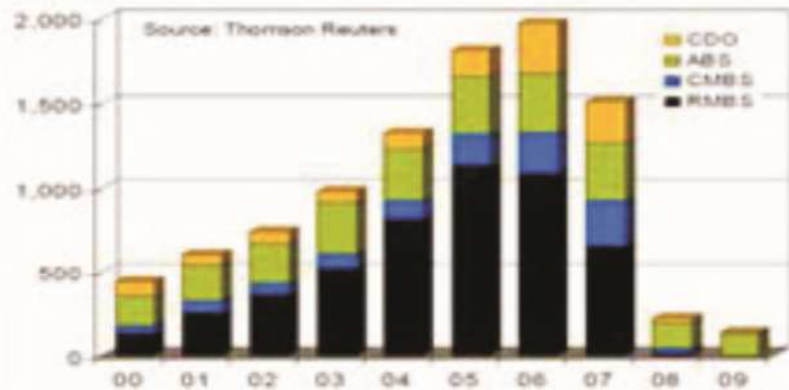


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SR. NO.	PARTICULAR	PAGE NO.	DOI NUMBER
1.	FORENSIC ACCOUNTING AND FINANCIAL MALPRACTICES: A CONCEPTUAL REVIEW Ukarin Isaac, Agharese Joy Uhunmwenna	1-8	10.5958/2319-1422.2021.00026.6
2.	PROMOTING EFFICIENT AND PRODUCTIVE EMPLOYMENT IN THE LABOR MARKET Kurbanov Samandar Pulatovich	9-22	10.5958/2319-1422.2021.00027.8
3.	IMPORTANT ASPECTS OF COMBATING IGNORANCE WITH ENLIGHTENMENT Tashmetov Tuxtasin Xudoyberganovich	23-27	10.5958/2319-1422.2021.00028.X
4.	CASH ECONOMY IN INDIA: AN ECONOMIC ANALYSIS Dr. Sathyanarayana	28-34	10.5958/2319-1422.2021.00029.1
5.	IMPORTANCE AND ROLE OF FINANCING OF RELIGIOUS EDUCATIONAL INSTITUTIONS IN THE DEVELOPMENT OF RELIGIOUS ENLIGHTENMENT Dusanov Salim Mamarasulovich, Mallabaev Abdullakh	35-49	10.5958/2319-1422.2021.00030.8
6.	MODELING THE IMPACT OF BANK SHARES ON INCOME IN THE FUND MARKET Farkhod Mirzaev, Mexridin Rakhmanov	50-61	10.5958/2319-1422.2021.00031.X



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FORENSIC ACCOUNTING AND FINANCIAL MALPRACTICES: A CONCEPTUAL REVIEW

Ukarin Isaac*; Agharese Joy Uhunmwenna**

*B.Sc., M.Sc., PhD-in view,
NIGERIA

Email id: Issaac.ukarin@yahoo.com

Email id: agharesejoy@gmail.com

ABSTRACT

This study carried out a conceptual review of forensic accounting and financial malpractices. Forensic accounting involves the examination of a firm's records especially in cases of financial malpractice. This paper gives a broad conceptual review of forensic accounting, its history, the composition of forensic accounting, practitioners of forensic accounting, forensic investigation, financial malpractices and fraud, types of financial malpractices, steps in achieving forensic accounting engagement and empirical review on studies which examined forensic accounting and financial fraud using primary and secondary data. This study concludes that forensic accounting is an advanced method of detecting high level of fraud perpetrated in organizations and provides enabling stability in operation system of organizations.

KEYWORD: *Forensic, Accounting, History, Investigation*

INTRODUCTION

Forensic accounting is the practice of examining a company's financial accounts using accounting, auditing, and investigation abilities. According to Hopwood, Leiner, and Young (2012), as cited in Pedneault et al. (2012), it is a method of using investigative and analytical abilities to solve financial difficulties in a way that meets the standards set by court regulations. The goal of forensic accounting is to give an accounting study that can be used in court if necessary. Both forensic investigations and forensic audits fall under the umbrella of forensic accounting. It encompasses financial data auditing to establish or refute fraud, the interviewing procedure utilized throughout an inquiry, and the act of testifying as an expert witness. As a result, both litigation support and investigative accounting are covered. To collect, analyze, and evaluate the evidence at hand, forensic accountants use unusual talents in accounting, auditing, finance, particular areas of the law, research, and investigation abilities, as well as to interpret and present results to their clients.

It entails conducting exceedingly comprehensive research and analysis of financial data in order to uncover fraud or financial manipulation.

History of Forensic Accounting

According to the research carried out by Singleton & Singleton (2010), the first major corporate fraud is the fraud known as the South Sea Bubble. The South Sea Company was established in 1711 with exclusive trading rights to Spanish South America. The company made its first trading voyage in 1717 and made little actual profit to offset the £10 million of government bonds it had assumed. South Sea had to borrow an additional £2 million. Tensions between England and Spain resulted in Spain seizing South Sea ships in 1718. (Singleton & Singleton 2010). In 1719, the business presented a proposal in which it would assume the entire remaining national debt in the United Kingdom, totaling over £30 million, in exchange for government bonds that would endure until 1727. Despite the Bank of England's offer to assume the debt as well, parliament authorized the South Sea Company's assumption. In a speculative frenzy, its shares increased from £128 in January 1720 to £550 by the end of May that year. The corporation artificially raised the stock price using a combination of new subscribers and the distribution of pro-trade with Spain tales designed to give the impression that the stock could only go higher. Not only did capital remain in England, but many Dutch investors purchased South Sea shares, adding to inflationary pressures. Other joint-stock corporations entered the market afterwards, frequently making false claims about international operations, and were dubbed "bubbles" by the public (Singleton & Singleton 2010). Meyer v. Sefton, a bankrupt estate, was decided in 1817. The judge authorized the expert witness who reviewed the bankrupt's finances to testify to his examination because the nature of the evidence prevented it from being reviewed in court. Dr. Larry Crumbley, a forensic accounting professor and author, considers this accountant to be the first forensic accountant in records and the start of the forensic accounting profession (Singleton & Singleton 2010). Furthermore, banking sectors and all other major, medium, and small-scale organizations around the world today have forensic departments, also known as fraud alert departments, to ensure adequate and reliable financial representation and efficiency, as the case may be.

Composition of Forensic Accounting

According to Zysman (2019), forensic accounting involves both investigative accounting and litigation support. Litigation support helps in all nature in a matter involving present or awaiting litigation. It also mainly deals with issues related to the quantification of economic damages. On the other hand, Malcolm(2020) went further to explain litigation support by saying, litigation support is the way of giving consultation and support services to attorneys regarding present and awaiting cases. This type of support services obtainable will depend on the requests of the attorneys and may range from research and documentation of proofs and instances before a case comes to trial or to assist in the determination of damages once a case has been tried. Consultants rendering this type of professional service may work alone or work with several consultant firms providing litigating support services. Forensic accountants assist on several issues under litigation support. They can help in obtaining documentation necessary for backing up a claim. They provide assessment of the relevant documentation to form an initial charge of the case and identify areas of loss. They also support in examining the formulation of questions to be asked concerning the financial evidence. Furthermore, they assist with settlement discussions and negotiations (Malcolm 2020). Investigative accounting according to Zysman (2019) is usually associated with investigations of criminal issues. A good example of investigative accounting assignment would be an investigation of worker theft. Other examples include securities fraud, insurance fraud, and

incomes of crime investigations. Investigative accounting helps in issues such as the assessment of the accurate situation and provide suggestions concerning possible courses of action. More so, they can help with the guard and retrieval of assets, co-ordination of other professionals (including private investigators, forensic document examiners and consulting engineers), and also help in the line of criminal prosecution (Zysman 2019).

Practitioners of Forensic Accounting Profession

Forensic accounting is an offshoot of the general professional accounting and it is affiliated to professional accounting institutes. For the purpose of practice, individual firms of general accounting consultants departmentalize and train experts in investigative accounting within their general practice (Idowu 2012). Forensic accountants are basically certified public accountants which focus on using scientific method to detect fraud when the need for evidence arises. Forensic accountants also do arrangement of analysis for their investigation in order to get the fact which form an expert decision (Idowu 2012). On the other hand, separate bodies are also emerging for forensic accountants and firms of the same area of profession are being established, e.g. National Association Of Forensic Accountants, Association Of Certified Fraud Examiners, Certified Fraud Deterrence, Certified Forensic Financial Analyst, America College Of Forensic Examiners, and Forensic Certified Public Accountant Society. Some specialist practice firms include Zysman Forensic Accounting Incorporated, Kessler. The practice is just gaining popularity in Nigeria. As such, there can only be few instances of professionals engaging in investigative activities and there are knowledgeable and experienced persons in investigative accounting. According to Pedneault et al, (2012), the forensic accountant can work in the insurance company, with government regulatory agencies like Economic and Financial Crime Commission and Department of State Service in Nigeria. Forensic accountants are often employed to prepare for litigation associated to insurance claims, insolvency, divorces, embezzlement, fraud, skimming, and any type of financial crime. The forensic accountant can perform their duty in the banking sector when the internal and external auditors have lost their confidence and credibility. Also, they perform their task in the court area by doing some scientific investigation on cases that are extremely critical for the judge to decide on. Forensic accountant could also perform their duty in small or large-scale business which is the most popular place you can find the forensic accountant performing their duty because that is the area where fraud takes place the most.

Forensic Investigation

This is a process in which a forensic accountant performs operations in order to obtain evidence that may be utilized in legal actions or to resolve disputes. According to Alan Zysman, forensic investigation is the use of specialist investigative abilities to perform an investigation in such a way that the results can be used in a court of law. This could include, for example, an investigation into money laundering. A forensic investigation involves many stages (similar to an audit), including planning, evidence gathering, quality control reviews and reporting

Financial Malpractices and Fraud

According to Idowu (2012), financial malpractices can be traced to corrupt practices. He defines corrupt practice as any immoral, illegal, and unethical act and include cheating, lying, defrauding etc. It is also the mismanagement of entrusted power for personal benefit. The forms include bribes, favoritism and discrimination, governmental donations, kickbacks and artificial pricing and fraud of all kinds. Asset misappropriation, corruption, and fraudulent assertions are among the three types of fraud. They include asset theft or misappropriation, improper use of influence in a

transaction for personal gain, and financial statement fabrication. According to reports and research, Nigeria's banking sector is responsible for the highest incidence of financial malpractices.

Types of Financial Malpractices

- Identity theft: The use of someone's personal financial information without the person's consent (e.g. credit card number, social security number, bank account number) to make fraudulent transaction or withdrawals from your accounts. Sometimes the information stolen from victim can be used to open credit card or bank accounts with the victim left accountable for all the payment. In other words, identity theft can occur when someone illegally uses another person's identifying information (such as a Social Security Number) to commit crimes relating to fraud, such as credit card fraud.
- Embezzlement: A crime that occurs when an individual steals money or property that he or she has been entrusted to manage.
- Money laundering: A crime involving the transfer of unlawful funds and other gains into normal channels in order to conceal the money's illegal origins and elude tax authorities.
- Securities fraud: A crime committed when a corporate officer, for example, makes false representations regarding the company's stock performance or reveals confidential information about the company's shares.
- Tax evasion fraud: The act of failing to pay one's legally necessary portion of federal or state taxes, which is penalized by law and can result in asset forfeiture or jail.

Fraud

Pedneault et al. (2012) Fraud is defined as an activity that occurs in a social setting and has serious ramifications for the economy, businesses, and individuals. When greed collides with the possibility of lying, an unprincipled infection emerges. The fraud investigator is similar to a doctor who is on the lookout for signs and symptoms that indicate an outbreak. There are two principal methods of getting something from others unlawfully. Either you physically force someone to give you what you want (using a gun, knife, or other weapon), or you hoax them out of their assets. The first type of theft we call robbery, and the second type we call fraud. Robbery is generally more violent and more traumatic than fraud and attracts much more media attention, but losses from fraud far exceed losses from robbery (Albrecht et al., 2011). Fraud, as we know it now, is dishonesty in the form of a deliberate deceit or a wilful misrepresentation of a material fact. The phrases lying, which denotes the deliberate telling of a lie, and cheating, which denotes getting an unfair or unjust advantage over another, could be used to further describe fraud because these two words suggest the intent or readiness to deceive (Singleton & Singleton 2010). Nowadays, fraud is more complex and disturbing than ever. The complex nature of modern fraud has fueled the creation of forensic accounting, a specialty subject that is sometimes referred to as accounting's crime scene investigation, with practitioners trained in both accounting and criminal investigation. In criminal justice and civil litigation, forensic accountants play a critical role.

Forensic Accounting and the Accounting Graduate

According to Kreuter (2017), accounting graduates can specialize in forensic accounting in a variety of ways. They might work for a non-profit, a commercial corporation, a university, a hospital, or the government. Because a forensic expert in the private sector is valued and compensated more highly, forensic accounting knowledge is most useful for people engaged in the

private sector. Internal auditors and controllers should also be familiar with forensic accounting. A certified public accountant who has forensic skills and working in a private accounting position can expect higher rewards; there should be a developing need for this skill across the field. Forensic accounting is not a complex concept; it is basically litigation which supports accounting. It is straightforward and direct to apply forensic accounting techniques. The lawful cases to answer questions concerning damages, generally with an economic bearing, or where there is a concern expressed by a company potentially experiencing fraud or suffering from unprofessional internal control system, then forensic accounting skills are needed to fix the problem. Final step is to prepare the report, which may include sections on the nature of the assignment, scope of the investigation, approach utilized, limitation of scope and findings and/or opinions (Zysman 2012).

Steps to Achieving Forensic Accounting Engagement

Zysman (2012) outlined the following steps in executing forensic accounting engagement. The first factor forensic accountants need to do before carrying out their investigation is to meet with the client to understand the important facts, know the players, and the cause of the problem then, perform a conflict check when the relevant parties are established. After that, they perform an initial investigation to allow subsequent planning to be based upon a more complete understanding of the issue. Next step is to develop an action plan that considers the knowledge gained by meeting with the client and carrying out the primary investigation and which will set out the objectives to be accomplished and the methodology to be utilized to accomplish them. Following step involves, obtaining relevant evidence to make the work more interesting, this may involve locating documents, economic information, asset, a person or company, another expert or proof of the occurrence of an event. Following that, the forensic accountant should conduct the analysis by calculating economic damages, summarizing a large number of transactions, tracing assets, performing present value calculations using appropriate discount rates, performing regression analysis or sensitivity analysis, using a computerized application such as a spreadsheet, database, or computer model, and explaining the findings with charts and graphs.

Empirical Reviews

Modugu and Anyaduba (2013) while studying "Forensic Accounting and Financial Fraud, adopted the survey research approach, distributed 5-Point Likert questionnaire to a sample size of 143 respondents, drawn from accountants in public and organised private sector. The hypothesis demonstrates that stakeholders are in agreement about the effectiveness of forensic accounting in fraud prevention, financial reporting, and internal control.

Ogodogun (2011) studied "Reducing Corruption in the Public Sector: The Forensic Accounting Pedagogy". The study adopted the descriptive approach and tested hypotheses. The study used the Pearson Product Moment Correlation Coefficient and the Spearman rank order correlation. A sample size of 124 of accountants in public service of Edo, Delta and Bayelsastates, 4-Point Likert Scale questionnaires were administered. Findings of the study were that there exists a significant relationship between corruption and forensic accounting; there is a very strong relationship between poor accounting records and corruption practices in the public sector and there is significant relationship between corruption and poor economic development.

Enofe et al. (2013) in Forensic Accounting: A Tool for Detecting Fraud in Nigeria Business Environment while adopting the descriptive survey, distributed 50 questionnaire based on 5-Point Likert Scale, 3 research hypothesis formulated and used SPSS to analyse data. The findings show

that forensic accounting services are required in Nigeria; forensic Accounting is an effective tool for detecting fraud in Nigeria business environment.

Ahmadu et al.(2013)in their study titled "An empirical examination of the role of forensic audit in enhancing financial investigations in Nigeria" employed the use of primary data collated via questionnaire based on 5 Likert-Scale administered among 240 accountants. They used the Pearson correlation coefficient statistical tool and multiple regression for analysis of data. They concluded that while forensic audit ensure earlier detection and confirmation of fraud and thus enhance financial crime investigations in the country but submitted that introducing independent audit skill into periodic audit will most likely not boost financial crime investigations especially in the aspect of early detection and confirmation of fraud.

Izedomin and Agbame(2011) in Modugu and Anyaduba(2013) recognize the rising frequency of fraud and fraudulent activities in Nigeria, which are conducted through financial statement manipulations, and regret that it is quickly becoming a way of life. Kasim(2009) observes that perpetration of financial irregularities are becoming the speciality of both private and public sector in Nigeria as individuals perpetrate fraud and corrupt practices according to the capacity of their office.

Enofe et al.(2013) regret that the specific problem with fraud in Nigeria business environment is the negative effect on corporate earnings and a loss of investors' confidence. Jristic(2009)studied "The role of Forensic Accountants in Detecting Frauds in Financial Statements". According to the report, erroneous financial statements present an inaccurate picture of an enterprise's earning potential and financial status, on which users, including all classes of stakeholders, make decisions and, as a result, become vulnerable to fraud.

Ozumba et al. (2016) defined forensic accounting as the application of specialized body of knowledge to the evidence of economic transactions and reporting suitable for court proceedings and accountability, and defined it as the use of accounting, auditing, and investigative skills to assist in legal matters. Economic crimes and financial scandals such as those involving Tyco International Xerox (USA), Tesco of the United Kingdom, HIH insurance, Waste Management, Sunbeam, Global Crossing, Saudi Arabian mobility, and corporate fraud perpetrated in Nigeria by the management of Lever Brothers (now Unilever), Union Dicon Salt, Cadbury (Nigeria), and fourteen distressed banks were exposed by forensic accounting experts who deployed forensic accounting experts. Unlike traditional auditing, which focuses on reviewing errors, internal control systems, identification, and prevention, forensic accounting's main goal is to uncover fraud and resolve financial concerns in a way that follows court-ordered criteria.

