may be estimated. In the case of the cocoa plant, collecting and fermenting need a unique technique that is dependent on the climate. In the event of significant rainfall or severe moisture conditions, simple sun dryers constructed of wooden structures and plastic pieces may be utilized to dehydrate beans(5).
- *Soil Management:* Heavy rains may rinse productive top-layered soil, particularly on sloping terrain. Establishing pulverized protection helps to keep top soil in place during heavy rains and is beneficial for drought-prone regions because it helps the soil retain moisture. All actions that improve the quality and structure of the soil increase efficiency, which is a major goal of climate wise farming. In many cases, healthy soil acts as a carbon sink, storing carbon dioxide and keeping it out of the atmosphere, thereby aiding in the fight against climate change.
- *Management of pests and diseases:* Pests and illnesses brought on by global warming have the potential to severely reduce production and perhaps wipe out whole farms. Climate smart farming gives farmers the knowledge they need to apply the right quantity of pesticide at the right time of year to combat new pests. Buying pest-resistant plantlets is also a good idea. Farmers are recommended to use hand weeding as needed in any climate when it comes to weeds, concentrating on dangerous weeds while separating the mushy weeds to replenish soil and prevent nutrient-rich top layered soil from dissolving(6).
- *Shaded Plants:* Regardless of the climatic risk, planting shade trees helps a farm or community: the right number of plants, of the right class, and with the right amount of

coverage may help to protect farmland from harsh wind, rain, and sun. Climate-smart trainings help in identifying the best tree class to plant, the best amount of vegetation to plant, and a full shade-tree classification—which may include the use of trees as wind-barriers and living borders, as well as providing shade for harvests that benefit from it. Planting different types of trees that offer protection to their leaves at different periods of the year, especially in warmer and drier climates or areas with more rain, is important to maintaining a continuous canopy, especially in warmer and drier climates or regions with more rain(7).

- *Water Conservation:* Agriculture consumes 70% of the world's available water supply.According to current understanding, if the planet continues to warm, water scarcities, which have been a concern in many places, will become a more serious danger. Climate change may potentially deplete a nearly limitless supply of water. Flooding was caused by a combination of prolonged dry spells that weakened the pulverized soil, followed by severe rains. To network excess water and protect crops from illnesses caused by moisture, drainage systems and trenches may be built. Climate smart agriculture is synonymous with sustainability; it integrates many sustainable methods to address the climate's unique challenges in a given agricultural community. To begin, the risk linked with climate is measured since a field that suffers ongoing water scarcities would need different strategies than one that experiences periodic floods. Using a variety of methods and taking into consideration local ecosystems and crops, we can determine the risk associated with climate change and vulnerability throughout the country. It makes climate smart agriculture "smart" by allowing farmers to discover the right combination to meet their farmland's climate challenges—as well as provide flexibility for future impacts(8).

1.4 Problems And Its Solution For The Execution Of Climate Smart Agriculture Practice:

The fundamental methods of climate-smart agriculture are often similar to those of integrated agricultural management. Most mitigation and adaptation methods and practices are similar or more similar in that they assist to improve living behavior, water quality and quantity, and biodiversity advantages. As a result, adopting a climate-smart strategy will aid in the addition of new resources and understandings to integrated agricultural management(9).Figure 4 represents several challenges associated during the implementation of climate smart farming.

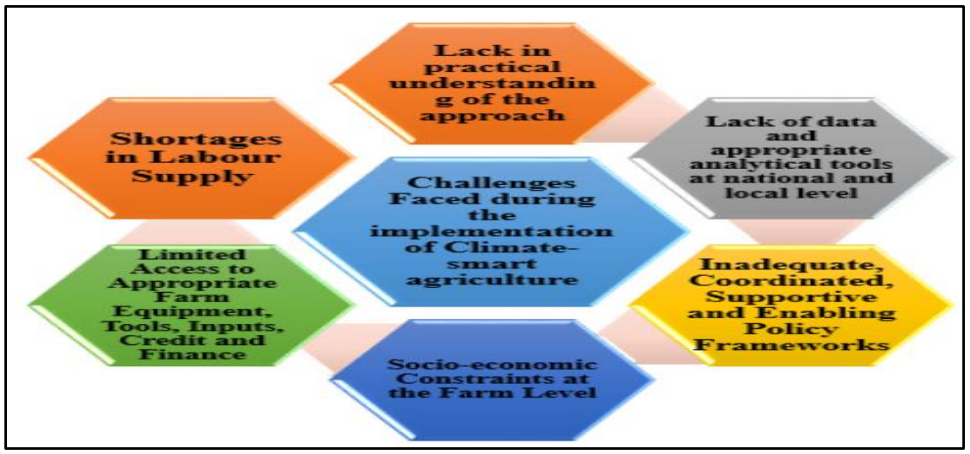

Figure 4: Challenges Associated During the Implementation of Climate Smart Farming.

2. LITERATURE REVIEW

According to Alvin Chandra et al. the link between climate change and agriculture has evolved into four main cross-functional programs: research, economics, management, and policy. Scientists are focusing their efforts on crop origins, farming methods, farmland management strategies, and how agricultural practices may complement the three pillars of climate-smart agriculture (CSA), which are mitigation, food safety, and adaptation. These CSA pillars perform different geo-economics, official, and three-dimensional tasks. It is also suggested that the issue of scales be addressed, as well as taking into account differences in CSA descriptions by promoting broad community participation. Priorities for cross-disciplinary research will aid in bridging the gap between science and policy. The global scientific research agenda requires a reintroduction of funding to smallholder "on-farmland" and "off-farmland" authenticity. This entails reconsidering the CSA debate's political and institutional elements, which may be achieved in part via cross-disciplinary research that enhance the communal, administrative, and financial scale of study(4).

Sara J Scherr et al. showed that the many goals of climate-smart farming, such as adjustment and mitigation goals, as well as improvements in living, efficiency, or other bionetwork facilities, would often need an integrated landscape strategy. On-farm and climate-smart methods, variety in agricultural systems as well as landscape use, and farmland usage connections management to achieve interactions between multiple objectives are all characteristics of a climate-smart environment. The implementation of climate-smart landscapes includes multiple stakeholder forecasting procedures, supporting supremacy organizations that include a term of resources, coordinated financial contrivances that enable the subsidy of inventiveness with several interconnected goals, and surveillance and estimation methods that justify for a range of landscape effects. Climate-smart landscape projects in the Sahel, Madagascar, Australia, and elsewhere demonstrate how different settings are already being created. Although these situations demonstrate a degree of success, lessons may be learnt from them for people who are still in the early phases of their careers. If properly implemented, the results may assist to update future stakeholder capacity investments and institutional development in all of its aspects, resulting in climate-smart landscapes(8).

According to Campbell et al. SI (Sustainable Intensification) and CSA are two linked concepts. The major distinction in the CSA is the emphasis on climate change adaptation and mitigation outcomes. SI requires both adaptation and mitigation. Invariably, all CSA patients are SI cases. In order to enhance food safety and accelerate financial growth in developing nations, a climate justice perspective necessitates measures to assist poor farmers who are most impacted by climate change but are less affected by it. Regular activities to improve food safety and assist agriculturists have significant mitigating benefits, as well as advanced start-up costs (e.g. additional labour prices). Identification of behaviors' that promote the adoption of smart-climate alternatives is a major issue. Agricultural policy is inextricably linked to rural financial aid in many countries. Low-income nations are increasingly able to steer output in more productive and sustainable directions. Enquiry associates and growth associates have a major role to play in identifying and encouraging environment-smart actions that improve country side publics, expand small-holder living conditions and jobs, and avoid adverse community and ethnic influences such as compulsory relocation and terrestrial tenancy harms. Many poor nations may see a significant increase in agricultural financing, and the CSA and SI goals will need to be set against this complex political backdrop(10).

3. DISCUSSION

Global agriculture has been much more productive during the past several decades. Improvements in manufacturing techniques, as well as harvest and cow breeding tactics, result in a significant boost in food output while only increasing agricultural area by 10%. Climate change, on the other hand, is expected to exacerbate farming's existing difficulties. Food safety and climatic fluctuation are intimately linked in the agricultural industry, and there are substantial possibilities to convert the area into climate smart techniques that resolve equitably. Climate change puts the stability and long-term viability of manufacturing under risk. Climate change is expected to further reduce production and raise unpredictable demand. Agricultural production systems must evolve toward higher output and, more crucially, reduced production erraticness in the face of climate change and other agriculture and socio-economic challenges in order to preserve and improve food safety.

In order to maintain performance and profitability, production systems must become more resistant to disruptions, or adept at executing effectively in the face of disruptions. Changes in natural resource management (e.g., water, genetic resources, soil minerals, and cropland) as well as improved productivity in the processing of these resources and inputs are required for more efficient and resilient agriculture. Transitioning to such systems will offer significant mitigation advantages by increasing carbon sinks and reducing discharge per unit of agricultural item for consumption. CSA practices are described as a variety of on-farm activities such as agroforestry, land use, forestry, agronomy, livestock, rustic and feeding, soil and water management, and bio-energy. Climate smart farming is defined by three main structures, according to an assessment of climate variation subtleties associated with agriculture: climate smart application at the arena and ranch level; variety of farmland usage through land that offers flexibility; and controlling of farmland usage connectionsonl and scapes to achieve communal, commercial, and environment al influences.

Multiple stakeholder forecasting, helpful site governance and supply tenure, and spatially based sites are all required to incorporate climate smart farming backgrounds with the following characteristics (i.e. for successful promotion and maintenance over time, in the face of complex financial, communal, environmental, and weather situations): One of the major obstacles to the development of sustainable agriculture is the significant dependence of agricultural systems on rainfall. Due to repeated droughts and the unpredictability of rainfall, farmers are especially susceptible to climate-related risks. As a consequence, climate information services (CIS) are considered as one-of-a-kind strategies for reducing weather-related hazards. Agriculturalists are informed about rain delivery configurations, concentration and regularity, wind tempests, and severe actions since CIS is accessible from any ethnic knowledge techniques or meteorological data.

4. CONCLUSION

Agriculture is the world's biggest business in terms of agricultural usage, and it is the sole source of human food, occupying about 40% of all accessible land. It is critical for the country's economic development. According to the scientific community, climate change would cause global temperatures to rise, which will have a direct detrimental effect on agricultural growth. As a consequence, climate-smart agriculture is becoming more popular across the globe as a way of enhancing and safeguarding the agricultural industry. CSA is for Community Supported Agriculture, and it refers to a set of practices that have been used in the fields of ecological

environmental science, preservation, climate change, and farming in the past. The three main goals of climate-smart agriculture are as follows: a) Increasing agricultural productivity to increase farmland productivity and food security; b) Making farms more resilient to climate impacts by increasing cumulative adaptive capability at various stages, such as farmland to country; and c) Reducing greenhouse gas emissions associated with agriculture.

Productivity, adaptation, and mitigation are the three pillars that are interconnected for attaining the Climate Smart Agriculture objectives. Crop management, soil management, pest and disease control, and other key areas where climate-smart agriculture may be applied are listed below. Challenges encountered during the implementation of climate smart farming include a lack of applied knowledge of this approach, a lack of information and appropriate diagnostic instruments, and a labour scarcity, among others. To address these issues, climate-smart agriculture is being widely and at all scales implemented in a nation with advanced technical ability, and it is being supported by institutions, several stakeholders, and the government in order to reduce all of the major challenges associated with climate-smart agriculture, as agriculture plays a key role in economic development. It may also be used to identify and alert farmers, allowing them to supply water for agricultural development.

REFERENCES:

1. Bose B, Mondal S. Climate change and sustainable agriculture in context to seed priming and role of nitrate. Vegetos. 2013;

2. Brevik EC. Processes and Corresponding Influence on Food Security. Agriculture. 2013;

3. Pretty J, Toulmin C, Williams S. Sustainable intensification in African agriculture. Int J Agric Sustain. 2011;

4. Chandra A, McNamara KE, Dargusch P. Climate-smart agriculture: perspectives and framings. Clim Policy. 2018;

5. Tissier J, Grosclaude J-Y. What About Climate-Smart Agriculture? In: Climate Change and Agriculture Worldwide. 2016.

6. Mall RK, Singh R, Gupta A, Srinivasan G, Rathore LS. Impact of climate change on Indian agriculture: A review. Climatic Change. 2006.

