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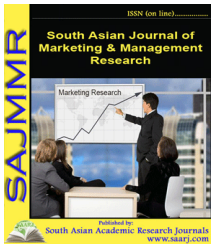

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AN ANALYSIS OF CHALLENGES OF THE AGRICULTURE ECONOMY IN INDIA

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ABSTRACT

Agriculture in India has evolved significantly during the past two decades. New possibilities for agricultural production have emerged as a result of globalization and liberalization policies. Agriculture has received special attention from the Indian government and development planners due to its importance in national Gross Domestic Product (GDP) and employment, allowing this sector to play a significant role in the country's financial growth and in raising the income and living morals of the vast population dependent on agriculture. Over the past 15 years, a number of issues have arisen in Indian agriculture, and they are getting more severe with the passage of time. Because India is an agricultural economy, the country's pace of growth is also influenced by agriculture. Because resources are finite, a rise in the number of people who rely on agriculture will result in a reduction in per capita income. This is believed to be a significant contributor to widespread rural misery and a high rate of farmer suicides throughout the nation. There are certain severe issues that must be addressed within a specific time period in order to fix the issues before it is too late for everyone.

KEYWORDS: *Agriculture, Biotechnology, Commodity Prices, India, Natural Resources.*

1. INTRODUCTION

India is mainly an agricultural country. Agriculture is the sole source of income for almost two-thirds of India's working population. It is the most significant feature of the Indian economy. Agriculture, along with its related businesses, is without a doubt India's most important source of

income, with most major industries relying on it for inputs[1]. In addition to liberalization measures that have given new possibilities for agricultural modernisation, India's agriculture has altered dramatically in the past two decades as a consequence of globalization. This has resulted in not just corporatization and diversification, but also a slew of technological and institutional advancements, thanks to industry expenditures. Despite the fact that agriculture's proportion in national output has dropped from more than 50% in the Business & Management sector, it currently contributes for 18% of India's GDP. Agriculture continues to be the primary source of employment and income for about 58 percent of the workforce. Agriculture has gotten special attention from India's policymakers and development planners because of its importance in national production and jobs , allowing this sector to play a significant role in the country's economy and in raising the income and living standards of the vast majority of the population who rely on agriculture[2].

One approach for addressing both fungibility and selectivity problems is supply characterisation, in which credit is regarded as an exponential function in the supply function. On the other side, credit will prefer one crop over another. If the methods are only used to a particular crop, the demand impacts may be exaggerated or understated if the implications on other crops are not taken into account. It's simple to get around this problem by estimating the impact of credit growth on aggregate output[3]. This is the approach this article takes to profit estimation. We are not aware of any other experiments that have utilized this technique. In an ideal scenario, one would be able to quantify the impact on total rural production, which would include crops, animals, and non-agricultural output from all rural families (farm and non-farm).

In the 1970s, the fast growth of India's rural banking markets offered an excellent opportunity for statistical research. Following their nationalization in 1968, the major commercial banks were instructed to expand their rural subdivision networks and boost agricultural lending. Traditional co-operative groups were eager to provide agricultural loans. The primary goal of this study is to quantify the impact of this development on agriculture and the rural environment [4]. We look at how additional credit affects overall crop output, agricultural savings, fertilizer demand, and labor usage. In rural regions, we also assess the impact of loans on non-farm employment and wages. The growth of rural finance in India has been supported by the Indian government. Because agricultural loan rates are regulated by the government, they are lower than those for urban and commercial loans. Commercial banks use earnings from other operations to finance agricultural loan management, thus cross-subsidizing farming output. The operating expenses of the professional and noncredit systems are subsidized by the government. Furthermore, relatively high levels of past-due as well as poor loans build a debt that must eventually be reimbursed by the taxpayer[5].

Furthermore, relatively high levels of past-due as well as poor loans build a debt that must eventually be reimbursed by the taxpayer Over the past 15 years, a number of issues have arisen in Indian agriculture, and they are getting more severe with the passage of time. Production growth, performance, equity, and long-term sustainability are all related to these factors. The most challenging challenge is to reverse the agricultural sector's significant drop in growth rate, which started in the mid-1990s. Agriculture's per capita income is decreasing since the pace of expansion has decreased in contrast to the rise in the number of people who rely on agriculture. This is believed to be a significant contributor to widespread rural discontent and a high incidence of farmer suicides throughout the nation[6]. Another important challenge is to ensure that natural capitals are utilized in an environmentally friendly way. The country's typical resource base is decreasing, despite the obvious need for greater agricultural development. In

addition, there are symbols of land loss and overuse of water in the area. Since the WTO (World Trade Organization), Indian agriculture has experienced major difficulties, since domestic prices of several commodities have increased above international rates. Imports have become more attractive as a result, while exports have suffered[7]. The scenario requires increasing productivity in agricultural production, marketing, and transportation, among other things, in order to improve Indian agriculture's competitiveness.