Efosa and Kingsley (2016) examine the impact of forensic accounting and fraud management in Nigeria. The study analyzed 29 quoted companies enlisted in the Nigerian Stock Exchange(NSE). The finding of the study indicates that forensic accounting has a significant effect on reducing financial fraud in corporate organizations. The finding of this study has a positive relationship with the result of Enofe et al. (2013) who also found forensic accounting has the impact of detecting fraud.

Alabdullah et al. (2013) also investigated the role of forensic accounting in reducing financial fraud in Iraq. Using correlation research design through administering interviews and questionnaires. The findings of the study revealed that the forensic accounting method is effective in the control of financial fraud cases. The study also indicates fraud is easy to be narrowed and detected using forensic accounting service. The study also demonstrates the necessity for forensic

accounting investigations as a result of widespread incorrect accounting information, flaws in traditional accounting and auditing that hindered fraud detection, and a lack of competent organizations that can provide forensic accounting consulting.

Popoola et al. (2016) examined whether forensic accountants knowledge, skills and competence are basically required for fraud prevention and detection in Nigeria. The study used survey research design and 400 questionnaires distributed among two groups of respondents comprising forensic accountants and auditors in the office of the Auditor General of Federation and Accountant General of the Federation in Nigeria respectively. According to the conclusions of the study, forensic accountants have extensive knowledge, abilities, and expertise in fraud prevention and detection. The study's findings show the effect and influence of forensic accounting services in both public and private organizations when it comes to fraud prevention and detection.

Suleiman et al. (2018) investigated expert opinions on the effectiveness of forensic accounting investigative methodologies in Nigeria. The study concludes that forensic accounting inquiry is more suited in fraud investigation and is eligible for use in court, based on in-depth interviews with 24 participants from Nigerian anti-corruption authorities such as the EFCC and ICPC.

The effects of a forensic accounting probe was also documented empirically in a study by Nwaiwu and Aaron (2018). The authors discovered that forensic accounting is the most effective method for detecting and preventing fraud in a company. Furthermore, the study's findings suggest that forensic accounting increases a company's overall performance.

In terms of fraud prevention and detection, Akhidime (2018) discovered that forensic accounting services give adequate results. The study indicates that forensic accounting provides a more desirable process in understanding fraud has occurred. This study highlighted the needs of forensic accounting investigation towards uncovering fraud issues.

Mukherjee (2018) examined fraud in banking industries and the role of forensic accounting in India. The study found widespread banking fraud in Indian corporate banking. The study indicated that fraud is a growing concern to the business organization. Furthermore, the study showed that the application of forensic accounting is a much needed area in reducing and detecting corporate banking fraud and other related fraudulent activities in today's business world.

CONCLUSION

Forensic accounting identifies the significance of an agency problem as one of the major sources of fraud in many organizations. It is an advanced method of detecting the high level of fraud perpetrated in organizations and provides the enabling stability in operation system of organizations.

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PROMOTING EFFICIENT AND PRODUCTIVE EMPLOYMENT IN THE LABOR MARKET

Kurbonov Samandar Pulatovich*

*Independent Researcher,
senior lecturer at the Department of Human Resource Management,
Tashkent State University of Economics,
Tashkent, UZBEKISTAN
Email id: s.kurbonov@gmail.com,

ABSTRACT

This article emphasizes the fact that the implementation of the recommendations of the International Labor Organization to increase efficient and productive employment in the country, its calculation and analysis based on national labor market indicators is one of the important tasks in the fight against poverty in many countries. The presence of a employed population among those suffering from poverty in the global labor market underscores the need to calculate productive employment. The article describes in detail the indicators of efficient and productive employment, their analysis and calculation. The article also concludes with recommendations for increasing efficient and productive employment.

KEYWORDS: *Global Labor Market, Productive Employment, People Affected By Employment Poverty, Deficit Of Productive Employment.*

INTRODUCTION

The globalization of the world economy is increasingly influencing the evolution and change of socio-economic systems and institutions, the structural features of national and regional economies. The world economy is the only economic system capable of operating “on a global scale in real time” [E.A. Kokoreva et al., 2020].

Globalization has become one of the most pressing problems of our time, as evidenced by the fact that over the past 30 years the world community has paid special attention to global problems and events of globalization in general at world congresses and symposia.

The ILO was founded on the basis of many revolutions around the world, as well as the difficult and unacceptable working and living conditions of the workers of that period. The next event in the development of the ILO after the creation of the organization was the adoption in 1944 of the

Philadelphia Declaration, which defined and approved the main goals and objectives of the ILO in the post-war period. The Philadelphia Declaration sets out the basic principles of the ILO, namely: labor is not a commodity; freedom of speech and trade union activity are important factors for development; poverty should be seen as a destabilizing element of socio-economic development and should be eradicated through sustained and united international efforts based on tripartism in each state. At the same time, the ILO contributes, for example, to the development and adoption of programs to ensure full employment and living standards for the population, protect the life and health of workers in all workplaces, and so on. This, in turn, requires compliance with the conditions of efficient and productive employment in the labor market of each country.

The globalization of the economy has now led to the need to consider the labor market as a new specific socio-economic phenomenon, the study of the world of work in the modern world economy requires new approaches, conceptual development, new methodological problems.

As noted by the economist [Sh.Kudbiev, 2020], the global labor market is a set of relations between buyers and sellers of labor and market infrastructure (government and local authorities, employment services, international organizations, recruitment agencies, trade unions). Modern processes in the labor market determine the impact of employment and unemployment on economic results and determine the fate of people. Therefore, taking into account the global aspects of the development of the world labor market, it should be noted that the labor market reflects the results of the development of society.

According to the laws on the labor market, economically active citizens of working age who enter the labor market for a number of reasons, both subjectively and objectively, cannot always find a place for themselves in the field of employment.

In many countries around the world, there are two ways to measure unemployment. The first is based on the results of citizens' registration with the employment service, the second - on the results of regular labor force surveys, in which the status of the unemployed is determined based on the ILO criteria.

The data show that the number of unemployed identified and counted varies significantly. This is due to the fact that the number of citizens officially recognized as unemployed by the competent authorities at the workplace is actually much less than their actual number, since most of them are not registered with the employment authorities.

Each state, based on its own and international experience, determines the strategy and tactics for solving the problems of employment and social protection, while improving methods of regulating the labor market.

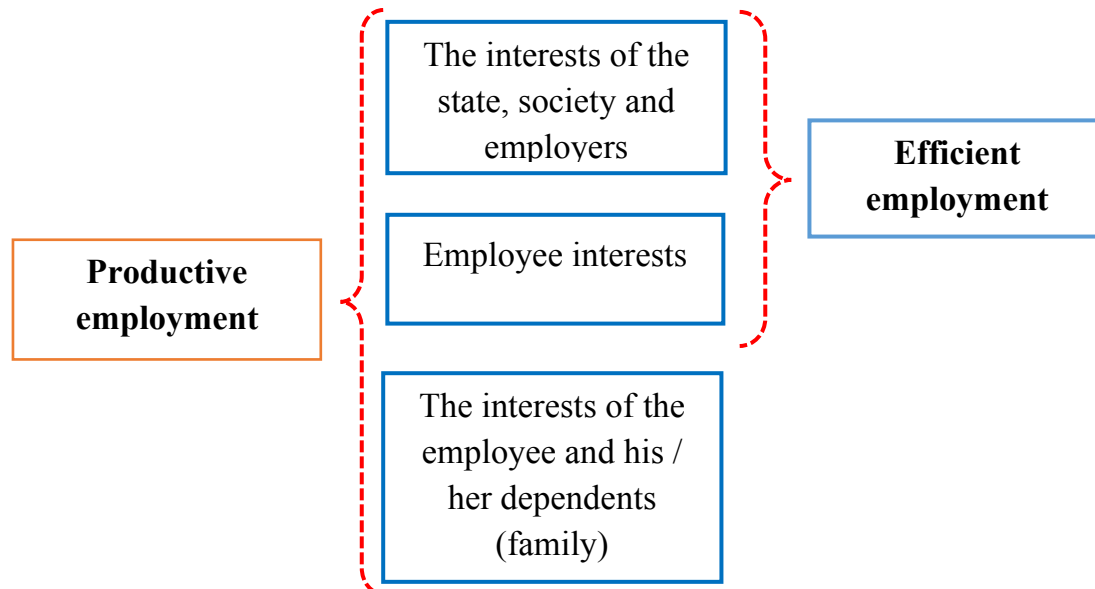
In recent years, Uzbekistan has also developed a policy of active employment of citizens, strengthening the position of the population to encourage self-employment, which will make it possible to replace unemployment benefits with social benefits - financial assistance to those who suffer from poverty.

Goals and objectives

While the concept of efficient and productive employment by the International Labor Organization (ILO) has a solid foundation, it has undergone major changes. This is now becoming an important political goal, along with such components of employment as workers' rights, international labor standards, social protection and social dialogue.

Efficient and productive employment is also overarching and has become a clear and undeniable form of employment that can be pursued in any country. And its study is one of the important tasks for every scientist in the working world.

Figure 1. The intersection of the interests of the employed employee in efficient and



productive employment¹

According to the International Labor Organization (ILO), productive employment is an activity that provides “sufficient labor productivity to enable workers and their dependents to achieve consumption levels above the poverty line” [ILO, 2012].

It is also an important link between economic growth and poverty reduction and a key instrument for poverty reduction along with social protection.

LITERATURE REVIEW

This problem can be solved by paying or increasing the amount of social benefits and financial assistance to citizens affected by poverty, but this is a one-sided approach and does not completely solve the problem.

Sustainable economic development moves employment to modern industries [McMillan, M.S.; Rodrik, D.; Sepúlveda, C., 2016] and requires support for actions that increase the efficiency of any economic activity, such as investing in technological innovation, developing skills, and at least leveraging institutional capacities.

Lavopa, A. and Szirmai, A. analyzed the relationship between the trajectories of structural modernization and the ability of countries to get out of poverty, emphasizing that increasing the size of the modern sector is not enough to ensure sustainable growth, since the process of absorbing technologies is necessary to reduce the technological gap [Lavopa, A.; Szirmai, A., 2018]. Economic development and labor productivity are closely related to the knowledge capital and innovation of countries, as education is seen as a driving force of productivity and economic development, especially in both developing and developed countries.

In 2018, the ILO estimated that 79 percent of all working people in the world lived in poverty,

while 13 percent were moderately poor and 8 percent lived in poverty. This means that for a small proportion of the world's employed, the fact that the job is not enough to keep them and their families out of poverty is a sign of unproductive employment in the workplace, especially lack of income.

A. Karnani, E. Herman, M. Georgescu, R. Islam, A. Szirmai, A. Lavopa on the specifics of productive employment in conditions of economic growth, labor potential of the economically active population and unemployment, as well as the specifics of employment poverty. Systematic research was carried out by such scientists as Decker, S. Bugelsdijk, J. Hayes, R. Gammarano.

Sustainable and sustainable growth of gross domestic product (GDP) per capita, employment growth, a steady decline in poverty and income inequality, sustainable improvement in human development indicators and basic social protection for all are important elements of inclusive growth and development [Herman, E., 2016]. Production efficiency is seen as the link between economic growth and poverty reduction [UN, 2020].

A World Bank report [WB, 2013] considers jobs as the basis for economic and social development. While effective employment and inclusive growth do dominate development policy, productive employment “dominates in many parts of the global South as a more realistic endeavor” [Rammelt, C.F. ; Leung, M. ; Gebru, K.M., 2017].

Employment-based poverty reduction is the most effective reform.

Many scholars have conducted research on poverty reduction through employment. For example, in a study by A. Karnani, professor at the University of Michigan, “poverty reduction through employment requires three main factors: employment, capacity building and labor market efficiency.” In his opinion, the factors are described as follows [Karnani A., 2011]:

The first factor “works” according to the demands of the labor market, creating jobs that match the skills of the poor;

The second factor relates to the supply of the labor market, which increases the employment of the poor through education and training programs;

The third factor is that the labor market, especially in developing countries, faces many challenges due to the lack of data for sufficient analysis and labor mobility. In this way, programs such as job coordination and job placement services on job portals can help make the labor market more efficient and thus increase employment. Improving employment opportunities, employability and labor market efficiency is certainly not an easy one that can be quickly addressed.

In countries with well-developed social safety nets, productive employment is made up not only of the poor, but also of the unemployed. Both those who join the ranks of the unemployed and those who suffer from poverty are unproductive employment. This, in turn, is eliminated under the influence of economic conditions and institutional factors.

In their studies of employment and living standards, such scientists as E. Herman, R. Anker, I. Cherneshev, R. Eggar, F. Mehran, J. Ritter, called efficient and productive employment the driving force of inclusive and sustainable development. [Herman, E., 2016; Anker, R. ; Chernyshev, I.; Egger, P. ; Mehran, F. ; Ritter, J., 2002].

Scientists from the United Nations University A. Zyrmay, M. Gibreissus, F. Guadagno and B. Verspagen identified three aspects of efficient and productive employment in the workplace;

recommended that it be an activity that includes wages, employment stability and working conditions [Szirmai, A. ; Gebreyesus, M. ; Guadagno, F. ; Verspagen, B., 2013].

Productive employment is viewed as employment that provides adequate labor productivity to enable the worker and his dependents to maintain consumption levels above the poverty line, respectively.

Measuring efficient and productive employment helps to understand how important growth in absolute income is in conditions of poverty.

The level of efficient and productive employment indicates a change in income relative to the baseline, and not a certain monetary value.

Some of the researchers noted in their studies that the real problem of national economies is their limited ability to support employment growth in the process of economic growth [Herman, E., 2014; Islam, R., 2013; Fosu, A., 2017].

Professor R. Islam, emphasizes that the limited ability to generate employment growth is insufficient for such an all-encompassing economic growth and development [R. Islam, 2013].

The efficient and productive employment indicator is useful for target groups such as a farmer on a normal working day or moving from one permanent job to another. The measure is not to lengthen working hours to make more money, but to maximize the benefit from the same level of effort. Overtime earnings, not overtime earnings, are calculated using a full day's equivalent.

Empirical studies [Herman, E., 2016] have shown a positive two-way relationship between quality jobs and per capita income. It was also pointed out that sustainable development cannot be achieved without decent and productive work [ILO. World of Labour Report 2014]. In addition, one of the most important factors for sustainable economic development and improving living standards of the population is the effective use of the potential for structural change to create a large number of good jobs [World Employment and Social Outlook: Trends, 2018]. Thus, the transition of workers from agriculture to the service sector, especially the transition of workers to skilled, skilled and highly productive service industries, requires the creation of jobs that can create productive employment.

Considering that economic growth by itself cannot be inclusive and sustainable, according to the studies of M. Shkare and R. Druzhetta, the nature and essence of economic growth are important for job creation and poverty reduction [Škare, M. ; Druzhetta, R., 2016].

Professor J. Hayes focuses on the main causes and mechanisms of employment of poverty, which manifests itself primarily as a form of productive unemployment, low wages, personal characteristics and professional qualifications of an employee, temporary and underemployment, focused on various negative aspects. factors in the structure of the household, the labor market and the social security system [Heyes, J., 2013].

The results of an empirical study of the Romanian scientist E. Herman and Professor R. Islam revealed a positive two-way relationship between quality jobs and per capita income [Herman, E., 2016; Islam, R., 2006]. They stressed that sustainable development cannot be achieved without job creation through decent and productive work [ILO. World of Labor Report 2014].

Economic development and labor productivity are closely related to the knowledge capital and innovation of the country [Beugelsdijk, S. ; Klasing, M.J. ; Milionis, P., 2018], as education is seen

as a driving force of productivity and economic development, especially in both developing and developed countries.

In the study of the scientist E. Herman, efficient and productive employment is called the driving force of comprehensive and sustainable development [Herman, E., 2016].

Research methodology

When preparing a scientific article, the methods of data grouping, analysis and systematic analysis, comparison and expert assessment were effectively used. In addition, monographic observation and analysis of its results were studied.

The methodology for calculating the deficit of efficient and productive employment was developed and analyzed on the basis of indicators of the world labor market. It turned out that the deficit of efficient and productive employment depends on the number of unemployed.

Analysis and discussion of results

Poverty in employment is caused by inadequate wages, inadequate income and working conditions. Conversely, the impact of poverty on the unemployed or those outside the economically inactive population may be largely due to a lack of adequate employment opportunities and inadequate social protection.

It took over 50,000 years for the world's population to reach 1 billion. Since 1960, it has increased to over one billion every ten to twenty years. In 1960, the world's population was 3 billion, by 2000 it reached 6 billion, and according to the forecasts of the United Nations (UN) by 2037 it will exceed 9 billion [D.I.Blum, 2020].

At the same time, according to the International Monetary Fund [Herman, E., 2016], population growth rates are declining: in the late 1960s, the annual rate increased to more than two percent, now it is about one percent, and by 2050 year it will double. Between 1960 and 2000, per capita income worldwide more than doubled, life expectancy increased to 16 years, and enrollment in primary school remained nearly universal, but rapid population growth created many complex problems in the private and public sectors. These challenges include the growing demand for food, clothing, housing, education and infrastructure, as well as the need for more people to be involved in productive work and more environmental protection. While global population growth is no longer relatively rapid, decade-long growth rates have persisted compared to increasingly high-income populations.