7. Hans VB. Impact of Climate Change on Indian Agriculture. SSRN Electron J. 2014;

8. Scherr SJ, Shames S, Friedman R. From climate-smart agriculture to climate-smart landscapes. Agriculture and Food Security. 2012.

9. Lipper L, Thornton P, Campbell BM, Baedeker T, Braimoh A, Bwalya M, et al. Climate-smart agriculture for food security. Nature Climate Change. 2014.

10. Rockström J, Williams J, Daily G, Noble A, Matthews N, Gordon L, et al. Sustainable intensification of agriculture for human prosperity and global sustainability. Ambio. 2017;

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

A REVIEW PAPER ON BUBBLING NATURE OF CRYPTO CURRENCY

Mr. Pooran Singh*; Dr. Jitendra**

*SOMC
Sanskriti University, Mathura, Uttar Pradesh, INDIA
Email id: registrar@sanskriti.edu.in

*SOMC
Sanskriti University, Mathura, Uttar Pradesh, INDIA
Email id: jitendra.somc@sanskriti.edu.in

DOI: 10.5958/2249-877X.2021.00129.6

ABSTRACT

The scholarly research on the development of price bubbles in digital currency marketplaces is reviewed in this article. According to studies, Bitcoin values went through numerous bubble stages, the most recent of which occurred. Other major digital currencies, such as Ethereum and Lit coin, have gone through numerous bubble periods as well. The most often used methods for bubble identification and measurement are the Augmented Dickey Fuller (ADF) and Log-Periodic Power Law (LPPL) methodologies. According to scholarly research, Bitcoin has been in a capsule stage from June 2015, while Blockchain, NEM, Stellar, Ripple, Lit currency, and Dash have been labelled as possessing bubble-like characteristics since November 2015. However, that the latter grouping has been lacking academic evidence to prove the presence of bubbles since early 2018. A thorough reference list is provided based on considerable differences between market citation marks and foundational beliefs, which may be used as a reference for policymakers, scholars, and investors.

KEYWORDS: *Bubble, Crypto, Currency, Development, Financial assets.*

1. INTRODUCTION

Bubbles have occurred in a variety of financial assets, Data base, contagious impacts, developmental rate, data interpretation, the influence of algorithmic investing, and news propagation via social sites are among the topics studied. Extreme price swings in investment forms have long sparked scholarly discussion and piqued the attention of investors, politicians, and regulators, thus the reasons for this widespread interest are easy to comprehend. Furthermore, rapid increases or declines in asset market prices have piqued attention because of their societal implications, such as the creation and exacerbation of social and economic inequalities[1]–[4].

In this article, researchers look at bubbles in all of the main crypto currencies and see what characteristics may help us forecast them. Both investors and regulators may benefit from this knowledge. The daily EPU index indicates legislative and regulatory uncertainty. Because financial regulation of crypto currencies is still in its early stages, uncertainty in this sector may have a significant effect on the value of crypto currencies. When there is a single bubble or many bubbles, there are a number of investigation methods that are favored. Furthermore, in the event of a moderately explosive or explosive situation, various detection methods are recommended.

While crypto currency investment is getting more fashionable as values climb, there will still be a great deal of confusion due to the significant amounts of fluctuation in both profits and unpredictable, and hence danger. Bubble development in virtual currency values makes it impossible for digital currencies to operate effectively as an account of unit and a store of value, two important purposes for which considerable research has shown significant weakness in these emerging goods.

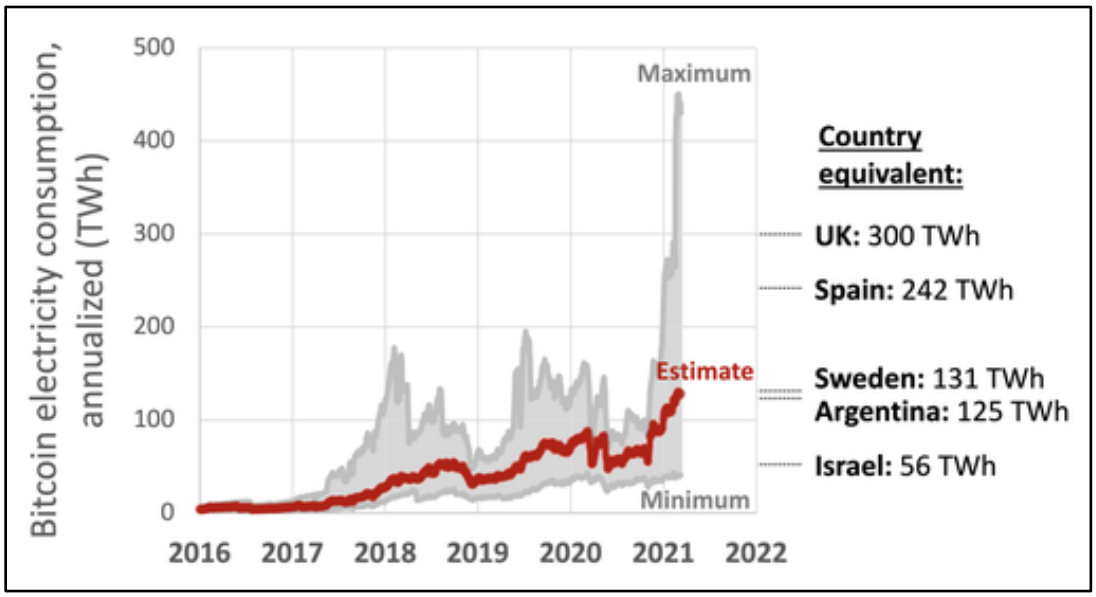

Figure 1: The above figure shows the Bit Coin electricity consumption [Wikipedia].

Understandably, this has triggered a lot of involvement in the forming of crypto exchange air bubble, especially when the investment in question is a new, innovator, and good potential tool that could be utilized for transactional cash flow and stockpile administration, with an interesting stage of appeal to base on speculation shareholders looking for unaccounted-for earnings. Notably, a wide range of different views on the concept of bubbles has been elicited. It is worth noting that an asset's nominal value is defined as the market value at which it can be sold or purchased, while its fundamental value is lower and is usually determined by its manufacturing costs. Increases in the multiplicity, or the number of times nominal prices surpass basic values, contribute to explosive behavior and the development of bubbles. Such price discrepancies from fundamentals are mostly caused by overly optimistic investor mood, which leads to a rise in collective demand for assets. When supply is constant or falling, as it is in the case with the majority of digital currencies, this phenomena of rapid demand elevation is exacerbated. One of the most amazing financial developments of the past decade was the emergence of crypto currencies. Their futuristic characteristics and dramatic pricing behavior have gotten them a lot of press, as well as the interest of regulators and academics. Most crypto currencies are renowned for their fluctuating values, which have risen and fallen dramatically in recent years. This has sparked debate about whether crypto currencies may suffer bubbles and how they should be controlled.

Virtual currency have sparked attention due to a variety of characteristics, including their origin and functions, as well as regardless of whether they indicate a commodities or fiat currency. Bitcoin is a hybrid of commodities and fiat currency. While virtual crypto currencies utilize peer-

to-peer (P2P) networking and accessible programming to prevent duplication expenditures and remove the need for institutional investors' intermediaries, they also use peer-to-peer (P2P) networking and expansive programming to prevent the need for financial institutions' intermediaries. The majority of crypto currencies are extremely decentralized. The demand for Bitcoin, along with its limited supply, are the factors that determine its value[5]–[9]. According to Ammous, Bitcoin is the only virtual currency that can be used as a store of value since it is more credible than other virtual currencies, its supply can be anticipated, and it is resistant to manipulation owing to its dominance in the crypto currency market. Nonetheless, Bitcoin cannot be regarded a powerful safe haven during times of crisis. Corbet performed a comprehensive study on crypto currency as a financial asset.

1.1 Definition of bubbles:

Reasonable bubbles: intrinsic vs. extrinsic when asset prices continue to rise owing to investors' confidence that they will be able to sell the overpriced asset at a greater price in the future, rational bubbles form. The constant need for greater profits causes price inflation, which eventually busts the bubble. When investors consistently and repeatedly make incorrect asset fundamental estimates, intrinsic rational bubbles develop. This is particularly frequent with sophisticated technological goods, when determining the precise basic worth is more challenging. After lengthy periods of price rises, crashes are typically the consequence of informational dynamics. Extrinsic rational bubbles, often known as ‘sunspots,' arise when rational investors are faced with high levels of uncertainty about the economy. This is what causes investors to assign a value – in terms of price projection, endogenously determining variables that have neither a genuine nor a substantial impact on asset basic values. Extrinsic logical bubbles are caused by a reliance on false information, which leads to poor management abilities[10].

1.2 Bubble Predictor:

We produced PSY data for each crypto currency after using the PSY methodology. The data was then examined using different regressions to see which factors may forecast crypto currency bubbles. The models for credibility and conventional extrapolation methods were both calculated. We begin by presenting panelist suggested that individuals for all crypto currency in the very same cohort. Secondly, we present unique suggested that individuals for each crypto currencies.

1.3 Panel regressions: All crypto currencies together:

To examine the factors' predictive impact across crypto currencies, we utilize panel regressions. We create univariate models that look at a period, one explaining component, as well as a multivariate model that takes into account all variables. For a reasonable evaluation of relevance, we standardize the multiple regression by eliminating the test statistics and multiplying it by the population average deviations. We also give you an idea of what the median economic effects are. For ethical conduct predictor, these are the most meaningful and equivalent alternative to fundamental factor loadings in a conventional nonlinear stagnation. Positive coefficients imply a greater likelihood of occurrence. As a result, a rise in the variable is linked to a greater probability of bubbles. A negative coefficient indicates that bubbles are less likely.

1.4 Defining and presenting a brief history of asset bubbles:

Throughout the years, the word "bubble formation" has been given a variety of different, though not conflicting, and meanings. Essentially put, balloons are a kind of gas "systematic differences between the asset's selling price and its intrinsic worth," the latter being characterized as the total sales price of the asset's future revenues. For certain commercial promotions, a balloon could be a closer analogy."To be sure, it is blown up, but not to the point of popping. The ultimate deflation will be more gradual.' Such discrepancies, according to the author, cannot be explained by any of the basics. Bubbles are dependent on the rationality or lack thereof of actors and markets.

Bubbles have two phases:

- The era of accumulation that results to the formation of bubbles and instabilities.
- The accumulating danger appears and the catastrophe comes out during the aforementioned period.

9. DISCUSSION

The author has discussed about the Bubbles, have sprung up in a range of financial assets, includes work focusing on a variety of interwoven elements such as online resource, contagious impacts, developmental pace, remote sensing, algorithm trading's impact, and news distribution over media platforms. The reasons for this widespread concern are comprehensible: extreme price volatility in financial forms have long sparked scholarly discussion and piqued the attention of investors, legislators, and policymakers. Rapid increases or drops in asset market prices have piqued attention because of their sociological ramifications, such as the creation or worsening of socially and economically imbalances. Figure 1illustrates the PSY test, when applied to the logarithm of Bitcoin price.

