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FACTORS AFFECTING STUDENTS'ACADEMIC PERFORMANCE: A STUDY ON MANAGEMENT STUDENTS IN BHUBANESWAR

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ABSTRACT

This study aims at determining the academic performance of management students studying in Bhubaneswar. The sample consists of 490 students across various colleges in Bhubaneswar providing management courses MBA & BBA. The various factors that we have considered to determine student's performance are educational background, time spent on social media, time spent on OTT, attendance in classes, study hours, etc. It has been found that the most significant factors contributing towards academic performance of management students are time spent on social media, time spent on OTT, attendance percentage in class, study hours they engage themselves in and board from which they have passed their schooling.

KEYWORDS: *Student's Performance, Ott, Social Media, Educational Background.*

INTRODUCTION:

Education is the most powerful weapon which can be used to change the world. Without education there is no future. A good education is a foundation for better future. A country's social and economic development depends on its education system and student's academic performance. Students are most essential assets of a country. Today many scholars from our country are representing world renowned Institutions and organizations. IITs and IIMs of our country are recognized as top ranking Institutions and have produced many such scholars who are leading global organizations.

With increasing facilities students are performing well. But due to development in technology, emergence of smart phones and availability of social media sites like face book, whatsapp, instagram have a negative impact on student's academic performance. Students are spending more time in social media and playing games; which is hampering the studies of students. This study is aimed at investing the effect of such factors on student's academic performance.

A study of the literature in this area revealed that the factors affecting student performance are gender, high school grade, student's parental education, financial background, medium of teaching, student's family status, student's previous semester marks, assignment performance, attendance in class, interest in particular course, engage time & family support for study, accommodation type, parent's occupation, parent's qualification. In this study we have considered factors such as educational background, time spend in social media, time spent on OTT, accommodation type, class attendance, study hours, etc.

The remainder of the study is designed as follows: section 2 represents literature review, section 3 comprises objectives, section 4 describes methodology, section 5 is about results & data analysis, in section 4 we present conclusion.

Literature Review:

Pedrosa et.al (2006) in their study onsocial and educational background pointed out that Students from lower socioeconomic and educational backgrounds, who make up the majority of the student body, performed somewhat better than students from higher socioeconomic and educational backgrounds.

According to Haist et al.'s research [6], males outperformed women in some contexts while women outperformed men in others as far as academic performance is concerned.

Researchers Robert and Sampson (2011) found that students who actively engage in the learning process tend to have higher cumulative grade point averages (CGPAs).

According to Raychauduri et al. (2010), numerous studies have been completed to identify the factors affecting students' academic performance. The socioeconomic factors that affect kids' academic performance include their involvement in class, family income, the teacher-to-student ratio, the availability of trained teachers in the classroom, and their gender.

Woodfield and Earl-Novell ascribed this in part to the fact that female students are more committed to their academics and are hence less likely to miss class.

Tahir, S., and Naqvi, S. R. (2006) investigated the relationship between family income and students' performance. Socioeconomic factors, such as participation in class, family income, teacher-to-student ratio, availability of qualified teachers in the classroom, parents' educational backgrounds, distance from school, and gender of the students also affect students' performance.

Objective:

The specific objective of this study is to identify the important factors that affect academic performance of management students. We have taken a few factors like educational background, time spend on social media and OTT, accommodation type of the students, attendance percentage in class, study hours they engage themselves and board from which they have passed their schooling.

1. To identify which factors are significant for academic performance of management students.
2. To check whether social media and OTT have significant impact on students' performance.
3. To find out whether accommodation type, schooling, educational background, attendance in class and study hours maintained have significant impact on students' performance.
4. To identify which factors positively contribute and which do not.

Methodology:

For this study we have taken a sample size of 490 from different management schools of Bhubaneswar. BBA and MBA students have been considered for this study. For selecting the sampling units we have used a convenience sampling method. We have used a regression analysis in this study to identify the important factors contributing towards students' academic performance. Grade points in the last exam is considered as the dependent factor and educational background, time spend on social media and OTT, accommodation type of the students, attendance percentage in class, study hours they engage themselves and board from which they have passed their schooling are taken as independent factors.

Analysis and Interpretation:

In this study we have taken the following independent variables:

Educational background (Science, Arts, Commerce, BBA, B. Tech)

Time spent on social media (less than 2hrs, 2hrs to 4hrs, More than 4hrs)

Time spent on OTT (less than 1hr, 1hr to 2hrs, More than 2hrs)

Accommodation type (Hostelite, Day Scholar)

Attendance in classes (75% to 80%, More than 80%)

Study hours (Less than 2hrs, 2hrs to 4hrs, More than 4hrs)

Board from which schooling was completed (ICSE/CBSE, State)

The dependent variable is:

Grade Point

Table 1

Regression Statistics	
Multiple R	0.815199756
R Square	0.664550643
Adjusted R Square	0.638460137
Standard Error	0.802067226
Observations	490

Table 1 above depicts regression statistics where R square value is 66.45% which indicates that 66.45% of the variation in dependent variable is explained by the independent variables. Table 2 below indicates the significance of the model. The value of significance is 0.0000, that indicates that the model is good and there exist a significant relationship between the dependent and independent variable.

Table 2

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	7	114.7004624	16.38578034	25.47097604	7.4859E-19

Residual	482	310.0763	0.643311835
Total	489	172.5985276	

Table 3

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	8.7482252	0.78949	11.0807	1.6725E-18	7.17975	10.316
Education_Background	-0.0121450	0.07996	0.15187	0.879623	0.17101	0.14672
Time_Socialmedia	-0.6817919	0.13379	5.09587	0.00000	0.94759	0.41598
Time_OTT	-0.3305687	0.11591	2.85178	0.005391	0.56085	0.10028
Accomodation	0.1119725	0.16717	0.66979	0.504704	0.22014	0.44409
Attendance	0.5084335	0.23130	2.19811	0.030506	0.04890	0.96795
Study_Hrs	0.4172027	0.15330	2.72130	0.007806	0.11262	0.72177
Board	-0.4462708	0.14903	2.99431	0.003551	0.74236	0.15017

Table 3 above represents p values of all the independent variables. We can see from the table that p values for time spent on social media, time spent on OTT, attendance, study hours maintained and board from which the students passed their schooling are significant because their values are less than 0.05. Whereas educational background and accommodation type are not significant factors as their p values are more than 0.05.

CONCLUSION:

From this study it has been found that the most significant factors contributing towards academic performance of management students are time spent on social media, time spent on OTT, attendance percentage in class, study hours they engage themselves in and board from which they have passed their schooling. Time spent on social media, time spent on OTT and board from where they had schooling have negative coefficients. That means the more time students spent on OTT and social media the more negative would be the impact on their academic performance. It is also seen that students from state boards have low academic performance as compared to students of ICSE/ CBSE. Attendance and study hours have a positive impact on academic performance as they have positive coefficients which can be seen from the table 3 in analysis section above. Whereas educational background and accommodation type have no significant impact on students' academic performance.

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THE CONTRIBUTION OF OUR COMPATRIOT AND THE GREAT MUHADDIS ABU ISA TERMIZI TO THE SCIENCE OF HADITH

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ABSTRACT

Imam Abu Isa Muhammad Termizi is a well-known and famous scholar in the Islamic world. He made a significant contribution to spreading the knowledge of our country to the world with valuable works related to the science of hadith. Imam Tirmidhi was an example to the rest of the people. Imam Bukhari said, "I have benefited more than you have benefited".
In this article, a set of opinions expressed by his contemporaries about the contribution of Imam Tirmizi to the science of hadith is presented.

KEYWORDS: *Imom Abu Iso Muhammad Termiziy, Jomeulusul, Samoniyansob,Al-Muxtasar, Ahmad Ibn Horismarvaziy, Abdulloh Ibn Abdurrahmondorimiy.*

INTRODUCTION

Imam Abu Isa Muhammad Termizi is a well-known and famous scholar in the Islamic world. He made a significant contribution to spreading the knowledge of our country to the world with valuable works related to the science of hadith. Our scientists and scholars have created many works about the scientist's scientific heritage. Studying the rich and rich scientific and spiritual heritage of Imam Termizi is of urgent importance in all eras[1].

IbnulAsir mentions the full name of Imam Tirmidhi as Abu Isa Muhammad ibn Isa ibn Sawra ibn Musa ibn Zahhak al-Bughi al-Sulami al-Tirmidhi in his book "JameulUsul". He was known by his nickname "Abu Isa". The reason why it is called Al-Tirmidhi is said to refer to a well-known and famous city in Mowaroonnahr. The reason why they are called Al-Bugyi is related to one of the villages of Termiz where they were born.

He was born in 209/824 AH and died in Termiz on Monday, 13th day of Rajab in 279/892. Some people add "zarir" after their names. Zarir means blind. Because at the end of his life, he lost his sight. Imam Hakim, I heard from Umar bin Allak that Imam Bukhari died. Now in Khorasan there is no one like Abu Isa in knowledge, discipline, piety and asceticism. He said that his eyes became weak from crying so much[2].

In the book SamoniAnsab, "Imam Termizi was the imam of his time without any competition. Zarbul was a parable in terms of sharpness of mind and strength of memorization ability".

Imam Bukhari said, "I have benefited more than you have benefited".

AbulFida al-Mukhtasar said in his book, “Imam Hafiz, blind, was one of the famous hadith scholars who was followed in the science of hadith”.

Abu Sa'd Abdurrahman ibn Muhammad Idrisi Astrobadi Samarkandi (d. 405/1015) says in his book “History of Samarkand”: Abu Isa was an exemplary person in terms of protection.

The scientist reached this level because he lived in the 3rd century, when the science of hadith reached its peak. Because this century began with the publication of hadiths in the form of a book. The interpretations of hadith were determined, and classified as sahih and others. The evidence for this is the division of hadiths into sahih, hasan and weak in the hands of Sheikh Ali ibn Madini of Imam Bukhari. Prior to this time, istelahs were not popular[3].

Also, Imam Tirmidhi was an example for the rest of the people. I heard from the jurist Abu Bakr Muhammad ibn HarithMarwazi: Ahmad ibn HarithMarwazi said. I went to him, thinking that the fragments were with me. When he gave me permission, I took my fragments. When I looked, they were white (that is, nothing was written on them). I was surprised. The sheikh began to recite the hadith to me from memory. So 'ng looked at me and saw the white paper in my hand and said, Aren't you ashamed of me? I told him what had happened and said, "I will remember everything you said. He said, "Tell me." I said to him; tell me another one of these. He told me forty of his rare hadiths and said, Come on, tell me back. I recited them from beginning to end and did not miss a single letter. He said: “I have never seen someone like you”[4].

His works: He has written many books. The books he wrote also show how mature a scientist he is, and the breadth of his knowledge. They are:

1. History book
2. Sunan at-Tirmidhi
3. Kitabulilal
4. Ash-Shamail
5. Companion of Asmaus
6. KitabulJarh and Tadil
7. Kitabuzzuhd
8. Kitabulasmawalkuna
9. KitabutTafsir
10. Rubaiyat fil hadith
11. Al-IlalusSaghir
12. Kitab fil asarilmavqufa[5]

Imam Tirmidhi, may God have mercy on him, received his initial knowledge from the sheikhs of the place where he was born and raised. If Imam Tirmidhi’s life is thoroughly studied, it will be known that he traveled in search of knowledge after 235/850 Hijri. Because the narrators like Ali ibn Madini (d. 234/849) and Muhammad ibn Abdullah Kofi (d. 234/849) who died earlier, narrate with a teacher in the middle[6].

So, around 235/850, at the age of 25, he studied science from the scholars of Khorasan, Iraq, Hijaz and other countries. In his place, he learned from the greatest scientists. As a result, they

became mature imams of their time. Some Researchers have increased the number of mentors to 210 people. Al-Jameh directly narrated from 210 sheikhs. In particular, he learned from his famous teachers Imam Muslim ibn HajjajQushayri, the owner of the authentic collection, Sulaiman ibn Ash'as, the owner of Sunan Abu Duvud, and narrated hadiths. The status of hadiths and narrators was taken from Muhammad ibn Ismail Bukhari, whose greatest teacher was called the Commander of the Faithful in the hadith. For a long time, he enjoyed the boon of knowledge after following his teacher.

Imam Tirmidhi said about Bukhari that he did not see anyone more knowledgeable than Muhammad ibn Ismail in knowing the meaning of illats, history and sanads in Iraq and Khorasan. In addition, he learned from Abdullah bin Abdurrahman Dorimi and Abu ZuraRazidan[7].

Scientific-practical cooperation between Imam Bukhari and Imam Termizi We would like to dwell a little on the teacher-student activity and incomparable friendship between Imam Bukhari and Imam Termizi. Because this relationship and friendship gave many great results to the world of knowledge, the world of hadith, and the world of Islam.

Three important aspects can be seen in the activity of mentor-discipleship and friendship of these two benazirs.

First. To cooperate in maintaining the purity of religion and the authenticity of hadiths, to respect the teacher, to show loyalty and loyalty, to look at the word of the teacher with respect and trust, to consult with his heart on every controversial issue, on the issues of the isnad and quality of hadiths.

Second. Choosing an independent path in one's work while respecting the judgment and conclusion of the teacher, entering into arguments with the teacher in some places, avoiding repeating and imitating the teacher.

Third. Humility, impartiality, mutual respect and moral support.

As an example of the first aspect, it can be said that in more than one hundred places of "SunaniTirmidhi" Imam Tirmidhi"I asked Muhammad (al-Bukhari), or Muhammad (al-Bukhari) says or: Muhammad ibn Ismail (al-Bukhari)" I heard from there are places that refer to his knowledge by referring to his name, which shows how much attention and trust they paid to the teacher's knowledge and talent in his judgment and conclusion[8].

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PROSPECTS FOR THE DEVELOPMENT OF INNOVATIVE ACTIVITIES OF THE PHARMACEUTICAL INDUSTRY OF THE REPUBLIC OF UZBEKISTAN

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ABSTRACT

The article discusses the innovative activities of the pharmaceutical industry of the Republic of Uzbekistan, the creation of a pharmaceutical cluster through the introduction of innovative solutions and high technologies using international experience.

KEYWORDS: *Pharmaceutical Industry, National Economy, Innovation Activity, Pharmaceutical Cluster, Innovative Solutions*.

INTRODUCTION

With the accelerating process of economic globalization, international competition is becoming increasingly fierce, and international political and economic models are changing.

Thanks to major changes, innovation has become the key to the success of industries and enterprises in various countries. The transformation of the basis of national competitiveness will shift from the intensive consumption of natural resources to the creative use of knowledge resources.

Today, in a highly dynamic environment, which includes numerous factors and phenomena, such as a decrease in solvency, a decrease in production volumes, an increase in competition between enterprises, both in the Russian and foreign markets, domestic enterprises should be aimed at the constant introduction of innovations. For the purpose of their effective and sustainable development.

Industrial enterprises need to implement a new policy - innovative, focused on the development of a range of products and services, improving their quality, updating technical equipment, software, etc.

Studies have shown that intensive factors have a fairly significant impact on economic dynamics. Increasing labor productivity and staff qualifications, as well as updating equipment, software and materials and their return is determined by the introduction of innovations.