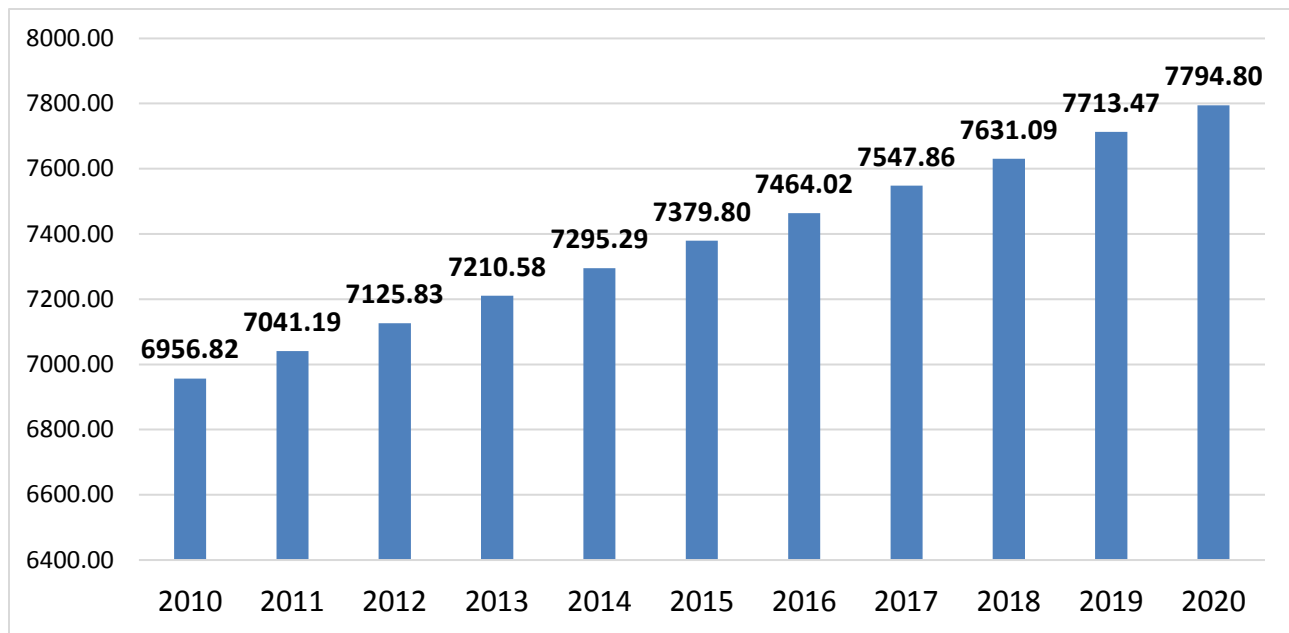


Figure 2. World population, million²

According to the UN forecast, by 2050 the world's population will choose more cities as their habitat, and the number of children under the age of 5 will lag behind the number of people over 65.

By age nine, only nine countries are expected to expect half of the world's population growth: India, Nigeria, Pakistan, Democratic Republic of the Congo, Ethiopia, Tanzania, Indonesia, Egypt, and the United States (in descending order). The population of sub-Saharan Africa could double and the population of Europe could decline.

Although the world's population is still growing, some countries are experiencing a decline in the overall population. In almost all countries, the population is aging (Fig. 2).

The world's population, which stood at 6,956.82 million in 2010, will reach 7,794.8 million by 2020. Today, natural growth in developing countries is demonstrating high rates.

The world's population continues to grow, albeit at a slower pace than at any time since the 1950s, due to declining birth rates. With a global population of 7.7 billion in 2019, the average projection predicts that the world's population could grow to about 8.5 billion in 2030, to 9.7 billion in 2050 and 10.9 billion in 2100 [UN report, 2019].

By mid-2019, the world's population had reached 7.7 billion, an increase of one billion since 2007 and two billion since 1994.

World population growth peaked in 1965-1970, when it averaged 2.1 percent per year. Since then, global population growth has slowed in half and fell below 1.1 percent per annum in 2015–2020, and is expected to slow until the end of this century.

In the context of structural and innovative changes in the modern economy, the need to solve economic and social problems requires a constant increase in labor productivity and efficiency of employees, as well as an increase in the productive employment of employees.

At this stage of such structural change, it is particularly important to focus on implementing

policies that ensure the implementation of measures to promote decent, efficient and productive employment that will generate income growth. It plays a special role in solving problems of employment structure and optimizing jobs while introducing digital transformation. In this context, one of the important links in the formation of a modern economic mechanism for ensuring efficient and productive employment of the population is the comprehensive improvement of the promotion of productive labor.

According to the proposed methodology for calculating productive and productive employment of the population, the amount of efficient and productive employment is calculated using the following formula:

$$PE = E - W_{POOR},$$

here:

E — number of employees;

W_{POOR} — employment, the number of people affected by poverty.

TABLE 1 THE NUMBER OF EFFICIENT AND PRODUCTIVE EMPLOYED PEOPLE IN THE WORLD LABOR MARKET, MILLION

Indicators	Sign	2010	2012	2014	2016	2018	2020
Total number of employed, mln	E	2984,9	3053,8	3120,4	3185,5	3263,4	3324,7
Total employed population affected by poverty, mln	W_{POOR}	940,6	830,0	731,0	685,2	651,2	622,6
Number of productive employed population, mln	PE	2044,3	2223,8	2389,4	2500,3	2612,2	2702,1

Source: Developed by the author based on ILO Statistics

The deficit of productive employment is calculated as follows:

$$PE_D = LF - PE,$$

here:

LF — labour force;

PE — productive employed population.

TABLE 2 THE DEFICIT OF EFFICIENT AND PRODUCTIVE EMPLOYMENT IN THE GLOBAL LABOR MARKET, MILLION

Кўрсаткичлар	Белги	2010 йил	2012 йил	2014 йил	2016 йил	2018 йил	2020 йил
Total labor force, mln	LF	3172,7	3240,9	3306,6	3376,8	3449,2	3515,0
Total productive employed population, mln	PE	2044,3	2223,8	2389,4	2500,3	2612,2	2702,1
The deficit of productive employment, mln	PE_D	1128,4	1017,1	917,2	876,5	837,0	812,9

Source: Developed by the author based on ILO Statistics

As can be seen from the tables above (Tables 1 and 2), the number of employed in the world increased in 2010-2020, and, accordingly, the level of productive and productive employment also tends to grow.

In 2010-2020, the total number of people employed in poverty changed from 940.6 million to 622.6 million, or the share of total employment from 64.4% to 76.9%.

The deficit of efficient and productive employment in 2010 in the world labor market amounted to UAH 1,128.4 million. in 2020, their number was 812.9, or its deficit in relation to efficient and productive employment changed from 64.4% and 35.6%, respectively, to 76.9% and 23.1%, respectively.

TABLE 3 PERCENTAGE OF THE WORLD'S EMPLOYED POPULATION BY EMPLOYMENT STRUCTURE, IN PERCENT (%)

Employment structure	2010	2012	2014	2016	2018	2020
Wage and salaried employment	48,8	50,2	51,2	52,1	52,7	52,8
Employers	2,5	2,5	2,5	2,5	2,6	2,6
Own-account workers	34,6	33,9	33,7	33,6	33,5	33,8
Contributing family workers	14,1	13,3	12,6	11,8	11,1	10,8
Жами:	100	100	100	100	100	100

Source: Developed by the author based on ILO Statistics

International organizations included the self-employed mainly in the structure of the deficit of efficient and productive employment and the vulnerable stratum of the total number of employed: persons engaged in self-employment and persons engaged in family business (Table 3).

According to the structure of the world's employed population in 2010, the share of those employed on a monthly basis was 48.8%, the share of those employed as an employer was 2.5%, the share of self-employed, self-employed was 34.6%. , family share of those engaged in entrepreneurial activity in total employment was 14.1%. Significant changes were observed in the structure of employment in 2010-2020. In particular, the share of self-employed, self-employed and family entrepreneurs in total employment tended to decline. In 2020, the share of self-employed, self-employed decreased by 0.8%, while the share of those employed by family businesses in total employment decreased by 3.3%. Between 2010 and 2020, the proportion of those who work on a monthly basis and those who work as employers increased.

The share of the employed world population in the distribution of income of countries by the structure of employment differs sharply (Table 4).

TABLE 4 THE SHARE OF THE EMPLOYED WORLD POPULATION IN THE DISTRIBUTION OF INCOMES OF COUNTRIES BY THE STRUCTURE OF EMPLOYMENT, PERCENT (%)

Employment structure	2010	2012	2014	2016	2018	2020
<i>Low-income countries</i>						
Wage and salaried employment	16,2	16,9	17,3	17,5	17,8	18,1
Employers	1,5	1,7	1,7	1,7	1,8	1,8
Own-account workers	51,7	51,2	50,6	50,9	51,1	51,3
Contributing family workers	30,5	30,2	30,4	29,8	29,3	28,8
Total	100	100	100	100	100	100

<i>Lower-middle-income countries</i>						
Wage and salaried employment	29,3	31,7	33,0	34,6	35,7	36,3
Employers	2,3	2,5	2,5	2,6	2,8	2,8
Own-account workers	51,3	49,8	49,4	48,8	48,7	48,8
Contributing family workers	17,1	16,0	15,2	14,0	12,9	12,2
Total	100	100	100	100	100	100
<i>Upper-middle-income countries</i>						
Wage and salaried employment	54,4	55,8	57,2	58,2	59,2	59,6
Employers	2,2	2,2	2,2	2,2	2,3	2,3
Own-account workers	29,2	28,8	28,5	28,4	28,3	28,3
Contributing family workers	14,1	13,2	12,0	11,1	10,2	9,8
Total	100	100	100	100	100	100
<i>High-income countries</i>						
Wage and salaried employment	86,3	86,7	87	87,4	87,6	87,8
Employers	3,9	3,7	3,6	3,5	3,4	3,4
Own-account workers	8,5	8,4	8,3	8,1	8,0	8,0
Contributing family workers	1,3	1,2	1,1	1,0	0,9	0,8
Total	100	100	100	100	100	100

Source: Developed by the author based on ILO Statistics

The data in Table 4 show that in low-, middle- and high-income countries, the proportion of persons working on a monthly wage basis in the employment structure is correspondingly increasing. In high-income countries, the bulk of the employed population works on a monthly basis, while the opposite is true in low-income countries. In particular, in 2010, the share of working on a monthly basis in low-income countries was 16.2%, in high-income countries this share was 86.3%, in low-income countries - 29.3%, in middle-income countries - this share was 54.4%. This shows that the higher the income in the country, the higher the employment rate, based on the monthly wages of the population.

In addition, the share of employees in the total number of employees as an employer in 2010 was 1.5% in low-income countries, 2.3% in low-income countries, 2.2% in high-income countries. rather than in high-income countries. the share was 3.9%. According to the data for 2020, the share of those employed as an employer in the total employed population tended to increase in all countries.

While employment poverty is declining in many countries around the world, very limited progress has been made in many developing countries. High employment growth in these countries is mainly due to the creation of substandard jobs, and the number of working poor is expected to increase in 2020-2021. As a result, the goal of ending extreme poverty by 2030 - Goal 1 of the Sustainable Development Goals (SDGs) - will become even more challenging. Insufficient economic growth per capita is one of the reasons why it is not yet possible to significantly improve the situation of most workers in low-income countries, which lag behind middle-income countries in this regard³.

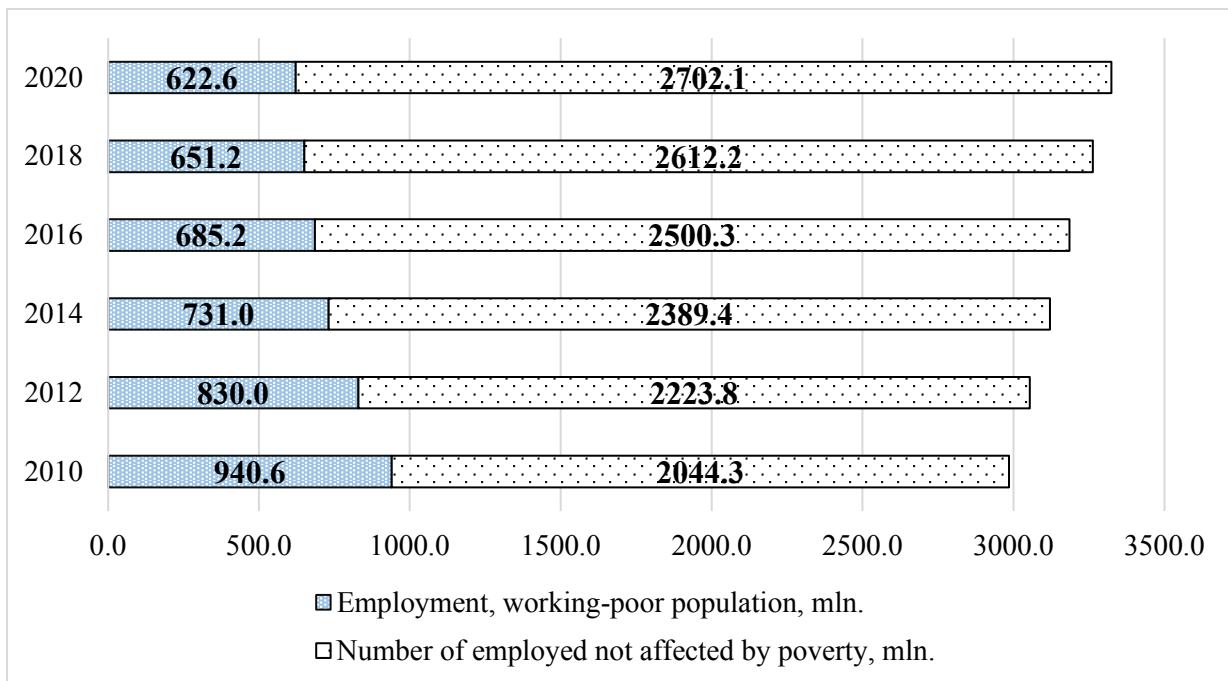


Figure 3. Persons affected by poverty in the world's employed population*, million

*Source: Developed by the author based on ILO Statistics

In reducing poverty, it is desirable not only to provide employment, but also to provide productive employment.

The number of people employed in the world labor market in 2010 amounted to 2,984.9 million people. is formed (Fig. 3). Of this number, 940.6 million were employed in poverty. people or 31.5%. In 2014, the number of employed people increased by 135.5 million compared to 2010. per capita, while the number of people in poverty among the employed population tended to decline, reaching 209.6 million. per capita. This means that in 2010 the share of the population affected by poverty in the employed population decreased by 8.1 points to 23.4%. Situation 2010-2020 She also noted a downward trend in the number of those under the influence of poverty among the employed population, as in 2010-2014. In particular, the number of employed in 2020 compared to 2010 will reach 339.8 million people. per capita, while the number of people in poverty among the employed population tended to decline, reaching 318 million. per capita. During 2010-2020, the share of the employed under the influence of poverty has significantly decreased.

The results of the above analysis show that population growth rates in high-income countries are lower than the world average. Other conditions, created to ensure a high standard of living, stable wages, high-quality jobs and good qualifications, “protect” the affected population from falling into the realm of poverty.

The results of this analysis show that all middle and low-income countries, with the exception of high-income countries, have a working population below the poverty line.

Thus, a study of the share of the population affected by poverty in the working-age population as part of reforms to reduce poverty in middle and low-income countries, as well as statistical calculations, will help to accurately assess the situation.

CONCLUSION

Reducing the deficit of efficient and productive employment is one of the important components of the human development strategy defined at the international and national levels.

The implementation of the most effective social policy aimed at material support for the well-being of the population requires adherence to the principle of maximum targeting. Accordingly, it is extremely important to identify the factors affecting the efficient and productive employment of the population, and to study the nature of their manifestation. At the same time, special empirical studies are needed in order not only to identify the “roots” of the emergence of this negative socio-economic phenomenon, but also to describe them.

Accordingly, one of the objectives of this study is to study and analyze factors such as geography, characteristics, dependence of regional and social development on the prevalence of deficit of efficient and productive employment in a particular region.

Each process corresponds to a certain force, a combination of forces necessary to carry it out; these forces are called factors. Actions, a chain of cause-and-effect relationships, conditions that determine the quantitative and qualitative characteristics of the process, together form the mechanism of the process.

The main causes and mechanisms of employment poverty are low wages, temporary and underemployment, personal characteristics and professional status of the worker, the structure of his household, the labor market and social protection, which are primarily manifested as a form of lack of productive employment, including various negative factors in the system. ...

Rapid identification of existing problems and obstacles to the determination of lower incomes of the population after employment requires in-depth study, scientific conclusions and the introduction of modern scientific approaches aimed at solving problems in a timely manner.

The existence of poverty among the employed proves that the employment of people is not always enough to avoid the risk of poverty [Georgescu, M., Herman, E., 2020]. Therefore, it is important to accelerate the transition from inefficient and unproductive employment to efficient and productive employment.

The persistence of employment poverty is a warning that the labor market is not reaching its full potential. Only the presence of the working poor should prompt relevant ministries and agencies to take action to develop strategies that will help all able-bodied citizens find decent work, efficient and productive employment.

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IMPORTANT ASPECTS OF COMBATING IGNORANCE WITH ENLIGHTENMENT

Tashmetov Tuxtasin Xudoyberganovich*

*Teacher of the Department "Social Sciences",
Tashkent region Chirchiq State Pedagogical Institute,
UZBEKISTAN

Email id: toshmetovtuxtasin@gmail.com

ABSTRACT

In a situation where disputes of different ideologies are sharply raging all over the world, it is clear to all that the struggle against thought, idea against idea, Enlightenment against ignorance is more important than ever. At such a moment, it is important that we develop in the minds of young people our love for our native land, our ancient rich history, our feelings of devotion to our religion, like our fathers, deliver it to future generations and, if necessary, increase ideological, spiritual immunity in their minds, hearts and inner world. Fergana State University

KEYWORDS: *Spirituality, Enlightenment, Tradition, Value, Globalism, Internet, Information Communication, Technology, Awareness, Immunity, Ideological Attacks, Religious Fanaticism, Terrorism.*

INTRODUCTION

In the present difficult and dangerous period, various ideological attacks that lie on our national self, our modern values are gaining momentum and gaining wide momentum, aimed at capturing the consciousness, soul and inner world of our youth. And this always encourages mankind to be on the alert. In this regard, we continue to comment on the term ogoh awareness: awareness is a very sensitive, cynical attitude of a person to what is around him, which leads a person to be in a careful attitude, in relation to the events that occur in society. Every detail in them, change, new analysis, internet, television, gazeta, attitude to the actions of people in their daily lives. After all, the first president of the Republic of Uzbekistan I.A.As Karimov pointed out, "... where carelessness and apathy reign, the most pressing issues are abandoned to selfishness, where spirituality becomes the most vulnerable and vulnerable point. And vice versa-where sobriety and vivacity, high intelligence and contemplation prevail, there spirituality becomes a powerful force.[1]"

A person must sufficiently understand the mysteries of this world, know who he is and understand the meaning of life. To date, the only way to do this has become relevant the question of adulthood as a person of high spirituality. A person with a high spirituality can not touch ignorance, ignorance and evil. After all, "...at the moment, in a situation in which deep changes are taking place in the world's geopolitical, economic and social, information and communication landscape in our eyes, the dispute of different ideologies is taking a sharp turn, it is clear to all of us that the struggle with anti-idea, anti-idea, anti-ignorance enlightenment is more important than ever.[2]"

To do this, it is necessary to pay special attention to the following in the trends of combating ignorance in the social life of young people in the global environment::

First of all, it is necessary to integrate all manifestations of ignorance into the minds of young people in the process of education and to establish a program of counter-measures in harmony with the educational process.