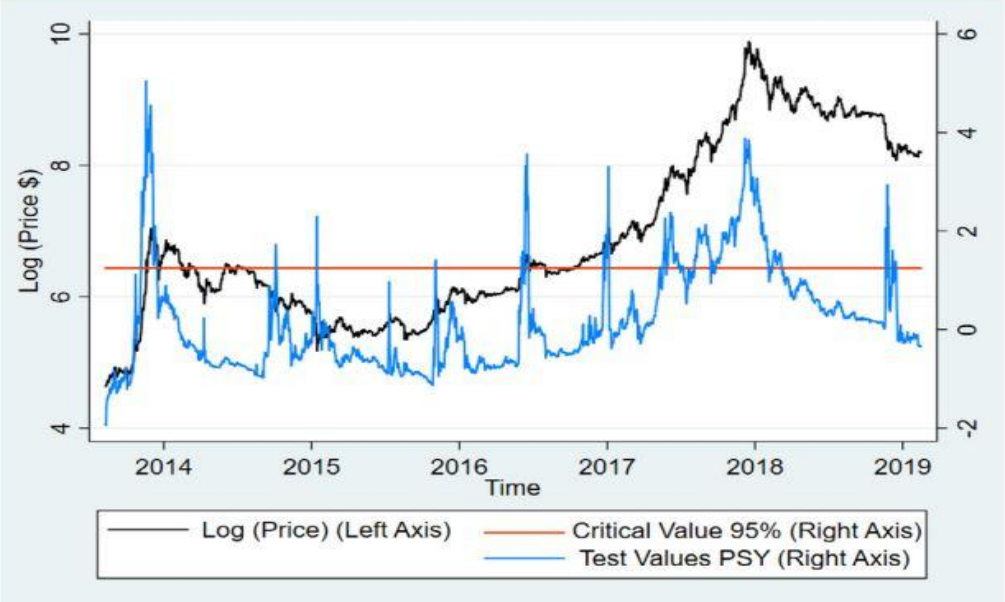

Figure 1: The above figure shows the PSY test, when applied to the logarithm of Bitcoin price.

Unsurprisingly, this has sparked a lot of interest in the formation of crypto currency bubbles, particularly when the commodity in issue is a fresh, emerging, and prospective instrument that may be utilized for both stability and reserves maintenance, as well as having an interesting amount of attraction to overseas traders seeking unrecovered gains. A broad variety of diverse perspectives on the idea of bubbles has been generated, which is noteworthy. The asset-pricing approach is the most well known, since it sees assets as investment tools capable of separating their nominal value from their intrinsic worth to a significant degree. It is important to remember that an asset's nominal value is the price at which it may be sold or bought, while its fundamental value is lower and is typically determined by its production costs. Multiplicity increases, or the number of times nominal prices exceed basic values, lead to explosive behavior and the formation of bubbles. Overly optimistic investor sentiment leads to an increase in aggregate demand for assets, which leads to price disparities from fundamentals. This phenomenon of fast demand elevation is worsened when supply is steady or decreasing, as it is with the majority of digital currencies.

CONCLUSION

During the last several decades, a significant body of data has developed that attempts to test for the presence and quantification of bubble price development in financial assets. Economic emotion and speculative motivations, coupled with overconfidence, have been shown to cause substantial divergences in asset market prices from their corresponding underlying values. The term "bubble formation" has been given a variety of different meanings. The bulk of these definitions agree that such behavior is produced inside heightened interest of economic units because of particularly favourable circumstances that result in various sizes of nominal values in comparison to fair value. Assets are seen as investing instruments that may be highly lucrative for traders in the asset pricing method. The extremely speculative nature of crypto currencies, as well as the resulting rise in popularity of Bitcoin and other digital currency, has fuelled some very fascinating scholarly discussion in the bubble price literature in recent years. The following difficulties that large and long-lasting price changes bring to the surface have piqued researchers' interest in bitcoin bubbles. Undoubtedly, this has sparked a lot of interest in the formation of crypto currency bubbles, the idea of bubbles has generated a broad variety of diverse viewpoints. The most well known approach is asset pricing, which sees assets as investment tools capable of separating nominal value from intrinsic worth to a significant degree. It is worth mentioning that an asset's nominal value is the price at which it can be sold or bought on the open market, while its fundamental value is lower and is typically determined by its production costs. Increases in multiplicity, or the number of times nominal prices exceed basic values, lead to explosive behavior and bubble formation. Overly positive investor attitude, which leads to an increase in collective demand for assets, is the most common source of price disparities from fundamentals. This phenomenon of fast demand elevation is worsened when supply is steady or decreasing, as it is with the majority of digital currencies.

When there is a single bubble or many bubbles, there are a number of investigation methods that are favored. Furthermore, in the event of a moderately explosive or explosive situation, various detection methods are recommended. Bubble development in virtual currency values makes it impossible for digital currencies to operate effectively as an account of unit and a store of value, two important purposes for which considerable research has shown significant weakness in these emerging goods. Other big currencies have gone through many bubble periods as well.

REFERENCES

1. A. (Wai K. Cheung, E. Roca, and J. J. Su, "Crypto-currency bubbles: an application of the Phillips–Shi–Yu (2013) methodology on Mt. Gox bitcoin prices," Appl. Econ., 2015, doi: 10.1080/00036846.2015.1005827.

2. J. Nair and A. Motwani, "Crypto Currency: Bubble or Boom," Int. J. Adv. Res. Comput. Sci. Manag. Stud., 2018.

3. Y. Shapoval, "Traditional banking in terms of industry 4.0: advantages and risks of new technologies," Ukr. Soc., 2017, doi: 10.15407/socium2017.04.114.

4. S. C. DANILA and I.-B. ROBU, "The Influence of Cryptocurrency Bitcoin over the Romanian Capital Market," Audit Financ., 2016, doi: 10.20869/auditf/2016/155/020.

5. D. Fantazzini, E. Nigmatullin, V. Sukhanovskaya, and S. Ivliev, "Everything you always wanted to know about bitcoin modelling but were afraid to ask. Part 2," Appl. Econom., 2017.

6. S. Gantori et al., "Crypto currencies: Beneath the bubble," Chief Invest. Off. Am. Wealth Manag., 2017.

7. D. Fantazzini, E. Nigmatullin, V. Sukhanovskaya, and S. Ivliev, "Everything you always wanted to know about bitcoin modelling but were afraid to ask. Part I," Appl. Econom., 2016.

8. S. Tetsuya, "Altcoins as Alternatives for What?," MCIS 2016 Proc., 2016.

9. N. Popper, "As Bitcoin Bubble Loses Air, Frauds and Flaws Rise to Surface," Int. New York Times, 2018.

10. F. A. Enoksen, C. J. Landsnes, K. Lučivjanská, and P. Molnár, "Understanding risk of bubbles in crypto currencies," J. Econ. Behav. Organ., vol. 176, no. 20, pp. 129–144, 2010, doi: 10.1016/j.jebo.2010.05.005.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

THE PATANJALI BRAND IN INDIA: A REVIEW

Sh. Sachin Gupta*

*SOMC
Sanskriti University, Mathura, Uttar Pradesh, INDIA
Email id: chancellor@sanskriti.edu.in

DOI: 10.5958/2249-877X.2021.00130.2

ABSTRACT

Because of its enormous population, India is a major market for Fast-Moving Consumer Goods (FMCG) businesses. There are currently a number of large and minor competitors on the market with considerable clout. The purpose of this article is to examine why the Patanjali brand has grown so quickly in the market. It is obvious that Patanjali's path has not been simple, since Patanjali is a relatively young company. However, Patanjali's positioning, branding, and eventual strategy to build consumer confidence and trust made a difference, and Patanjali's market share grew so quickly that it overtook several goods from well-known brands in only 2 to 3 years, propelling it to the top of the market. Ramdev's marketing plan was executed flawlessly in the market, and his primary formula was "swadeshi," which worked wonders in attracting a large number of consumers as well as a large number of raw material suppliers, i.e. Indian farmers. It is still necessary to promote locally grown and produced goods.

KEYWORDS: *Customer, Consumer, Foods, Patanjali, Swadeshi.*

1. INTRODUCTION

Fast moving consumer goods (FMCG) are an important element of human existence, and no one can live without them. The list of these things is extensive. There are numerous large and small brands accessible in the Indian market, and some of them are globally known. India is a large and populous nation with the world's second largest population. As a result, India is traditionally seen as a significant market for FMCG firms (1). More than 150 FMCG businesses operate in India, with the top 50 recognized companies included in Table 1. These firms are not new and have been in operation for more than a decade. The medical market is moving toward Ayurveda, and Ayurveda medication sales are rising year after year. Some of the credit for increased sales goes to the amount of pollution, since Ayurveda is said to provide a treatment for poor immunity. The fundamental advantage of Ayurveda has been shown in Figure 1, which is drawing more people to Ayurveda and its products(2).

Ayurveda is an ancient medicinal treatment that has its origins and dissemination across the globe attributed to India. Ayurveda is also regarded as one of the oldest medical disciplines, and it is well-known in other nations. There are various medical therapies accessible in the world, such as homeopathic, allopathic, Unani, and so on. The credit for Ayurveda goes to ancient Indian texts and scripts, where a number of methods for treating humans and other animals were described. Ayurveda's foundation is made up of naturally occurring substances such as root, leaves, and jadi-buti. Yoga and Pranayama are another important component of Ayurveda. One of the benefits of Ayurveda is that it cures the body from the inside out and has no side effects

since all natural substances are utilized during the treatment of a person via Ayurveda. Additionally, the cost of the therapy is more patient friendly than allopathy(3). Because India is a nation of many cultures, eating habits vary by 100 kilometers due to cultural differences and the fact that Indian people have varied tastes in various parts of the country. There is a large market for launching different products, which may make it easier for many businesses to start small. Cosmetics, bread and biscuits, soap and detergent, oral hygiene products, as well as certain health goods such as chyawanprash, juice of different leaves and roots, are the major products in FMCG. Another aspect that works well in the FMCG industry is the purity and naturalism of the product, as it is well known that an excessive amount of attention is placed on organic products, which must be natural and free of any artificial ingredients(4).

Figure1: Benefit of the Ayurveda to Attract People from All over World

The Indian market is enormous, with plenty of opportunities for everyone, since consumers have broad perspectives on goods and are willing to try anything new. On the other hand, certain items, such as Colgate tooth paste and Daburchyawanprash, remain at the top of the customer's wish list. And these items have a strong grip on their target market. The Indian market is equally dominated by international and domestic businesses, but the entrance of Patanjali in the market produced a spectacular scenario. Patanjali was founded in 2006 under the Companies Act, 1956, by yoga teacher Baba Ramdevji as Patanjali Ayurved Limited. There were many competitors in the industry, but Patanjali was able to carve out a niche in the competitive FMCG sector(5). The rise of Patanjali was so fast that several other businesses' stock prices plummeted.

TABLE1: LIST OF THE TOP 10 FMCG COMPANIES IN INDIA

Sl. No.	COMPANY'S NAME
1	ITC
2	Hindustan Unilever (HUL)
3	Marico
4	Patanjali Ayurved
5	Nestle
6	Britannia
7	Dabur
8	Godrej Group
9	GlaxosmithKline (GSK)
10	Colgate- Palmolive

Patanjali's strategy of promising only the purest and finest herbal goods to its consumers, as well as Baba Ramdev's role as a brand advocate for Patanjali products, are two aspects that have contributed to the company's reputation among customers (Table.1). Ramdevji's close connection has worked its magic, since he was already well-known as a Yoga Guru in India and internationally. In both the Indian and commercial contexts, trust, in addition to religion, makes a difference in the sale of any product, and science and technology are often overlooked in favor of trust. The punch line of Patanjali's product is "Prakritika Ashirwad," which sets it apart from other products. Figure 1 shows the sales figures of the main FMCG businesses in comparison to Patanjali, and it shows that Patanjali has built a miraculous market for itself in only 4 to 5 years, even achieving a growth rate of more than 100% in certain years.

Figure 2: Market Capture by Top 10 FMCG Companies in India(6)

The claim of Patanjali goods is that they are made from indigenously produced crops and that all harvesting is done using organic methods. This would improve the effectiveness of Patanjali goods while also providing a once-in-a-lifetime experience for consumers. In contrast to other brands, the positioning marketing with "Swadeshi" generated a large market in India. Many customers who previously used another brand have switched to Patanjali. Patanjali, for example, has left behind the well-known Colgate brand in the toothpaste industry. The demand for "Dantkanti" grew at an extraordinary pace. The Patanjali brand also utilized the mystical term "Satvic," which has been extensively used in culinary items such as biscuits, honey, and chyawanprash. The present pace suggests that Patanjali would quickly surpass Nestle and other brands, according to business experts.