The attention of researchers has long been directed to finding an effective direction for the development of a production management system with the use of innovations. It is innovations in modern practice that have become a serious means of shaping the development of the enterprise's economy and its pace. The innovative orientation of the enterprise management system sees innovation as one of the most successful tools:

- Achieving the goals of the enterprise;
- Increase in scientific and practical knowledge and search for effective methods of their application;
- Improving the efficiency of the personnel of the enterprise. The process of introducing innovations in an enterprise should become a lever for changing the content and structure of risks, reducing the possibility of new ones, as well as an obstacle to the spread of undesirable consequences. Internal factors of the enterprise can affect the innovative processes carried out at the enterprise. The management system at the enterprise should build an effective organization of innovation risks. It is important that due to various development factors, the sustainability of the enterprise is achieved, both motivational and investment, as well as innovative.

An important point of innovation activity is the stage of searching for new relationships and interdependencies between the indicators of innovations used with the conditions of their production and operation, economic efficiency and technical equipment. It should be noted that the issue of quality and economic efficiency of technical innovations cannot be considered separately. The innovative activity of an enterprise is a complex of ongoing commercial and industrial measures, while the quality of innovations depends on the technical equipment of the production sector. Obviously, the transition to new systems and the production of new types of products is possible only with the introduction of new technologies. The relationship between the implemented technologies and the competitiveness of the enterprise and its activities is seriously traced: the dynamics of technology development, competitiveness and the production of new products and investments in R&D.

As conclusions, it should be noted that the innovative development of the enterprise expands the range and volume of products and services, while improving their quality. Thanks to innovations, it is possible to enter new sales markets and reduce production costs. The introduction of innovations in various areas of activity of a manufacturing enterprise makes it possible to improve it and make it more efficient, adjusting to consumer demand and external factors. Thus, the innovative development of the enterprise is the main condition for increasing the competitiveness and efficiency of its activities.

Establishment of an effective pharmaceutical industry is quite a lengthy, labor-intensive and expensive process. Creating conditions for the localization of pharmaceutical and medical products based on modern technologies in accordance with international GMP standards is one of the main tasks for the development of the pharmaceutical industry of the Republic of Uzbekistan.

The main problem of lagging behind the pharmaceutical industry in Uzbekistan is the lack of diversification of production and the low competitiveness of most enterprises in the industry. It is possible to correct the current situation not only by solving the problems of the industry, but also by searching for new growth points, which requires a comprehensive modernization of the entire pharmaceutical industry. This strategy is based on an approach based on a gradual transition

from the production of simple goods to science-intensive and high-tech products by increasing the level of development of production and technology. The process of localization is primarily based on the development of all production, improving the quality of manufactured goods, technological re-equipment and innovative development.

To improve localization processes at pharmaceutical enterprises, it is necessary to optimize all areas of the enterprises' activities. Optimizing manufacturing processes has two goals: improving the finished product and reducing the overall cost of manufacturing it. To achieve these goals, enterprises use modern production equipment, change the concept of work and apply different methods and models.

Innovation is the main driver of growth in the pharmaceutical industry. Pharmaceutical innovations are:

- Innovative medicines, medicines,
- New approaches to drug development,
- Innovative production, technological processes,
- New methods of analysis,
- New approaches to quality assurance and quality control of medicines,
- Open innovation model.

At its core, the growth in the number of innovative drugs ensures the development of the pharmaceutical industry. Demand for medicines is unabated in both developed and developing countries. There are many reasons for this. Among the main ones are the aging of the population in developed countries, the high level of cancer, diabetes, hepatitis, AIDS, diseases of the reproductive system, the emergence of new infections and viruses, the harmful effects of environmental pollution on the health of the population, etc. Therefore, government and business communities are now paying so much attention to drug development.

The path of innovative development of each industry depends on which of the archetypes of industries according to the prevailing type of innovation it belongs to. It is worth noting that the pharmaceutical industry belongs to the scientific archetype, so the path of innovative development is determined by innovations in the scientific field. Scientific innovations are created in the course of fundamental, applied scientific research. It often takes many years of hard work. The emergence of both innovative products (eg active molecules) and innovative processes (eg new industrial technologies) and innovative business models is important for the pharmaceutical industry.

With the ever-increasing cost of pharmaceuticals and a sharp decline in R&D productivity, the pharmaceutical industry is looking for external innovation models in R&D to reduce R&D costs and increase productivity in drug development. In addition to improving internal research and development, major international pharmaceutical companies are also seeking external resources to accelerate the development of new drugs. In today's world, a new technological revolution is rapidly developing, constantly generating new waves of innovation, and the complexity of products is constantly increasing.

The rapid development of technology and the high degree of environmental uncertainty have made technological innovation an increasingly complex activity requiring extensive technical

resources and professional capabilities. Even large companies cannot support research activities at all technological frontiers and keep pace with technological changes. With changes in the global innovation landscape, the “closed innovation” model has become obsolete. Relying on internal resources, especially R&D resources, is already difficult to meet the development needs of enterprises. Closed R&D will create problems for high-risk technological innovations. The enterprise ceases to be an isolated system, and the technological innovation activity of the enterprise is an open and non-linear process of activity. How to use the leverage of internal research and development to capture and share external value, and the ability to integrate internal and external innovation resources are very important for enterprise technology innovation. The open innovation model proposed by Chesbrough, a national expert on innovation management, is a completely new model for managing R&D and innovation, enabling enterprises to solve the innovation dilemma and maintain their competitive advantage. The open innovation model means that in the process of technological innovation, enterprises use internal and external complementary innovation resources to achieve innovation. The essence of openness is the acquisition and use of external innovation resources, with an emphasis on integrating innovation resources within and outside the enterprise. Open innovation can widely absorb fresh ideas from everyone, accelerate the pace of enterprise innovation, and better seize fleeting market opportunities. In an open innovation system, technological innovation will no longer be a simple linear process, but will become a complex feedback mechanism that needs to be coordinated with other organizations (users, suppliers, competitors, unrelated companies, universities, innovation in interaction and mutual influence of research and development). institutes, consulting firms, governments, etc. External knowledge and technology are very important to fill the knowledge gaps in the internal research projects of an enterprise, and the ability to effectively use and integrate external knowledge is the source of an enterprise's competitive advantage. Enterprises can economically and efficiently obtain technologies suitable for their business operations, through joint research and development, the purchase of external technology licenses, technology mergers and acquisitions, etc., which reduces the costs and risks associated with technological innovation.

Today, an important condition for the dynamic development of the republic is the accelerated introduction of modern innovative technologies into the economy. The pharmaceutical industry is one of the strategically important and rapidly developing sectors of the economy. Pharmaceutics is considered to be a high-tech and science-intensive production process due to the fact that it is the level of provision of the population with medicines that is the main indicator of the social development of society and an indicator of well-being. Modernization of the pharmaceutical industry is one of the priorities in the country. The reform of the pharmaceutical industry is designed to help ensure the country's drug safety, modernize the pharmaceutical sector, create new science-intensive and high-tech industries, increase the export of pharmaceutical products and services, stimulate advanced scientific and technological developments and minimize dependence on foreign markets. In order to organize the production of innovative and high-quality medicines, medical devices and medical equipment, meet the demand of the population, ensure the training of pharmaceutical industry specialists based on international educational standards and in popular specialties, the consistent integration of pharmaceutical education into the system of the international scientific community, as well as further development In the pharmaceutical industry in the Republic, the Decree of the President of the Republic of Uzbekistan dated January 28, 2020 No. PP-4574 was adopted on the creation

of an innovative scientific and production pharmaceutical cluster in the Zangiati district of the Tashkent region « Tashkent Pharma Park ".

Industrial enterprises play an important role in ensuring economic stability, maintaining existing and creating new jobs. Uzbekistan's transition to a new stage of development shows that the outdated material and technical bases of industrial enterprises have a negative impact on the results of their activities. The reforms taking place in the national economy show the unsuitability of enterprises for an innovative development model. An important factor in increasing the competitiveness of enterprises is the organization and conduct of innovative activities. It is known that innovations are one of the main factors of intensive economic growth.

The innovative development of industrial enterprises contributes to the development of both enterprises and the economy as a whole. The introduction of modern advanced technologies into production will lead to an increase in the efficiency of the reproduction process, an improvement in the quality of economic potential, an increase in the competitiveness of enterprises, as well as an increase in GDP. A serious problem is the outdated management system in the economy, the inactive implementation of innovative ideas.

In order to accelerate the development of the country on the basis of modern achievements of world science, innovative ideas, developments and technologies, as well as the consistent implementation of tasks, the Decree of the President of the Republic of Uzbekistan No. UP-5544 dated September 21, 2018 “On approval of the innovative development strategy of the Republic of Uzbekistan for 2019- 2021".

An analysis of the current state of the pharmaceutical industry of the republic indicates that the pharmaceutical industry is "catching up" in relation to the global industry and has a number of main problematic aspects:

- Inability to meet the needs of citizens in medicines (drugs);
- The unstable state of the process of development, production and promotion of pharmaceutical products;
- Its inadequacy to changes in the internal and external environment. the presence in the portfolio of domestic manufacturers of a large number of obsolete, as well as low-margin generic drugs;
- Lack of investment in research programs and a small number of developments of new innovative drugs;
- Insufficient organization of work on the introduction of international standards at domestic enterprises ;
- Shortage of highly qualified personnel in the domestic pharmaceutical industry.

These problems hinder the development of the domestic pharmaceutical industry and determine its unstable state at the present stage.

One of the promising directions for the strategic development of the pharmaceutical industry is the creation clusters that allow organizing a full-cycle production of medicines in a certain territory, as well as increasing the scientific and human potential of the industry. Adopted within the framework of the Decree of the President, the Concept "On the creation of an innovative scientific and production pharmaceutical cluster" Tashkent Pharma Park "is aimed at creating a

system for the development of educational, research potential in the country's pharmaceutical industry, education and training in the field of pharmaceuticals based on the best foreign curricula, and the creation of new science-intensive and high-tech industries. This master will include the creation of:

- Pharmaceutical technical university with its own infrastructure (research center, laboratories, pharmacopoeial center, vivarium, etc.);
- Industrial zone (production sites for the production of innovative medicines, medical products and medical equipment).
- The creation of a pharmaceutical cluster should solve the following tasks:
- Development of the pharmaceutical industry of the republic through the introduction of innovative solutions (know-how) and high technologies using international experience;
- Creation of a specialized educational infrastructure for the training of qualified personnel in accordance with international training programs for specialties in demand in the pharmaceutical industry;
- Development of the research base by integrating it into the international innovation system, creating modern teaching and laboratory and research centers, as well as innovation infrastructure;
- Attraction of investments and advanced technologies, including foreign pharmaceutical companies, to create modern competitive industries for the production of innovative and high-quality medicines, medical products and medical equipment;
- Providing conditions for the participation of scientific, educational and research centers in scientific, technical and innovative programs, competitions and grants;
- Establishing cooperation with similar foreign research centers by organizing a constant exchange of experience and data, ensuring practical participation in international research programs, conferences and symposiums.

Among the main directions of the university is the training of qualified personnel in the field of production of medicines, medical devices and medical equipment, cosmetology, industry and business management in accordance with international educational standards.

Today, one of the urgent problems for domestic manufacturers is the transition to GMP standards. The introduction of GMP standards is an important aspect of healthcare development, as it solves the problems of drug interchangeability, public procurement, drug insurance, and pricing policy in the field of drug supply. To date, 10 out of 95 domestic pharmaceutical companies producing medicines have implemented the requirements of good manufacturing practice - GMP.

Insufficient organization of work on the implementation of international standards at domestic enterprises, including the requirements of good manufacturing practice (GMP), good pharmacovigilance practice (GVP) and ISO 13485, which regulate the quality and safety management system at pharmaceutical enterprises, limits the ability to produce effective and safe pharmaceutical products. Products that is competitive in the foreign and domestic markets. The transition of the pharmaceutical industry to GMP standards to the formation of a market for high-

quality drugs, the improvement of the pharmaceutical industry as a whole and the movement to the world level in terms of quality and range of manufactured drugs.

In conclusion, it can be noted that with the help of the cluster approach, the main problems of the domestic production of drugs and substances that will be competitive not only in the domestic but also in the foreign market will be solved:

- Transition of domestic pharmaceutical enterprises to international GMP standards;
- Weakening the import dependence of the domestic pharmaceutical market, including in terms of ensuring the production of medicines with pharmaceutical substances;
- Localization on the territory of the republic of new innovative technologies for the production of medicines, including through foreign investment.

Comprehensive, large-scale work is underway in the republic to raise the pharmaceutical industry to a new level of development and create conditions for its transition from an investment to an innovative development model.

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CLUSTER APPROACH IN CREATION AND DEVELOPMENT OF METALLURGY IN UZBEKISTAN

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ABSTRACT

The article explains that the metallurgical development strategy in Tashkent and Navoi regions should be determined based on the cluster approach, both in terms of industry and territory, based on the NKMK and NKMK.

KEYWORDS: *Cluster Approach, Metallurgy, Copper Industry Cluster, Innovation Cluster, Non-Ferrous Metals, Consumer Demand.*

INTRODUCTION

In the conditions of increasing globalization and competition, the development of the economy of Uzbekistan largely depends on the stable and effective development of each sector.

Stated in the first chapter of the dissertation, the metallurgical industry is the basis of the development of the economy of the country and its regions. The unstable situation in the metallurgy of Uzbekistan due to the decrease of the domestic iron ore base is causing problems in the industry and requires the development of a new strategy for its development, taking into account the current state of the country's mineral-raw material base.

The strategic task of the metallurgical industry of Uzbekistan today is to attract the explored iron ore resources of the North-Eastern region, which is sufficiently provided with relevant resources and fuel- energy capacities, to the circulation of the national economy, and to create new capacities in its undeveloped areas, which will spread the industry throughout the country, allows to realize the concept of development, concept of socio-economic development of Uzbekistan until 2030, clusters should be the main object [1]of the state policy to stimulate innovations.

The use of the cluster approach is considered as an effective form of complex economic systems and one of the most effective ways of developing sectors and regions. At the same time, many methodological and methodological aspects of the formation of clusters, in particular mining and metallurgical clusters have not yet been sufficiently studied.

For example, the following questions: justification of the strategy for the creation and development of a specific mining-metallurgical cluster; development of a mechanism for the formation of a mining-metallurgical cluster , taking into account the characteristics of the industry and allowing the formation of the most promising directions of the development of the region; organization of mutual cooperation of participants within the mining-metallurgical cluster; it is urgent to develop measures and mechanism of state support for the cluster development of the mining and metallurgical industry of our country . The scientific and

practical importance of the above issues predetermines the need to continue relevant scientific research.

In our opinion, the metallurgical development strategy in Tashkent and Navoi regions should be determined based on a cluster approach, both in terms of industry and territory.

The formation of world-class metallurgical clusters has already begun in Uzbekistan, the basis of which is the large vertically integrated holdings located in the Tashkent region.

In accordance with the decision of the President of the Republic of Uzbekistan dated June 24, 2021 "On additional measures for the development of the mining and metallurgical industry and related industries" No. A scientific-technological cluster is being created for the production of copper products and finished products with high added value.