Secondly, in the process of combating ignorance with enlightenment, it is necessary to make extensive use of national traditions and values, as well as to prevent discrimination of national traditions and values in this process.

Thirdly, as a means to combat ignorance, it is necessary to form an image of a perfect person who can deny the qualities of ignorance in order to direct young people in the family, neighborhoods and educational institutions their future.

From the four, it is necessary to demonstrate the negative vices of ignorance and to carry out propaganda work in other ways.

Fifth, in the fight against ignorance with enlightenment, it is necessary to correctly choose the technologies of socio-cultural activity and use them more effectively.

Enlightenment first of all takes care of the human personality with its noble qualities. Find perfection in mind, consciousness, thinking, client, will. It gives enlightenment light to the process of realization of enlightenment, knowledge and education. He is the lifeblood of the will, the coach of the mind is an invaluable charm of the client, the gardener of his soul. Enlightenment introduces to the person the most convenient ways to get acquainted with the world, to effectively use the opportunities for self-realization, to grow physical attributes. He guides man to the heights of his life. Therefore, the great teacher, when they say that "the fate of progress is an enlightened man," is exactly the farewells. Because an enlightened person deeply understands his duty to the people, society and vatan. His spirituality will be healthy. Ideological immunity abates, protects itself from various threats.

In our opinion, enlightenment is a factor that guarantees that a person will enjoy the wealth of knowledge, education and culture in the form of self-awareness, self-perfection, bringing his opportunities to action.

"Enlightenment is essentially a beacon of reason, a beacon of thought, a coach of the client, a lifelong tool of finding solitude in the heart, human glory, faith, character, the architect of the word, the lifeblood of the body. It is the content, methods and means of finding perfection of knowledge, acquaintance, science and culture"[3]. Indeed, the confession of the people who are determined to create an enlightened society will be high. The perfection of humanity in man comes true through the hard and honorable ways of enlightenment. Enlightenment, in one way or another, can be called the practice of spirituality in penetrating into the world of human perception, soul,

character, emotions. At the same time, it grows in the soul and body beauties, goodness. It is he who feeds from knowledge and culture, the ways, methods and means of raising. Consequently, the first president of the Republic of Uzbekistan I.A.Karimov pays special attention to the issue of spiritual values. According to him, it is possible to preserve national identity, relying on spiritual values. However, any society can not imagine its prospects without developing and strengthening spiritual opportunities, spiritual and moral rules in the minds of people. Therefore, in the spiritual and moral values of our people, such features as patriotism, humanism, national pride, tolerance are priority. By consistently promoting them, it is possible to inflict an ideological blow on spiritual threats. Because “the restoration of the spirit of the Uzbek people, the formation of the spiritual and moral ideals of the nation is a phenomenon that is closely connected with deep nationalism and universality. The peoples living in Uzbekistan shall have a common spirit, a philosophy of conduct, without losing their originality ” [4].Now, in the conditions of globalism, spiritual threats have not suddenly appeared, the desire to seize the riches of developing regions. Scientists who have analyzed the processes of globalization, evaluate in different ways the role of the state in these processes. “In some theories, it is argued that the role of the state in the process of globalisation is increasingly diminished, while in others its role and significance do not change. Another group of scientists re-divide political power between the state and state-owned organizations in the context of globalization, and the state gives them part of its sovereignty”[5], he argues.

In the current reality, the relationship between the idea of national independence and foreign ideologies takes place in the forms of ideological struggle, ideological opposition, psychological war. Yacht ideologies occupy a thousand-year style of ideological struggle, as well as modernized styles: information space; through the application of ideological diversions, political indoctrination, ideological infiltration, dezorientation, ideological overburdening actions, they seek to evoke distrust in our people for the great future of Uzbekistan, to discredit the public policy, to divert people from the protection of the nation, to achieve indifference. In Bunda they say that it is possible to generalize (extrapolation) something private, to describe the lie as a reality, to make a big lie out of a small problem, to repeat something, to put the feeling above the crazy, to prioritize the personal interest of the listener (to be friends with him), to “envy”, to show governments badly to the people, to arouse feelings of it is used in ideological struggle.

Spiritual humanity should have learned appropriate lessons from the past and did not allow the occurrence of events, which in the XXI century were inextricably linked to the sheets of history. Poverty, environmental problems, shortage of reserves, mass diseases, religious fanaticism and terrorism inherited from the 20th century to the 21st century. On-Master, as a result of the attempts of some forces, the list of risks has expanded even more on account of new ones. The dangers such as the demographic crisis, the expulsion of democracy, spiritual poverty, information wars, the congestion of a Western way of life have increased the world's worries. The struggle of mankind against the existing vices reminds us of the shooting with a multi-headed dragon, which is described in legends in some ways[6]. As soon as one head of the Dragon is lost from his body, the growth of two or three heads from this place will show how hard it is to fight this creature. In this regard, religious fanaticism and other alien ideologies primarily rely on the ideological-political inexperience of some part of the youth. Yat struggle with ideology and destructive influences dictates intolerance to any manifestations of apathy, apathy in ideological upbringing. If we take such risks seriously, we will understand that the policy of colonialism, the policy of dependence on someone, has not disappeared in the new century, but has changed the wind of its form.

In our opinion, in raising the National idea and spirituality of young people in our country, it is necessary to comply with the following awareness requirements. These are:

□to prevent ideological emptiness in the minds of young people, to protect against attacks of foreign and foreign ideas, to form a healthy mind, a healthy worldview and a healthy mind, to ensure the continuity and continuity in the teaching of these disciplines;

□on the one hand, the power of the idea depends on the work of national enlightenment-propaganda, on its effectiveness, on the other hand, on the understanding of the problems that young people face in everyday life, on their relationship, on the other hand, the ability to respond to the idea with an opinion, against the idea, directly depends on how they solve it. In the absence of young people who are able to give their lives to the Motherland, the goals envisaged in the National idea can not be achieved. These young people should be proud of the national pride, high national pride and feel the national responsibility sincerely[7].

□using the most effective methods of forming a national idea in the minds of young people: holding various seminars-trainings, organizing competitions, forming groups of propaganda, organizing youth camps with leaders, paying the main attention to how the power of our Motherland is in them, forming a feeling of pride that this country is a child;

□in the youth it is necessary to evoke a feeling of affection for the book. In this, the role of parents in the first place, and then teachers, is incomparable. Parents should give their children fairy tales from the very beginning of their childhood, to provide them with various interesting books as they grow up-it is necessary. And this creates a huge basis for parents to grow up as a spiritually mature and harmonious person of their children. In fact, it is worth bluntly saying that in the world there is no spiritual training other than reading books. The book leads a person to spiritual perfection in every way.

□to create a ground for young people to spend their free time effectively It protects young people from the influence of external forces in their free time to learn foreign languages, engage in sports and other interesting activities. A person who has learned foreign languages will formulate his her ability to analyze himself herself using different sources and will have a deeper understanding of what is good and what is bad. Obviously, the spirituality, ideological immunity of a healthy person will be highly developed, and through this any repression will be eliminated;

□to determine the interest, desire and inclination of the students in learning tart to acquire knowledge. It also constitutes the study, use, etc. of the experience of advanced countries.

In fact, since the future of any state is in the hands of young people, it is necessary to begin with the education of the consciousness of the younger generation in the spirit of the nation. At the same time , the fact that a person knows the genius of self-awareness is not indifferent to the realities of the surrounding world, deep study of worldly and religious knowledge and knowledge can certainly struggle “Enlightenment against ignorance” if it is constantly in search.

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CASH ECONOMY IN INDIA: AN ECONOMIC ANALYSIS

Dr. Sathyanarayana*

*Assistant Professor of Economics

Department of Economics, B M Shetty Government First Grade College

Konanur, Arakalagudu taluk, Hassan, Karnataka, INDIA

Email id: sathya956@gmail.com

ABSTRACT

Moving towards cash to a cashless economy is one of the major transformations in the Indian economy. In this view, the present paper examines the currency - GDP ratio and the burden of the cash economy in India. It is found that there is a high positive correlation between total expenditure and expenditure for the printing of notes by RBI. It is suggested that adopting a cashless economy is the best medicine to getting out from the burden of the cash economy in India. This paper is purely based on the Reserve Bank of India's data.

KEYWORDS: Banking, Cash, Cashless Economy, Digital Payments, GDP.

I. INTRODUCTION

Money was not used in the early history of man. Exchanges were few since each family was self-sufficient. Whatever exchanges, there were, they took the form of barter, that is, exchange of goods for the other goods. Various difficulties were faced by the people in the barter economy. Later with the arrival of industrialization, size of the economy expanded which resulted in the invention of money. Throughout history, to the present day, there is no agreement on the most fundamental of questions – what is money? (Walters, 1973). In economics, the term ‘money’ is used in a much wider sense. Money is what money does (Hicks, 1967). Conceptually, it can be defined as any commodity that is generally accepted as a medium of exchange and a measure of value. Historically, many commodities have performed these functions, and forms of money have been changing from cattle to cards and most recently digital currency.

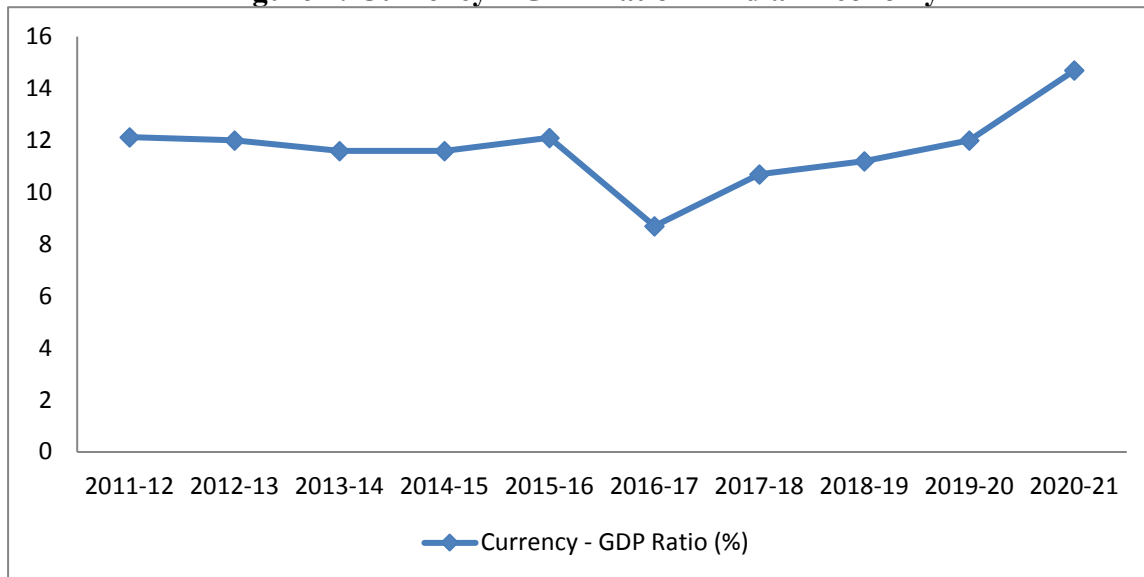
A financial transaction is an agreement or communication, carried out between a buyer and a seller to exchange an asset for payment. It involves a change in the status of the finances of two or more businesses or individuals. The buyer and seller are separate entities or objects, often involving the exchange of items of value, such as information, goods, services, and money. Generally, financial transactions can be done through direct or indirect methods of cash payments. The direct method

involves the physical existence of currency notes for payments and settlements where indirect methods involve cashless payment methods which are popularly known as digital currency.

II. CURRENCY - GDP RATIO IN INDIAN ECONOMY

Cash-to-GDP Ratio or Currency in Circulation (CIC) to GDP Ratio or simply currency-to-GDP ratio shows the value of cash in circulation as a ratio of GDP. The ratio of currency in circulation to Gross Domestic Product (GDP) takes into account the size of the Indian economy. As an economy grows, the total amount of currency being used in it also grows in absolute terms. Hence, it is important to take the size of the economy into account.

Figure 1: Currency – GDP Ratio in Indian Economy



Source: RBI Annual Report: 2020-21. Page No. 53 & 319.

The Currency-to-GDP ratio as of March 2020 was 14.7 %, which is the highest in all the previous years. The currency-to-GDP ratio as of March 2018 and March 2019 was 11.2 % and 12.00%, respectively. However, the currency-GDP ratio increased to its pre-demonetization level of 12.0 percent in 2019-20 from 11.2 percent a year ago, indicating the rise in cash intensity in the economy in response to the pandemic (figure 1). The higher currency in circulation (CiC) growth at 17.2 percent in 2020-21 resulted in the currency-GDP ratio increasing to 14.7 percent as cash intensity in the economy increased in the wake of the pandemic (RBI Annual Report, 2020-21).

Despite the increased efforts of authorities to push for a less-cash economy, the currency in circulation has increased steadily in the Indian economy with every one percent increase in GDP. The total currency in circulation, adjusting for the size of the Indian economy, reached a two-decade high in March 2021. Despite the emergence of various alternatives to cash transactions, the public still has a strong affiliation for currency as evident from the currency to GDP ratio. In the process, India's currency-GDP ratio increased to 14.7 percent in 2020-21 from 8.7 percent in 2016-17 with the expansion matched by liquidity injection through Liquidity Adjustment Facility (LAF) operations as well as outright open market purchases among the sources of reserve money and reflected in net domestic assets in the form of net RBI credit to the Government. Considering the presence of a huge informal sector in the Indian economy, a higher currency-to-GDP ratio suggests that economic transactions in the informal sector are picking up.

III. BURDEN OF THE CASH ECONOMY

Cash remains the most readily available and widely used form of payment in India. In 2012, for instance, 87% of all transactions in India were cash-based (Mazzotta et al, 2014) . Cash also fuels India's huge informal economy, which constitutes 23% of official GDP. (Schnieder, et al, 2010). Even Indians with access to formal banking tend to carry a lot of cash with them—typically in high denomination bills. The circulation of cash provides a good home for disease-causing bacteria, according to a study on the bacterial composition in banknotes (Heshikiet, Y & et al, 2017). Cashless payments eliminate several risks, including counterfeit money¹, theft of cash by employees, and burglary or robbery of cash (Srinivasan, S, 2017). The costs of physical security, physically processing cash (withdrawing from the bank, transporting, counting) are also reduced once a business goes completely cashless, as is the risk that the business will not have enough cash on hand to make a change. Moreover, paper money fuels corruption, terrorism, tax evasion, and illegal immigration. One significant societal advantage cited by proponents is the difficulty of money laundering, tax evasion, performing illegal transactions, and funding illegal activity in a cashless society.

One of the major financial burdens of the Reserve Bank of India (RBI) is the printing cost of the various denominations of currency notes in circulation. In addition to this, RBI incurs expenditure in the course of performing its statutory functions by way of agency charges/commission, the printing of notes, expenditure on remittance of currency besides staff-related and other expenses. The total expenditure of the Bank decreased by 39.72 percent from Rs. 282.77 billion in 2017-18 to Rs. 170.45 billion in 2018-19 (table 1).

TABLE 1: EXPENDITURE FOR PRINTING OF CURRENCY NOTES BY RBI (RS. IN BILLION)

Year	Expenditure for Printing of Notes	Total Expenditure
2014-15	37.62 (28.17)	133.56
2015-16	34.21 (22.82)	149.9
2016-17	79.65 (25.57)	311.55
2017-18	49.12 (17.37)	282.77
2018-19	48.11 (28.23)	170.45
Correlation Coefficient Value : 0.840285		
Correlation Probability: 0.0748		

Note: Figures in parentheses represent the value in percentage

Source: RBI annual Report 2018-19, page no. 226.

However, the expenditure incurred in the printing of banknotes was 37.62 billion in 2014-15 and it is substantially increased to 48.11 billion in 2018-19. The expenditure for printing notes was very high (79.65 billion) in 2016-17 due to the introduction of new currency notes in circulation and the announcement of demonetization. More interestingly, there is a high positive correlation (0.84) between total expenditure and expenditure for the printing of notes by RBI during 2014-2018 and it is significant at the 10 % level (0.0748) (table 1). The expenditure for the printing of currency notes is becoming a financial burden to RBI over a period. The introduction of digital currencies can be the best way to reduce this financial burden of the RBI. Accordingly, RBI has taken many initiatives regarding the cashless system for the past 5 years.

TABLE 2: DISPOSAL OF SOILED BANKNOTES (APRIL-MARCH) (PIECES IN LAKH)

Denomination	2018-19	%	2019-20	%	2020-21	%
2000	6	0.00	1768	1.21	4548	4.56
1000	22	0.02	0	0.00	0	0.00
500	154	0.12	1645	1.12	5909	5.93
200	1	0.00	318	0.22	1186	1.19
100	37945	30.62	44793	30.57	42433	42.56
50	8352	6.74	19070	13.01	12738	12.78
20	11626	9.38	21948	14.98	10325	10.36
10	65239	52.64	55744	38.04	21999	22.06
up to 5	591	0.48	1244	0.85	564	0.57
Total	123936	100.00	146530	100.00	99702	100.00

Source: RBI Annual Report: 2018-19, Page No. 180.

There is always the possibility of increasing soiled and mutilated currency notes² when an economy has a greater economic transaction in hard currencies. The disposable process and re-printing cost for replacing these currency notes bring additional costs to the government. The denominations of Rs. 10 and Rs. 100 together accounted for 65 percent of the total disposed soiled banknotes in 2020-21. The denominations of Rs. 2000, 500, 200, and 100 have recorded positive increases in their soiled forms and remaining recorded negative trends (table 2). The disposal of soiled banknotes was initially affected due to the COVID-19 pandemic and was expedited during the latter part of the year 2020-21. Despite efforts, the year as a whole still witnessed a 32 percent decline in the disposal of soiled banknotes as compared to the previous year.