TABLE2: REVENUE GENERATED AND GROWTH RATE OF PATANJALI

YEAR	REVENUE IN CR	GROWTH (%)
2009-10	164	--
2010-11	328	95
2011-12	456	42
2012-13	863	92
2013-14	1216	41
2014-15	2112	68
2015-16	5143	152
2016-17	10,652	115

Patanjali embodies all-natural products that are consistent with Ayurveda and Indian principles, as well as a broad variety of products in popular categories like as food, cosmetics, and Ayurveda therapeutic preparations. This natural brand is aptly referred to as a leader in the FMCG industry, which can be attributed to their vision, as their devotion, scientific method, astute preparation, and practicality are all ready to assist people by transporting environmental blessings from side to side Yoga and Ayurveda in lives (Figure 2). According to Forbes, Patanjali is portrayed as an Indian company that has taken over markets like a storm, posing a real threat to existing industry leaders such as Colgate, Unilever, Nestle, and GlaxoSmithKline(7).

Figure 3: Health Benefit Of Organic Food in Comparison to Normal Food(8)

Patanjali has made a huge debut in the FMCG sector, with a wide range of food items, as well as potions, healthcare and medications, personal care products, and cleaning agents. Promotion and advances often account for 14–22 percent of profit expenditure for FMCG corporations, however Baba Ramdev's unique home strategy will take care of this effectively. Patanjali used a single word-of-mouth promotional strategy in the beginning, and patron loyalty to the brand proved beneficial to the company, allowing it to save money on advertising as well as other expenses (9). Figure 3 depicts the impact of organic food vs conventional food.

Figure 4 depicts some of the qualities of Patanjali products that have attracted consumers since everyone wants their food or medication to be clean and have a positive impact on their health without causing any negative effects. The effect of these qualities may be seen in the year's final report on sales and revenue. Figure 5 and Table 2 illustrate the annual growth of the Patanjali brand in terms of money collected, as well as its brand effect on individuals, as sales exhibit a pattern that varies by almost 100% every year. The organization's goal to offer green and

nutritious food and medication to its consumers determines the product's quality and long-term viability.

Figure4: Quality of Patanjali Product That Attract the Consumer And Increased Demand

Patanjali's growth to a revenue of more than 28.7 million USD in 2014–2015, which is a 113 percent increase over the previous year, is well above expectations (10). The commercial quality of a brand has undergone seismic change in the FMCG sector, and it now generates five times the revenue of previously informed trades. These development tendencies should be applauded for breaking into highly guarded FMCG strongholds, which can be attributed entirely to Ramdevji's soaring product copy.He took advantage of every chance to engage consumers who were more concerned with healthy living, and in the process, he built a territory similar to that of a number of major FMCG companies in India, bringing Patanjali close to the positions of FMCG companies such as Emami and Marico.

2. DISCUSSION

Baba Ramdev recognized the Indian customer's proclivity for compassion and a preference for culturally based products. To do so, he developed a single model for Patanjali that included distinctive marking and affordable pricing as part of the company's entire business plan. Patanjali's Ayurveda division is a star performer, with products such as Desi Ghee, DantKanti toothpaste, KeshKanti shampoo, herbal bath soap, and Patanjali Honey among the top sellers. Patanjali ghee is the company's most popular product. Patanjali has a 20% market share for its shampoo, a 21% market share for toothpaste, a 23% market share for face wash, a 37% market share for dishwashing liquid, and a 47% market share for honey.

Figure 5: The Sales Data Show Exponential Growth of Patanjali Product

Patanjali's marketing combination seems to be one-of-a-kind, and it may be comprehensive as far as the ability to convey a product using honest and natural components in sufficient numbers. As a result, the customer has a make experience that convinces them of the authenticity of the product representative as well as the potential of the product. The value is 17–33% lower than that of competitors' goods. The use of alternative media (online), word-of-mouth exposure, Ramdevji's replacement as a public association officer, yoga measures, real-time digital advertising, and the use of many distribution stations all contributed to the brand's formation. PAL's product range includes nutrition as well as supplements, groceries as well as basics, prepared meals, beverages, personal care, healthcare, and household products, among other things.

3. CONCLUSION

The Patanjali product review was conducted based on market and customer feedback, and it was discovered that, as a swadeshi product, Patanjali's product quality is superior to that of other available products in the market, and that naturally grown raw material is indeed a means of attracting customers and also responsible for shifting customers from other brands to Patanjali. The most important factor is Ramdev's association, which instills trust and faith in the product because Ramdev always advocates for a pure, healthy, and natural product that will bring happiness to Indian farmers, as all raw materials are sourced from Indian farmers, and this is a way to avoid the flow of Indian currency to the outside world, resulting in prosperity. Patanjali has resurrected Ayurveda not just in India but also across the globe. People from all over the world depend on its products and go to India to experience the power of Ayurveda, as well as

Yoga and Pranayama. The credit goes to Ramdevji, who turned an old Indian art of Ayurveda into a multimillion-dollar business.

REFERENCES

1. Lee H, Jain D. Dubai's brand assessment success and failure in brand management - Part 1. Place Brand Public Dipl. 2009;

2. AFF. A STUDY ON THE GROWING POPULARITY AND PURCHASE OF FASHION PRODUCT FROM ONLINE STORES IN INDIA. Int J Res Eng Technol. 2015;

3. Angeli F, Grimaldi R. Leveraging offshoring: The identification of new business opportunities in international settings. Ind Innov. 2010;

4. Havaldar KK. Management Education in India: The Present Status and Future Directions. SSRN Electron J. 2012;

5. Sengar A, Sharma V, Agrawal R. Market development through integrating value chains – a case of Patanjali Food and Herbal Park. Emerald Emerg Mark Case Stud. 2017;

6. Ahmed JU, Sultana H, Ahmed A. Patanjali ayurved invades India. Decision. 2018;

7. Rodriguez-Llanes JM, Ranjan-Dash S, Mukhopadhyay A, Guha-Sapir D. Flood-exposure is associated with higher prevalence of child Undernutrition in rural Eastern India. Int J Environ Res Public Health. 2016;

8. Kumar V, Jain A, Rahman Z, Jain A. Marketing through Spirituality: A Case of Patanjali Yogpeeth. Procedia - Soc Behav Sci. 2014;

9. Behera B, Das M, Rana GS. Studies on ground water pollution due to iron content and water quality in and around, Jagdalpur, Bastar district, Chattisgarh, India. J Chem Pharm Res. 2012;

10. Misra JC, Maiti S. Peristaltic transport of rheological fluid: Model for movement of food bolus through esophagus. Appl Math Mech (English Ed. 2012;

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

MARINE PLASTIC POLLUTION AS A PLANETARY BOUNDARY THREAT

Dr. Vipin Jain*

* Professor,
Department of Finance & Account,
Teerthanker Mahaveer Institute of Management and Technology,
Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, INDIA
Email id: vipin555@rediffmail.com

DOI: 10.5958/2249-877X.2021.00114.4

ABSTRACT

Plastic pollution has accumulated in the marine environment due to an exponential rise in its usage in contemporary civilization and insufficient waste management. There is mounting evidence of a variety of mechanisms via which marine plastic pollution has an impact at many levels of biological organization. Ecological communities and ecosystem functioning will inevitably be impacted. One unanswered question is whether, today or in the future, the concentration of plastic in the ocean will reach levels above a critical threshold, causing global effects in vital Earth-system processes, allowing marine plastic pollution to be considered a key component of the planetary boundary threat associated with chemical pollutants. The impacts of plastic pollution in marine ecosystems, as well as the 'core planetary limits,' biosphere integrity, and climate change, are reviewed and evaluated to see if there are any possible solutions to this issue. Because marine plastic pollution is irreversible and ubiquitous throughout the world, two critical criteria for a planetary boundary danger have already been fulfilled. Plastic pollution's effects on the Earth system are yet unknown, although routes and mechanisms for thresholds and global systemic change have been discovered. Regardless of whether plastic is recognized as a new entity in the planetary boundaries paradigm, marine plastic pollution is undeniably linked with global processes to the point that it requires careful control and prevention.

KEYWORDS: *Chemical, Environment, Marine, Plastic, Pollution.*

1. INTRODUCTION

1.1 Anthropocene danger of marine plastic pollution:

Human actions have the potential to alter the regular functioning of Earth-system processes in ways that increase the hazards to global societies. The production, usage, and disposal of plastic is one of the most visible human activities. Plastic has become so pervasive in the environment that it is now regarded a geological marker of the Anthropocene, the coming era in which human activities have a significant impact on the status, dynamics, and future of the Earth system[1].Since the 1950s, mass manufacturing of plastic has exploded, influencing the evolution of contemporary civilization. Plastic resin output grew from about 1.5 million tonnes in 1950 to 322 million tonnes in 2015.

According to estimates, between 4.8 and 12.7 million tonnes of poorly managed land-based plastic trash entered the seas in 2010. Due to the numerous diverse origins and environmental transport routes, the absolute quantity is difficult to quantify, but marine plastic pollution (MPP) is now widespread in the marine environment. It has been shown to have detrimental consequences for species, ecosystems, human health, and economical sectors including tourism, aquaculture, and navigation. The increased number of MPP research in recent years indicates increasing awareness about its consequences. The origins, fates, and consequences of microplastic in the seas have been assessed for the first time, emphasizing the need for policy and societal action and outlining important research objectives to guide this action[2], [3].

Plastics have recently attracted scientific interest as a possible planetary boundary hazard. The planetary boundaries framework establishes precautionary limits for a variety of anthropogenic perturbations, aiming to prevent thresholds or changes in Earth-system functioning that might result in increased hazards for the world's civilizations. The framework creates a worldwide ‘safe operating environment' for humankind by defining quantifiable control factors and establishing limits. Chemical pollution/novel entities were identified as problems of concern in the scientific synthesis and subsequently, but no defined planetary limit was suggested[4], [5].

The new entities border is increasingly being addressed in the scientific community, alongside attempts to operationalize the planetary limits as a global sustainability policy integration framework. Expanded on the reasoning for the chemical pollution limit, addressing a broader spectrum of new synthetic or manmade substances discharged into the environment. However, due to a lack of consensus on the types of thresholds that should not be crossed, the wide variety of substances released into the environment, and the high uncertainty about their individual and interacting behavior, no boundary has been proposed, despite the fact that the planetary threat posed by chemical pollution is widely acknowledged as an unaddressed societal task. MPP is likewise subject to these strong knowledge limitations[6], [7].

This research builds on the concepts presented in three previous studies that have highlighted the problem of defining a planetary limit for marine plastic pollution and considers the consequences for environmental management and policy. Physical-biological interactions may play a deciding role in the large-scale and long-term destiny of marine plastics and ecological processes from sub-cellular to ecosystem scales may be affected in a variety of ways by marine plastics. These papers provide forth a study agenda for determining the origins, routes, degradation, and final fates of plastic in the ocean. The evaluation of whether and how MPP meets the criteria to be classified as a sub-border of the new entities boundary is informed by combining these various perspectives and concentrating on the ways that MPP influences Earth-system processes.

1.2 Justification: the Earth-system viewpoint on new things:

1.2.1 A scientific and governance gap in Earth systems:

The Earth system is made up of the dynamic interactions of Earth's physical and biological components at their most basic level. According to the planetary boundaries paradigm, this is a linked social-ecological system in which the world's societies are progressively influencing Earth's biophysical trajectory.

“New chemicals have the potential for undesirable geophysical and/or biological effects,” according to the definition. They claimed that new creatures become a planetary concern when they show permanence, cross-scale dispersion, and the ability to disrupt critical Earth-system

processes. The primary concern in looking into MPP as a planetary boundary threat is not its effects on people or even marine organisms in general, but rather the biophysical behavior of the Earth system as a whole, with the added challenge for policy and operationalization that the behavior of concern is, by definition, unprecedented.

There are many unanswered scientific issues regarding which elements of planetary behavior are important and over what timeframes. The Holocene offers a baseline of comparative climatic and biological stability for most planetary boundary processes. There is no equivalent baseline for new entities, though. They exist because of contemporary humanity's creativity, ability, and technology for overcoming numerous physical and material limitations in the environment. The integration of human activity in Earth-system science's conceptual frameworks has remained a challenge, and the development of new entities exposes the limits of existing scientific knowledge. Thresholds or regime changes within ‘components' of the Earth system, such as ecosystem collapses, and in the dynamic connections between system components, such as ‘shifting gears' between physical and ecological processes, may constitute MPP a global boundary danger.