Cathodic copper produced in "Almalik KMK" joint-stock company serves as raw material for manufacturers of finished products - participants of the Copper industry cluster. Currently, the annual production volume of cathode copper is 148,000 tons. It is planned to increase the volume of copper production several times in the coming years.

Within the framework of the cluster, the task was set to increase the volume of deep processing of copper to 80%, to produce a final product with high added value.

The priority areas of cluster development are as follows:

- production of finished copper products with high added value (cable and wire products, pipes, fittings, copper powder, spare parts and chargers for electric cars, elements of renewable energy sources, etc.);

Providing cluster participants with chemical reagents and substances, as well as equipment and mechanisms produced in the Republic of Uzbekistan;

- Training, retraining and improving the skills of personnel for the cluster, as well as expanding the scope of experimental design and scientific research in these areas.

to coordinate the ongoing activities, to develop proposals on the strategy and main directions of the cluster's activities.

One of the most promising regions in terms of prospects for the development of the metallurgical industry and the creation of a mining-metallurgical innovation cluster is Tashkent region. The region is one of the most attractive investment regions of Uzbekistan. As an example of this , we can cite the successfully operating investment project for the development of the Yoshlik-1 mine with a total cost of 4.9 billion US dollars , which in many ways involves the development of processing industries in the region, not just the mining industry.

The establishment of the mining and metallurgical innovation cluster in the Tashkent region of Uzbekistan is also related to the fact that the Tashkent region ranks 3rd among the regions in terms of industrial potential and is the locomotive of industrial growth in Uzbekistan.

According to the level of specialization of the industry of Tashkent region, the metallurgical industry ranks 1 .

Figure 1. Assessment of the degree of specialization of industry in Tashkent region[2].

A metallurgical innovation cluster in the Tashkent region, such as "Almaliq KMK" JSC, "Angren Pipeline Plant" JSC, "Uzmetkombinat" joint-stock company ,"Hard Alloys and Resistant Metals Combine" LLC , large-scale production of the Tashkent Metallurgical Combine base, it is possible due to the presence of industrial relations with Ingichka, Koytash and Almalyk complexes for mining and production of non-ferrous metals.

"Almaliq KMK" JSC, "Angren Pipe Plant" JSC, "Uzmetkombinat" JSC, "Hard Alloys and Resistant Metals Combine" LLC, Uzbekistan scrap preparation and processing plant, non - ferrous metal waste plant, Tashkent metallurgical combine. Uzbekistan scrap preparation and processing, non-ferrous metal waste plant.

The advantages of establishing a metallurgical innovation cluster in Tashkent region are as follows:

- Proximity to the capital, increasing influence of agglomeration;

-Convenient transportation position, the location of the transport-logistics center that marks the region as the largest industrial and transport center;

- A densely populated area, which is a factor of increasing the importance of the labor potential and the size of the consumer market;

-Personnel capacity, regular improvement of their qualifications and training in basic enterprises;

-The presence of production facilities that are not similar in other regions of the republic;

- Increase in domestic demand for goods and services, which are driving factors of economic development.

It is assumed that the development of non-ferrous metallurgy in the long-term perspective will be characterized by the attraction to development of mining reserves in the Tashkent region, etc.

The presence of large deposits of non-ferrous metals determines this opinion.

TABLE 1 LARGE DEPOSIT OF NON-FERROUS METALS IN THE TASHKENT REGION[3]

No	The name of the mine	The name of the metal	Amount, t	Production quantity, t	Reserve processing period, year
1	Kalmakir	Copper	6 1500 000	148,000	41
2	Kalmakir	Gold	1 300	15	86
3	Youth-1	Copper	45,000,000	148,000	305
4	Youth-1	Gold	5 384	15	360
5	Sary-Cheku	Copper	856,000,000	4,000,000	214
6	Uch-Kuloch	Copper	51,500,000	500,000	103
7	Kicked out	Gold-copper	15,525,000	345,000	45
8	Koch Bulak	Gold-copper	240,000	40,000	6
9	Red Apple	Gold-copper	620,000	100,000	62

The most important factors determining the creation of a mining-metallurgical innovation cluster in the Tashkent region, as noted earlier, are the consumer demand for various types of metal products and difficulties in interregional cooperation.

The mining and metallurgical innovation cluster in Tashkent region should be formed on the basis of the copper industry cluster to be established in 2021 and existing metallurgical enterprises.[4]

JSC (Almaliqcity) currently operating in this region, which in the future has more than 19 billion tons of mineral reserves as a result of the development of the Yoshlik 1 mine and the transition to iron ore raw materials due to the supply of ore from the Kalmokir mine, and later the merger of these mines. will become the world's largest ore mine.

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ISSUES OF PROTECTING YOUNG PEOPLE FROM INFORMATION THREAT

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ABSTRACT

This article contains some considerations aimed at increasing the social mobility of young people in various subcultures and information attacks. The significance of the virtual space in the life of young people, new trends in the description of virtualization in sociological research, a comparative analysis of modern youth social relations.

KEYWORDS: *Youth, Socialization, Art, Culture, Creativity, Creativity, Innovation, Social Lift.*

INTRODUCTION

The general public is deeply aware that immorality and lack of spirituality are at the bottom of the scandals that are happening all over the world today. It is well known that most of the participants in the events taking place in Europe and the Middle East are young people. The various frustrations, wars and disturbances that arise as a result of following different alien ideas, misleading them from their goals, or satisfying their material and spiritual needs in the way of their selfish goals, make us all aware and vigilant. , calls us not to be indifferent to the events around us.

Today, the changes and reforms implemented in various cities and villages of our republic, in all regions, make people happy. The positive changes in the thinking of the population of our republic, especially the youth, their social activity, the level of political culture is growing more and more, if you go to the places, it becomes more obvious. Especially, the attitude towards life is changing among our youth, the healthy need for "self-reformation" is forming in them, which allows us to imagine the future brightly. Undoubtedly, during the years of independence in our country, large-scale work was carried out to educate young people to be spiritually mature and physically healthy, patriotic and selfless, and to protect their rights and interests.

In a world that is constantly changing in content and essence, at a time when the processes of globalization and integration are rapidly progressing, protecting the spiritual world of our youth from various spiritual and ideological aggressions, from the effects of "mass culture", in fact, protecting the nation, is a very important task for the future. is a big, important step. As ideological struggles and disputes intensify, new types of it are becoming popular. Most importantly, it is an important task today to protect our young people, including unorganized youth, from the influence of "mass culture". We analyze the types of moral threats under the guise of "popular culture" that can affect disaffected youth today.

One of the ideological threats in the form of "popular culture" is egocentrism. It is a manifestation of selfishness, it means living only thinking about oneself and one's own interests, not recognizing anything else [2.]. In terms of the damage that this vice does to humanity, ignorance and bigotry never cease. Negative habits such as indifference, putting one's own interests above everything else, selfishness, and ambition are the main characteristics of a person suffering from egocentrism.

Individualism is the idea that a person puts his own interests before the interests of others. A person should be an individualist. However, the individuality of a person also has its own standards. Individualism is a contradictory form of collectivism, which leads a person to live apart from society, against neighborliness, communityism and collectivism. A person suffering from this vice puts his own interests above those of others, learns the habit of living only for himself. For example, "today, 30 percent of women in the United States kill at least two children before marriage, and girls are also brought up in this spirit. Most voters will vote against any policy that interferes with this way of life"[3.]. Violence is the essence of this vice, when a person dominates a person. Violence violates the rights of a person and creates animalistic feelings and features in his mind. In the ideological and ideological sphere of society, the fight against "mass culture" and the ideological and moral vices it brings remains the main task. In this regard, the way of reviving the national idea and national culture, education, spirituality, Islamic teachings and the values that our ancestors have faithfully preserved until this day was chosen. As can be seen from these processes, among the youth of our country, there are many young people who like to carry out nationalism and modernity in harmony, but there are also many who are under the influence of the threat of "mass culture". That's why today, especially in the age of globalization with advanced information technologies, it is important to fight against ideological threats under the guise of "mass culture". Taking into account the above, it is necessary to pay special attention to the following aspects in the fight against ideological threats under the guise of "popular culture".

First, it is necessary to introduce new, consistent and effective methods of teaching and propaganda in the system of ideological education. After all, it is possible to build a new building for a school, lyceum or college, where young people's thinking is formed, equip it with modern equipment, but without achieving quality changes in teaching, highly qualified , it is difficult to achieve the intended goals without preparing selfless, intellectually and spiritually literate teachers who love their profession with all their heart.

Secondly, the most effective way to fight against "mass culture" is to raise our young men and women from their youth to have a high spiritual and cultural level, taste and wisdom, independent thinking, enlightened.

Thirdly, it is necessary to increase the responsibility not only of the educational institution, but also of the parents, the neighborhood and the general public regarding the ideological education of young people. The fact that some of our young people are influenced by fanatics, they fall into the path of drug addiction and crime, they are influenced by "mass culture", there are shortcomings in the process of ideological education and upbringing, the educational institution, parents, general public, political parties that come to life only during elections, indicate the inconsistency in the activities of organizations responsible for youth education, consistent and effective cooperation between them.

Fourthly, as we are living in the age of information, where ideological conflicts have intensified, first of all, in order to prevent the emergence of an ideological gap in the minds of young people, it is necessary to protect them from external ideological influences and attacks. immunity should be formed. For this, our youth should be free, independent thinkers, have faith, be intelligent, have a strong will, be educated and wise, and be aware of the history of their country, national values, and the priceless scientific and spiritual heritage left by their great ancestors. and it needs to be in his heart.

In the process of developing the Uzbek national culture, the spiritual under the guise of "mass culture" that honors its national values, breaks the spirit of independence, cares for the country's interests and the nation's prospects, and shows a negative impact on the development of its own national culture. Issues of raising a person who is not easily affected by threats and preventing these threats are among the urgent tasks of today.

The main force driving the life of the society is the youth. This class has a special place in the development of any socio-economic and political relations. It is no exaggeration to say that the life of young people, the processes related to their social and political movement are a mirror of the life of the society, an echo of the reforms implemented in the country.

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ECONOMETRIC ANALYSIS OF FACTORS AFFECTING INVESTMENT ACTIVITIES OF ENTERPRISES

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ABSTRACT

Today special attention is paid until the development of the scientific oath fundamental foundations of the transport oath communication system which is one of the leading sectors of the economy. Since road transport is a key link in social infrastructure, it is necessary until optimize investment activities in warrant until adapt said until world standards and of course, provide the population with new types of services. The article presents an econometric analysis of the factors influencing the investment activity of motor transport enterprises.

KEYWORDS: *Investments, Investments Activity, Trucking Companies, Regression, Correlation.*

INTRODUCTION

Enter.The transport system, including road transport, has a special place in the effective development of the world and national economy. According to the World Bank, "the share of world road transport services in GDP is 6.9 percent or 4300 billion. In terms of US dollars, 110 billion tons of cargo, more than 1.0 trillion passengers were transported per year, and the number of employees employed in the transport infrastructure was 100 million people[1]. In this regard, great importance is attached to issues such as the development of the transport system on a global scale, full digitization of the transport sector, increasing the volume of transport services and modern types while increasing the quality of services, and improving economic relations in the field.

Special importance is attached to the development of transport and communication systems, which is one of the leading sectors of the world economy, on a scientific basis. In this regard, research is being carried out in the following priority areas: social support for the provision of safe, affordable and convenient transport services by encouraging investment activity, public-private partnership as an effective means of investment sources, and improvement of mechanisms for covering transport costs in non-standard economic conditions, interregional and global large-scale projects, for example, further development of transport and communication systems along the "Great Silk Road".

In the years of independence, especially in the conditions of the establishment of New Uzbekistan, special attention is paid to the development of road transport on modern bases, and the organization of effective investment activities in this regard. "In order to deliver our products to domestic and foreign markets, to reduce their cost, we need to develop the transport and logistics sector[2]." This, in turn, determines the expediency of carrying out scientific research on

the purposeful and effective use of investment opportunities, the effective use of production resources, the optimization of automobile enterprises, the optimal exploitation of vehicles, and the use of working capital as an effective mechanism of investment sources.

Due to the fact that road transport is the main link of social infrastructure, it is the demand of the time to adapt them to world standards and optimize investment activity in order to provide new types of services to the population. Optimizing the operation of urban public transport, which is part of the infrastructural sectors, and creating an environment of free competition in it are among the most urgent problems for large cities. Creating a wide opportunity for citizens to use public transport serves, firstly, as a means of socio-economic regulation , and secondly, it eases the process of property stratification of society in market conditions.

The total length of 8 bus depots within the joint-stock company "Toshshahartransxizmat", which is the object of our research work, is 2952.1 km. providing transport services to the population on 133 inner-city and 21 suburban routes, more than 96 percent of the total passengers are carried by them.

LITERATURE REVIEW

us, we found it appropriate to analyze the concepts, terms and categories that reveal the essence of the research, taking into account the complexity of the management of investment projects in motor transport enterprises, investment objects and the factors affecting them .

The theoretical research of the investment process, which is the main condition for attracting investments - the study of the possibilities of creating a favorable investment environment, arises from the need to effectively attract the resources of the national and world capital market for the development of economic sectors at the level of demand.

Therefore, solving the theoretical and practical issues of investment activity in the provision of transport services requires a systematic approach, allowing to imagine the object as a complex socio-economic factor[3]. In this approach, attention is paid to the definitions given to the concepts of investment activity as a system of relative descriptions, and due to their mutual harmonization, it is possible to reveal the investment potential of enterprises and the ability to use it.

The most important element of investment activity is to determine the nature and content of "investment". The word "investment" is derived from the English language (investment) and means "capital investment".

Currently, there are different views on the essence of investment, and these views express its essence in different ways. The essence of investment is the process of putting capital in various forms to get some kind of effect or income. Such a concept is somewhat general[4].

If G.S.Vechkanov, G.R.Vechkanova define investment as long-term investments of state or private capital in order to benefit various sectors of the economy in the country or abroad, according to V.V.Bocharov, investment is all types of property invested in business and other activity objects. And achieving profit or social effect at the expense of intellectual values[5].

In practice, we often see that the concept of "capital investment" is used as a synonym for "investment", but this is not always true. I.A. Blank convincingly justified this. That is, investments can be mobilized to increase working capital, various financial instruments and some types of intangible assets, along with spending capital on the reconstruction of fixed assets

in the form of production and non-production. So, "capital investment" is a relatively narrow concept and can be considered as a form of investment[6].

N. Haydarov defined[7] investment as "regardless of the form of ownership, individuals and legal entities operating on the basis of entrepreneurship or the state spend their financial, material and intellectual wealth on any business object within the scope of the law for the purpose of obtaining economic or social benefits."

We believe that this definition is correct if applied to business entities based on commercial activity. However, investments in public goods, such as urban passenger transport, cannot be described as business objects.