Fake Indian Currency Note (FICN) is a term used by officials and media to refer counterfeit currency notes circulated in the Indian economy. Recent advances in printing technology have greatly aided the production of counterfeit notes. As a result, counterfeiting is posing increasing challenges to currencies all over the world, including India. In 2012, while responding to a question in parliament, then Finance Minister admitted that there is no confirmed estimate of counterfeit (fake) currency in India (Business Line 2012). The main motive of the announcement of demonetization on 8th November 2016 was to curb black money and widespread counterfeit currency in the country. Counterfeit Money (Fake currency) is like poison, it will vanish the whole economic system.

TABLE 3: NUMBER OF COUNTERFEIT NOTES DETECTED (NO. OF PIECES)

Year	Detection at Reserve Bank	Other Banks	Total
2016-17	32432 (4.3)	729640 (95.7)	762072 (100)
2017-18	188693 (36.1)	334090 (63.9)	522783 (100)
2018-19	17781(5.6)	299603 (94.4)	317384 (100)
2019-20	13530 (4.6)	283165 (95.4)	296695 (100.0)
2020-21	8107 (3.9)	200518 (96.1)	208625 (100.0)

Note: 1. Figures in parentheses represent the percentage share in total

2. Does not include counterfeit notes seized by the police and other enforcement agencies.

Source: RBI Annual Report: 2020-21, Page No. 180.

Although fake currency is being printed with precision, the Crime Investigation Department (CID) of India says that it can be detected with some effort. Currency printed by local racketeers can be detected easily as they use the photographic method, hand-engraved blocks, lithographic processes and computer colour scanning. During 2020-21, out of the total Fake Indian Currency Notes (FICNs) detected in the banking sector, 3.9 percent were detected at the Reserve Bank and 96.1 percent were detected by other banks. The detection of fake currencies from other Indian banks has been increased from 63.9 % (2017-18) to 96.1 % (2019-20). During 2020-21, out of the total Fake Indian Currency Notes (FICNs) detected in the banking sector, 3.9 percent were detected at the Reserve Bank and 96.1 percent by other banks (table 3). Theoretically and practically, it is proved that the higher level of fake currencies in circulation surely destroys the whole economic system and people will be losing their confidence in the monetary authorities of the country. However, it is opined that moving towards a cashless economy will reduce the FICNs in circulation.

TABLE 4: DENOMINATION-WISE COUNTERFEIT NOTES DETECTED IN THE BANKING SYSTEM (APRIL-MARCH) (NUMBER OF PIECES)

Denomination (Rs.)	Number of Pieces				
	2016-17	2017-18	2018-19	2019-20	2020-21
2 & 5	80	1	0	22	9
10	523	287	345	844	304
20	324	437	818	510	267
50	9222	23447	36875	47454	24802
100	177195	239182	221218	168739	110736
200	0	79	12728	31969	24245
500 (MG series)	317567	127918	971	11	9
500 (New design)	199	9892	21865	30054	39453
1000	256324	103611	717	72	2
2000	638	17929	21847	17020	8798
Total	762072	522783	317384	296695	208625

Source: RBI Annual Report: 2020-21 Page No. 181

Fake currency has been a thorn in India's economic system even after the demonetization exercise back in 2016. Five years down the line, and after adding 'security features', the counterfeit currency still seems to be lurking in the shadows. During 2020-21, the highest denomination-wise fake currency detected in Rs. 100 and it is followed by Rs. 500 (New design), Rs. 50 and Rs. 200. Even though counterfeit notes were detected in the denomination of Rs. 100 declined annually when compared to the previous years, their percentage share was recorded highest in all the years. In the denomination of Rs. 200, which was introduced in August 2017, there were 12,728 counterfeit notes detected as against 79 during the previous year (2017-18). Counterfeit notes in the denomination of Rs. 500 (new design notes), increased to 39453 in 2020 from 30054 in 2019. Compared with the previous year (2019-20), there was an increase of 31.3 percent in counterfeit notes detected in the denomination of '500 [Mahatma Gandhi (New) Series – 2020-21] (table 4).

Despite the extent of counterfeiting being small, it poses serious threats to the currency and financial system. The Government and RBI have progressively responded to this threat by redesigning notes and most recently the demonetization process in 2016. The main aim of the demonetization process of the Indian Government was to reduce counterfeit currency in the

economy. Along with the demonetization process, digital India programme, promoting people to use more cashless transactions through mobile-based apps, online transactions by using internet banking, etc has a strong goal of reducing fake Indian currencies.

IV. CONCLUDING REMARKS

This paper briefly examined the currency-GDP ratio and the burden of the cash economy in India. The burden of the cash economy is examined with expenditure for the printing of currency notes, detection of the soiled and mutilated, and also the problem of the counterfeit (fake) currency notes in the Indian economy.

It is found that the currency-to-GDP ratio continued to grow in the aftermath of demonetization towards the long-term Indian average of around 12% of gross domestic product. Considering the presence of a huge informal sector in the Indian economy, a higher currency-to-GDP ratio suggested that economic transactions in the informal sector are picking up pace again, even though they are still not back to the pre-demonetization levels. India is a cash-intensive economy where retail payments are majorly driven by cash. This affinity for cash is becoming a big burden on the economy. Additionally, the printing cost of cash and fake currencies also increasing day by day. With the huge amount of currency in circulation, the costs associated for handling the cash are tremendous. Low-value notes are replaced frequently because of the damage due to poor handling. Also, features are upgraded from time to time to push out fake notes in circulation. This whole exercise of pulling out old notes and replacing them with new ones incurs a huge cost.

At present, getting out from the huge burden of the cash economy is one of the challenges in the Indian Economy. In this regard, the policy-makers at RBI and the Central Government are suggesting adopting a cashless society. A cashless society describes an economic state whereby financial transactions are not conducted with money in the form of physical banknotes or coins, but rather through the transfer of digital information (usually an electronic representation of money) between the transacting parties. The growing shift towards digital payments is strongly debated among governments, central banks, and financial experts including India. Indeed, the proliferation of new electronic and mobile instruments has opened the door to a possible revolution of the payments landscape. Finally, it's time to say goodbye to paper currency and adopt a new way of making cashless payments. Let's help our nation to fight against black money and cash crunch problems by using digital currencies.

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IMPORTANCE AND ROLE OF FINANCING OF RELIGIOUS EDUCATIONAL INSTITUTIONS IN THE DEVELOPMENT OF RELIGIOUS ENLIGHTENMENT

Dusanov Salim Mamarasulovich*; Mallabaev Abdullakh**

*Scientific Research,
Tashkent State University of Economics,
UZBEKISTAN
Email id: msalimd@mail.ru

**Deputy Director of the Repository of Manuscripts,
International Islamic Academy of UZBEKISTAN
Email id: abdun-rasul@mail.ru

ABSTRACT

The article discusses topical issues such as the financing of religious educational institutions, the effectiveness of the use of financial resources, the mechanisms of financial support for teachers and students, the importance and role of financial incentives. Analytical approaches of Uzbek and foreign scholars on the importance of funding religious education and the stages of its development were studied. The article presents a comparative analysis of the historical significance of funding and its current state, based on the results of monographic and expert and systematic analysis.

KEYWORDS: *Stories, Religious Literacy, Teachers And Students, School Teachers, Muaddibs, Teachers Working In Mosques And Madrassas, Time-Related Salary, Student-Related Salary, Muaddibs, Judges, Bayt Al-Hikma, Fatimids, Charter, Charter, Award, Reward, Praise, Encouragement, Literary Award, Special Religious Education, Religious Education In Public Educational Institutions, Education Through Electronic Portals Of Official Religious Education.*

INTRODUCTION

Today in our Republic on the development of the activities of existing religious educational institutions, international research centers, has been done a lot of significant work for radical improvement of the religious and enlightenment sphere, to study the rich scientific heritage of our ancestors.

The head of our state has issued a number of decrees, resolutions and orders in order to carry out radical changes and reforms in the field. Including, PQ-2995 decree “On measures to further improve the system of preservation, research and promotion of ancient written sources” on May 24, 2017, PF-5416 decree “On measures to radically improve the activities of the religious and enlightenment sphere” on April 16, 2018, PQ-4436 decree “On additional measures to improve the activities of the religious and educational sphere” on September 4, 2019, PQ-4802 decree “On measures to establish the Imam Moturidi International Research Center” on August 11, 2020.

Alternatively, such decrees as №364 “About social assistance and privileges in further improvement of spiritual and enlightenment, educational work and activity in the field of religion” on August 22, 2003, №483 “On the organization of the Imam Bukhari International Research Center under the Cabinet of Ministers of the Republic of Uzbekistan” on July 10, 2017, №896 “On measures to organize and support the activities of the School of Hadith” on November 1, 2018 of Cabinet of Ministers of the Republic of Uzbekistan aimed at the development of religious-enlightenment and religious educational institutions, its full support.

Analysis of the literature on the subject.

The issues of financing of religious education (higher education) institutions, the order of payment of monthly salaries to professors and teachers, awarding scholarships to students has been studied by foreign scientists, including doctor Ahmad Chalabi, Salahuddin Munjid, Khuda Bukhsh, William Schweiker, Maria Antonaccio, Elizabeth Bucar, David A. Clairmont etc. By historians, philosophers, literary critics, Islamic scholars, theologians of our Republic have been conducted studies for historical aspects of the development of religious educational institutions, development of madrassas, teaching methods such as Z.Abdurashidov, L.Asrorova, B.Valikhujaev, Kh.Ziyoev, A.Inoyatov, M.Soliev, A.Irisov, A.Nosirov, T.Rahmonov, R.Shamsutdinov, B.Rasulov and others. However, on the financial condition of religious educational institutions, principles and sources of funding no research has been conducted by Uzbek scientists. That’s why it requires to conduct scientific research, develop science-based suggestions and recommendations in this direction.

RESEARCH METHODOLOGY

During the research proposals were developed on the importance of financial independence of higher education institutions and improving ways to increase the efficiency of financial resources, stages of development of religious education in our country, historical foundations and current status by using monographic analysis and structural analysis.

Analysis and results:

There is evidence that development of science in the Islamic world, appreciation of scholars, creating conditions for students to learn had started from the period of our Prophet Muhammad (s.a.w.).

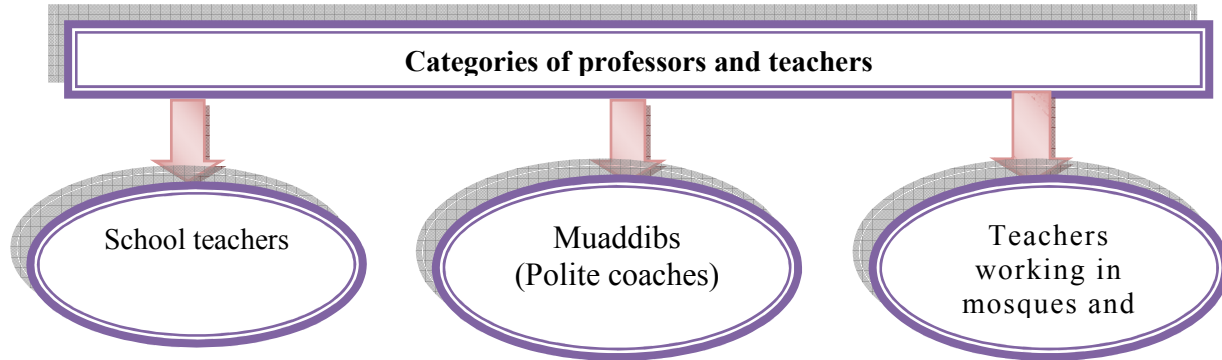
Later in the time of the caliphs, including, by the time of Umar the Islamic country has expanded territorially. As a result, Umar selecting several Companions based on their intelligence and scientific potential sent as a teacher to the famous cities of that period.

In the early days of Islam scientists not financially encouraged by the state. They gave religious education to the people only in the hope of reward. At that time mainly mosques operated as educational institutions and scholars were engaged in teaching in mosques. In mosques sciences not taught to separate topics. Classes are not state-funded and lesson schedule is not planned.

Education financing began by dividing the lessons into topics. After the ideas have been put forward that the lessons will be conducted on a specific topic the government began to intervene directly in the field of education. For the first time, the division of education into topics It took place during the time of Mu'awiya. The first subject of Islamic education was "storytelling"¹. The storytellers were paid 10 dinars (gold coins) a month.

Ibn Hawqal, may God have mercy on him, writes about the low salaries of school teachers in Sicily: "They earn ten dirhams a year. Even their annual salary is sometimes less than that amount."²

An ancient category of teachers in the Islamic world³. Table-1



THE CATEGORY AND CLASSIFICATION OF TEACHERS IN THE ISLAMIC WORLD IN ANTIQUITY TABLE-2

No	Categories of professors and teachers	Direction of teaching	Monthly salaries	Note
1.	School teachers	Teachers worked mainly in rural schools and taught young children the Qur'an.	Teachers were given bread, clothes, and other similar items in lieu of wages	<p><u>Time-related salary.</u> Most students paid the teacher a weekly or monthly fee in this style.</p> <p><u>The salary associated with the student child himself.</u> In this case, after the pupil completes a surah from the Qur'an, the parents pay a certain amount of money in order to thank the teacher.</p> <p>The fee paid varied depending on the economic status of the pupil's family.</p>

2.	Muaddibs (polite coaches)	Muaddib, that is, polite coaches, were mainly engaged in raising the children of caliphs, ministers and emirs, as well as wealthy individuals.	The average monthly salary of a muaddib was one thousand dirhams. Dirham means silver coin. The muaddibs were also paid in gold coins, earning an average of seventy dinars a month ⁴ .	Of course, the generosity and economic status of the caliph, king, or officials were also a major factor in the muaddibs' high salaries.
3.	<i>Teachers working in mosques and madrassas</i> ⁵ .	The Mudarris were the most prestigious and high-ranking scholars. They were also highly respected in the presence of caliphs and kings, advising on political, social and economic issues.	The average monthly salary of these kind of teachers was one thousand dinars.	

Later madrasas were established, after the introduction of the position of teacher general treasury for teachers (state treasury) and a certain amount of salary was to be allocated from the foundations every month. Salaries are the position of teachers and defined differently depending on the capacity of the foundations. In both cases, teachers are well paid.

Maqrizi and Qalakshandi, may God have mercy on them, wrote valuable information about the salaries paid to teachers and civil servants during the Fatimid period. If you look at the list they give, you can see that teachers' salaries are high⁶.

INFORMATION ON THE MONTHLY SALARIES OF PROFESSORS AND TEACHERS IN ANCIENT TIMES TABLE-3

№	Position name	The amount of monthly salary to be paid
1.	Secretary of school (Дасти шариф котиби)	150 (one hundred and fifty) dinars
2.	Head teacher (Дўиюд-дуўот)	100 (hundred) dinars
3.	Teachers	100 (hundred) dinars
4.	The owner of the brochure	100 (hundred) dinars
5.	Mosque preacher	From 10 (ten) dinars to 20 (twenty) dinars
6.	Caliph poet	From 10 (ten) dinars to 20 (twenty) dinars

Salahuddin Ayyubi, may God have mercy on him, also carried out some reforms in the field of education. In particular, he will build a madrasah called Madrasai Salohiya and Sheikh Najmuddin Habushi, may God have mercy on him, appointed him as a teacher and supervisor of the madrasa. Salahuddin Ayyubi, may God have mercy on him, decided to pay the following salaries to the scholar working in this position:

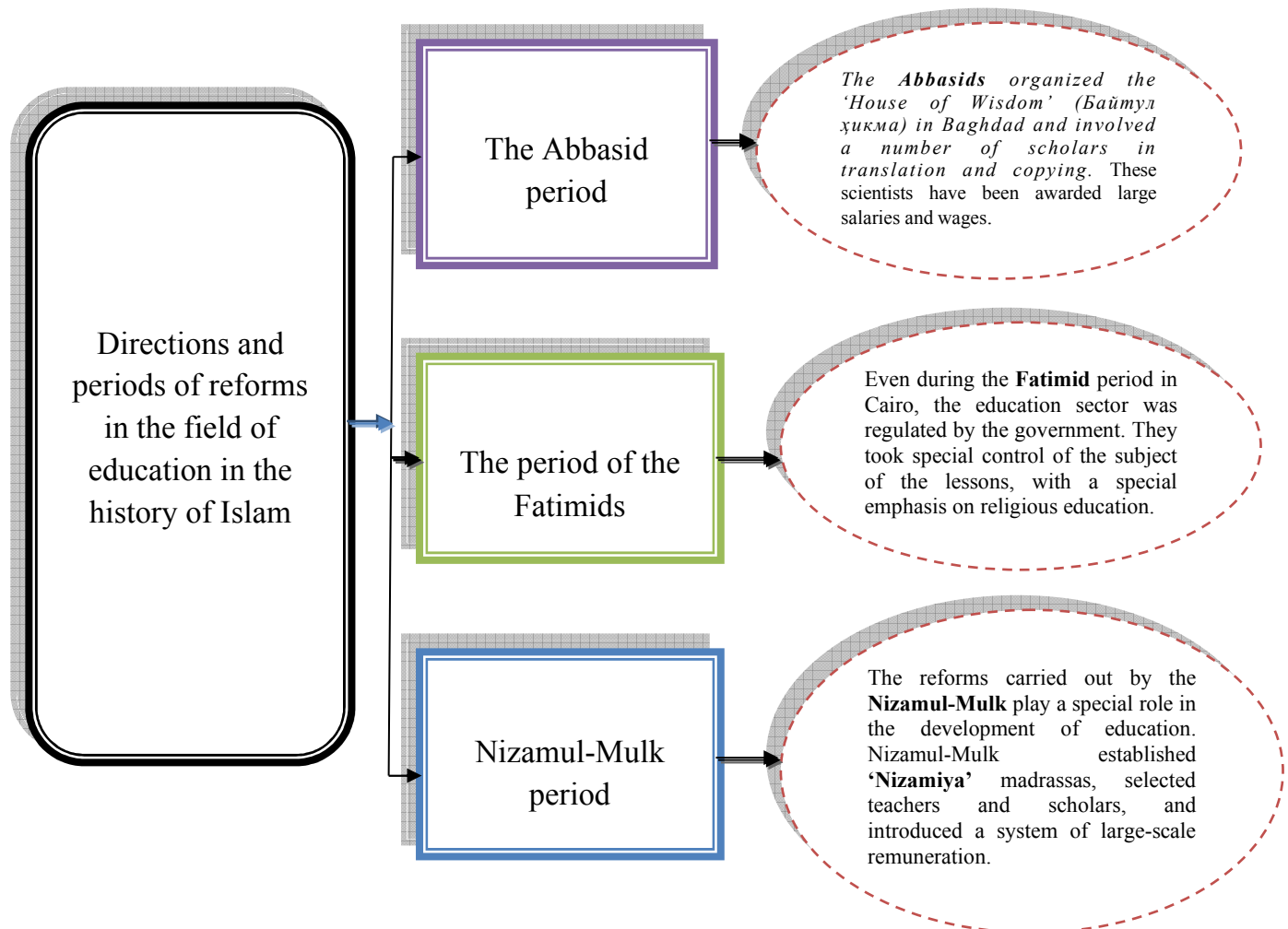
1. 40 (forty) dinars per month for teaching;
2. 10 (ten) dinars per month to supervise the work of the foundation;

Also, to those who have held this position given the bread equal 60 Egyptian rat per day and the right to use the Nile twice a day⁶.