There is a common perception throughout the globe that food market intervention has benefitted mainly agricultural land-based areas. Aside from dryland agricultural areas, the rain has been overlooked. Small-scale farms, which account for the majority of both the country's farmers, are also being thoughtfully considered for their long-term viability and survival. The country's present dismal agricultural image is due to a number of factors/reasons. There has been a lack of consistency in agriculture policy for a long time. The government will not alter institutional structures or regulatory frameworks to create an environment that is favorable to agriculture and to adapt to changes in the domestic and international environment, as is required. This is especially true when it comes to private sector participation in output and seed markets. The second reason is that substructure has been overlooked, with money being devoted to populist projects. The third reason is a delay in development reaching prospective areas, as well as a weaker technology distribution extension mechanism. It will be difficult to re-establish steady output growth and relieve rural suffering unless the agricultural sector undergoes significant changes [6].

There is growing worry that if agriculture's problems are not addressed swiftly and effectively, India's economy would struggle to grow from its present rate of around 5.6 percent to more than 7%, as the nation wants. According to the rate of population increase in cultivation of 1.76 percent since the mid-1992s, the non-agriculture sector must expand at a frequency of more than 12 percent to achieve a 9 percent overall development rate. The difficulties faced by individuals or groups of people in agriculture are shown:

Figure 1: Representation of several challenges Faced by a Farmer or an Organisation in the Cultivation of the Food Grains.

The agricultural industry in India accounts for approximately 43% of the country's total land area. Despite a decline in agriculture's proportion of India's GDP, agriculture remains the country's single biggest contributor to GDP. It also showed that it had a significant role in the socioeconomic growth of India. Previously, India was highly dependent on food imports, but the expansion of the Indian economy's agricultural sector has allowed it to become grain self-sufficient. In this area, the country also possesses substantial deposits [8]. Following the food crisis of 1960, the agricultural sector, particularly the food production unit, saw a resurgence. Since then, India has worked hard to establish itself as a leader in agricultural output, resulting in the Green Revolution. While services have overtaken manufacturing in terms of GDP share and now account for close to 15%. It employs half of the population, contributes to production, is a source of raw materials, and serves as a request generator for a variety of companies.

Food prices are used to determine inflationary pay goods, which is a major policy problem in the development process. The question would be whether the current trend in food prices is due to production inequities, with reduced farm development meeting the stresses of an elevated economy due to technical bottlenecks, or whether it is due to exchange and product commodity vulnerability, or a lack of institutional reform. The Indian agricultural system is built on a supply-side mechanism that responds to increasing demand and rising prices. Alternative explanations, such as mixed or mongrel, are possible. For example, limitations in the food grains sector may be institutional or policy-driven, while in the semi-grain sector, market and non-price variables dominate, especially in this portion of farming that does not react to values.

When evaluating the impact of macroeconomic policy changes, the balance of monetary and fiscal policies must be taken into account. Economic growth would be limited by a combination of restrictive fiscal and monetary policies, which may lead to a recession or downturn with severe consequences for all sectors. The combination of an overly expansionary fiscal policy with an excessively expansionary monetary policy would result in fast inflation, making it an unpopular policy combination. The other two suggested combinations, contractionary fiscal policy with tight financial policy and preventative fiscal policy with expansionary financial policy, are also widely used. Interest rates and inflation are influenced by the relationship between macroeconomic policies, which has an impact on the agricultural sector. Changing interest rates impact variable profit margins, long-term capital expenditure, cash movement, house prices, and conversation rates, whereas a rise affects input costs, asset prices, inflation and interest rates, and property values.Potential local and international policy changes will have a uniformly larger effect on the agriculture industry's financial performance, given the global economy's growing convergence. As a consequence, for farmers and small farmers to make strategic choices, knowing the connections between the macroeconomic environment and agriculture is becoming more important. In the nation, there is a common perception that grocery market intervention has benefited mainly agricultural land advanced areas, whereas wet and dryland farming regions have been ignored.