According to the current legislation of the Republic of Uzbekistan, " investments are tangible and intangible assets and rights to them, including rights to intellectual property objects, as well as reinvestments, which are invested in the objects of the social sphere, entrepreneurship, scientific and other types of activities based on risks for the purpose of profit, and they include the following may include: funds, including cash, target bank deposits, shares, shares, stocks, bonds, promissory notes and other securities; movable and immovable property (buildings, structures, equipment, machines and other material assets); intellectual property rights, including technical, technological, commercial and other knowledge formalized in the form of technical documents, skills and production experience, patented or unpatented (know-how), necessary for the organization of one or another type of production, as well as Other valuables not prohibited by the laws of the Republic of Uzbekistan are defined as "[8].

According to the definition of T. U. Kadirov, "investment is material and intangible capital attracted to the economy in order to increase the wealth of society[9].”

However, in the scientific works of the above-mentioned scientists and specialists, the theoretical and methodological foundations of the effective implementation of investment activities in the road transport system have not been sufficiently researched.

The main part. On the one hand, bus companies perform an important social task in providing public transportation by providing transport services to the least well-off segments of the population under preferential conditions determined by state bodies, and on the other hand, they purchase vehicles, energy resources, fuel and other materials from commercial entities at market prices. purchases, that is, transport operation is carried out on a commercial basis. Therefore, it is important to evaluate the impact of these factors in increasing the efficiency of investment activities of bus companies related to the increase in the volume, scope and quality of transport services to the city residents[10].

2021 , we can see the growth rate of both income and expenses (see Figure 1).

However, the amount of income increased by 3.5 times in 2021 compared to 2012 at current estimates, while expenses increased by 3.9 times. The main reason for this rapid increase in costs was the purchase of new rolling stock and the increase in the cost of spare parts and fuel and lubricants required for their repair. As a result, the negative balance between the received income and the incurred expenses has increased by almost 8 times, which means that the company is currently operating at a loss.

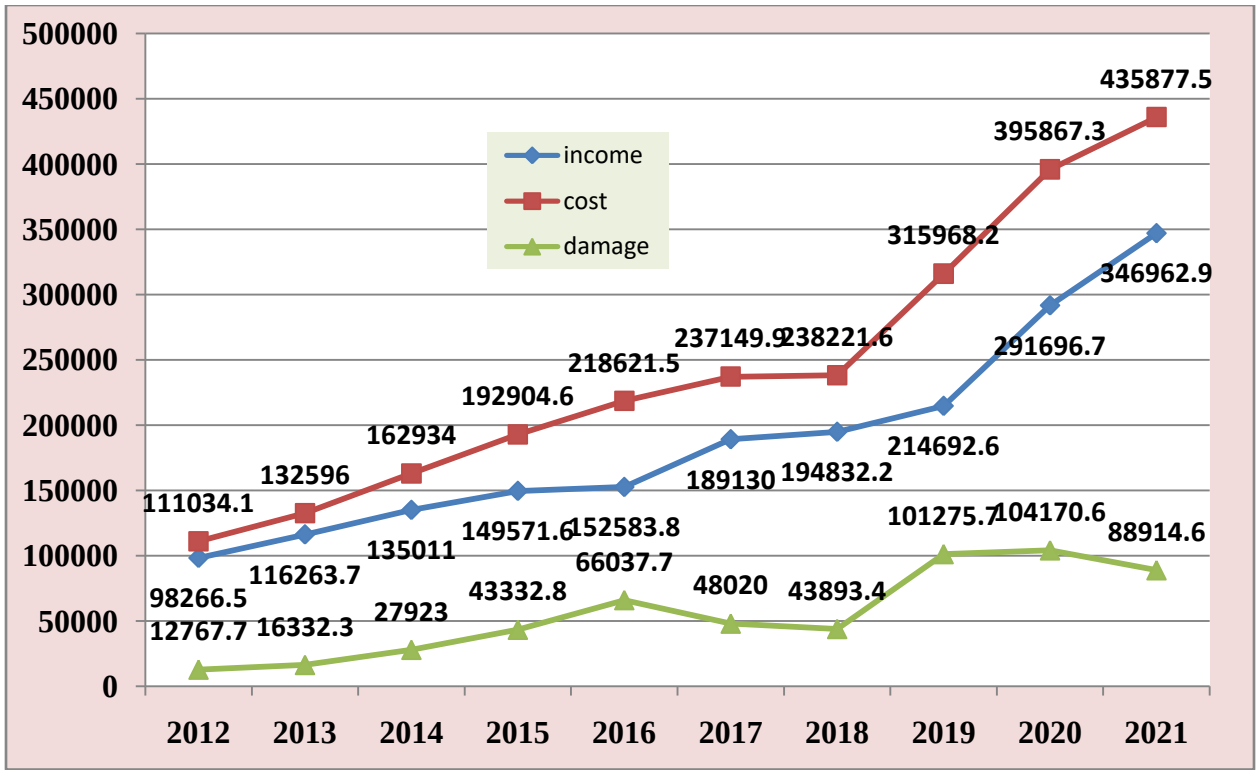

Figure 1. Dynamics of financial indicators of "Toshshahartransxizmat" JSC bus enterprises[11]

Revenue from passenger transportation, expenses incurred and financial situation show that investment is very necessary for the development of bus companies.

As we mentioned above, investors first of all start by analyzing the financial situation of any enterprise, that is, what kind of expenses it is making, whether these expenses include unnecessary expenses or not. Therefore, we consider it preferable to evaluate the investment attractiveness of bus enterprises that are part of "Toshshahartransxizmat" JSC in order to attract investment.

If we study the structure of expenses incurred for bus service in "Toshshahartransxizmat" JSC, we can see that it consists of 3 parts. These are production (service), auxiliary activity costs and non-production costs. The cost analysis shows that production (service) costs make up the main part of all costs.

Based on the above-mentioned points, in order to attract investment to the bus enterprises within JSC "Toshshahartransxizmat", it is appropriate to analyze the factors affecting its income. Because it is necessary to know the influence of factors on income when developing an investment strategy in the field of passenger transportation.

In our opinion, the most optimal way to solve this problem is to develop a correlation-regression model. To do this, it is necessary to identify the main factors affecting the income and see how they affect the income.

Analysis

When performing a multi-factor analysis of income for 2012-2021, the composition of expenses incurred in these years was taken as factors affecting income (see Table 1). The result of the analysis of their composition shows that a large part of the total costs (we did not take these indicators as an influencing factor due to the low possibility of reducing wages and social contributions) corresponds to the following five indicators:

- Fuel and lubricants;
- Depreciation allowances;
- Maintenance and repair costs;
- Period costs;
- Taxes and mandatory fees.

Below we will consider the reason why we take these indicators as a factor.

Depreciation is a component of the general economic activity policy of the enterprise, and it is a deduction from income based on the condition of fixed assets.

The main means are in their own condition.

TABLE 1 FINANCIAL INDICATORS OF "TOSHSHAHARTRANSXIZMAT" JSC BUS ENTERPRISES AND THE DYNAMICS OF CHANGES IN THEIR STRUCTURE, MLN. SOUM[12]

Years	Total income	Total cost	including					Damage
			Fuel and lubrication costs	Depreciation of vehicles	Maintenance and repair costs	Period costs	Taxes and Fees	
	Y1	Y2	X1	X2	X3	X4	X5	Y3
2012	98266.5	111034,1	33753.2	19368.1	24325.9	2597.9	8597.1	-12767.7
2013	116263.7	132596.0	43341.3	22271.1	29493	13912.7	8597.1	-16332.3
2014	135011.0	162934.0	47572.6	30278.5	37195.4	17818.7	11748.1	-27923.0
2015	149571.6	192904.6	45602.9	32196.5	46093.4	30291.3	22915.1	-43332.8
2016	152583.8	218621.5	69982.2	31367.6	47598.5	30997.1	23301.6	-66037.7
2017	189130.0	237149.9	64069.6	32650.1	51994.7	40799.3	29485.6	-48020.0
2018	194832.2	238221.6	57295.4	34025.1	49885	50964.1	38187.1	-433893.4
2019	214692.6	315968.2	74774.8	35696.6	70381.7	75314.2	60373.6	-101275.7
2020	291696.7	395867.3	96994.8	46699.2	93423.7	89415.1	69334.5	-104170.6
2021	346962.9	435877.5	114995.9	53778.2	96013.7	97473.1	73616.6	-88914.6

Its value by giving it to the product , that is, the change due to wear and tear of fixed assets is assumed.

Depreciation or change in value of fixed assets mainly occurs in the following cases:

- As a result of mechanical impact on fixed assets as a result of product production;

- As a result of the effect of a natural factor, regardless of whether the main tool participates in the production of the product or not;

- As a result of scientific and technical achievements, technical and technological obsolescence of the main means in the production process, i.e. failure to meet modern standards - moral obsolescence.

Among the 3 types of depreciation mentioned above, it should be noted that according to the national accounting standard of the Republic of Uzbekistan No. 5, allocations should be calculated based on the company's income for each reporting period, and at the same time, material depreciation should also be taken into account when calculating allocations.

From the above points, it is possible to take depreciation deductions as factors affecting the income when assessing the investment attractiveness. Because the wear and tear of fixed assets leads to a decrease in the company's income, it also leads to an increase in the value of the product due to the fact that it is included in the cost of deductions.

In addition, fixed assets that change their condition without participating in production, that is, in the organization and implementation of transportation work, do not bring any income. As a result of natural obsolescence or mental obsolescence, fixed assets do not meet current requirements, which leads to an increase in the costs of maintenance and repair of fixed assets, including vehicles. Because adapting to today's requirements (techniques with low operating costs) requires a lot of money. In addition, the external and internal appearance of buses should meet the requirements of the era in terms of design.

It is known that taxes and compulsory payments are included in the income received by the enterprise. This means that a certain part of the company's income is spent on taxes and compulsory payments. The higher the burden of taxes and mandatory payments for the enterprise, the more part of the income is directed to the implementation of taxes and mandatory payments. Ultimately, it affects the amount of profit. This has a negative impact on the low investment attractiveness of the enterprise.

Summary.

Based on the above-mentioned points, we believe that it is appropriate to study the impact of fuel and lubricants costs, depreciation, maintenance and repair, taxes and compulsory payments and period expenses as factors to attract investment in the field of passenger transportation in road transport. Therefore, the last 10 years of income and expenditure figures were taken as factors. A linear correlation-regression model was developed to see the effect of these factors on income. Its regression equation looks like this:

$$Y=63722.7-0.331X_1 – 2.39X_2 – 1.21X_3 – 1.97X_4 – 0.29X_5 \quad (1);$$

Here:

Y – Income, mln. soum;

X_1- Expenses for fuel and lubricants, million soums;

X_2- Depreciation allowances, mln. soum;

X_3- Maintenance and repair costs, million soums;

X_4- Period expenses, million soms;

X_5- Taxes and mandatory payments, million soms.

The coefficient of correlation between income and factors was R=0.96, and the coefficient of determination was R 2 =0.92. A high correlation coefficient indicates that the studied factors are closely related to each other. The coefficient of determination shows that 92 percent of the income of bus companies depends on the variation of factors.

The value of the F-Fisher criterion is higher than the error of a = 0.05 in the table (Fhaq = 10.05>Table), which indicates that the equation can be used as an objective function.

Based on the results of the regression equation, it can be concluded that the factor that has the greatest impact on income is depreciation costs, the next is the period costs factor, the 3rd place is maintenance and repair costs, and the least impacting factor is the tax and mandatory payments factor.

Based on the above-mentioned points and the obtained correlation model, it can be said that in order to invest in the field of passenger transportation in road transport of JSC "Toshshahartransxizmat" it is necessary to develop measures aimed at reducing costs that have a high impact on income. Because these costs are directly related to income, and because these costs were covered by income, the factors led to the negative financial condition of bus companies. This leads to a decrease in profitability and solvency.

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THE ROLE OF INFORMATION TECHNOLOGY IN THE TREATMENT OF CANCER

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ABSTRACT

Although the teaching of the course of information technology in medical education is aimed at developing students' knowledge about the role of information technology in medicine. It is necessary that future medical workers have the ability to correctly set a goal and choose priority areas in solving their professional problems. General computer science and information technology occupy a special place among the disciplines important for study. The problems of teaching natural sciences in medical schools are primarily associated with close interdisciplinary links with other disciplines taught at the university.

KEYWORDS: *Healthy Person Model, Data Bank, Human Health.*

INTRODUCTION

Information support systems using modern computer technology are increasingly being used in various branches of medicine and healthcare. The Oncology Service is no exception. However, there is no systematic approach or unified ideology in the informatization of the oncological service.

The need to develop a system of information support for medical technologies (examination – treatment – rehabilitation) is obvious. All issues of management, resource provision, expertise should be resolved on the basis of the information reflected in the medical technological process. Informatization and computerization of medical technologies in some cases involves a radical change in the technology of the doctor's work with the patient, algorithms, and methods of collecting, processing information and making management decisions.

There is a need to integrate automated information systems, when creating which it is necessary to take into account the following general principles:

The implemented developments should become part of an automated health information system, provide for the exchange of information of scientific importance and the creation of high-class expert systems.

New forms of organization and functioning of healthcare industries, including oncology, in modern socio-economic conditions establish increasingly stringent requirements for the regulation of medical and organizational and managerial actions and responsibility for decisions taken at all technological stages.

It becomes obvious that system engineering and a systematic approach should become part of a methodology capable of covering the entire issue and providing guidance in a complex of problems, including: methodological justification and formulation of goals, determination of indicators of the final result of service, material resources (medicines, medical equipment, tools, equipment), intangible resources (diagnostic methods, prevention and treatment, information and intellectual support, control methods), technological support, equipment and systematics.

We have developed a concept and a project of an information and analytical management system for the treatment and diagnostic process of an oncological clinic. The most important task of the project is the development and implementation of integrated information and diagnostic systems, which, based on already created database structures, give the doctor an intelligent tool for decision-making, taking into account all sections of the analyzed information.

The doctor gets the opportunity at various stages of work to visualize and objectify high-quality information, create and maintain a data bank associated with various information medical. The doctor gets the opportunity at various stages of work to visualize and objectify high-quality information, create and maintain a data bank associated with various medical information systems, have access to expert diagnosis systems.

The concept of a lifelong personal information atlas of cancer patients and those predisposed to cancer is based on the comparison and analysis of diagnostic signs and clinical symptoms of the disease with a computer model of a normal person.

The functional structure of the system includes:

- A model of a healthy person – a computer medical atlas of the typical structure of organs and diagnostic signs in normal;

- A model of a real person of a given age, gender, etc. – a modified computer atlas with corrections for the current condition of the patient, determined using various diagnostic methods;

- Diagnostic rules and criteria for detecting preclinical signs of diseases based on an integral and differential analysis of all deviations from the norm.

Medical informatics plays an important role in the formation of a medical history, related to the modeling of the process of oncological disease, the development of changes under the influence of pathogenic factors and normalization under the influence of therapeutic factors and the external environment, as well as the activities of medical institutions to ensure the medical and technological process. With its help, the tasks of objectification and formalization of the routine part of the medical and technological process (measurements, research, diagnostics and documentation) are already being successfully solved.

Work in the system is carried out throughout the entire treatment process – from the patient's admission to the clinic to post-treatment monitoring, up to lifelong observation.