Salahuddin Ayyubi, may God have mercy on him, built another madrasah called “Suyufiya” and Sheikh Majduddin Muhammad ibn Muhammad Jabti, may God have mercy on him, appointed him as a teacher. Teacher (mudarris), on the other hand, receives a monthly salary of 11 (eleven) dinars⁷.

This is how the government’s education reform began. Later, with the establishment of educational institutions by the state, the scope of these reforms expanded. This can be seen in the following:

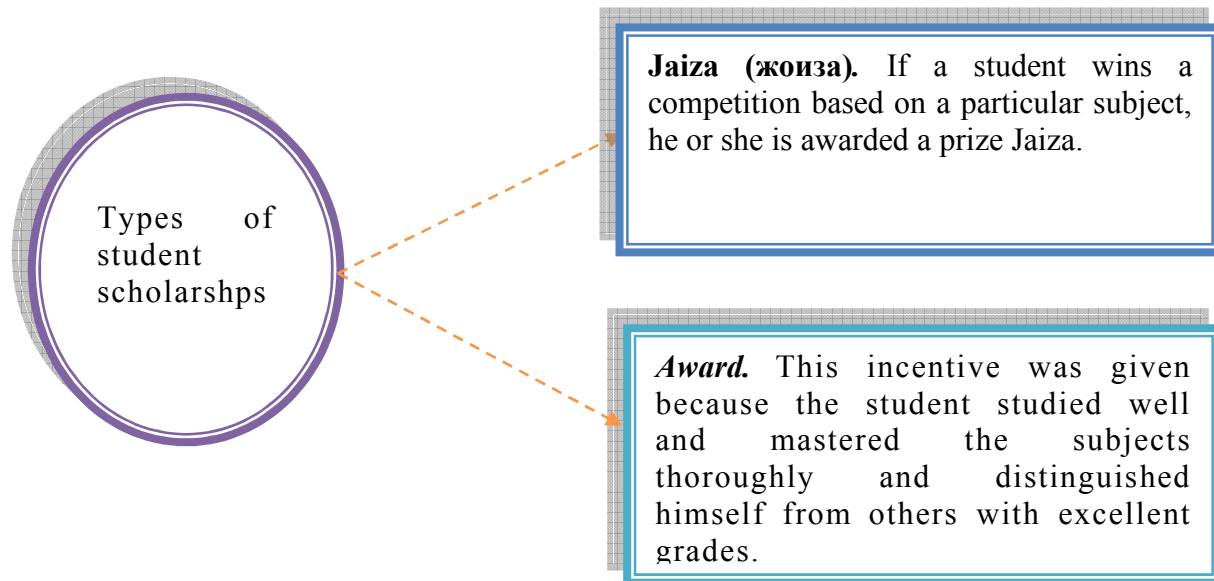
DIRECTIONS OF EDUCATIONAL REFORMS IN THE HISTORY OF ISLAM. TABLE-4



Imaduddin Asfahani, may God have mercy on him, writes about Nizamul-mulk madrasas: “During the Seljuk period, where a scholar was famous and was “Sea of knowledge”, a madrasah was built for him, a foundation was set aside for him, and a library was established inside.⁶”

Pupils and students have not been left out of the reforms in the field of education. Various scholarships (awards) have also been organized to encourage students to study. The awards are divided into two types⁷:

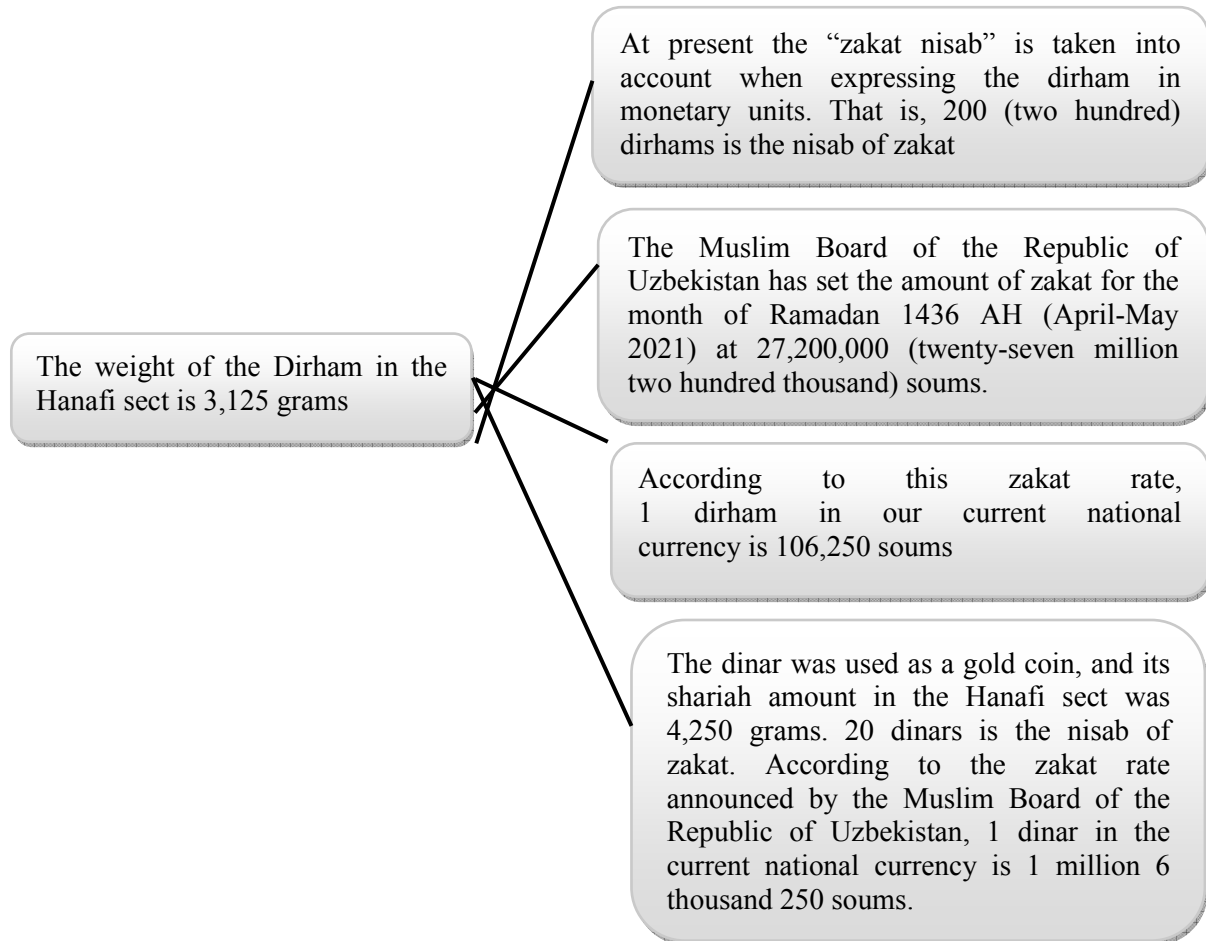
TYPES OF STUDENT SCHOLARSHIPS: TABLE-5



These awards were presented in two different ways:

- 1. Praise, encouragement and encouragement.** This is also called a "literary award". Outstanding students who excel in etiquette and knowledge among the pupils (students) were awarded with this award and made public. People congratulated the pupil and sprinkled things like almonds and walnuts on him. This served to increase the interest of other students in science.⁸
- 2. Financial awards (jaiza – жоиза).** Financial incentives are mainly set by the founders of the madrassa. Salahuddin Munjid (may Allah have mercy on him) writes: “8 dirhams were given to each of those (students) engaged in science. For those who are more involved in science, this amount of salary has also been increased. The listeners were given three or four dirhams. Well-read listeners are paid extra. Eight dirhams were also paid in addition to gifted students. A student who memorizes the books of Hadith is awarded a special prize (jaiza – жоиза) by the sheikh (teacher)”⁹.

THE PLACE AND PRESENT VALUE OF THE DINAR AND DIRHAM IN ISLAMIC HISTORY: TABLE-6

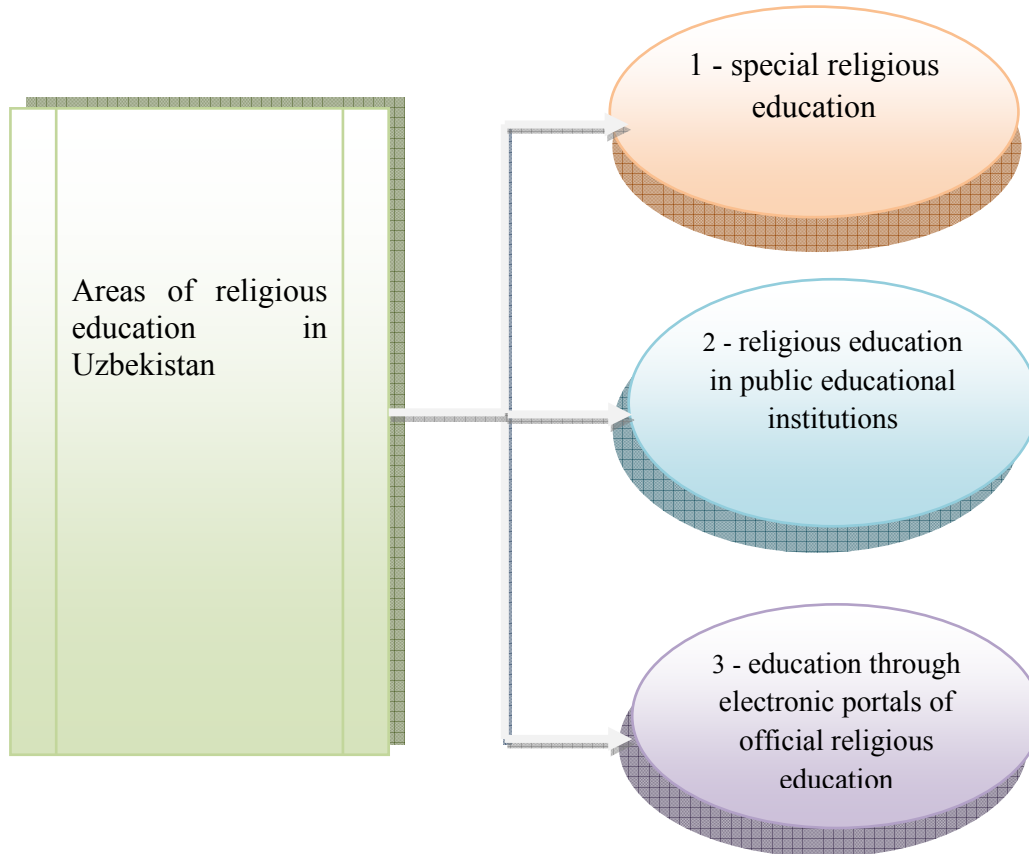


In the reforms in the field of education in the history of Islam salaries and bonuses paid to teachers and students, basically, were in the form of dirhams and dinar coins. The dirham and the dinar have long been treated as the main currency in Islamic countries. Although these coins are now obsolete, they have retained their importance in the implementation of some religious precepts. That is, dirhams and dinar coins were minted in different weights in each country and city, it is almost impossible to compare their value with current currencies. But the shariah amount of dirham and dinar has been preserved so far. Based on this amount, it is possible to get at least a little idea of the level of financial support of teachers and students.

Based on this account, it is possible to draw an approximate conclusion about the above salaries and bonuses paid to teachers and students.

Even today, in our Republic has created sufficient conditions for education and research in this area. Given the opportunities created for religious education, the field of religious education in the country can be divided into 3 stages:

AREAS OF RELIGIOUS EDUCATION IN UZBEKISTAN¹⁰: TABLE-7



There are 15 religious educational institutions in Uzbekistan. 13 of them are higher and secondary special religious educational institutions under the auspices of the Muslim Board of Uzbekistan, including 3 higher educational – Tashkent Islamic Institute, “Mir Arab” Higher Madrasah, School of Hadith Science and 10 secondary special Islamic schools (2 of them are women's secondary special Islamic educational institutions) and 2 non-Islamic religious educational institutions¹¹.

At the Tashkent Islamic Institute, a 3-year modular education system has been introduced in order to improve Imam-khatibs’ skills who with secondary special education and make them more educated. Imam-khatibs have been admitted to this education system from the 2019-2020 academic year without leaving their main place of work.

There are 3 research institutions (International Scientific Research Center named after Imam Bukhari, Imam Termezi Research Center and Imam Moturudi International Research Centers) and the Center for Islamic Civilization.

From these educational institutions International Islamic Academy of Uzbekistan organized by the Committee on Religious Affairs under the Cabinet of Ministers of the Republic of Uzbekistan and the Muslim Board of Uzbekistan, is a higher education institution that teaches religious and secular sciences together. It was founded according to the decree №466 of the Cabinet of Ministers of the Republic of Uzbekistan “On measures to organize and support the activities of the International Islamic Academy of Uzbekistan” on June 18, 2018¹². At the same time, this higher education institution is funded by the state organization and the state budget.

In Uzbekistan, in contrast to religious education, **academic theology-Islamic** studies is also established. The International Islamic Academy of Uzbekistan is a leading institution of higher education and research specializing in the training of qualified specialists in this area.

Following the relevant decree adopted in 2018, the Vaqf Charitable Public Fund was established. Among the main tasks of the Fund construction, repair, reconstruction, beautification, strengthening the material and technical base of mosques and buildings of religious educational institutions, preservation and reconstruction of shrines of historical and architectural significance, financing the activities of religious educational institutions, research centers and material and social support for professors, researchers, specialists and students etc. carried out by the Fund.

INFORMATION ON THE TOTAL INCOME AND EXPENSES OF THE VAQF CHARITABLE FUND¹³ TABLE-8

Indicators		Unit of measurement	VAQF report (cash)					
			2018 year		2019 year		2020 year	
			Total	VAQF	Total	VAQF	Total	VAQF
1.	Total income, including	billion soums	48,1	48,1	159,3	159,3	59,4	59,4
1.1	Residue at the beginning of the year	billion soums	0,0	0,0	16,2	16,2	20,6	20,6
1.2	Income throughout the year	billion soums	48,1	48,1	143,1	143,1	38,8	38,8
2.	Total cost	billion soums	31,9	31,9	138,7	138,7	48,0	48,0

In 2018, the Fund received 48,1 billion soums, of which 31,9 billion soums were spent. By 2019, we can see a sharp rise in Fund revenues and by 2020, revenues had declined directly. Because the pandemic and quarantine processes observed around the world were affected.

THE SHARE OF EDUCATION IN THE EXPENDITURES OF THE VAQF CHARITY FUND¹⁴ TABLE-9

№	Name of indicators	Costs, over the years (billion soums)		
		2018	2019	2020
1	Education	1,72	4,67	2,24
2	Health	0,51	1,88	2,50
3	Culture and sport	0,57	0,41	0,33
4	Science	0,20	0,70	0,50
5	<i>Social security</i>	<i>0,20</i>	<i>0,60</i>	<i>0,80</i>
6	<i>Social benefits, financial assistance and compensation payments</i>	<i>1,48</i>	<i>3,62</i>	<i>7,72</i>
7	Total social sphere and social support expenditures of the population	1,68	4,22	8,52

8	TOTAL COSTS	4,68	11,88	14,09
9	Share of education as part of VAQF charity fund expenditures (in %)	37%	39%	16%

The current financial situation of religious educational institutions, the appointment of professors and teachers working in this field and student scholarships not even in accordance with established standards. About 95 percent of Uzbekistan’s population is Muslim. From time immemorial, scientists who grew up in our region have shaken the cradle of world science. In order to re-emerge such scientists today and in the future and to regain world leadership in this field it is necessary to radically improve the funding mechanisms for religious education institutions.