Plastic pollution is just beginning to be recognized as a worldwide systemic issue. Recent evaluations continue to record problems from an anthropocentric standpoint, such as human health or presently commercially important ecosystems, rather than Earth's resilience. They also draw attention to significant gaps in our understanding of the destiny of plastics and their geophysical and biological consequences.

Policy on marine plastics is also currently developing in this context. The necessity for a global agreement on marine plastic waste or debris is now being debated. The London Convention2, particularly its 1996 London Protocol3, and MARPOL both of which are enforced via national legislation in signatory countries, are important international agreements dealing with sea-based pollution. The Stockholm, Rotterdam, and Basel Conventions are global mechanisms that regulate land-based pollution, but not particularly plastic pollution. Only the United Nations Convention on the Law of the Sea8 establishes a wide overarching obligation to avoid all marine pollution from land-based sources. Plastic pollution is addressed at the European level via the Marine Strategic Framework Directive (Descriptor 10)9 and Article 9 of the Joint Communication on international ocean governance, both of which promote UN Agenda 2030's Sustainable Development Goal 14. Despite the increased focus on marine plastic in these settings, policy integration and consistency remain a major governance deficit[8].

1.2.2 A novel method for determining boundary lines

This investigation on the possibility of categorizing marine plastic pollution as a sub-border adds to the current debate over the classification of chemical pollution and new entities as a planetary boundary. To be deemed a planetary border, an entity must concurrently fulfil three suggested criteria and related scenarios. These criteria were first suggested for chemical pollution, mainly caused by synthetic chemicals, where there is a greater degree of consensus on how to define toxicity and danger. Two main difficulties emerge when applying this conceptual approach to MPP, both of which are related to substantial knowledge, governance, and policy shortages[9], [10].

To begin with, the overwhelming majority of plastic has long been thought to be ‘safe' (nontoxic or low toxicity). Chemical hazard assessment techniques presently in use place a greater

emphasis on organism exposure than on the Earth system's multi-scale ecological functioning. A planetary limits approach should concentrate on characterizing the "hazardous paths" that may change Earth-system dynamics, rather than attempting to define "dangerous levels."

Second, the impacts of plastic on the Earth's system are inextricably complicated, with poorly predicted environmental behavior, destinies, and interactions with other chemical compounds – both natural and manufactured.

While some data on the amount of plastic material generated and discharged is accessible, there is still a great deal of misunderstanding and ambiguity regarding the paths that plastic takes in the marine environment. This investigation focuses on two possible pathways or scenarios: ecological effects on food webs and biogeochemical effects on marine carbon sequestration, both of which have a solid body of scientific evidence and where the direct, indirect, and cascading effects that combine to alter Earth-system dynamics can be distinguished fairly clearly. Figure 1 the Conditions under which marine plastic pollution can be regarded as a planetary boundary threat.

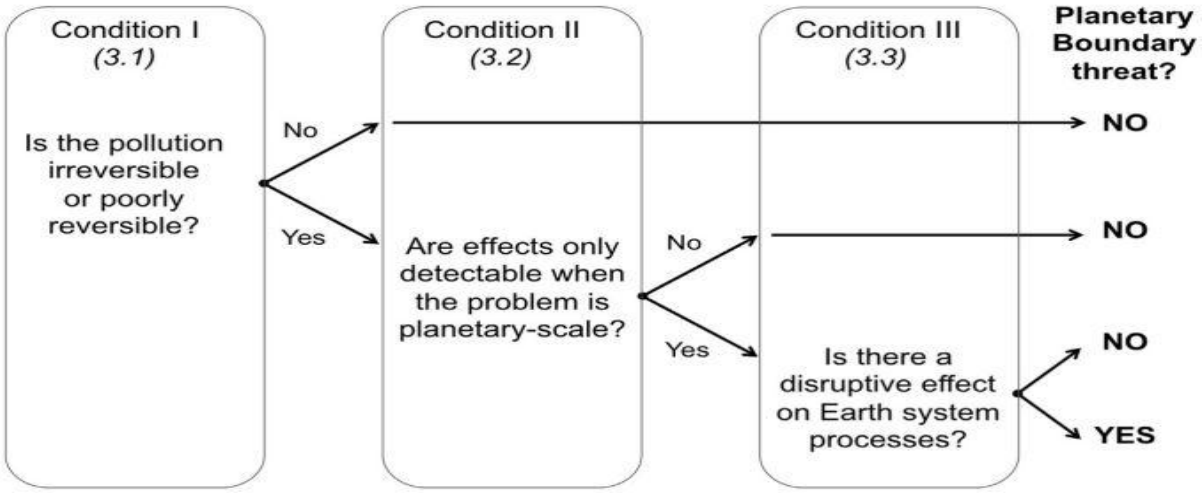

Figure 1: The above figure shows theconditions under which marine plastic pollution can be regarded as a planetary boundary threat.

1.3 Why are marine plastics included in the context of planetary boundaries?

Multiple worldwide anthropogenic disturbances are grouped together in the planetary boundaries idea in research and policy discourse. It is being addressed in policy settings such as the United Nations General Assembly, Europe's 7th Environment Action Programme, which outlines a vision of living well "within the limitations of the earth," and national sustainability plans. As a framework for human-caused Earth-system change, it should encompass the most visible and globally pervasive changes in the contemporary world, and this present review suggests that the environmental destiny of plastic trash is one of them.

MPP is a worldwide sustainability issue, a clear example of the tragedy of the commons, and one that is difficult to manage and regulate on a global scale.

Multinational frameworks, such as the Sustainable Development Goals, specifically Goal 14 ‘Life below water' and goals related to production and consumption; resolutions of the first and second United Nations Environment Assembly10; and the G7 and G20 marine litter action plans,

are all addressing plastic waste. There is also talk on the necessity for a global instrument, such as a treaty on marine plastic pollution. Recognizing MPP as a worldwide issue may offer valuable policy advantage for the regulation of other high-risk chemical compounds. Recognizing the potential for a mismatch between risk perception and actual risk, global ecological benefits could result if environmental plastic release is regulated in response to human public health concerns (e.g., about the effects of plasticizers like biphenyl A, which has been linked to cancers, endocrine and metabolic disorders, and behavioural disturbances).

Including MPP in the planetary limits framework may provide a shared framework for further developing and implementing these new policies while taking into account broader systemic impacts. It may also act as a catalyst for better global status and trend assessments, ecological monitoring, and management. Knowledge gaps must be filled before a marine plastics/novel entity planetary boundary can be made operational: basic information needed to define control variables about current stocks and effects of plastic debris in the marine environment, as well as its systemic effects, is lacking, particularly on the sustainability-critical issues in the planetary boundaries framework. The effect of marine plastic on connected social-ecological systems is a major knowledge gap. Only around 5% of the scholarly literature on marine plastic contamination discusses social or economic issues. Packaging and consumer/household products account for about two-thirds of overall plastics demand, with throwaway items accounting for a significant portion. Simultaneously, there is increasing worry about the impact of plastics and their additives on human health, food security, wealth, and well-being. Whether MPP worsens, increasing the danger of exceeding some Earth-system threshold, or is stopped and reduced, will be determined by people's consumption decisions and their prioritization of certain issues over others.

It is doubtful that the MPP issue has reached its pinnacle. Although oil, the primary raw material for plastic production, is a finite resource, if current rates of oil conversion into plastic continue until the estimated total cumulative oil production is reached, the final stock of marine plastic debris could be 2.3 times greater than what is currently in the oceans. There is no internationally systemic sustainability viewpoint, as shown by the increase in plastic manufacturing from other raw materials the large quantity of unmanaged plastic waste entering the seas, and the scarcely noticeable effect of clean-up operations worldwide. When there is a lack of knowledge regarding the disruptive impact that contaminants may have on Earth-system processes, care is required.

2. DISCUSSION

The author has discussed about the marine plastic pollution as a planetary boundary threat. Ecological groups and ecosphere health will undoubtedly be harmed. One unanswered question is whether the concentration of plastic in the ocean will reach levels above a critical threshold, causing global effects in vital Earth-system processes and allowing marine plastic pollution to be considered a key component of the planetary boundary threat associated with chemical pollutants, whether today or in the future. Plastic pollution's effects on marine ecosystems, as well as the "core planetary limits," biosphere integrity, and climate change, are all examined and evaluated to see if there are any potential solutions to this problem. Two vital criteria for a planets dividing line danger are already met but since industrial pollution is irrevocable and widespread around the world. The effects of plastic pollution on the Ecological systems are unknown, despite the discovery of pathways and mechanisms for baselines and global progressive change.

3. CONCLUSSION

Industrial pollution is irreparable and global in scope, meeting two of the three suggested necessary criteria for a planetary chemical pollution border. The evidence for the ecological effects of plastic pollution is increasing, but it is still unclear if MPP fulfils the third criterion and has altered Earth system processes. The suggested danger conditions and scenarios that establish the criteria for a chemical pollutant to be considered a planetary boundary candidate have to be modified for MPP, since the solid-phase characteristics of plastic add to the complexity of chemical routes and ecological effects. The criteria may be interpreted in a variety of ways, especially in terms of time and space scales. Complex cross-scale processes such as trophic webs, ecosystem changes, and the carbon cycle exist. While it is clear that plastic is a global issue, there remains a great deal of ambiguity, if not outright misinformation, regarding its disruptive impacts on the Earth's ecosystem. The current literature lacks a comprehensive, holistic understanding of how sub-systems interact with one another and with the Earth-system processes that define Earth's self-regulating capability.

REFERENCES

1. P. Villarrubia-Gómez, S. E. Cornell, and J. Fabres, "Marine plastic pollution as a planetary boundary threat – The drifting piece in the sustainability puzzle," *Mar. Policy*, vol. 96, no. August, pp. 213–220, 2018, doi: 10.1016/j.marpol.2017.11.035.

2. K. Aunan, M. H. Hansen, and S. Wang, "Introduction: Air Pollution in China," *China Q.*, vol. 234, pp. 279–298, 2018, doi: 10.1017/S0305741017001369.

3. K. Maduna and V. Tomašić, "Air pollution engineering," *Phys. Sci. Rev.*, vol. 2, no. 12, pp. 1–29, 2017, doi: 10.1515/psr-2016-0122.

4. D. Ierodiakonou *et al.*, "Ambient air pollution," *J. Allergy Clin. Immunol.*, vol. 137, no. 2, pp. 390–399, 2016, doi: 10.1016/j.jaci.2015.05.028.

5. P. J. Landrigan *et al.*, "Pollution and children's health," *Sci. Total Environ.*, 2019, doi: 10.1016/j.scitotenv.2018.09.375.

6. T. Bourdrel, M. A. Bind, Y. Béjot, O. Morel, and J. F. Argacha, "Cardiovascular effects of air pollution," *Arch. Cardiovasc. Dis.*, vol. 110, no. 11, pp. 634–642, 2017, doi: 10.1016/j.acvd.2017.05.003.

7. T. M. Karlsson, L. Arneborg, G. Broström, B. C. Almroth, L. Gipperth, and M. Hassellöv, "The unaccountability case of plastic pellet pollution," *Mar. Pollut. Bull.*, 2018, doi: 10.1016/j.marpolbul.2018.01.041.

8. J. Rembiesa, T. Ruzgas, J. Engblom, and A. Holefors, "The impact of pollution on skin and proper efficacy testing for anti-pollution claims," *Cosmetics*. 2018, doi: 10.3390/cosmetics5010004.

9. F. Rajé, M. Tight, and F. D. Pope, "Traffic pollution: A search for solutions for a city like Nairobi," *Cities*, 2018, doi: 10.1016/j.cities.2018.05.008.

10. Y. Chae and Y. J. An, "Current research trends on plastic pollution and ecological impacts on the soil ecosystem: A review," *Environmental Pollution*. 2018, doi: 10.1016/j.envpol.2018.05.008.