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A STUDY OF RURAL HOUSEHOLD ENERGY USE AND RURAL TRANSFORMATION IN MADURAI DISTRICT

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ABSTRACT

The English term "energy" has its roots in the Greek word "energia," which means "at work." It is the capability or power to carry out labour. A nation's infrastructure for human growth and financial development must include energy as a fundamental and necessary element. Energy is the standard for all work, and global energy use is rising. It is necessary to function in the current world. In actuality, it forms the basis of contemporary civilisation. This study aims to assess the current status, rural household energy use patterns and rural transformation in Madurai district from 2021 to 2023. The research results show that before PMUY (Pradhan Mantra Ujjwala Yojana) Implementation of such scheme the usage of fire woods was high. After Implementations such scheme the usage of fire wood was low compare to LPG (Liquefied Petroleum Gas). The maximum of people usage for the L.P.G is 91 percent respectively.

KEYWORDS: *Lpg, Pmuy, Rural Household Energy*

INTRODUCTION

Energy is important for economic growth, but it also significantly raises the quality of life at home. One of the main factors that determine the development and standard of living of a country is the availability of energy resources. It is necessary to raise the country's standard of living, socio-economic progress and human development. It is an important element in the development of every civilized society. Household income and quality of life are significantly affected by the amount of energy used in rural and urban settings. While 1.06 billion people lack access to electricity, more than 3 billion people still cook and heat their homes with fuels including wood, peat, coal, and dung. Between 2015 and 2040, the world's energy consumption is expected to increase by 28%, with Asia outside the OECD (including China and India) accounting for more than half of this increase. Between 2015 and 2040, the energy consumption of non-OECD nations will climb by 41%, compared to a 9% increase in OECD nations. Much of

the growth is taking place in substantial, developing non-OECD countries, where people are still moving from rural to urban areas.

Most of the energy used in the domestic sector goes to lighting and cooking. The household sector in developing countries uses energy to prepare food, using wood and charcoal and plant waste as cooking fuel. Bullock carts were replaced by bicycles and other vehicles running on petrol and diesel as they made transportation considerably easier. In the initial phase, only human and animal power was used for agricultural operations. But as technology has advanced and the human mind has grown smarter, machines have taken the place of hard work. The trend is changing how homes use energy for heating, lighting, transportation and agriculture.The primary uses of rural household energy include all forms of energy used to provide for daily needs such as cooking, lighting, heating, hot water, cultural entertainment, and other necessities of life. The issue of rural energy consumption is intimately tied to the social and economic hardship in the area. Another crucial issue that is closely related to reducing regional poverty and comprehending regional socio-economic sustainable development is the issue of rural living energy and its poverty. In LDCs, the majority of total national energy consumption is consumed in rural areas. Inadequate residential fuel supplies have significant and increasing social and economic costs. According to UNDP and World Bank estimates, household energy consumption accounts for 30–95% of total energy use in 15 LDCs [as opposed to 25–30% in DCs].In most developing countries, cooking consumes more than half of the energy consumed in households.

Rural household energy use is an increasingly important concern for all emerging economies. Although household fuel consumption in rural areas accounts for a large share of total national energy consumption in many developing countries, the social and economic costs of household fuel for the rural poor are high and steadily increasing. In developing countries, according to UNDP and World Bank estimates, household energy consumption ranges from 30% to 95% of total energy consumption (25% to 30% in rich countries), with the share increasing with country poverty. Many households rely entirely or completely on biofuels. Rural households that rely on biomass supplies must spend more time and effort harvesting the fuel they need, as supplies are scarce in many places.

This makes an already challenging familial situation even more challenging. Therefore, there are more reasons than only energy to investigate how households use energy in rural locations. The pattern of household energy use or reliance on biomass in rural regions is not expected to change significantly over the long run, according to the World Bank's Energy Sector Management Assistance. The population of the globe has surpassed 6 billion, and according to growth predictions (FAO, 2000c), by 2030, there will be over 8 billion people on the planet. More over 2.8 billion people, or more than half of the world's population, reside in rural areas, making up the majority of the global population. There are 2 billion people who lack access to safe, affordable, and efficient energy sources. For cooking and space heating, at least two-thirds of them rely on the conventional fuels of wood, dung, and crop leftovers. Low energy conversion efficiency characterise these conventional fuels.

Literature Review

ZHAO Chun-sheng et al, (2012) analyzed Environmental Consequences of Household Energy Use in Rural and Urban Areas, Current Affairs. The investigation took place in the Western Loess Plateau of China. In this study, the SPIRPAT model was used to examine how variables such as wealth and population affected the environmental impact of energy use. The results show

that regional differences in per capita energy use are small. However, in terms of energy composition, urban households are dominated by fossil fuels, whereas rural households are dominated by biomass. Rural households produce more emissions than urban households. However, there are some differences between urban and rural locations in social emissions from residential energy use. According to the study, the overall energy and environmental footprint of electricity and coal in urban regions and electricity and biomass in rural areas are influenced by factors including population size and income levels.

Jitiwat Yaungket and Tetsuo Tezuka, (2013) investigated Electricity is available in every home in Thailand. Inverter and control unit, the two main system parts, both sustained damage to a more than 50% degree. The main cause of malfunctioning parts is because SHS users lack the expertise required to run and maintain the system. Each day, SHS users must purchase extra electricity. According to study results, 78 percent of households only use SHS to produce electricity, 16.9 percent use SHS and agricultural diesel engines, and 5 percent just use agricultural diesel engines to produce electricity. To fulfil the rising energy needs of a hamlet, a PV hybrid system can be constructed by integrating a diesel engine for agricultural usage. This is done to introduce a community micro-grid and provide reliable electricity to the neighbourhood.

Ioana AndaMilin et al, (2022) Chinese researchers evaluated energy use, energy and economic growth for rural and urban populations using annual data from 1995 to 2017. A balanced auto-distributed regression (ARDL) method was used to find intervariable correlations, along with long- and short-term estimates, two unit root tests to ensure that variables are stationary, and other methods. In this work, the univariate link between variables was evaluated using the Granger causality test and the vector error correction model (VECM). The short-term results show positive connections between the economy and all population access to electricity, urban population access to electricity, and energy use, with probability values of (0.004), (0.000), and (0.007), respectively. With p-values of (0.005), (0.000), and (0.047), respectively, long-term data show a positive link between energy use, electricity for urban populations, and overall population access to electricity. The Chinese government should implement conservative tactics and policies to encourage the adoption of clean energy sources to meet its energy needs as China consumes more energy and emits more CO2.

Methodology

Objective:

1. To study the nature and extent of rural transformation with respect to household energy used by scheme of Pradhan Mantra Ujjwala Yojana (PMUY).

2. To study the expenditure on rural household energy in Madurai.

3. To identify and evaluate the push and pull factors for the rural household energy use.

Sample Design

The district of Madurai in Tamil Nadu was chosen for the current study in order to meet the set of goals.This district has been classified into seven taluk such as Madurai South, Madurai North, Melur, Vadipatti, Thirumangalam, Peraiyur, and Usilampatti. Hence 10 villages namely, Doddappanaickanur, Nakkalapatti,Kovilankulam, Vikkiramangalam, Pothampatti, Uthappanaickanur, Karumathur and Valandur selected as the study village from the Madurai district. The researcher planned to select 10 households in each gram panchayat as sample

households. Consequently, 300 sample households were selected and included in the study using direct random sampling method.

Data Source:

In this analysis, both primary and secondary data were employed. To gather the necessary information from 300 sample families, a systematic, validated questionnaire including questions about socioeconomics and energy use was created.

Results and Discussion

TABLE 1 BEFORE PRADHAN MANTRI UJJWALA YOJANA WHAT ARE FUELS YOU USING

SL.NO	Before Pradhan Mantri Ujjwala Yojana What Are Fuels You Using	Frequency	Percent
1	Fire Wood	298	99.3
2	Agriculture residues	2	0.7
3	Total	300	100.0

Source: Primary Data

In this above table explain about before of Scheme in Madurai District. If before PMUY Implementation of such scheme the usage of fireweeds was high compare to 6th. It was 291 and 993 per cent similarly the usage of Agriculture residues was Just 2 and 0.7 percent respectively.

TABLE 2 AFTER PRADHAN MANTRI UJJWALA YOJANA WHAT ARE FUELS YOU USING

SL.NO	After Pradhan Mantri Ujjwala Yojana What Are Fuels You Using	Frequency	Percent
1	fire wood	9	3
2	Agri residues	5	1.7
3	Kerosene	4	1.3
4	Lpg	273	91
5	Electicity	9	3
	Total	300	100.0

Source: Primary Data

In this above table explain about after prove of Scheme in Madurai district. If after Implementations such scheme the usage of fire wood was low compare to LPG. The maximum of people usage for the L.P.G that is 91 percent respectively. In usages of was and usages of "Kerosene was 4 respectively. In firewood and electricity usage was 9 and 3 percent respectively.

Figure 1

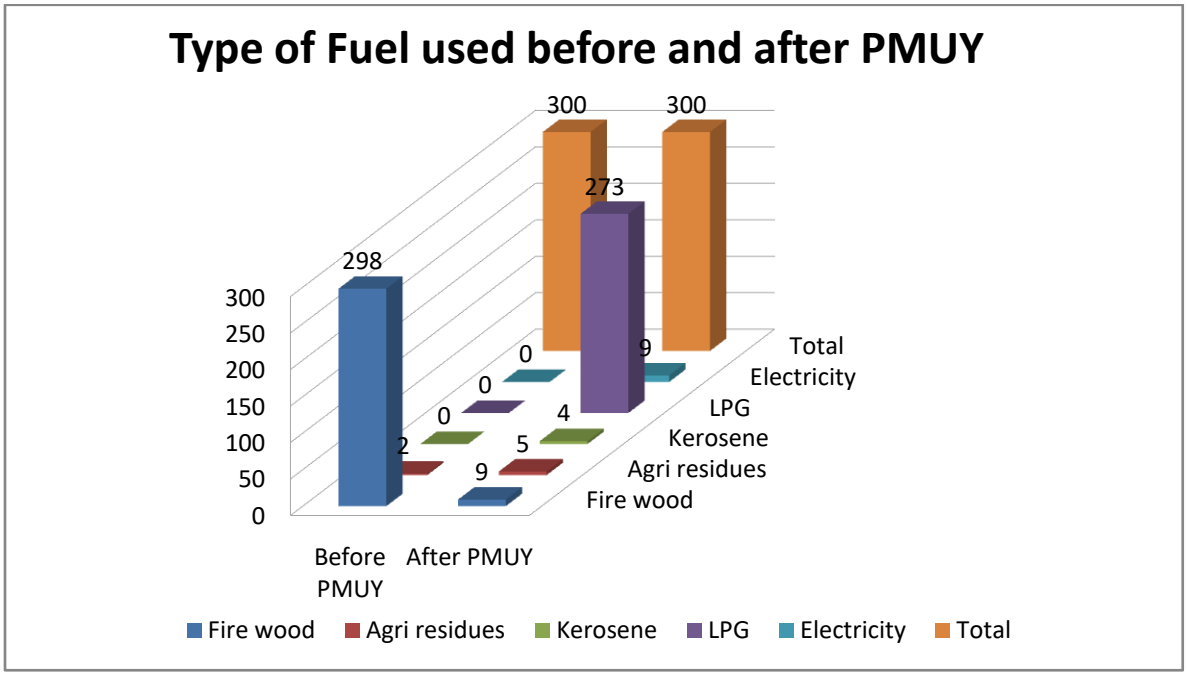


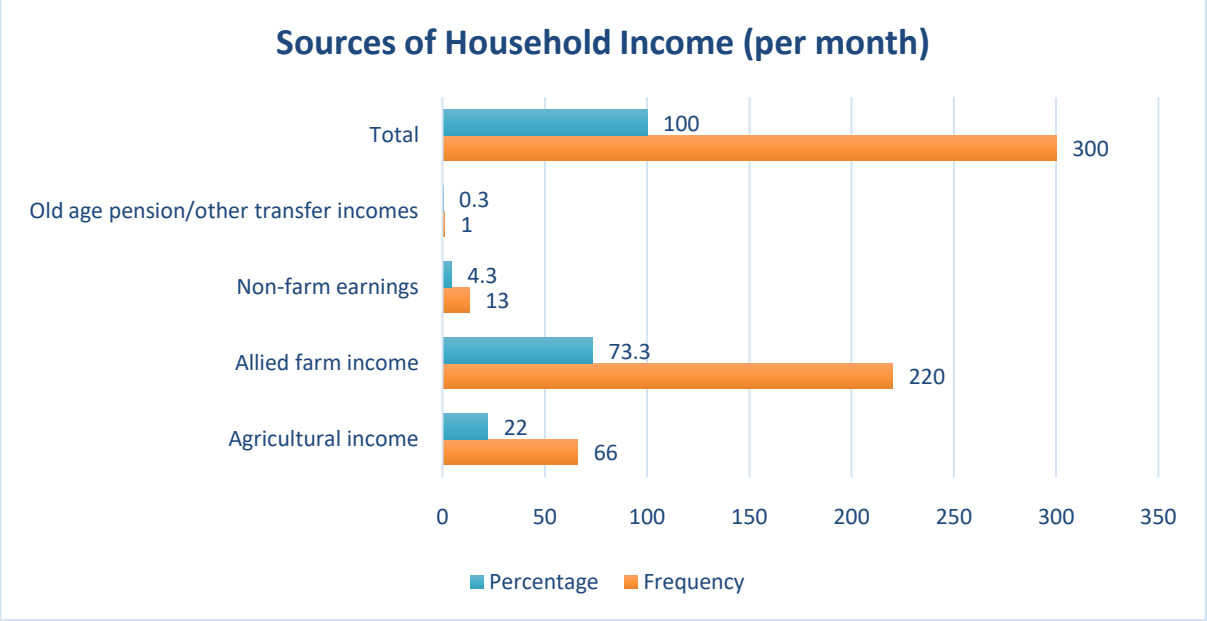
TABLE 3:- MONTHLY HOUSEHOLD INCOME BY SOURCES

SL.NO	Monthly Household Income By Sources	Frequency	Percent
1	Agricultural income	66	22
2	Allied farm income	220	73.3
3	income farm earnings	13	4.3
4	old age pension / other transfer income	1	0.3
	Total	300	100.0

Source: Primary Data

In the above table to explain the monthly household Income of source in Madurai district. The first source Agricultural income 66 respondent getting income from agricultural and 22 percent . In source of income from Allied farm that in 220 and 73 percent. In 13 respondent earn income from farm earning and 4.3 percent. In income of source in old age person was just only one and 0.3 percent respectively. Therefore, the maximum household income from Allied farm income that in 220 and 73 percent respectively.

Figure 2



The study results show that before PMUY Implementation of such scheme the usage of fireweeds was high. After Implementations such scheme the usage of fire wood was low compare to LPG. The maximum of people usage for the L.P.G is 91 percent respectively. In usages was and usages of "Kerosene was 4 respectively. In firewood and electricity usage was 9 and 3 Percent respectively. The maximum household income from Allied farm income is 73 percent respectively.