SHARE OF EDUCATION AS PART OF VAQF CHARITY FUND EXPENDITURES¹⁵

TABLE-10

№	Religious educational institutions	Costs, over the years (billion soums)								
		2018 year			2019 year			2020 year		
		Mont hly salari es for teachers	Contr act to students	To strength en the material and technica l base	Mont hly salari es for teachers	Contr act to students	To strength en the material and technica l base	Mont hly salari es for teachers	Contr act to students	To strength en the material and technica l base
1	Islamic Institute named after Imam Bukhari		0,15	0,10		0,25	0,54	0,24	0,30	
2	“Mir Arab” Higher Madrasah					0,20	0,07	0,13	0,05	
3	“Kukaldo sh” secondary special Islamic school		0,05	0,05		0,11	0,23	0,05	0,10	
4	Khuja Bukhari secondary special Islamic school		0,04			0,22		0,03	0,05	
5	Sayyid Muhyiddin		0,04			0,16			0,05	

	mahdum secondar y special Islamic school								
6	“Hidoya” secondar y special Islamic school	0,04			0,16		0,01	0,05	
7	Mir Arab secondar y special Islamic school	0,05			0,20			0,04	
8	Fakhriddi n ar-rozi secondar y special Islamic school	0,04			0,16			0,08	0,05
9	Muhamm ad al- Beruni secondar y special Islamic school	0,04			0,16	0,29		0,03	
10	“Khadich ai Kubro” women’s secondar y special Islamic school	0,05			0,44		0,01	0,03	
11	“Juybori Kalon” women’s secondar y special Islamic school	0,04			0,20	0,29		0,03	
12	School of Hadith Science					0,73		0,04	0,60

13	International Islamic Academy of Uzbekistan		0,03			0,06	0,10		0,10	
14	“Imam Termezi” secondary special Islamic school								0,10	0,07
TOTAL COST			0,57	0,15	-	2,32	2,25	0,47	1,05	0,72
Share of education as part of VAQF charity fund expenditures (in %)		37%			39%			16%		

As can be seen from the table, the main part of the resource directed to education from the funds of the VAQF aimed at paying student contract fees **0,570 billion** soums in 2018, **2,32 billion** soums in 2019 and **1,05 billion** soums in 2020. This is **52,3%** of the total expenditure on religious education. In three years, **3,12 billion** soums were spent (**41.4%** of total expenditures) in order to strengthen the material and technical base of religious education. A total of **0,47 billion** soums was spent on professors and teachers. Despite the fact that professors and teachers working in religious educational institutions are a relatively small number of specialists and their salaries are lower than those of professors in other secular higher education institutions, a very small amount of incentive funds has been directed by the foundation fund.

CONCLUSIONS AND SUGGESTIONS

The current financial situation of religious educational institutions, the appointment of professors and teachers working in this field and student scholarships not even in accordance with established standards. About 95 percent of Uzbekistan’s population is Muslim. From time immemorial, scientists who grew up in our region have shaken the cradle of world science. In order to re-emerge such scientists today and in the future and to regain world leadership in this field it is necessary to radically improve the funding mechanisms for religious education institutions.

It is appropriate to cite the following as current issues in the financing of religious education: including,

- granting financial freedom to religious educational institutions;
- liberalization of admission quotas for students admitted on a fee-for-service basis;

- determination of the amount of payment-contract, taking into account the exact calculations and the costs of the educational institution;
- introduction of state orders to religious educational institutions;
- revision of the monthly salaries of professors and teachers working in this field;
- to organize the study of foreign students on a fee-for-service basis;
- development of mechanisms for attracting leading foreign professors and teachers and the procedure for paying their salaries;
- to take measures to attract funds on reasonable accounts to further strengthen the material and technical base of religious education institutions and other issues are pending.

As a solution to these issues, it is expedient to develop a scientifically based concept of measures for financial support of religious educational institutions and to make proposals on sources of funding, taking into account the views of the general public.

At the same time, it is recommended that religious education institutions do the following in the following areas:

- organization of preparatory courses in 5 disciplines for access to existing directions in religious education effective use of the potential scientific potential of professors and teachers at religious educational institutions for a period not exceeding 7-9 months;
- introduction of Arabic language courses for a period not exceeding 3-6 months;
- organization of 3-month calligraphy courses;
- organization of 5-day, 10-day paid training for pilgrims from Tashkent and Tashkent region for Hajj and Umrah using the experience of Malaysia, Indonesia and Turkey. In this case, the pilgrims going for Umrah are trained on the basis of a 5-day program, the pilgrims going on Hajj are trained on the basis of a 10-day program, the main pillars of Hajj and Umrah (fard, wajib, sunnah and mustahab) and issues specific to women pilgrims are taught. Practical lessons are based on prepared models.
- A Scientific and Innovative Development Fund should be established under the Committee for Religious Affairs. The funds of the Fund will consist of 2.0% of the proceeds from the Hajj and Umrah of the Republic and other funds not prohibited by law. As part of the funds raised for the Fund further to address pressing financial issues as strengthening the material and technical base of religious education institutions, financial support for professors and teachers working in the field, introduction of preferential scholarships for students, attracting qualified foreign professors and teachers and etc.
- to strengthen international cooperation of religious education institutions, including:
 - a) Establishing international cooperation with the Al-Nahyan Foundation of the UAE, using the international status of Uzbekistan;
 - b) Effective use of the opportunities of the Islamic Development Bank;
 - c) Implementation of joint programs, joint faculties and Double degree projects with foreign religious educational institutions (universities).

Conclusions on the situation with religious education in public educational institutions:

1. Knowledge of religion in secular educational institutions of Uzbekistan is based on an academic approach;
2. A new subject called “Education” (“Tarbiya” fani) has been introduced for pupils of grades 1–11 of general secondary education, which embodies universal and religious values, high spirituality. This subject provides information related to religion;
3. The subject “Religion” is included in the curricula of higher education institutions. Within the framework of this subject are taught about world religions and national religions without giving preference to or discriminating against any religion. It should be noted that secular sciences are taught in all religious educational institutions as well as religious sciences.

At present, the International Islamic Academy of Uzbekistan, Tashkent Islamic Institute, “Mir Arab” Higher Madrasa, School of Hadith Science and 10 secondary special Islamic schools, including 2 women’s madrassas, Imam Termezi Center, schools of jurisprudence (fiqh), aqeedah, hadith and mysticism work together in our country. forms a system of continuous religious education. They form a completed cycle of religious education, which includes secondary special education, bachelor’s, master’s and doctoral degrees.

It is necessary to finance higher education institutions in this area, to determine the payment of contractual fees on the basis of accurate calculations, to revise the salaries of professors and teachers, to liberalize admission quotas.

We believe that the implementation of these proposals will directly contribute to the further strengthening of the material and technical base of religious education, increase the efficiency of existing extra-budgetary financial resources and ensure financial stability.

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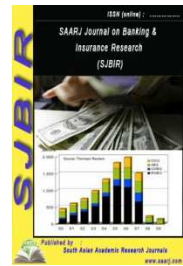
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MODELING THE IMPACT OF BANK SHARES ON INCOME IN THE FUND MARKET

Farkhod Mirzaev*; **Mexridin Rakhmanov****

**Ph.D., Associate Professor,
Head of the Main Department of the Test Center,
Tashkent, UZBEKISTAN
Email id: farxod_m@inbox.ru

**Senior Lecturer,
Department of Higher and Applied Mathematics,
Tashkent Financial Institute, Tashkent, UZBEKISTAN
Email id: mexridin.raxmanov@mail.ru

ABSTRACT

This article analyzes the changing trends of bank shares in the securities market and the factors affecting them in increasing the income of commercial banks. Models that assess the factors influencing changes in the stock market are analyzed and their impact on changes in bank shares is revealed. A methodological apparatus for assessing the competitiveness of the banking system and financial markets is being developed, the issues of analyzing and evaluating the effectiveness of reengineering processes in the banking business are still being studied, economic and mathematical methods and modern tools in financial institutions are fragmented. Therefore, the process of mathematical modeling of the income that market participants receive is complicated, where ignoring all the factors can lead to its participants becoming unprofitable.

KEYWORDS: *Mathematical Modeling, Bank Income, Securities Market, Stock, Issue, Gaussian Copula And Binary-Copula Models, A.Roy's Model.*

INTRODUCTION

The stability of the banking sector depends primarily on the financial stability of business entities and is determined by the effectiveness of its interaction with market infrastructure organizations. In the context of the development of digital technologies, there is an urgent need to systematically address the problems of deepening economic research in terms of increasing the reliability, stability and competitiveness of credit institutions, the formation of an effective mechanism of interaction between the banking system and financial markets. In the formation and solution of

such problems lies the development strategy of the banking sector in the financial markets as an important element, which allows determining the functional and stimulating role in solving national economic problems. Unfortunately, while the development of such documents that reveal the concept of development of these segments of the economy is limited to a maximum period of 4 to 5 years, in the international community such strategic programs are being developed for the next decades. The problems of the interdependence between the banking system and financial markets have not received enough attention in the economic literature. Increased competition in the market of banking services, aggressive behavior of non-bank credit institutions, mutual funds and other financial institutions, the complexity and rapid development of modern information technologies require the study of the relationship of credit institutions with specific segments of the financial market. In the current state of the economy of the country, the problem of forming an effective mechanism of interaction between the banking system and financial markets remains particularly relevant. In this regard, the development of fundamental rules for the development of the banking system of the republic, the mechanism of its interaction with financial markets can become a dominant factor in the growth of the national economy.

The role of the banking system in the local financial services market remains insufficiently studied in the field of local science. A methodological apparatus for assessing the competitiveness of the banking system and financial markets is being developed, the issues of analyzing and evaluating the effectiveness of reengineering processes in the banking business are still being studied, economic and mathematical methods and modern tools in financial institutions are fragmented. Therefore, the relevance of the article is determined by the issue of studying the impact of increasing the bank's income through mathematical modeling of their activities in the securities market.

MATERIAL AND METHOD

The distinctive feature of the bank's activity is that when attracting financial resources, the credit institution places them on loans and investments on its own behalf. This leads to the ambiguity of the sources of formation of the credit institution's assets: they can be the bank's own funds or any type of resources involved. Prior to the August 1998 crisis, the stock market was listed as one of the most efficient sectors of the local financial market. It is currently experiencing a slow recovery and is expected to continue to operate effectively in the future.

Financial data turns out to be a very important tool in any research. In business, financial data helps users estimate the amount, timing, and inevitability of cash flows to make decisions. The financial statements of developing countries such as the United States of America (USA) contain evidence and facts about the development of banks. Thus, the purpose of financial analysis is to provide evidence of the financial condition, the expected results, and the bank's capabilities, which are important in motivating clients to solve economic problems (Barry & Jamie, 2011) [1]. In the financial statements of commercial banks, banking activities are objectively explained by the evidences and facts related to the success of the bank, the relevant problems and strategies to solve them. Hence, knowledge and skills in financial analysis are essential for a wide variety of people, such as investors, lenders, and regulators (Higgins, 2012) [7].

Changes in the financial statements of stakeholders have consolidated activities identified from time to time in the equity portion of the balance sheet. However, changes in capital are the result of incurring profits or losses, dividends and shares (Ebimobowei, 2012). Thus, dividends are paid to shareholders at their own discretion [3].

Modeling and analyzing daily earnings per share. The results show that the binary Gaussian Copula and the binary t-Copula can very well model the daily stock market return data. The copula function is very important in market risk analysis. The copula function can be used to better model financial data and break down financial risks to reduce the impact of financial risks.

To better understand Copula's role in analyzing financial risks, more representative data should be selected [11].

In some areas, especially in relation to credit risk, information is often lacking to model the relationship between random variables. However, there is enough information to model the limit values of each random variable. It is in this context that Copula functions are important for modeling dependence (Cherubini et al. [19]).

Although the methods for estimating the parameters of the Copula function look very well developed, the selection of the Copula function still remains an open problem.

The research was to help practitioners select a specific linear function. In particular, the t -binding as a method of modeling counterparty risk was compared with the Gaussian model. Through modeling, it has been found that the t -binding naturally derives from the structural model of credit risk proposed by D.Cossin and H.Schellhorn and is then abbreviated as the CS model [3].

If the gains are related to Gauss, we assume that t -Copula is better for modeling than the Gaussian limit. This is done with different network configurations. This result has been recognized by various researchers, and the t -bindings have allowed for a more effective evaluation of a positive outcome than the Gaussian model [9].

In the CS model, this velocity is not directly observed. At each point in the market, the bank shares are valued by market participants. The total income of the bank consists of operating income and repayment of loans from borrowers. The main assumptions of our model are to draw conclusions using different models to determine the impact of banks' shares on earnings in the stock market. In realizing this assumption, the factors influencing the shares of banks, the tendency of changes in relation to the nominal value of shares are proportional to the total income of the bank.

$$\hat{a}_i(t) = \hat{v}_i(t) + \sum_k \hat{a}_k(t) \tau_{ki} \quad (1.1)$$

In some studies, the payout ratio shows what percentage of a bank's total costs is allocated to bondholders and shareholders. It is modeled as a geometric Brownian motion with relative displacement and variability. A payment ratio, greater than one corresponds to the bank's capitalization. We think the payout ratio is independent of the cost level. Payment rates of banks may be interrelated. In case of breach of the obligation, the bank suffers a loss. Theorem (1.1) is proved by D.Cossin and H.Schellhorn [4].

$$\hat{a}_i(t) = \hat{v}_i(t) + \sum_k \hat{a}_k(t) \tau_{ki}$$

As mentioned above, one of the main objectives of this article was to compare t-Copula with Gauss Copula as a method of counterparty risk modeling in assessing the financial risks affecting the shares of banks on the stock exchange. Based on the results of this comparison, it was argued that t-Copula's assessment of financial risks affecting stocks had a positive outcome [5].

Stock price information includes information about the characteristics of the company, which reflects the level of market efficiency, affects the distribution of resources in the stock market, and determines the effectiveness of the stock price signaling mechanism. The classical theory of market efficiency assumes that the stock price includes all the information already available, so that market news does not affect the change in the stock price. Many literary sources refute this view, stating that information in the media influences the volatility of stock prices, influencing the trading behavior of investors; that information about corporations is included in the share price together with investor information and thus affects the information content of the share price.

Daily trades on the stock exchange are in different directions, and it is necessary for economists to constantly monitor the analysis of products, funds, currencies, labor exchanges and other indicators here. Therefore, the process of mathematical modeling of the income that market participants receive is complicated, where ignoring all the factors can lead to its participants becoming unprofitable. Therefore, the forecasting of the income that banks receive from their participation in the market is directly related to changes in the stock market under the influence of external factors. Several studies have been conducted with examples of mathematical modeling of forecasting the income of stock exchange participants under the influence of external factors, on which we will briefly dwell.

The model of assessing the status of stock exchange participants in the exchange is evaluated by two conditions.

1. The stock exchange participant must make the right decision on which financial instruments to use in the formation of the investment portfolio of banks. In this case, the banks can make an independent decision or come to a clear conclusion using the information on the stock exchange.
2. A thorough study of the market by a person's psychological approach, conclusion, or selection of the most appropriate of the various financial instruments.

The modeling of stock market participants was discussed by the 1990 Nobel Prize-winning G. Markowitz [13]. In Markowitz's research, two mutually exclusive ideas for building an optimal portfolio are capital growth and maximization, and the second is loss, which is measured by the volatility of the market and the rapid fluctuations in financial instrument prices.

The model proposed by Markowitz:

1. Mathematical modeling of expected portfolio income of the first criterion (capital growth), modeling of variance of portfolio income of the second criterion (risks) (such an approach is called mean-variance);
2. The law of normal distribution of income of each security known to market participants;
3. The share of securities in the portfolio has a positive correlation.

In finding a solution to the problem, Markowitz argued that it would be expedient to implement Pareto theory of finding the optimal limit. He concludes that participants in any market make a profit based on certain mathematical models regardless of the situation. However, the second aspect of the problem is that the sequence of factors that need to be taken into account in determining the variance of the emerging situation may not allow it to achieve a definitive result. However, the model presented by Markowitz allowed creating a source of mathematical modeling of investment in the stock market. The model proposed by G. Markowitz does not fully reveal the

possibility of forecasting the income of banks on the basis of an assessment of the situation on the stock market. Because of some shortcomings of the model it does not allow a complete assessment of these cases. Therefore, several models have been proposed to further develop this hypothesis. These include the mean semi-variance model (mean-semi variance) [12], the average absolute deviation model [10], the risk-weighted average attraction model VaR [8], and the mean-CvaR [15]. also a high-reliability criterion model (Safety-first) presented by A.Roy [17]. Based on this model, not all market participants aim to make a profit, but prefer "caution". The main content of the Roy's study is as follows. If m and σ are the bank's recent expected return on investment and standard deviation. In this case, the upper limit of the "bad" message can be assessed by Chebyshev's inequality:

$$P(W \leq d) \leq \frac{\sigma^2}{(m-d)^2}$$

To minimize the likelihood of a "bad" message coming, it is advisable to replace $\frac{\sigma^2}{(m-d)^2}$ to

minimize the upper limit or to change the high confidence coefficient $\frac{m-d}{d}$ to Safety-First Ratio.

According to Roy's theory, a commercial bank will be able to analyze the price of financial instruments based on the information obtained from the stock exchange and determine the future price change s_1, \dots, s_n and the standard deviation variance $\sigma_1, \dots, \sigma_n$ of the future price of n financial instruments and the correlation coefficient R_{ij} , $i, j = \overline{1, n}$ of all securities. If the bank has x_i number of $i = \overline{1, n}$ securities in the initial "quiet" state of time W_0 , then

$$m = \sum_{i=1}^n x_i s_i, \quad \sigma^2 = \sum_{i=1}^n \sum_{j=1}^n x_i x_j p_{ij} \sigma_i \sigma_j \quad \text{Ba} \quad W_0 = \sum_{i=1}^n x_i$$

Roy proved that the optimal limit of Pareto is the hyperbola under the law of the correct distribution of future prices of securities and the most "safe" portfolio formula under the law of normal distribution. The formula is as follows:

$$x_i = \frac{\tau}{\sigma_i} \sum_{j=1}^n \frac{\left(P_j - \frac{d}{W_0} \right)}{\sigma_j} \cdot \frac{P_{ij}}{|R|}, \quad i = \overline{1, n}$$

Based on this, the probability of a decrease in the bank's expected income is below the critical point d :

$$P(W \leq d) = \frac{|R|}{\sum_{i=1}^n \sum_{j=1}^n \frac{\left(P_i - \frac{d}{W_0} \right)}{\sigma_i} \cdot P_{ij} \cdot \frac{\left(P_j - \frac{d}{W_0} \right)}{\sigma_j}}$$

Here is the matrix for determining the correlation coefficient $|R| - R = (P_{ij})$, the normalization coefficient under the condition $\tau - W_0 = \sum_{i=1}^n x_i$.

The model presented by Roy, i.e. minimizing risk in a “bad” market situation, allowed investors to create the concept of “risk assessment” (VAR) and other risk identification models. Through the development of these models, new concepts of portfolio management have been introduced by scientists [2]. In this case, the assessments were carried out by modeling in an arbitrary case [20] or the distribution by the law of "critical condition" [14]. Based on the above models, a “CAMP for Valuing Financial Assets” has been developed for financial asset management [18].