South Asian Journal of Marketing & Management Research
ISSN: 2249-877X Vol. 11, Issue 11, November 2021, SJIF 2021= 7.642
A peer reviewed Journal

SUPPLEMENTARY NUTRITION: ISSUES AND CHALLENGES OF ICDS IN MANIPUR

W. Lata Devi*

* Head, Department of Home Science S, Kula Women's College,
Nambol, Manipur, INDIA
Email id: muhinsingh@gmail.com

DOI: 10.5958/2249-877X.2021.00099.0

ABSTRACT

ICDS is a very important intervention to ensure the health, nutrition and development of children under six in the state. This research work presents a pathetic picture of the programme in the state. But very luckily the rate under nutrition is not serious when we compare to other states in the sense that most of the parents usually take care of their child and even they do not bother of RTE food. The expectation of the people as well as the aim of the ICDS scheme might have certain difficulties to act accordingly that in various states it is reported that the state of functioning is in the sorry state. In the case of Manipur too, since its inception the state of activities in the centres have not been up to the desire expectation that does not claim the responsibility should be fixed to the Anganwadi centres or government.

KEYWORDS: *Intervention, Expectation, Health*

INTRODUCTION

Supplementary nutrition is a major component of the program in terms of importance and cost. All the beneficiaries who attend the *anganwadi* center are given the feed. (Ramana et. al, 1997) The children in the 3-6 years attend the pre-school and have the lunch provided by the center whereas the expectant and nursing women and children in the 0-2 years age group come to center for their supplementary feed. In some sense self-targeting takes place with regard to supplementary feeding as richer households usually do not prefer to eat this food, however children from these households may attend the pre-school. The food to the children is provided either as ready to eat food or hot cooked meals or sometimes dry ration. The effectiveness in terms of impact has been the maximum for cooked meals as in the other two cases there is tendency for the food being shared by other members of the household. The nutrition supplement is supposed to be provided for 300 days in a year; however, there is a significant variation across the states in the number of days. Tamilnadu is the only state which shows the target days being achieved whereas states like Bihar are at the lower end. (Shariff, 2002)

Perception

Focusing on the perception of health is wealth different strategies are being taken up by the Government of India in which it is worth to mention the scheme of Supplementary Nutrient Programme under the ICDS schem that enable children in the extensive quantum to get feeding important nutrients. Nutrition is the focal point of health and well-being (Joshi, 2001). Nutrition is directly linked to human resource development, productivity and ultimately to the national growth. Malnutrition is a complex phenomenon. It is both the cause and effect of poverty and ill

health, and follows a cyclical, inter-generational pattern. It is inextricably linked with illiteracy, especially female illiteracy, lack of safe drinking water and proper sanitation, ignorance, lack of awareness and ill health. It creates its own cycle within the large cycle of poverty (WCD). Malnutrition in India continues to be at a high level with 42.5% children below the age being underweight and almost 70% being anaemic. 22% children are born with low birth weight. Lack of adequate information on nutritional needs, has been identified as a major factor for the prevailing nutritional situation in the country. Child malnutrition is both the result of economic conditions and poor nutritional awareness. Nutrition education and extension has been recognized as one of the long-term sustainable interventions essential to tackle the problem of malnutrition and to generate awareness and to promote the nutrition status of the country. FNB's major task is to address this major challenge. Monitoring of SNP and Nutrition Education & Awareness for ICDS Functionaries - Anganwadis under different projects are visited to monitor the "supplementary nutrition" and "nutrition and health education" components of the ICDS. The technical staff of CFNEUs, during the visit provides technical support to the functionaries of the AWCs (Prasanti, 2013). The observations are communicated to the respective State Secretaries in-charge of WCD at the headquarter level also.

Objectives of the study

a) To find out whether the scheme is reached out to the target group.

b) To examine the impact of the nutrition and health education components of ICDS on the children and women in the ICDS area.

Hypothesis

- If the ICDS scheme is implemented properly the issue of malnutrition and supplementary food for lactating mother and children may not be appeared.
- Besides, it may have lots of hurdles in different stages of implementation which is proved by the reported news in the local dailies. That proper share of supplementary foods, equipment and other needed material cannot arrive to the anganwadicentres and targeted groups.

REVIEW OF LITERATURE

Sumati and Nidhi (2005) conducted a study about the comparison of the status of the nutrition of children under ICDS project area and non ICDS project area of ReshamGhar, Colony of Jammu and Kashmir State. The sample consists of two groups, one group - 15 pre-school children and their mothers to whom SN ration was delivered in the Anganwadicentres and other group - 15 pre-school children and their mothers to whom SN ration was not delivered in the Anganwadicentres. The finding shows that Children had good health who visited AWC as compared with those who did not visit any AWC. Besides, children under ICDS area had good dietary consumption as compared to their counterparts. An evaluative work was conducted by Balsekar, *et al.* (2005) studied on Child welfare and community participation in Trivandrum district of Kerala. The study attempted to assess the functioning of the Anganwadis at the grass roots level, and it revealed the total absence of severe malnutrition among the children. The AWCs in the remote locations also achieved better outcomes. Lokshin*et al* (2005) presented an article on, Improving Child Nutrition, the Integrated Child Development Services in India. They argued that levels of child malnutrition in India have fallen only slowly during the 1990s, despite significant economic growth and considerable expenditure on the Integrated Child Development

Services. This article assesses the programme's placement and its outcomes, using NFHS data from 1992 and 1998. Prinja*et al* (2005) conducted a study on role of ICDS program in delivery of nutritional services and functional integration between anganwadi and health worker in north India. This study was to ascertain the nutritional status and dietary patterns of 1- 3 year old children in areas served by ICDS program. The study concluded that the problem of under-nutrition continues to persist with low involvement of mother. It suggested that the program needs to be further revamped with a holistic approach towards child development and making the mother responsible for the health of the child.

Dash (2006) analysed on - Impact Assessment/ Evaluation of ICDS Program in the State of Orissa. It was found that supplementary feeding was usually given for 25 days in a month and was considered adequate by over 96% of the mothers of beneficiary children. Over 92% of the beneficiary children received 3 doses of immunization against DPT/ Polio. Finding - Female children (64%) were more malnourished than male children (54%). Kumar *et al* (2006) studied to assess the nutritional status of under-five children and to observe the association of infant feeding practices with under nutrition in anganwadi (AW) areas of urban Allahabad. The factors considered were socio-demographic characteristics, age of children, caste, religion, socioeconomic status (SES), education of mother, infant feeding practices, initiation of breastfeeding, feeding of colostrum, exclusive breastfeeding up to 6 months, complementary feeding, and also information about receipt of ICDS benefits by children. The findings revealed that ICDS benefits received by children failed to improve the nutritional status of children. The study suggested that there is need for promotion and protection of optimal infant feeding practices for improving the nutritional status of children.

Verma*et al.* (2007) argued that children participating in the ICDS in India have high rates of iron and Vitamin A deficiency. This study was undertaken in West Bengal to assess the efficacy of nutritional supply in ICDS. The addition of a fortified premix to khichdi in ICDS AWCs provides an excellent opportunity to provide the needed food. The result suggested that it would be an effective means of meeting the micronutrient malnutrition needs of pregnant and lactating women and of younger children who are consuming solid foods. Dongra, *et al.* (2008) undertaken a study and observed that poor quality of supplementary food, poor cooperation of villagers, poorness, mothers being engaged in farm works, poor health check-up services, poor child protections practices and poor help of officials etc. are the major causes that undermine the success of ICDS Scheme. The researchers also pointed out that most of the AWWs spent more time and work load just doing paper work and attending workshops which remarkably reduce the time devoted to their basic ICDS duties. Dongre, *et al.* (2008a) analysed nutritional status of children under-six year who attending ICDS scheme and to understand AWWs work load and functional problems. Outcomes of the research showed that the overall, prevalence of underweight and severe underweight among children under-six was 53% and 15% respectively. It has suggested to effectively tap the potential of AWWs for decreasing multidimensional problems of malnutrition, ICDS requires to be flexible in designing. Sinha (2008) published an article on 'Child malnutrition and ICDS'. In the article the author addressed some of the issues face by the ICDS like poor ratio of beneficiaries and AWW, poor infrastructure of the AWCs, low budget, and low priority on the issue of early childhood care and development. Further, she has cited a few good practices for better work of ICDS such as additional staffing, better quality and cooked food, longer working hours and better infrastructure in Tamil Nadu model of ICDS.

Shankar (2009) worked on the role of the ICDS programme in delivery of nutritional services and functional integration between Anganwadi and Health worker in Rohtak district of North India. The study aimed to ascertain the nutritional status and dietary patterns of 1-3 years old children in areas surveyed by the ICDS. The study revealed the presence of a large number of incidences of underweight children with the prevalence of moderate to severe malnutrition. Meghana (2009) studied on health systems research for improving quality of implementation of nutrition services for children below 3 years in NGO managed ICDS in rural Vadodara. To understand NGOs' implementation of ICDS and the factors responsible for impeding and improving the quality of its implementation, using the Health Systems Research (HSR) Methodology becomes crucial mentioned in this study. This study was undertaken with the overall objective to adapt the Health Systems Research methodology to study selected nutrition services Growth Monitoring (GM), Supplementary Feeding (SF), and Nutrition Health Education (NHE) of the NGO managed-ICDS in rural Vadodara. The study results indicate that trained and motivated functionaries can bring about major improvement among mothers and a simple monitoring system can be a valuable tool to track progress. Kumar (2009) studied on nutritional status of under-five beneficiaries of Integrated Child Development Services program in rural Karnataka. It discussed to determine the nutritional status of children aged between 3- 6 years registered in government sponsored maternal and child care Anganwadicentres in India. The findings of this study indicate that malnutrition is still an important problem even among children attending anganwadis.

Sanjay *et al.* (2010) conducted a study in nine ICDS project areas under Indore and Ujjain Divisions in the state of Madhya Pradesh from during 2008/9 to assess the working of the AWCs. They reported that, lack of PSE Kits, inadequacy of food, dearth of medicine kits, lack of regular visits by the ANMs to the centres, non-existence of routine health check-ups of beneficiaries are some of the factors which hinder smooth implementation of ICDS. The research also proposed that, to boost the working of the ICDS scheme, different services delivered in the AWCs should work in collaboration. Trivedi, *et al*. (2013) in their study, explained that the children in the ICDS group were just as likely to be malnourished as those in the control group. For children aged 1-2, BCG vaccination status was 80.2% for the ICDS group and 88.8% for the control group. The control group was significantly more likely than the ICDS group to have received 3 doses of DPT, 3 doses of OPV and the measles vaccine.

Boby (2014) In order to assess the growth and nutritional status of the children up to 5 years of age, the most reliable indicator for both short and long term malnutrition in the community, that is weight-for-age, was used. Due to illiteracy or low level of education and ignorance, the people from the rural areas and remote villages are either not aware about the scheme or their socio-cultural practices restrict them from enjoying the benefits of the services. It has been found that the socioeconomically backward, underprivileged and tradition bound Hajong people, who are living in the two remote isolated villages, remain far from availing the benefits of the ICDS scheme in the true sense. Shanthi (2015) studied the impact of integrated child development scheme on the nutritional and health status of children in Kanyakumari district. It attempted to review the existing child schemes in the district and to study the impact of ICDS on the nutritional and health status of the children. The findings included the rise of malnutrition in children during the first two years of life is indicative of poor infant feeding practices.

Ramana*et al*. (1997) analyze the results from the district profile survey (again for select states only) for the period 1988 to 1996 to get an understanding of the trend within ICDS areas. The

main findings are: severe malnutrition level which was below 5 percent in the beginning of the survey period came down to nearly nil levels at the rate of 0.34 percent per year. The total (moderate plus severe) malnutrition levels showed a fall of about 0.69 percent per year. This analysis is mainly based on the northern and north-eastern states. Smritikana (2016) argued that among several other programmes of the government, the flagship programme Integrated Child Development Scheme (ICDS) attempts to offer supplementary nutrition to children aged 0-6 years, along with some pre-school education. However, even with such a prolonged presence of this scheme, child malnutrition has not shown any sign to fall appreciably in India. From the analysis it is clear that policy matrix to reduce child stunting should be region specific, targeting some particular socio-economic groups.

Analytical Observation

The analysis prompts us that it would recall the necessity of good governance in particular to provide supplementary food and health care management through ICDS schemes. Policy planner shall also awake to be taken up urgent need where the lapses are going in the effective implementation. Significantly, it can understand various obstacles and interference facing by the government. Such ineffective and less progress of its kind will draw attention of the central government. On the other, it will give an immense help to the needy persons and scholars in the field.