CONCLUSION:

Attaining energy self - sufficiency through adoption of solar and biogas should be the goal of households in the future days to come, which helps in reducing dependency on imported fuels and thereby boosting the economy as well as in curtailing pollution in the long run.To meet the emerging energy needs in the future, India has to focus more on research activities and up gradation of the existing technology. Biogas production not only meets the energy needs of the agrarian households, but also helps to improve the health and overall wellbeing of the rural population. Through pollution reduction and minimizing waste generation it also brings down the energy deficit and further promotes green and sustainable development.

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GENRE FEATURES OF SHELLEY'S LETTERS

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ABSTRACT

The article describes Shelley's epistolary prose, although it is cited in many articles and monographs devoted to his work, so far it has not become the subject of special consideration. At the same time, Shelley's letters are not only necessary material for a comprehensive study of his biography and work. They are an important link in the development of English epistolary prose. They reflected the taste and style of the era of romanticism. Hollowly, Shelley's letters require their study primarily from the point of view of their genre originality.

KEYWORDS: *Literary, Letters, Novel, Publication, Culture, Epistolary, Prose, Article, Poetry.*

INTRODUCTION

Since ancient times, writing has become a fact of culture and literature. For more than two thousand years of its existence, the epistolary genre has gone from rhetorical, belonging to high oratory, to deeply personal, confessional. Its place in the genre system of certain eras changed. This process is traced in detail in his dissertation work N.A. Dezen. We will pay attention to the fact that already in antiquity there are literary letters as a special genre; "fictitious letters", which are either introduced into comedies, novels, or are independent and real letters generated by the urgent needs of life. In the future, these forms of writing, different in form and function, will develop in two directions - literary letters, oriented towards reading by the general public, i.e. for publication with a literary orientation, and everyday letters - designed only for a specific addressee, and therefore not subjected to literary processing.[1] Together they represent different aspects of the epistolary genre, one of the most interesting and difficult to analyze phenomena in the system of genres. The study of letters and, in particular, letters of writers is of particular interest, because. They "reveal before us the half of the writer's being hidden from everyone, exposing the most intimate sides of his soul and mind" (8, p. IY). Letters not only allow you to learn more about the biography of the writer, to penetrate deeper into his inner world, but also represent a kind of creative laboratory in which the features of the style and artistic manner of the writer are formed. They also reflect the trends in the development of literature, concentrating in themselves its genre potential. As S.S. Averintsev rightly notes, “the study of “younger”, “hybrid”, generally semi-recognized genres is always important in the history of literature, because these genres are especially plastic and mobile; they lay the foundations for later genre phenomena”. In addition, writers' letters can be a borderline case, when everyday correspondence in its purpose, reflecting the originality of the creative talent of its authors, acquires a literary quality, developing into epistolary prose of enduring aesthetic value. It is these borderline cases that are of the greatest interest for study, on the one hand, and appear to be little studied phenomena today, on the other.[2]

Speaking about the Western European epistolary tradition, scientists pay great attention to the art of writing in France in the 11th century. This is due to the fact that French literature of this period gave rise to vivid examples of artistic writing. The letters of such masters as Guess de Balzac, Voiture, and Madame de Sevipier have been studied in sufficient detail. The epistolary literature of England, within the framework of the general tradition, is mentioned in passing, more often the name of A. Pope is mentioned, who published three collections of his letters, purposefully subjecting them to literary processing.[3] However, in modern literary criticism there are separate works devoted to the letters of English writers, which represent a fairly deep analysis of them and, in their totality, allow us to talk about the traditions of the epistolary genre in English literature. In the English literature of the Enlightenment, which is called the "golden age of epistolary prose", this genre occupied a leading position.[4] As V.L. Sidorchenko notes, “at the end of the 11th century. The publication of private letters has become quite common in England”. Moreover, they were a fact and part of public life. We also note that in the English literature of the Enlightenment, the genre of the epistolary novel is becoming widespread. Shelley's epistolary prose, although quoted in many articles and monographs devoted to his work, has not yet become the subject of special consideration. At the same time, Shelley's letters are not only necessary material for a comprehensive study of his biography and work. They are an important link in the development of English epistolary prose. They reflected the taste and style of the era of romanticism. The study of Paul's letters and their comparison with the letters of Byron and Keats opens up a new level in the study and definition of the typological features of this genre in the literature of romanticism. Hollowly, Shelley's letters require their study primarily from the point of view of their genre originality. [5]

Epistolary Prose of the Romantics” by A.A. Elistratova examines Shelley’s letters in the context of the epistolary heritage of contemporary Romantic poets. As their distinguishing features, the researcher notes the presence of "lyrical landscapes", the motive of loneliness, and special punctuation. However, Shelley's letters require a detailed study precisely as a fact of literature, as an independent genre of the poet's work. At the same time, it should be taken into account that the genre specificity of Shelley's letters is largely due to the fact that they were not subjected to copyright editing and were not intended for publication. Therefore, the problem of the unity of the epistolary text also arises, which, however, has already been resolved a priori by literary critics.[6] Nevertheless, genre indicators have not yet been defined that would prove this unity and would characterize Shelley's letters as a special literary phenomenon. In addition, the poet's letters represent just the borderline case when everyday writing develops into literary, which also determines a special interest in their study. The relevance of the work is determined by the insufficient study of the poet's epistolary prose as a whole and the need to introduce it into wider scientific use, the lack of studies in literary criticism devoted to the study of Shelley's letters as a literary genre. «The principal aim of this new collected edition of Shelley's letters is to establish an accurate text from the original manuscripts, a text which is presented with unified and consistent editorial principles. [7] Such an achievement has been made possible by the work of my predecessors, especially H. Buxton Forman, Roger Ingpen and Seymour De Ricci; and by the fact that now for the main body of the letters are available at one and the same time. Of the 745 letters (and cheques) in this edition, 453 were taken directly from the original manuscripts by the editor». Shelley's epistolary prose is the subject of a special study in N.Ya. Dyakonova's article "Shelley's Letters" (1987).[8] The author sets as his task “to tell how they form into an autobiographical story of enduring significance. Show how the correspondence reveals the multifaceted, unique personality of the poet, his inner world”, how the letters help explain

Shelley's artistic work and reveal their relationship. N.Ya. Dyakonova focuses on the plot of the epistolary novel, which includes the facts of the poet's biography, his philosophical and socio-political views, reflected in the letters; on the image of the hero, which does not coincide with the lyrical hero of Shelley's poetic works. Among the features of the style, irony and aphorism are noted. The researcher comes to the conclusion that the letters, distinctly from Shelley's poetic work, have greater concreteness and common sense, that they "help to better understand and capture the lofty feat that is hidden behind every line of his poems "In the monograph "Shelly" (1994) by N.Ya. Dyakonova and A.A. Ya. Dyakonova "Shelley's Letters". [9]

Thus, Shelley's letters are considered among the epistolary heritage of contemporary romantic poets, as part of his work.We have the right to consider Shelley's letters, everyday by their nature, as a literary genre with specific features and design features. Dialogically, as a fundamental feature of the genre of writing, is also characteristic of Shelley's epistolary prose. At the same time, a distinctive feature of the poet's letters is the active involvement of the reader (addressee) in the narrative. Shelley's addressee has a special value.[10]This is due to the personality traits of the poet, who always strove for people. The letters show the attention and sensitivity with which Shelley treated relatives and friends, and with what respect - for political and literary opponents. The firmness with which Shellp defends his convictions (as, for example, in letters to Timothy Shelley, to Southey, some letters to Hogg) is combined with a desire to approach problems and disagreements more objectively.

The genre originality of Shelley's letters is inextricably linked with their wide thematic range. In Shelley's letters, the following "cross-cutting" topics can be distinguished: religious and philosophical, socio-political, aesthetics and literary creativity, and intimate.[11]

Percy By she Shelley's correspondence has been published in two extensively commented volumes by the American scholar F. L. Jones. However, in Anglo-American literary criticism there is only one article devoted to the early letters of the poet, "The Early Letters of Shelley" by John Freeman. [12]

In some works of domestic scientists, the problem of studying Shelley's epistolary heritage is posed. Thus, in the monograph by I. G. Neupokoeva "Shelley's Revolutionary Romanticism", the poet's letters are considered as an independent and significant part of his literary heritage. At the same time, they are involved by the author of the monograph in connection with the facts of the biography and creativity of the floor. [13]

I. G. Neupokoeva gives a periodization of Shelley's letters, points out some features of their content and style. For example, speaking about the letters of the Italian period, the researcher notes the presence in them of laughter, mild irony, turning into sharp grins at her literary opponents, the use of wordplay and puns.

I. G. Neupokoeva emphasizes the genre of open writing and considers its characteristic feature "the generous use of various emotional means of influence - from various shades of revealing satire to the most sincere notes of frank conversation. The predominance of one or another means depends on who the letter is addressed to - a political opponent or like-minded person.

Shelley's epistolary prose gravitates towards certain genre forms that are in accordance with the subject matter of the letters (a friendly message, a journalistic letter, a diary, a treatise, an essay). Some of them are comparable to the genres of the rest of Shelley's work (for example, a treatise). [14]

The closeness of Shelley's letters and poetry lies in the fact that everything (both the life of the poet himself and everything that happens around him) is depicted here through the prism of lyrical perception. At the same time, the letters have a universally synthetic character (personal and public are merged in a single lyrical impulse). Shelley's letters tend to comprehend the issues raised in connection with the facts of his personal life, among other topics and problems in the form of a conversation with the addressee (epistolary conversation). [15]

Shelley's epistolary prose is determined by sincerity, immediacy of feelings, and the power of expressing the author's emotions. All this, together with a heightened attention to the addressee, a peculiar style of letters, their inherent lyrical outpourings, plot sketches, vivid images, determines a special place for Shelley's letters in the epistolary prose of romantics. [16]

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EFFECTS OF PRODUCTION COMPLEXITY AND COMPETITION LEVELS ON THE IMPLEMENTATION OF ACTIVITY BASED COSTING IN PHARMACEUTICAL COMPANIES

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ABSTRACT

Despite its advantages over traditional pricing systems, the ABC system is still not extensively adopted, and it has thus been a focus of discussion for scholars for examination and, eventually, acceptance. Because of the reduced level of ABC adoption, various scholars have conducted empirical studies on it to explore the impact of the firm's characteristics and surroundings on its dissemination and the elements that determine its success. Much empirical research has been conducted in Western or Industrialized countries, with relatively little research conducted in emerging countries, particularly in Asian contexts. Few studies have been conducted in India, as in other Asian nations, to explore the prevalence and the use of ABC systems. The study's main goals are to analyze the company's features and environment elements that affect the adoption of the ABC system, as well as to analyse the influence of behavioural and institutional contexts on ABC success in pharmaceutical enterprises in Odisha. The factor analysis revealed that the most important reason that has discouraged pharmaceutical enterprises in Odisha from embracing ABC was that they confront certain innate problems in the process of the ABC system, such as the difficulty of the ABC system is the lack and high cost of advisors, followed by trust in the currently used cost systems.

KEYWORDS: *ABC System, Pharmaceutical Companies, Production Complexity.*

INTRODUCTION

In present era of automated processes and intense competition, it is necessary to allocate costs more accurately than ever before. The introduction of ABC was intended to address the problems related to the traditional quantity based costing system's shortcomings. Authors from a wide range of fields have asserted that ABC provides accurate pricing than traditional systems. In addition, various authors claim that precise product costs focus on providing valuable details to

measure the performance, control cost, and taking strategic decisions (Kaplan & Cooper, 1998). The ABC method is required for performance evaluation. It serves as the base for performance management of all costs associated with a cost criterion in order to give a more exact scenario of the costs associated with achieving those goals. An additional benefit of ABC, according to the findings of several researches, is that it can assist businesses in expense reduction and increased profitability (Hilton, 2011).

India is one of the biggest providers of generic pharmaceuticals. The Indian pharmaceutical industry supplies more than half of the world's consumption of different vaccines, 40% of generic consumption in the US, and about 25 percent of medicine consumed in UK. Globally, the rank of India is third in aspects of pharmaceutical volume of production and fourteenth in aspects of pharmaceutical production quality. Over 3,000 people work in the pharmaceutical industry in the United States.

During fiscal tenure 2020, the Indian medical devices market had a value of US$ 10.36 billion. From 2020 to 2025, it is projected that the market will expand at a CAGR of 37 percent, reaching US$ 50 billion. Pharmaceutical companies and approximately 10,500 Pharmaceuticals facilities.

Further research has been conducted by several other researchers (Innes, et al., 2000)(Al-Omiri, 2011)(Abernethy, et al., 2001) to denote the aspects that impact the success of ABC implementation in a variety of western countries. Charaf & Bescos, (2013) conclude that the victory of ABC is related with behavioral and organizational aspects instead of technical factors, in contrast to (Horngren, et al., 2012), who comes to the opposite conclusion. India is Asian country whose natural environment attributes, like culture and work practices, are distinct from those of western nations, such as the US and the UK. The factors that influence adoption, non-adoption and successful execution of ABC in Indian industries are different from those that influence these factors in western countries. Up to this point, there is still no indication of how the attributes and environment of an organization influence the decision to use ABC in its business practices. Furthermore, it has not been determined what variables impact the effectiveness of ABC in Indian Pharmaceutical industry. The researcher is aware of no prior studies in this field, to the best of his or her knowledge. As a result, the current study aims to fill in the gaps and add to the existing knowledge warehouse in this area.

Study Objectives

The researcher has charted out given objectives related to ABC in pharmaceutical enterprises in Odisha:

- To investigate the factors like company characteristics and environment that impacts the adoption of the ABC system in pharmaceutical enterprises in Odisha.
- To explore factors that impacts the adoption or non-adoption of ABC by pharmaceutical enterprises in Odisha.
- To assess the advantages that the pharmaceutical enterprises in Odisha have derived from the implementing ABC.
- To investigate the hurdles that the pharmaceutical enterprises in Odisha face in the design and implementation of ABC systems.

Hypotheses of the Study

The impact of the characteristics of an enterprise and business environment on adoption of system of ABC is discussed in detail.

H1: The production complexity has significant impact on acceptance of the ABC method by the companies.

H2: The level of competition has a significant impact on the level of implementation of the ABC method by the enterprises.

Scope of the Study

As per the census of India, the total population of Odisha is 4.2 Crores and it is one of poorest states of India, despite the state's abundant natural resources. When measured in terms of the ratio of urban to rural populations, the urbanization rate in Odisha is slower than most of the other states of India; however, urbanization process in some cities is extremely rapid, with Bhubaneswar serving as an illustration. Since becoming the administrative headquarters during independence, the city has grown 17-fold in 40 years. As there was almost 17-fold increase in population (Census of India 2011).Facilities, including healthcare system, has not been established at a rate that is commensurate with this increase in population. The major reason behind this is identified as the inability of the pharmaceutical companies in the area to cope up with the demand. Some researchers also pointed out that he finance and accounting practices of these firms is highly questionable.