1.1 Agricultural Economy Challenges:

1.1.1 Dependency on Nature:

India's agriculture is mostly rain-fed, and as a result, it is heavily reliant on the countryside. Excessively hot and dry weather, as well as an unnecessary monsoon or lack of rainfall, are all issues to consider. Droughts have a direct effect on the Company's financial performance. Although these risks may never be fully eliminated, they can be reduced by adopting proactive measures and responding promptly.

1.1.2. Perspective and Possibilities:

The global economy has been slowing for the last four and a half years. It has, thankfully, recovered at a slower rate; nevertheless, it still contains flaws that must be addressed. Structural changes are required to address inflationary pressures, fiscal imbalances, infrastructural constraints, and inefficiencies. Unless these flaws are addressed in a systematic way, growth is only expected to rise up slightly. The Indian economy expanded at a slower-than-expected 4.7 percent, plagued by poor productivity, rising inflation, a sinking rupee, and restrictive monetary policies. The economy has continued to operate below capacity as a result of these factors. Agriculture may be the lone bright spot in an otherwise dismal year for economic indicators. If structural improvements are implemented successfully, stronger development may be generated. India's long-term development potential is strong, despite a recent cyclical downturn, with promising prospects for workforce, worker skills, resources, infrastructure, and productivity. However, changes are required before the budget can achieve and sustain this quicker pace. While growth is anticipated to perk up in the near term, the projection is contingent on institutional bottlenecks that hinder investment being removed. Improvements in agricultural efficiency, as well as perishables marketing and distribution, are critical. God's assets, cold storage facilities, and the APMC's (Agriculture Produce Market Committee) reform are all included. Not only would this reduce inflation, but it would also increase supply by eliminating waste. According to the Indian Council for Agricultural Research's (ICAR) Vision 2030 report, the price of food and processed goods is rising due to rising population and per capita income.

Food grain consumption is expected to increase from 192 million tonnes in 2000 to 345 million tonnes in 2030, according to estimates. As a consequence, over the next 20 years, food grain output will increase at a pace of 5.5 million tons per year. High-value goods (such as horticulture, dairy, livestock, and seafood) are rising faster than food grain consumption, which is expected to increase by more than 100 percent between 2000 and 2030. Despite the fact that this is a daunting and difficult challenge, it also presents numerous opportunities for the agricultural industry as a whole, ranging from the advancement of promising innovations and management options to increasing efficiency to meet rising food demand at the lowest possible cost in a declining production environment. With demand in the agricultural industry rising to approximately 232 million from 229 million in 2011-12, our farmers will continue to be concerned about a shortage of skilled farm workers.

1.2 Strategies To Overcome The Challenges:

According to a study released by the World Trade Organization (WTO), overall import and export of nutrition and forestry increased by $1.66 trillion and $1.82 trillion, respectively. India's share of the market has been calculated at 2.05 percent and 1.34 percent, respectively. India's food production sector has long been regarded as a significant exporter of food to the rest of the globe. India produces about 250 million tonnes of food, including more than 100 million tonnes of rice, more than 90 million tonnes of wheat, and a variety of other foods such as pulses. The constant technical progress in the area of innovation has resulted in the rise of food products for export. From April 2000 to August 2013, FDI inflows into the agricultural activities and machinery sectors totalled US $ 1,529.19 million and US $ 327.35 million, respectively, according to statistics from the Department of Skill Development and Entrepreneurship (DIPP). Agriculture's growth target in the 12th plan is anticipated to be 4%, up from 3.5 percent in the previous plan, and agricultural productivity and growth must be maintained and improved to meet the country's grain production needs. The government is also working to revitalize the

agriculture industry. The 12th plan emphasizes small and marginal farmers, increases output in rain-fed areas, and streamlines the value chain.

The administration is also attempting to revive the agriculture sector. Smallholder farmers are prioritized in the 12th plan, which also improves production in rain-fed regions and simplifies the supply chain. India must increase its access to expensive contemporary technologies, particularly agricultural biotechnology, in order to have a major effect on the cost of pricing and output of farm goods. Tomatoes (Chinese), papayas, and other GMO food crops have been grown and consumed safely all across the globe (including the United States and China). Squash and zucchini, as well as maize, are grown in 16 nations (the US). Cotton growers in India have had comparable experiences and have had similar outcomes. In March 2014, the Genetic Engineering Assessment Committee issued its report. (GEAC). Except for maize, farm experiments for 11 crops were authorized by the auditor general's department. India should anticipate greater clarity on such crops now that the current administration is in place.