The expectation of the people as well as the aim of the ICDS scheme might have certain difficulties to act accordingly that in various states it is reported that the state of functioning is in the sorry state. In the case of Manipur too, since its inception the state of activities in the centres have not been up to the desire expectation that does not claim the responsibility should be fixed to the Anganwadicentres or government. It is known to all that various central schemes cannot be implemented in a proper way in the sense that numerous issues are still alive (Patil, 2013). Numerous difficulties have been witnessing that even the unknown armed personals picked up the high ranking officials. Besides, various malpractices are also appeared that seems to failure of just good objectives of ICDS.

The experience we have in the state where most of the anganwadicentres are very free in the sense that they have no much interest on the prescribed norms that they used to manage it for the time being (Balsekar, 2005). It is not the responsibility of the centeres exclusively. With this view, there is a gap between the Anganwadi Workers and the beneficiaries. On the other the state of Anganwadi is at large depend on the cultural habitation of the locality where the centre situated, that the activities of the centre in the urban areas seems to fail while in the remote and rural area the it is quite success. In the rural area, the people of the locality recognized the responsibility of the Anganwadi workers and Helpers, but in the vis versa, urban people have taken the responsibility of the Anganwadi in a very light way, as a result of this success rate is very low in the urban.

On the other the government cannot provide the necessary infrastructure and equipments to the centres. For instance, distribution of the supplementary nutrition, even this is not done in a satisfactory manner. The coverage is low, the distribution of food is irregular and quality is poor. While it is estimated that there are about 315529 (as per record of WCD- 31-12-2009) children (boys & girls) under six years of age in Manipur, the number of children covered by the SNP programme in Manipur might be just 38 % so many children are outside the coverage. No doubt, the Supreme Court order dated 7th October 2004 which was later reaffirmed in the order dated

22nd April 2009 the state government is to ensure provision of hot cooked meals in all AWC centers in a phased manner latest by 31st March 2009. Currently, 9654 as per record found on 31-12-2009 (Ministry of Women and Child Development).ICDS projects are operational in the state of Manipur. Mention may be made that the report of the Government of Manipur that stated in the Governor's address given on the floor of the Manipur Legislative Assembly on Jan. 13, 2010 stated "Under ICDS Scheme, 42 ICDS projects, 9418 AnganwadiCentres, and 234 Mini Anganwadicetres are operational in the state providing supplementary nutrition to lactating mothers and 0-6 years children" (Assembly 2010).The total no of sanctioned AWC centers are 11510. As per the GO of Social welfare department, government of Manipur had drawn out a plan to implement the order of decentralized food model (hot cooked meal) in a phased manner and also being started. So far the coverage of hot cooked meal is restricted only in some centres.

Of the 33 centers visited only 5 were providing hot cooked meals for more than 15 days in a month (15 to 20 days in a month). 3 centers were providing meals only for 10 days a month, while 6 centers were reported to be providing hot cooked meals for less than 10 days in a month. More than half the centres visited (19 centres) were not providing any hot cooked meals at all. More over the hot meal was also not up to the desire quality with a view of healthy nutrient (Bharti*et al.* 2003). It will have significance to understand the reasons behind this, of which the probable reasons might have certain differences from the rest of other states in the sense that the situation we have in the armed conflict. Some of the main reasons may be highlighted.

The existing system of fund for the hot cooked meals in the Anganwadicentres is not systematic. From time to time it is implemented through direct and indirect method. In some area the needed amount is sanctioned to the self help groups of the locality that constituted by at least ten anganwadicentres. On the other it is also distributed through Supervisors. The distribution system is also very irregular. Besides, in some urban areas most of the beneficiaries ignored to get the facilities or nutrients from the centres that they have less confidence on the quality of the products. The anganwadi worker is not very enthusiastic to take on this responsibility as there is a gap (Amtta, 2002).

Minimal budgetary allocation and irregularities:

The funds allocated for hot cooked meals are very low. Although the Government of India has increased the norms for supplementary nutrition from Rs. 2 per child per day to Rs. 4 per child per day (also mandated by the Supreme Court order of 22nd April 2009) the government of the concern state managed it according to their budgetary position (no doubt it is hundred percent central schemes). The anganwadicentres were supposed to implement the new norms beginning the current financial year. District Programme Officers are aware of the new norms as they have been informed by the government. But as they have not received the increased budget they continue to allocate resources according to past norms. This has affected both the quality and quantity of the food provided in the AnganwadiCentres (Barman 2001).

As per the new guidelines the mothers who has great role in the success of nutrition is still to give awareness contextually. There should be mother committee from the location of AnganwadiCentres. There must be mutual understanding between workers and mother committee to share the responsibility (Himanta, 2018). As such mothers of the locality have no intension to send AnganwadiCentresby seeing the modus operandi of the centres. On the other there is inadequate infrastructure in the centres in terms of sooking materials. The guidelines also cited to handover to the local committee but such practices are seemingly handled by pocketed

few. Though mothers' committees have been appointed to monitor the provision of hot cooked meals, in reality their role has been reduced to merely putting their signatures for withdrawal of money. There have been no attempts to actually involve them in the programme or to properly orient them on their role.

Issues challenges

Since the inception of (SHG) Self Help Groups for the purpose of hot cooked meal there are lots of controversies regarding the monetary management as well as work allocation. Management of the cooking are also manage in the equal proportionate and cooked in a particular centre and distributed to all the accompanied centres. All the financial matters and transaction are done through two or three members and allegation leveled each other. Perhaps it might major factor for the failure of such groups in the present context and replaced it by the conventional method. The actuality of hot cooked meal is certainly ineffective when the system changed to direct handling by Supervisor to the Anganwadi workers. Nevertheless, there is also intra conflict in the sense that in most of the Anganwadicentre there is a big gap between the workers and helpers. Various factors may influence the situation but one of the important factors might be the available materials and goods. It is known to all that various items supply from the government like nutrients, edible oil, dal, rice, milk-powder, and other medicinal facilities etc. have even lost where the eligible beneficiaries are very few in number. The situation compelled to use in another way they prefer.

Complicacy and malpractices:

The Supreme Court order of 7th October 2004 bans the use of contractors in provision of supplementary nutrition to ICDS. Village communities, MahilaMandals and Self-help groups should be given the preference for preparing the food to be served in ICDS. Although the Supreme Court has banned the use of private contractors in the procurement and distribution of SNP under ICDS, discussions with anganwadi workers, supervisors, CDPOs and NGOs working in the area revealed that contractors continue to be involved. They are involved in procuring raw materials for hot cooked meals.

Various news reported in the local dailies confirmed that there are lots of confusion in the construction. Mention may be made on the basis of new report Dec. 13, 2009 in the Sangai Express that "a sum of Rs 5 lakhs had been taken as advance in connection with cons-truction of 10 Anganwadi buildings in different parts of Patsoi Assembly Constituency under Imphal West district, no buildings have been ever constructed. Under the Social Welfare Department, a total of 1554 new Anganwadicentres are to be constructed in different parts of the State. Of these 25 new Anganwadi buildings to be constructed in Patsoi Assembly Constituency, the advance amount for construction of 10 buildings at the rate of Rs 50,000 each had been granted in June-July 2009 along with the work order in favour of two agencies proposed by local MLA. It is supposed to complete the construction of the buildings within 3 months of sanctioning the fund. However, till date (Dec., 2009) no sign of any construction work could be seen. Further the news reported that when the Sangai Express went around inspecting the sites where the new Anganwadi buildings are supposed to come up, it was confirmed that indeed there has been no sign of any new building or construction work. (Sangai Express Dec. 13, 2009) Most of the Anganwadicentres in these places are also being operated in private residences and out- houses.

Interacting with The Sangai Express, Anganwadi workers and helpers working in these centres asserted that they have not been informed anything about the construction of new Anganwadi buildings by the local (MLA. However, around one year back, signatures were collected on *blank papers* maintaining that it was for construction of Anganwadi buildings and group photographs clicked along with the workers and helpers at the supposed sites where the Anganwadicentres are to be constructed. After this, nothing had been intimated, the Anganwadi workers and helpers said, while questioning what action the authorities concerned is going to be taken up against the work agencies who have not constructed the Anganwadi buildings in spite of having taken the advance amount. During the course of the investigation, it has also come to light that there are also some issues which are yet to be resolved like the inability of the workers to decide where the proposed Anganwadi buildings should be constructed and the difference of opinion between the Government and the work agency on the model of the building to be constructed(Sangai Express Dec. 13, 2009). Under the ICDS scheme it is mandatory that every anganwadi center should have a well maintained separate toilet for girls and boys. During this study it was seen that not a single AWC had a separate toilet for girls and boys.

Mention may be made that RTE food used to be supplied from the 2007-08 fiscal has been replaced through provision/ supply of food and cooking materials and the personals/staff engage with the formation of (SHG) self help groups at the local level, however sanction procedure was initiated in the March 2008 for purchase of 7642 vessels along with recommended shap and size in the rate quotation of Rs. 1179. Meanwhile 19 Sanction Orders were reportedly handled by the Social Welfare Department cashier in between March 27 and 28, 2008 for purchase of 7642 vessels. Another clear instance of mismanagement of money was noticed by all in compare to the rate quoted by the government under a specific shape and size that can be available at the market in the range of 500-600 only. It is also revealed that at least Rs. 15-20 was usually deducted by the Department officials as ‘stamp charge’ from the workers and helpers when their honourarium is paid for every month (Snagai Express, May 25, 2009). There was also strong suspicion fraudulent withdrawal of Rs 89 Lakh as the amount have been withdrawn by submission of bill voucher without checking and maintaining proper record with regard to the items bought(Snagai Express, May 25, 2009). On the other anganwadicentres have not been able to get full quota of rice, that usually five bags of 50 kg., used to be supply for each centres but it is reported that about 24 kg., to even one bag has deducted from each centres when distributed in the name some higher authority (Snagai Express Oct. 25, 2009). In case of demands from extra constitutional bodies, instances of deducting Rs. 1000 by officials from the allocated fund meant for feeding the kids in the Anganwadicentres to meet the demands are very often. Whether the quality of the rice is questionable or not, none of the centres have complain the matter it is still open secret all these years as they have been threaten or cautioned against speaking out (Snagai Express Oct. 25, 2009).

Inefficiency of supplied materials:

The utensils for the cooking are also supply by the contractors. It is worth to mention that news reports analysed the quality of the utensil that was far from the expectation. In such situation none of the centres do not interest on the nutrition of supplementary nutrition programme. On the other there is also controversy on the fund allocation of utensil that the central guidelines have no clarity on the specific matter of utensil for that purpose which is a big loophole. Different manifestations of financial misused that large number of cooking utensils purchased by the department for supplied to Anganwadicentres were found in excess of the existing centres

and the expenditure made on the cost of utensils were so notably in-proportionate. It came to light that cooking vessels purchased under the official sanction for use in each of the anganwadicentres exceeded by over 3000 (Snagai Express, May 25, 2009).

Ready to Eat (RTE): issues and challenges:

Where decentralized food model is implementing in some selected areas for supplying weaning food (WF) to children of 6 months to 6 years at 80 gm per child and ready to eat rich energy food (RTE) to pregnant and nursing mothers and adolescent girls at 160 gm per day. One of the big obstacles is that most of the mothers have somewhat negligence to collect the RTE, for their children supplementary nutrition is suppose to be collected by the mothers. Further, the supplementary nutrition for children under three years of age and pregnant and lactating mothers are given in the form of 'take home rations' once or twice a fortnight. It was seen that this component of the programme is not very effective and children under three are mostly out of the ICDS programme in the state. Significantly even the Supreme Court had decreed special attention for proper implementation of the scheme quality of rice supply by the concern department was sometime very unfortunate in the sense that adulterate food was supplied. Bed *smell*, *stone* and *charcoals* were also found in the rice bag that usually distributed five bags of 50 kg., to every centres see the following picture. On the other hand Anganwadicentres have not been able to get full quota of the allocated rice as there are lots of intervention from different quarters.