When compared to the previous decade, the pharmaceutical industry has contributed to the new status of India as a developing global economy, that has an average compounded growth rates of around 15.9 percent during 1994–95 and 2000–01. In 2001, the industry was worth around $5.7 billion (IBEF, 2019). Certain areas, such as pharmaceutical drugs, were exempt from paying license and royalties under the 1970 Patent Act, allowing the industry access to the latest prescription medications at a fraction of the global market price. This growth was spurred by the exemption from license and royalties granted to certain aspects, including pharmaceuticals, under the 1970 Patent Act (IBEF, 2019). There are many different types of Pharmaceuticals facilities in India, including those of multinational corporations, large Indian corporations such as Ranbaxy, which initially focuses on generic versions, and comparatively medium Pharmaceuticals units that accommodate the local markets. It is identified in a study that many good pharmaceutical companies in India are now using latest and modern accounting techniques to become sustainable in the long run. However, it is important to establish the significance of ABC technique in these firms.

The pharmaceutical enterprises chosen for the study were chosen for a variety of reasons that have been previously documented in the literature. According to, when compared to Pharmaceuticals firms, non-Pharmaceuticals firms are a diversed group, with characteristics that are very different from one another, and whose outputs are frequently difficult to determine. The authors also pointed out that there are significant differences in cost structure between non-manufacturers and manufacturers, as Clarke et al. (1999) demonstrated. As a result of the differences, it is more difficult to investigate ABC applications in different types of industries. Pharmaceuticals industries are also more probable to have greater product variety and production cycle complexity when contrasted to service and retail outlets companies, owing to the fact that they play a major role in determining how costs are allocated among different products. The

management accounting many previous studies have also given careful consideration to this criterion in the course of their research. For example, Al-Omiri, (2011) conducted an Indian ABC survey in which the questionnaires were mailed to General Manager of the company, Vice President, Accountant, and Head of Finance and Accounting. A survey conducted by Bescos, et al., (2002) made use of Chief Financial Officers (CFOs). They trust that CFOs are the best people to respond to the survey because they are likely to have real and important information about the use and design of product costing systems. They assume that CFOs are the best people to respond to the survey because they have knowledge of costing.

The participants in this study were stakeholders working in pharmaceutical enterprises in Odisha. These individuals were chosen based on the assumption that they'll possess a thorough detail of practices of accounting and that they will also be key personnel in the design and implementation of ABC in their respective organizations.

Literature Review

Management and engineers placed a strong emphasis on the hiring of cost accountants to enhance the efficiency of production, which resulted in the establishment of the modern cost management trend in the industry. Rather than focusing on cost determination, the scientific cost management movement concentrated on cost control in order to improve production efficiency (Banerjee, et al., 2004). As a result, the standard system of costing was established as a reliable method of cost control, rather than the benefits and costs associated with the traditional method of costing (Chandler, 1977). The accurate calculation as well as the administration of overhead costs has been thoroughly described under one of the subject of accounting namely “Scientific Cost Control”. Coordination of costs and performance was achieved through the use of timely standard costing reports that had been presented by understanding the concepts from the “Scientific Cost Control” branch of the account which were further available for modifications as per the needs (Cao, et al., 2006). The cost budgeting and accounting systems were earlier found to be used by different departments and were not integrated into a single system. For instance, the cost budgeting was majorly used by the production department while the accounting systems were handled by the financial department. As a result, the earlier structures were found more concerned about achieving efficient Pharmaceuticals as against the achievement of full financial efficiency of the company.

It is still necessary to develop a system that will aid in the calculation of accurate costs in the future despite the fact that ABC has been termed as a benefactor. To accomplish this, the following procedures must be completed: To determine the firm's resources, one must first determine all of the firm's direct and indirect operating costs, both direct and indirect. These costs will now be associated with specific activities in the future, rather than with general expenses (Ghaffari, et al., 2008). In light of this, it was suggested that the activities of a mapping firm be carried out at the same time. The activities that indirectly contribute to the production of products, such as overall leadership and managerial activities, must be included in addition to those that directly contribute to the production of products (González, et al., 2005). This is succeeded by tracking down the costs within the assets and activities so identified in the earlier stage for further associating the cost drivers. The identification of appropriate cost drivers is one of the most difficult problems that the Abc system has to deal with. Lastly, the cost drivers are linked with the activities identified in the earlier stage in order to undertake the estimation of costs.

The following are the conclusions reached by Drury (2000), according to another researcher: The advancement of the ABC method involves four steps:

1. Figure out which are the most important actions that take place within a company.
2. For each activity, cost absorption is calculated and allocated to cost pools or cost centres; and 3.
3. Identifying the primary cost driver for each of the major sectors; and 3.
4. Another method of cost assignment is to allocate the costs of each activity to the respective cost of such activities themselves.

This corresponds to the first part of the acquisition procedure, with the first two stages representing the beginning and the ending two stages representing the other phase of the acquisition procedure. In most cases, the ABC project team is in charge of putting these steps in place (Gujral. & Dongre, 2008). Various types of expertise will be required for this team, which will typically include not only management accountants but also representatives from a variety of different departments and sections within the organisation. It is possible that additional outside advisers will be brought in to assist with the implementation and design of the ABC framework.

A task that is completed with a specific goal in mind is referred to as an activity. ABC places a strong emphasis on taking action. It is therefore logical to begin by identifying the activities that will be used in the activity-based system of costing before proceeding with the design (Lin, et al., 2009). In order to identify activities, it is necessary to put together the building blocks of the ABC system. This step is critical in ABC because it significantly influences the structure and scope of the system. Additionally, this provides the accountants with a reason to dig thoroughly in the appropriate business sphere, resulting in a more accurate and efficient costing system that is based on reality rather than assumptions.

An activity could be created specifically for the purchase of materials, for instance. When a purchase order is processed, it undergoes various stages such as receipt of order, identification of appropriate supplier, purchase memos preparations and supplying the order once the order is finalized (Gujral. & Dongre, 2008). In order to identify the activities of an organisation, it is necessary to determine what has been completed with the resources that have been committed in the organization's overhead area. A systematic approach must be taken to the task at hand in order to ensure that everyone involved in performing a specific task is accurately represented or described in the final product (Innes et al., 1994).

The process is the primary focus of ABC, and process analysis aids in the improvement of product design even further. Because traditional costing founded on the drivers of volume-cost will not give clear, true, and equitable picture of resource allocation, it is necessary to develop new costing systems that are accurate and reliable. Among other things, according to Banker and colleagues (2002), costs of products become contorted, that lead to skewed analysis of layout for the ability to manufacture, and analysis of profitability, and pricing, among other things.

Without ABC information, it is impossible to determine the profitability of a company and to get clear scenario of the precise costs associated with every product. Besides that, Gupta and Galloway (2003) point out that when it comes to evaluating a product as a whole, evaluating specific design characteristics becomes impossible. This discussion demonstrates that ABC is beneficial in the planning of production as well as the improvement of product design.

Cost containment is more important than ever before in today's business environment, as success and profitability are more dependent on it than ever before (Udpa, 1996). The nonfinancial dimensions of quality, versatility, and time to market must be taken into account when designing today's cost management processes. ABC necessitates the identification, decomposition, and analysis of the underlying actions that are responsible for overhead costs by Pharmaceuticals and economic teams.

Based on his research, Swenson (1995) discovered around 75% of sampled companies utilise ABC for supporting their decisions of pricing, which is consistent with previous research. Innes, Mitchell, and Sinclair discovered in 2000 that the use of ABC with objective of product/service costing is highly correlated to the entire performance of ABC, and they published their findings in 2001.

The investigation's primary focus is to explore drug inventory control procedures and procedures. The purpose of the essay was to categorise medicines based on their criticism and cost, and to distinguish between the ones that need strict control on management and those that do not require such control. The pharmaceutical medications were classified using an excellent spread sheet that was based on the ABC analysis of the ingredients in the medications. It was possible to classify drugs according to their cost and criticism factors based on the results of this analysis. In order to promote effective drug inventory management with the least amount of monetary resources, to maintain the highest level of drug safety, and to reduce the frequency with which drug supplies are in short supply, the goal of these analyses is to: A successful inventory management programme can result in the provision of uncompromised care of patient at the health care facility level, if implemented properly.

The authors hope to develop a contemporary outpatient pharmacy system using the method of JIT in order to assist them in improving the operations of pharmacy. This system addresses both inventory and distribution aspects of pharmacy operations, as well as significantly lowering costs of production and increasing rates of services for their members as a result of the implementation of this system. By reducing the Bullwhip Effect, a just-in-time system for inventory management, which reduces safety stocks to enhance supply reliability, has been implemented by Titan Pharmaceuticals.

Using traditional inventory techniques as a starting point, the purpose of the researcher was to examine drug consumption products and the costs associated with drug procurement, as well as to prioritise drug procurement method. The process of determining drug stock levels has proven to be time-consuming and complicated. The abc system and the VED assessment were the methods that were used to resolve the situation at hand. For the purposes of accuracy and efficiency in drug store scientific inventories, the researchers discovered that devices are required for effective and precise monitoring of drug store scientific inventories. Therefore, the ABC-VED matrixes, as well as the ABC-VED matrix with the VED matrix, demonstrate that drugs require strict oversight and regulatory oversight. The ABC-VED approach must be incorporated into the medicines inventory under the supervision of hospital drug administration, as a result of this.

In order to effectively manage drug inventories, this paper is required. In order to optimise medical management, the project's goal was to decrease drug inventory costs while simultaneously increasing patient satisfaction levels. Pharmaceutical shortage, over-stock, discrimination in health-care system, unbudgeted estimation techniques, and a lack of knowledge

were the most significant issues faced by companies dealing with large volumes of medicine and large quantities of inventory. The implementation of a DSS system was also approved, with the goal of assisting users in better management of drug inventories and making more dependable decisions. As a result, the patient reports higher levels of satisfaction.

In this study, the primary focus is on the selection of pharmaceutical suppliers in Sudan's central and hospital settings, which is accomplished through the application of ABC-VEN analysis techniques. Sustainable models were used to measure the inventory control system among pharmacists who worked in the centres under consideration, and the indicators were based on sustainable frameworks. According to the Centers for Disease Control and Prevention, staff members who work in drug treatment should receive extensive academic training as well as frequent master classes or trainings on the subject.

After conducting an ABC analysis on the items under consideration, the researchers discovered that 35 (52), 171 (172), and 52 (172) items were classified as A, B, and C according to their ABC classification, respectively. An overall percentage of 73 percent of the total items included in the VED assessment were deemed to be the most important, with 26 percent of all items falling into the category of essential (e).

Research Gaps

Because of the contributions of a large number of social scientists to the conceptual progression and actual implications of the concept in various industries since its introduction in the 1980s, Activity Based Costing (ABC) has made significant progress since its introduction in the 1980s. When it comes to changing dynamics of factors such as global competition, automation reformation, changes in corporate processes, and changes in the business environment, the literature has vociferously advocated for the strategic significance of ABC, which has been supported by the entire review of literature.

It was discovered through the review of the literature that there were some inconsistencies in the scope of cost management techniques that were previously undiscovered. The following are the most significant gaps in the literature that were discovered as a result of this research:

An organised compendium of the history of the costing system and development of the discipline is currently unavailable.

Because of the lack of understanding of ABC, as well as its application, it is not acceptable and is unpopular among organisations as a whole. The non-Pharmaceuticals sector has seen a significant increase in activity, but a review of the literature revealed that ABC is more well-established in the Pharmaceuticals sector.

There are various Pharmaceutical enterprises in Odisha but it is not known whether they have applied ABC or not. Therefore, it is also important to know whether Pharmaceutical enterprises in Odisha effectively applied the ABC system along with the outcomes of the application. There are various behavioral and organizational characteristics related to the success of ABC implementation. But there is no study that researched the relationship between behavioral and organizational characteristics and success of ABC implementation for Pharmaceutical enterprises in Odisha. The implementation process is not quite easy and various issues are encountered throughout the implementation of the ABC system. Again, there is no study that researched the implementation issues that the Pharmaceutical enterprise in Odisha has encountered throughout the implementation of the ABC system and how these issues can be resolved.

Research Methodology

It is necessary to undertake research with the purpose of addressing issues and increasing current knowledge in order for it to be effective (Saunders, et,al., 2009). As per Morgan and Smircich (1980), methods of research used should be selected in accordance with the study question being addressed. It is also necessary to consider if the information sought by the investigator is readily available. This is something that should be considered (Maddison, 1983). A number of criteria influence the selection of suitable techniques. One or more of the following criteria should be considered: the researcher's previous experience; the statement of research; and the target people that will be benefited from the results of this study (Creswell, 2003).

As a result of the choice of research method, there is a major impact on the requirements of the research methods that will be utilised in the examination of a topic, as well as on the research design (which includes all types, analysis, and comprehension of the data) that will be employed (Dainty, 2008).

The procedures and consequences of two classic strategies were discussed in detail in this section, as were the discussions that surrounded these approaches and their ramifications. In order to establish the path of the investigations, the positivist method (quantitative research techniques) and the phenomenology approach (qualitative research strategies) are used, respectively (Easterby-Smith, et.al., 1991). To keep things as simple as possible, the quantitative methodologies were employed in this investigation. Following the previous section's discussion of the study's aims and goals, this section discusses whether the method chosen for this study was appropriate under the circumstances.

Data Analysis

To be eligible for membership in the analysis, only those surveys had to be totally filled in all aspects. Following the collection of raw data, it was further converted into statistical information, which was then coded and entered into a data base and preservation reasons. Data files, which were prepared with Microsoft Excel, were used to store the information. In order to conduct statistical analysis, the information acquired was coded and fed in a database by utilising the statistical package for social sciences (SPSS) software programme in its version 21.

It is possible that more tests, in addition to those given below, were employed to test the data in this research, which was done statistically. There are numerous sorts of statistics to consider when conducting descriptive statistics: I frequencies, (ii) Pearson's Chi-square, (iii) the paired sample t-test, (v) Cronbach's alpha, (vi) Pearson correlation coefficient, and (vii) factor analysis are all examples of statistical methods used in data analysis. Two different types of regression analysis exist: (viii) binary logistic regression and (ix) linear regression analysis. Binary logistic regression and linear regression analysis the following section provides a succinct synopsis of the numerous tests that were performed:

Descriptive statistics

For numerous variables, standard values are produced and presented in a large table that summarises the univariate overview of data for each of the variables. There are a variety of ways to present parameters, including alphabetical order, the order in which they appear by default, or any mix of these two methods.

The incidence and percentages of occurrences

With the Frequencies process, you may create statistical information about the variables and get a visual depiction of their analysis all on the same screen.

Pearson's Chi-squared test

For the purpose of determining if the distribution of units in a variable is based on a known or hypothesized distribution, the Chi-square goodness-of-fit method was used, and the findings are provided in Table 1. Depending on how the group has different is specified, the percent of subjects anticipated in each group of data sets can be equal or not-equal for each group of categorical data. For the purpose of determining whether or not the predicted and actual frequency bands were equal, this study compared the predicted and actual frequency bands. This is performed through the application of a statistic known as Pearson's Chi-square, which has a value of 2.

Primary Data Analysis

1. Demographic Profile

The companies that took part in the present study got selected via use of a standard randomization process. In order to respond to the survey, each firm was assigned a single member, resulting in a total of 200 responders from pharmaceutical companies in Odisha, as per results of the paper. The study was conducted in order to evaluate the multidimensionality of the ABC method among Pharmaceuticals industry sectors in Odisha, that included mainly the behaviour of different respondents in relation to factors influencing ABC adoption, the purposes for adopting / not having adopted ABC, the advantages and problems of execution, as well as the based on behavioral and organisational aspects that have impact on success of the ABC method. On the basis of the structured equipment that was utilized for the collection of the data from a sample of respondents, analysis and evaluation of the results have been carried out on the data.