2. LITERATURE REVIEW

Van Den Berg L et al. discussed Opportunities and Challenges of Urban Agriculture for Sustainable City Development in which they explained how a growing number of cities across the globe are turning to urban agriculture (UA). UA as a concept is explored and discussed in this article from a variety of geographical and strategic perspectives. We want to shed light on the opportunities and difficulties of UA for sustainable city development via this essay. To illustrate this point, we utilise case studies from cities across the globe. While investing in urban agriculture has its advantages, there are certain limits that need to be considered[8].

Raizada M et al. discussed Agronomic challenges and opportunities for smallholder terrace agriculture in developing countries in which they explained how Improving land productivity is important to satisfy growing food and forage needs in hillside and mountain communities. Tens of millions of smallholder terrace farmers in Asia, Africa, and Latin America who earn $1-2 a day do not have access to peer-reviewed knowledge of optimum agronomic techniques, but they have extensive traditional ecological knowledge. Terrace farmers also lack access to inexpensive agricultural equipment and supplies needed to improve crop yields. The goals of this study are to emphasize the agronomic difficulties of terrace farming, and propose creative, low-cost solutions to increase terrace agriculture while enhancing local lives. The article focuses on smallholder farmers in emerging countries, with specific reference to Nepal[9].

C. Xiong et al. discussed Potential and challenges of organic agriculture in Bangladesh in which they explained how Bangladesh’s economy and lives of most of its people rely on agriculture. Despite the significance of agriculture, maintaining food security is a problem because of frequent natural catastrophes, the impacts of climate change, and land degradation. The nation has little land area but varied ecosystems (hills, plains, coastal, and wetlands) (hills, plains, coastal, and wetlands). Climatic variables include temperature, rainfall, and humidity. The homestead production system in Bangladesh follows traditional organic farming, with a variety of fruits, vegetables, spices, and tuber crops. The traditional agriculture in Bangladesh grew highly reliant on synthetic fertilizers and pesticides following the Green Revolution. This has resulted in many human health and environmental risks, jeopardizing food safety[10].

3. DISCUSSION

The Indian government has been adopting a lot of new technical innovation in the area of agriculture in order to boost output while also retaining the soil's fertility power, since it is widely known that the soil's fertility power has been decreasing with each season of cultivation.

The issue of soil fertility may arise in the field, when fertilizer is used extensively during cultivation, causing the soil to become less fertile. The government has announced the soil health care plan, under which each farmer would get a soil health card following a lab test of the soil in his or her land, and the farmer will be given recommendations based on the soil health card. Apart from that, water and electricity supply are also important elements in the development of agriculture, since water is the most important component in preserving crops in areas where rainfall is insufficient.

To boost demand, a record-breaking green movement is required. Punjab became the top wheat producer as a consequence of the first Revolution. As a consequence, the only option to address the agricultural growth gap is for a second Green Movement to emerge. The second Industrial Revolution will, in essence, maintain the world green and prevent it from becoming a desolate wasteland. To reduce the cost of travel, rigorous measures to eliminate corruption at checkpoints and decrease taxes on transportation companies are required. Exporting agricultural goods should be emphasized since it will lead to rural development and a significant number of employment openings. If immediate action is done, agriculture may become more buoyant, efficient, and commercial. India has the potential to play a key role in the WTO in the future.

4. CONCLUSION

India's agriculture is still at a fork in the road, even after many years of independence and Five-Year Plans. Agriculture suffered a setback during the previous WTO period. According to the proportion of agro foods in India's worldwide export, farm subsidies in rich nations have been increased in the post-WTO period. As a consequence, India is struggling to compete in the international agricultural market. In this scenario, the agricultural food trade will most likely become oligopolistic. Commodity returns have been announced due to increasing production costs, a sluggish rate of growth in output, a weak marketing system, and an improvement in input intensity. As a consequence, India struggles to compete in the global agricultural market. In this scenario, the global agricultural trade would very certainly become oligopolistic. As a consequence of increasing production prices, a dramatic decrease in output, bad pricing practices, and greater input power, commodity yields have been declared. Importing nations should enhance their marketing strategies, and security should be provided in terms of both quality and quantity. Fisheries, poultry, and traditional items, as well as horticulture and manufactured goods, benefit from long-term market trends.

As a consequence, it's possible that export of these goods may be promoted. The federal and state governments should increase infrastructure investment in post-harvest management, including highway extension and rural road upgrades. Computerized networking of Germless centers is required to develop better crop types and by birds. The most essential criteria is to enhance the quality, production, and cost of our agricultural goods. We must reduce our production costs to meet the WTO challenge, which may be accomplished by growing hybrids and adopting natural pest management methods. The emphasis should be on educating farmers about hybrid seed production and propagation.

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