Like other models mentioned above, this model also has shortcomings, which are as follows:

1. It is wrong for all market participants to have the same information, earnings, and stock risk assessments.
2. Many factors affecting stock earnings have not been taken into account.
3. The fact that the value of β in the formula is evaluated differently in different countries does not allow it to come to a definite conclusion.

One of the classic approaches to forecasting future earnings based on market conditions is the Arbitrage pricing theory (APT) proposed by S. Ross [16].

The positive side of this model is that it covers all factors in estimating future income.

$$r_i = a_i + b_{i1}F_1 + \dots + b_{ik}F_k + \varepsilon_i$$

Factors F_k in the APT model include stock market indices, interest rates, inflation, GDP, and other indicators. Here, the coefficient b_{ik} determines the sensitivity of income of financial instruments i to F_k factors.

The shortcomings of this model are identified by the followings:

1. This model is designed for very large markets.
2. Many factors need to be covered when forecasting stock returns.

Hence, we analyzed that the models discussed above were designed to study the impact of external factors on the expected income of its participants as a result of changes in the market situation. However, the above circumstances do not indicate that the market is sufficient to fully describe or change its position under the influence of any external factors.

Results

On the basis of the above models, we evaluate the commercial banks of the republic on the basis of factors influencing their activities in the securities market. In the above models, it can be seen that the factors influencing the increase in the income of commercial banks through the stock market are based on the followings: changes in the stock market, the impact of various news on bank shares, changes in financial markets and the impact of various risks.

The participation of Uzbek banks in the securities market is very weak, as evidenced by the fact that the share of investments in the assets of banks is 1.5%. However, commercial banks are the

most active among the participants of the securities market of our country, which can be seen from the data in the table below (Table 1).

TABLE 1 THE ROLE OF COMMERCIAL BANKS IN THE SECURITIES MARKET OF UZBEKISTAN [21]

Indicators	01.01.2016 y.		01.01.2017 y.		01.01.2018 y.		01.01.2019y.		01.01.2020y.	
	In bln. soums	In %	In bln. soums	In %	In bln. soums	In %	In bln. soums	In %	In bln. Soums	In %
Total stock exchange trading volume	161	100	299,8	100	298,6	100	687,3	100	438,8	100
Banks	141,4	87,8	151,7	50,6	257,6	86,3	591	86	319,5	72,8

According to the table, the share of commercial banks in the stock exchanges of the country is more than 70%.

Based on the above models, if we analyze the activities of 5 commercial banks participating in the stock exchange of the republic as issuers the largest volume of shares issued by them was in the primary market in 2003.

TABLE 2 PLACEMENT OF SHARES OF COMMERCIAL BANKS ON THE PRIMARY MARKET AS ISSUERS ON THE STOCK EXCHANGE¹

Issuer	Listing Date	Nominal value	Number of listed shares	Market price at trading date (UZS)
JSCB "Uzpromstroybank"	03.09.2003	19	243 551 784 442	15,5
JSCB "Agrobank"	06.09.2003	1168	4 201 369 030	797,0
ATIB "Ipotekabank"	14.11.2003	1	2 861 787 259 906	0,79
JSCB "Qishloq Qurilish Bank"	05.12.2003	119,25	15 548 065 844	120,0
ATB Mikro kreditbank "	12.02.2008	1068	1 537 063 929	1068,0

In particular, the nominal value of shares of Uzpromstroybank amounted to 19 soums.

The authorized capital of the Bank (number of placed shares) amounted to 4,634,513,904,398 soums and it was divided into the following shares: 243,551,784,442 ordinary shares with the total value of 4,627,483,904,398 soums; - 370,000,000 preference shares with a total value of 7,030,000,000 soums².

The price of the bank's shares in the secondary market had sharp fluctuations in 2020 in the context of a pandemic. The market price of the bank on the lowest trading day in 2020 was on December 28 and amounted to 14 soums. According to the results of 2016-2020, if we pay attention to the data on the payment and calculation of dividends of JSCB "Uzpromstroybank" for 2016-2020, it will be 3.13% in 2016, 2% in 2017, 3.30% in 2018, 2019. The highest paid in the

year was 7.6%. The bank paid its shareholders a dividend of 3.3% per share in 2020 compared to the nominal price³. The return on the authorized capital of the bank was 0.216.

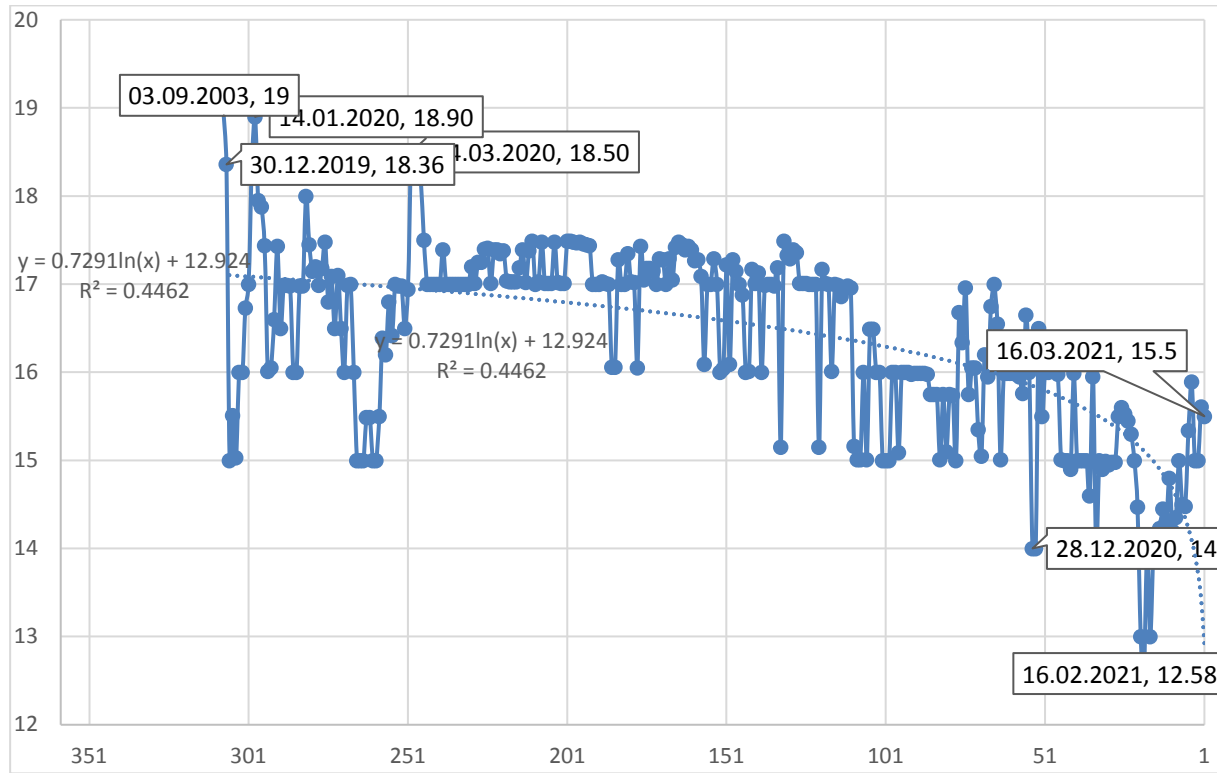


Figure 1 Diagram of changes in the share price of JSCB "Uzpromstroybank"⁴

However, when analyzing the bank's reports for 2020, the share of non-performing loans in total loans was 1.0%, while non-performing loans amounted to 379 billion. soums.

TABLE 3 NON-PERFORMING LOANS OF COMMERCIAL BANKS INFORMATION AS OF JANUARY 1, 2021 (BILLION SOUMS)⁵

№	Bank name	Loans	Non-performing loans (NPL)	Share of NPL in total loans
1.	Uzpromstroybank	39 898	379	1,0%
2.	Agrobank	24 997	308	1,2%
3.	Ipotekabank	24 304	548	2,3%
4.	Qishloq Qurilish bank	13 823	210	1,5%
5.	Microcreditbank	8 540	87	1,0%

Assets of Uzpromstroybank accounted for 13.4% of state-owned banks, 14.4% of loans, 11.5% of capital and 10.0% of deposits.

Despite the positive position of the bank in the banking market, in the analyzed years, the share price was not sold above the nominal value. The occurrence of this condition has led to an inverse imbalance if we analyze on the basis of the above models.

**TABLE 4 KEY PERFORMANCE INDICATORS OF COMMERCIAL BANKS
INFORMATION AS OF JANUARY 1, 2021⁶**

№	Bank name	Assets		Loans		Capital		Deposits	
		Amount	%	Amount	%	Amount	%	Amount	%
1.	Uzpromstroybank	49 045	13,4%	39 898	14,4%	6 704	11,5%	11 437	10,0%
2.	Agrobank	31 211	8,5%	24 997	9,0%	5 371	9,2%	9 037	7,9%
3.	Ipotekabank	32 410	8,9%	24 304	8,8%	4 274	7,3%	9 499	8,3%
4.	Qishloq Qurilish bank	15 923	4,3%	13 823	5,0%	2 414	4,1%	3 777	3,3%
5.	Microcreditbank	10 283	2,8%	8 540	3,1%	1 738	3,0%	2 383	2,1%

Similarly, if we analyze the situation of Qishloq Qurilish Bank, the number of shares issued by the bank in 2003 amounted to 15,548,065,844, with a par value of 119.25 soums. The trend of changing the market price of the bank's shares in 2020 can be assessed as positive to a certain extent. The lowest price of the Bank's shares in the secondary market was 100 soums on February 28, 2020, while the highest price (relative to the nominal price) was 122 soums on January 27, 2021.

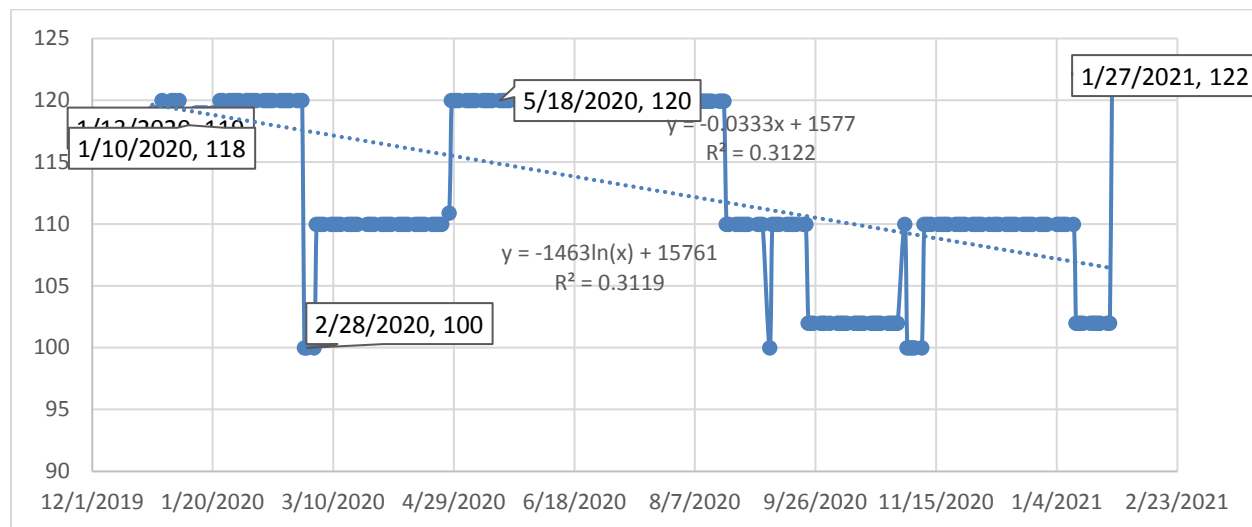


Figure 2 Diagram of change in share price of Qishloq Qurilish Bank⁷

Dividends paid by the bank to shareholders in 2016 amounted to 8.71% on ordinary shares, unpaid in 2017, 2.52% in 2018, and unpaid in 2019, while in 2020 the amount of dividends on ordinary shares was only 6.79%⁸.

Among the state-owned banks QQB accounted for 4.3% of assets, 5.0% of loans, 4.1% of capital and 3.3% of deposits. Return on equity was 2.8%. The solvency ratio was 175.8%, the absolute liquidity ratio was 79.7%, the ratio of own funds to borrowed funds was 21.3% and the ratio of the issuer's own funds to borrowed funds was 24.3%.

The next bank analyzed was Agrobank, which in 2003 had 4,201,369,030 shares with a par value of 1,168 soums. The bank's shares in subsequent years were sold at prices lower than their face value. In particular, the lowest figure was 424 soums on November 9, 2020, and the highest figure was 1150 soums on January 3, 2020.

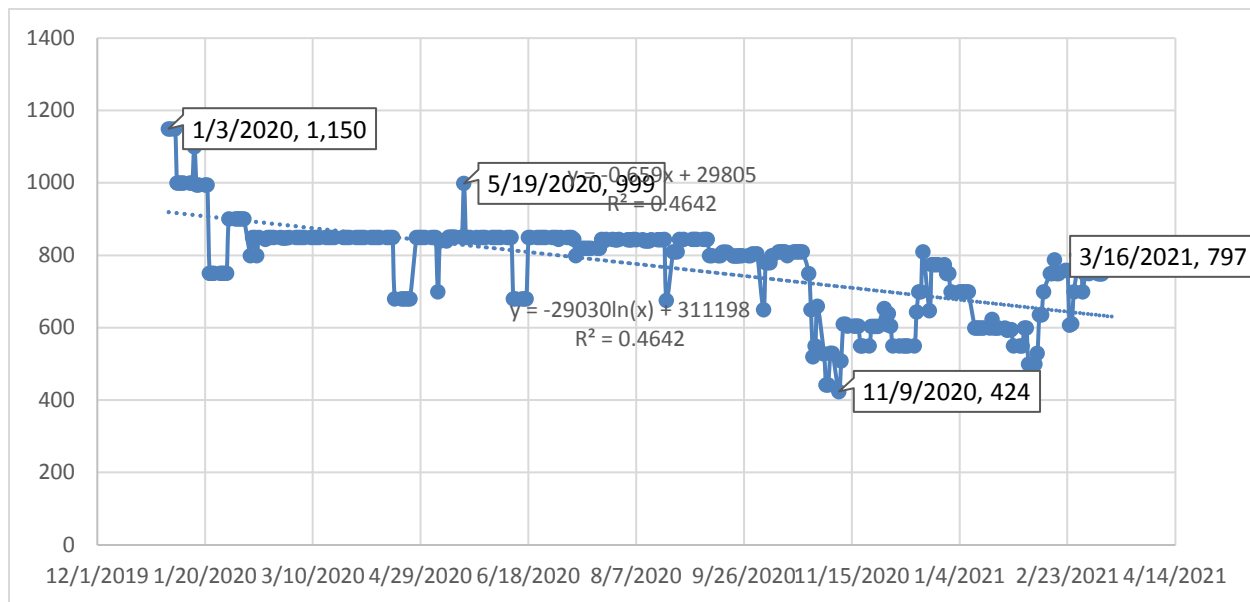


Figure 3 Diagram of changes in the share price of Agrobank⁹

Among the state-owned banks Agrobank accounts for 8.5% in terms of assets, 9.0% in terms of loans, 9.2% in terms of capital and 7.9% in terms of deposits.

Despite the positive performance of the bank in the banking market, the stock price on the stock market was sold at a lower level than the nominal price.

DISCUSSION

Based on the analysis, the following controversial cases were observed.

Firstly, based on the t -Copula model, Uzpromstroy and Agrobank had a high level of sensitivity to financial risks affecting them in 2020 based on the price fluctuations of their shares. As a result, the bank's shares were sold at a lower price than the face value.

Secondly, based on the Safety-first model presented by A.Roy, the share prices were decreased by market participants on the basis of the bank's "Bad" news. According to Roy's rule for the correct distribution of future securities prices, the Pareto optimal limit is logarithmic and, according to the law of normal distribution, is "the safest". For Uzpromstroybank it is $y = 0,729 \ln x + 12,924$ with the reliability coefficient of $R^2 = 0,4462$. For Agrobank accordingly $y = -29030 \ln x + 311198$ and $R^2 = 0,4642$. As a result, the probability of a decrease in the expected income of banks was below the critical point d .

Thirdly, the weak demand for bank shares issued in 2003, as a result of the fact that the shares were not freely traded in the secondary market for many years, has lowered the bank's image in the market.

Fourthly, the stock market rule was reversed. Despite the fact that the banks have a high share in the banking market on all indicators, its shares were sold at prices below par.

CONCLUSION

Based on the analysis and controversy, the following conclusions were drawn.

1. Increasing the demand for shares of commercial banks by further developing their activities in the secondary securities market.
2. Expanding the bank's sphere of influence and attracting new customers by participating in the capital of enterprises and organizations.
3. Based on the t -Copula model, it is necessary to assess the financial risks that affect the change in the price of shares of banks in the stock market.
4. Based on the model of high reliability (Safety-first) presented by A. Roy, it is expedient to assess the impact of any information in the market on the image of the bank.
5. It is necessary to expand the participation of banks in the capital of non-bank credit institutions, as well as in the capital of legal entities that are part of the financial market infrastructure or provide information and advisory services to banks.

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Email: mahmud.shareef@northsouth.edu

S. Anandasayanan

Lecturer
Department of Financial Management
Faculty of Management Studies & Commerce
University of Jaffna, SRI LANKA
Email: sayananakshi@yahoo.com

Dr. Esha Jain

Assistant Professor
Deptt. of Management,
G.D. Goyenka University, Gurgoan, INDIA
Email: dr.eshajain1985@gmail.com

Dr. Karun Kant Uppal

Assistant professor,
P G Deptt. of Commerce & Management,
Kamla Lohtia S D College, Ludhiana, INDIA
Email: dr.karunkantuppal@rediffmail.com

Dr. Ebele P. Ifionu

Faculty
Department of Finance and Banking,
University of Port Harcourt, NIGERIA
Email: ebeleazu@yahoo.co.uk

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