As happening in other states like UP, considering that the age of children under two is the most important for any intervention on malnutrition, this is a gap in the state. On the other 'take home rations' or RTE are un-proportionately distributed to those who interested to it because majority of mothers usually do not care of such things. Besides, due to the absence of need based allocation of RTE food most of the centers had surplus stocks of RTE and weaning foods. This stock was kept in unhygienic conditions mostly at the homes of the anganwadi worker or helper. The new stock was piled on unused stock ignoring the practice of 'first in, first out'. Dust, moisture and insects further reduced the shelf life of these foods. People in the community also complained the stock was illegally being sold as cattle feed. The problem of unused stocks was more acute in urban areas where there was less demand for these foods. These factors and problems have severely compromised the basic component of providing nutrition and tackling hunger for children.

For healthy Lactating mother:

If the anganwadi workers and helper join hand to take up the following suggestive and optimistic view to the specific area of health and nutrition, the existing ICDS scheme will have more sense.

1. To weigh each child every month, record the weight graphically on the growth card, use referral card for referring cases of mothers/children to the sub-centres/PHC etc., and maintain child cards for children below 6 years and produce these cards before visiting medical and para-medical personnel.
2. To carry out a quick survey of all the families, especially mothers and children in those families in their respective area of work once in a year.
3. To organise supplementary nutrition feeding for children (0-6 years) and expectant and nursing mothers by planning the menu based on locally available food and local recipes.

4. To provide health and nutrition education and counseling on breastfeeding/ Infant & young feeding practices to mothers. Anganwadi Workers, being close to the local community, can motivate married women to adopt family planning/birth control measures.
5. To make home visits for educating parents to enable mothers to plan an effective role in the child's growth and development with special emphasis on new born child
6. To guide Accredited Social Health Activists (ASHA) engaged under National Rural Health Mission in the delivery of health care services and maintenance of records under the ICDS Scheme.
7. To assist in implementation of Kishori Shakti Yojana (KSY) and motivate and educate the adolescent girls and their parents and community in general by organzing social awareness programmes/ campaigns etc.
8. AWW would also assist in implementation of Nutrition Programme for Adolescent Girls (NPAG) as per the guidelines of the Scheme and maintain such record as prescribed under the NPAG.
9. To identify the disability among children during her home visits and refer the case immediately to the nearest PHC or District Disability Rehabilitation Centre.
10. To support in organizing Pulse Polio Immunization (PPI) drives.

CONCLUSION:

ICDS is a very important intervention to ensure the health, nutrition and development of children under six in the state. This research work presents a pathetic picture of the programme in the state. But very luckily the rate undernutrition is not serious when we compare to other states in the sense that most of the parents usually take care of their child and even they do not bother of RTE food. Considering the centers as a place where their children to motivate and to adopt a habitual cultural of learning or school going habit. It is also cleared that most of the anganwadicentres are in a state of function-less in the sense that children turn up to the centre are very poor but at the time of health care day like pulse polio immunization the centre has been taken great role. On the other, some centres being opened once in a while, food not being distributed regularly and the programme of hot cooked meals not even being initiated in most places. But, in the case of reaching out to children below three is one of the major limitations in the implementation of ICDS in the state. As this is the most important age group for any intervention against malnutrition. Providing services to these children involves home visits and meetings by the anganwadi worker for nutrition and health counselling, regular growth monitoring and proper distribution of good quality supplementary nutrition is a big question. None of this is happening properly in any of the anganwadis that investigator visited. Further, the absence of weighing machines and growth charts makes it impossible for even well-intentioned anganwadi workers to do their job well. The system of monitoring and supervision is also very poor. For instance, it is seen that allocations of supplementary nutrition to the anganwadicentres are not made on the basis of the records maintained by the anganwadi workers but in fact is done in quite an arbitrary manner. The supervisors and CDPOs are still need to accentuate. From the findings of this study it is clear that clear that health and well being of children is not really a priority for politicians or for the administration. There is a complete somewhat lack of enthusiasm or effort by the administration to innovate to make the programme more effective.

REFERENCES:

AmttaBalabantaray (2002). Effect of integrated child development services programme on the development of rural pre-school children. Unpublished Ph. D thesis submitted to the faculty of arts (psychology) Utkal University.

Assembly (2010). Governor's address given on the floor of the Manipur Legislative Assembly on Jan. 13, 2010

Balsekar, A., George, A. T., Puett, C. and Dhingra, P. (2005). "Child Welfare and Community Participation: A Case Study of the ICDS programme in Thiruvananthapuram District, Kerala". Research on ICDS: An Overview (1996-2008). NIPCCD, New Delhi, 3:75-77.

Balsekar, Ameya (2005). Thiruvananthapuram: Institute Of Social Sciences-Child Welfare and Community Participation: A Case Study Of The ICDS Program In Trivandrum District, Kerala.

Barman, Nibha Rani (2001). 'Functioning of Anganwadicentres under ICDS scheme: An evaluative study.' Published in Research Abstract on ICDS (1998- 2009), pp.162-164 Documentation Centre for Women and Children. National Institute of Public Cooperation and Child Development. 5, Siri Institutional Area, HauzKhas, New Delhi- 110016

Bharti, Shaveta, Mahajan, ArshiAndArora, Samridhi, (2003). Evaluation Of Health Services Provided To Preschoolers At Anganwadi Centers (Urban Slums Of Jammu City, Jammu: Jammu Univ., Post Graduate Department of Home Science.

BobyDutta (2014). Impact of Integrated Child Development Services on the Rural Communities of Margherita Development Block: A Case Study. Unpublished Ph. D thesis submitted to the Department of Anthropology Dibrugarh University

Dash, N.C. (2006). Bhubaneswar: Centre For Rural Development –Impact Assessment/ Evaluation of ICDS Program in the State Of Orissa.

Dongra A.R., P.R. Deshmukh and B S. Garg, (2008). Eliminating childhood malnutrition: Discussions with mothers and Anganwadi workers. Journal of Health Studies, Vol. 1, No. 2-3, May-December, pp. 48-52.

Dongra A.R (2008a). Perceived Responsibilities of Anganwadi Workers and malnutrition in Rural Wardha, Journal of Health and Allied Science, Vol. 7, No. 1, January-March, pp. 1-5.

HimantaBorgohain (2018). The Anganwadi Workers: A Study in Sivasagar District of Assam. Unpublished Ph D thesis submitted to Department of Sociology, Dibrugarh University, p. 16

Joshi, Anita. (2001). A Comparative Study of Urban, Rural and Tribal Mothers Regarding Their Knowledge, Attitude and Practices of Nutrition. Indore: BAL NiketanSangh, Indore. (Online) available at http://wcd.nic.in/fnbweb.htm, accessed on Feb. 12, 2010

Kumar, A. (2009). Nutritional status assessment of under-five beneficiaries of Integrated Child Development Services program in rural Karnataka.Australasian Medical Journal (Online). Retrieved on December 26, 2011http://periodicals.faqs.org/ 201007/2142227791.

Kumar, D., Goel, N.K., Mittal, P.C., and Mishra, P. (2006). Influence of infant feeding practices on nutritional status of under-five children. Indian journal of pediatrics, 73, 417-421.

Lokshin, M., DasGupta, M., Gragnolati, M., and Ivaschenko, O. (2005). Improving Child Nutrition? The Integrated Child Development Services in India.Institute of Social

Studies.Blackwell Publishing, Garsington Road, Oxford OX4 2DQ, UK, Development and Change, 36(4), 613–640.

MeghanaDaxini (2009). Health systems research for improving quality of implementation of nutrition services for children below 3 years in NGO managed ICDS in rural Vadodara. Unpublished Ph. D thesis submitted to The Department of Foods and Nutrition, The Maharaja Sayajirao University of Baroda, Vadodara

MWC (n.d). Ministry of Women and Child Development (Online) available at: http://www.wcd.nic.in, accessed on April 21, 2010

Patil SB Doibale MK (2013). Study of profile, knowledge and problems of anganwadi workers in ICDS blocks: a cross sectional study Indian Journal of Basic & Applied Medical Research; June: Issue-7, Vol.-2, P. 738-744

Prasanti Jena (2013). "Knowledge of Anganwadi Worker about Integrated Child Development Services (ICDS): Study of Urban Blocks in Sundargarh District of Odisha" Master of Arts in development studies department of humanities and social sciences national institute of technology Rourkela – 769008, Odisha.

Prinja, S., Verma, R., and Lal, S. (2005). Role of ICDS program in delivery of nutritional services and functional integration between anganwadi and health worker in north India. The Internet Journal of Nutrition and Wellness, 2008, 5(2).

Ramana, G.N.V., M.S. Reddy, G. Sadhana, G., and K.A.B.L. Murthy, (1997).*National Strategy to Reduce Childhood Malnutrition,* Administrative Staff College of India, Hyderbad. This survey covered 131 districts in the states of Haryana, Punjab, Bihar, Rajasthan, Manipur, Sikkim, Mizoram, Meghalaya, Tripura, Goa, Daman and Diu and was conducted by the department of woman and child development of the central government.

Sanjay Dixit, SalilSakalle, G.S. Patel and GunjanTaneja, (2010). Evaluation of functioning of ICDS project area under Indore and Ujjain Divisions of the state of Madhya Pradesh, Online Journal of Health and Allied Sciences, Vol. 9, No. 1, January-March, pp. 1-5.

Shankar, P. (2009). "Role of ICDS Programme in Delivery of Nutritional Services and Functional Integration between Anganwadi Worker and Health Worker in North India". DCWC Research Bulletin, XV (2):14-15.

Shanthi S.D. (2015). Impact of Integrated Child Development Scheme on the Nutritional and Health Status of Children in Kanyakumari District. Unpublished Ph. D thesis submitted to the department of Economics, ManonmaniamSundaranar University

Shariff.A., (2002). "Food Security and the ICDS" presented at *Analysis of Market Reforms and Household Food Security: A Methodology Workshop*, at Indira Gandhi Institute of Development Research, Mumbai, July 8-9 2002,

Sinha, D. (2008). "Child Malnutrition and ICDS".Yojana.Ministry of Information and Broadcasting. Government of India, 52: 54-57.

SmritikanaGhosh (2016). Child Malnutrition in India: An Assessment of ICDS Programme. Unpublished Ph. D thesis submitted to the Department of Economics, University of Calcutta

SumatiVaid and NidhiVaid, (2005). Nutritional Status of ICDS and Non-ICDS Children Journal of Human Ecology, Vol. 18 No. 3, , pp. 207-212.

The Sangai Express (Local English Daily) Dec. 13, 2009

The Snagai Express (Local English Daily) May 25, 2009

The Snagai Express (Local English Daily) Oct. 25, 2009

Trivedi, S., Chhaparwal BC and Thora S, (2013). "Utilisation of ICDS Scheme in Children 1- 6 years of Age in a rural block of Central India", 'Department of Paediatrics', Medical College, My Hospital, Indore,

Verma, J.L., Das,S., Sankar,R., Mannar, M.G,V., Levinson, F.J. and Hamer, D.H. (2007). Community level micronutrient fortification of a food supplement in India: a controlled trial in preschool children aged 36-66 months. American Journal of Clinical Nutrition, 85, 1127-33.

Editorial Board

Categories

- Management and Economics
- Financial Management and Accounting
- Industrial and Business Management
- Entrepreneurship Management
- Marketing Management
- Banking and Insurance Studies

Review Process

Each research paper/article submitted to the journal is subject to the following reviewing process:

1. Each research paper/article will be initially evaluated by the editor to check the quality of the research article for the journal. The editor may make use of ithenticate/Viper software to examine the originality of research articles received.
2. The articles passed through screening at this level will be forwarded to two referees for blind peer review.
3. At this stage, two referees will carefully review the research article, each of whom will make a recommendation to publish the article in its present form/modify/reject.
4. The review process may take three/four working days.
5. In case of acceptance of the article, journal reserves the right of making amendments in the final draft of the research paper to suit the journal's standard and requirement.

Published by

South Asian Academic Research Journals

A Publication of CDL College of Education, Jagadhri (Haryana)
(Affiliated to Kurukshetra University, Kurukshetra, India)