Individuals who took part in the study were finance executives or executives from costing department who are important in process of taking decisions process in their respective organisations, according to the findings of the study.

Aside from that, they are in charge of the implementation of accounting management procedures in enterprises and the installation and use of the ABC method in the pharmaceutical industry.

TABLE1: DETAILS OF DEMOGRAPHIC INFORMA

	Frequency	%
Gender		
M	174	93.5%
F	12	6.5%
Age (In Years)		
20-30	11	5.9%
31-40	66	35.5%
41-50	88	47.3%
51-60	21	11.3%
Education		

Graduate	9	4.8%
UG	36	19.4%
PG	141	75.8%

TABLE 1.2: EXPERIENCE IN SERVICE

Experience (In years)	Frequency	%
Less than 5 years	8	4.3%
5-10	87	46.8%
11-20	86	46%
More than 20 years	5	2.7%

1.2.2 Characteristics of the organization

These are the dependent variables that are being investigated in this section: I the manufacturing industry; (ii) the type of company; (iii) the country of origin of the company; (v) the threshold of manufacturing sophistication; (vi) the concentration of competing; (vii) the tier of overhead expenses; and (viii) the accuracy of price information; It was important for each and every defendant company to complete this component of the questionnaire. Several businesses that had embraced the ABC method were contrasted to a similar lot of firms that had not embraced the system for the context of this research, and the results were quite interesting. Therefore, in order to meet the study's objective, it was important to differentiate among ABC users and other adopters in order to collect data. Based on their responses, the respondents were split into four categories, which are depicted in the table below. Among the 200 respondents to this survey, just 56 (28 percent) indicated they had accepted ABC, while 122 (61 percent) said they had never embraced or contemplated accepting ABC, and only 22 respondents (11 percent) said they were now in the process of analysing ABC for possible adoption. Take into account the fact that no corporation has ever adopted ABC and then decided to discontinue its use of the acronym.

TABLE1.2.3: ABC IMPLEMENTATION STATUS IN ORGANIZATIONS IN ODISHA

Companies	Frequency	%
ABC :Adopted	56	30.1%

ABC : Adopted, but later abandoned	0	0
Not adopted ABC, but taken into consideration the adoption	9	4.8%
Never considered or adopted ABC	121	65.1%
Total	**186**	**100**

1.2.3: Production complexity and Adoption of ABC system

When the loadings of two factors were combined, the concept "production complexity" was evaluated. The two components were "variance in the complexity among goods" and "complexity in the manufacturing processes." The methodology developed by Van Nguyen and Brooks to measure production complexity served as the foundation for this approach (1997). On a 5-point Likert scale, the participants scored the items.

Cronbach's alpha, which would be a dependability metric that quantifies the stability of variables in a construct, was used to assess the complexity of the manufacturing process. In this study, the factor 'production complexity' was found to have an alpha value of 0.875, suggesting that the measurement used has a great level of internal consistency.

TABLE1.2.4: CRONBACH'S ALPHA FOR PRODUCTION COMPLEXITY AND ADOPTION OF ABC SYSTEM

Variable	N	Mean		Std. Deviation	Cronbchís alpha
		Statistic	Std. Error	Statistic	
Differences in the complexity among products	200	3.42	.080	.899	0.875
Complexity in the Processes of production	200	3.81	.067	.932	

***Production Complexity Descriptive Statistics*-**

Everyone who participated agreed that the performance and operational ranged from moderate to somewhat higher than average. Average product complexity variation was 3.42, while the average variance in process design complexity was 3.81, according to the data.

The first cross tabulation has been conducted for determining the acceptance level of ABC system at various aspects of diversity of product. Because of the zero replies in some areas and the restricted units of answers in others, the five different sections of the average values were compressed into 3 categories by comparing the information of the numbers 1 and 2 into less and

results of the digits 4 and 5 in extreme. The findings that had the value 3 showed that they belonged to the category Medium. The results are presented in the following table.

ABC Adoption Vs. Production Complexity

According to the data in the table below, 72.2% of High-growth enterprises have been non-adopters of ABC, compared to 42.7 % of Medium-growth organisations. Similarly, just 23.2 percent of High-Tech companies adopted ABC, compared to 51.4 % of Medium-Tech enterprises. Low companies were non-adopters of the ABC programme in 87.6 percent of cases.

TABLE1.2.5: ABC ADOPTION AND PRODUCTION COMPLEXITY

Responses		GROUP		Total
		Adopters	Non-adopters	
Low	Frq.	2	13	15
	%	13.3	87.6	100
Medium	Frq.	20	18	38
	%	51.4	42.7	100
High	Frq.	34	99	133
	%	23.2	72.2	100
Total	Frq.	56	130	186
	%	30.1	69.9	100

H1: The production complexity has significant impact on acceptance of the ABC method by the enterprises

A binary (RA) regression- analysis was utilized via production complexity as predictor factors and ABC acceptance as the regression model (0 for - non adoption; 1 for adoption). The findings of (LR) logistic regression analysis are shown in table below.

Using the Chi-square test, you may quickly determine if a single predictor appropriately effects the response variable when contrasted to chance alone. In accordance with the outcome of the (LR) logistic regression model, the estimated Chi-square does not appear to be statistically significant ($p>.05$). In other words, the model with a deterministic model may be able to predict the dependent variable by chance (production complexity). A logistic regression model's "variation" can be quantified using the Cox and Snell R2 and the Nagelkerke R2, which are both statistics. They are interpreted in similar manner as R2 in regression analysis, but because Cox and Snell R2 also couldn't achieve maximal value of 1, interpretation becomes more difficult (Field, 2009).

High Cox and Snell scores are supposed to signal that the model is becoming increasingly well-fitting as time goes on. With an R2 value of 0.00, the logistic model is responsible for only 0.4 percent of variance in ABC increasing adoption, as per the Cox and Snell analysis. As a consequence, the Cox and Snell Value of r2 that was calculated has a decreased predictive capability. The R2 calculated by Nagelkerke is 0.006, which is extremely low. In this particular

instance, it reveals that there is only a 0.6 percent relationship between manufacturing complexity and ABC adoption.

Similar to the t-test in regression analysis, the Wald statistic is test of null hypothesis, which is that the "" correlation is equivalent to zero. A p-value smaller than .05 can be used to reject out the null hypothesis, which means we can deduce that the predictor variables has a statistically significant impact on how well the dependent variable predicts.

REGRESSION (LR) FOR THE Impact on THE level OF PRODUCTION COMPLEXITY on ABC ADOPTION

TABLE.1.2.6: LOGISTIC

	B	S.E.	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)	
						Lower	Upper
Complexity of Production	-.167	.185	.815	.367	.846	.589	1.216
Constant	-.244	.677	.130	.719	.783		
Chi-square	.815						
Sig.	.427						
Cox & Snell R^2	.004						
Nagelkerke R^2	.006						

It is clear from the above study that there is no statistically significant relationship among ABC adoption and output problem in pharmaceutical firms in Odisha, as shown by p value of.427 (p>.05). A result of this is that null hypothesis, which is the production difficulties does not have any significant impact on a company's acceptance of the ABC system, is found to be correct. Therefore, Hypothesis H1, which asserts that production difficulty has a massive effect on ABC system implementation, cannot be proven.

Various researches have been carried out related to determine whether the ABC approach is applicable to organisations with a higher degree of production complexity than the average (Schoute, 2011). According to the conclusions of this research, when a firm produces a diverse range of things, the ABC technique may be advantageous due to the variations in costs and procedures related. Consequently, the ABC will be profitable and advantageous for the organisation when it is implemented in its entirety (Baker, 1994). Baker (1994) emphasises that enterprises with fewer goods and a lower level of complexity do not have to adopt ABC blindly in order to make up for high direct labour costs, as previously thought. These companies must first explore with several methods of accounting before implementing the ABC technique. Companies that do not generate products with a high level of diversity, according to Baker (1994), have less need to use the ABC strategy in their operations. Gupta and Galloway had similar points of view on the subject (2003). In manufacturing, the term "sophistication" refers to a difficult or unusual manufacturing procedure, as well as a product that requires elaborate preparation and quality control (Swenson, 1995). The findings of stated study, on the other hand, imply that the intricacy of production had no massive effect on the ABC system's acceptance in firms as a whole. This finding is also uniform with the findings of Brown et al. (2004) as well as

Charaf & Bescos (2013). Companies with a high level of product complexity did not necessitate the use of the ABC system.

H2: The level of competition has a significant impact on the level of implementation of the ABC method by the enterprises.

Competition and ABC adoption

Individual responders were provided a scale based on five-point Likert from 1 (none) to 5 (very intense) when asked explicitly about the level of competition in their company (extreme). In line with this approach, Swenson's method is appropriate (1995).

After doing an initial cross-tabulation, it was possible to determine how quickly the Abc approach was being adopted in proportion to the extent of competitive intensity present. The five different categories of the overall average were crumbled into 3 groups as a result of the zero and compact amount of production in some classifications. The outcomes of values 1 and 2 were joined to make a low category, and the results of values 4 and 5 were joined to make a high category. According to the findings of this study, the number 3 was needed to demonstrate the category "Medium." Results are presented in the table at the bottom of this page.

TABLE1.2.7: COMPETITION AND ABC ADOPTION

Responses		GROUP		Total
		Adopters	Non-adopters	
Low	Frequency	7	4	11
	%	63.6	36.4	100
Medium	Frequency	11	27	38
	%	28.9	71.1	100
High	Frequency	38	99	137
	%	27.7	72.3	100
Total	Frequency	56	130	186
	%	30.1	69.9	100

An analysis of binary logistic regression was carried out in the study, with the competitive pressure as the predictor variables and the acceptance of ABC as the predictor variables. A single variable (strength of competition) can predict the adoption of ABC, but the modeling with a deterministic model (strength of competition) can only predict the adoption by chance, as demonstrated by results from the logistic regression model, which is statistically non-significant ($p>.05$). The Cox and Snell R2 and Nagelkerke R2 values of 0.001 indicate a very weak link between the level of competitiveness and the acceptance of ABC, with a coefficient of correlation of 0.001 percent. The correlation coefficient between the amount of competition and the adoption of ABC is 0.001 percent.

TABLE1.2.8: LOGISTIC REGRESSION (LR) FOR THE IMPACT OF LEVEL OF COMPETITION ON ABC ADOPTION

	B	S.E.	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)	
						Lower	Upper
Competition	-.086	.202	.182	.712	.917	.617	1.364
Constant	-.499	.818	.373	.541	.607		
Chi ^{2}	.181						
Significance	.670						
Cox & Snell R^2	.001						
Nagelkerke R^2	.001						

They found that, there was a lot of rivalry in Odisha, the findings of the regression analysis study demonstrated categorically that there was no major effect on ABC adoption amongst the chosen firms in the state. This predictor variable has a significance level of only.712, which indicates that it is not statically important at the current time. As a result, it can be argued that the severity of the rivalry did not had significant effect on the wide acceptance of the system of ABC. As a result, the discovery did not initially lend support to the hypothesis of H2.

Cooper (1988b) observed that "contest supply voltages the costs of mistakes since there is a higher probability that a challenger will reap the benefits of any defects created" (p. 43). As a result of rising worldwide competition and the development of revolutionary new Pharmaceutical technologies, trustworthy product cost data has become vital to achieving competitive success in the pharmaceutical industry (Cooper & Kaplan, 1988b, p. 96). Clarke and colleagues discovered that there is positive significant association of market competition and the use of managerial accounting practises (1999). The ABC method, as developed by Cooper (1988b), should be used by businesses in situations when there is significant rivalry. As a result, organisations that are faced to intense competition are more likely to accept the ABC system. According to studies undertaken by Van Nguyen and Brooks (1997), companies in highly competitive marketplaces mostly use ABC than other companies (2008).

Even still, the results of this study demonstrated that there is no relationship between the level of rivalry and the use of ABCs in the work.

Accuracy of Costing Details

The first step in the cross-tabulation technique was completed.. It is important for a company's cost analysis to be clear and correct in order to have a clear picture of how well its system is performing. It also shows whether or not the process is operating effectively or successfully, according to the corporation. For ABC or for avoiding ABC, it is vital to comprehend the concept of accuracy. While it is feasible that the companies will not implement the ABC system if they also have yet another framework in place that provides high levels of clarity and accuracy, it is more likely that the firms with lower levels of transparency and accuracy in the costing system that is already there will switch over to a more equitable plan. Companies who

have used the ABC approach and are enjoying high degree of efficiency in their data are almost guaranteed to maintain to use the ABC state as long as they are successful.

The accuracy of the present system was determined by asking participants to rate it on a Likert scale based on 5-points that ranges from extremely accurate to somewhat correct to terribly inaccurate. A conventional or an ABC system may be in use at the moment, depending on the organisation. The aim of this study was to lay down the rate of accuracy of costing data among ABC users and non-users with aim of understanding the costing process. We were able to decrease the five response groups to three by combining the result of the values 1 and 2 in a section called Low Accuracy, findings of the numbers 4 and 5 into a clustering technique High Accuracy, due to the zero and minuscule proportion of responses in some groups. Specifically, the findings of value 3 were typical of the category Medium Reliability in this instance. The results of the study are illustrated in table.

TABLE1.2.9: CHI-SQUARE TEST FOR THE ACCURACY OF INFORMATION PROVIDED BY CURRENT SYSTEM

Responses on Accuracy		GROUP		Total
		Adopters	Non-adopters	
Low	Frq	4	51	55
	%	7.1	39.2	28.4
Medium	Frq	13	47	60
	%	23.2	36.2	34.2
High	Frq	39	32	71
	%	71.3	23.2	38.2
Total	Frq	56	130	186
	%	100	100	100
Chi-square is 36.448, P is .000				

Generally speaking, 39 percent of the person's participants replied a high degree of correctness, followed by 34.2 % who suggested a medium rate of precision and the other 28.4 % of them who indicated a low rate of precision.

Companies -adopted ABC system

The execution of the Abc method was the focus of the inquiry conducted in this portion of the report. These sections investigate the factors that led to the implementation of ABC, what advantages were noticed as a consequence of ABC implementation, what level of success the ABC system achieved, what influence based on behavioral and institutional factors had on the achievement, and what difficulties were faced at the time of composition and construction of the system of ABC . As mentioned in the question title, this component of the survey was filled out entirely by those who worked for an organisation that was presently adopting or utilising the ABC method.

Introduction to ABC for the first time

It is obvious that the poll was only open to mangers or costing executives with minimum 5 years of experience in finance and accounting professions, and that only those with such experience were invited to participate. Consequently, it is vital to understand how people working in firms that have adopted the ABC system become acquainted with the ABC method in the first place.

TABLE1.2.10: RESPONSE ON INTRODUCTION TO ABC FOR THE FIRST TIME

Response	Frequency	Percent
University	23	42.3
In-house training	13	18.4
Conferences/ seminars	11	16.3
Reading	9	15.2
Total	56	100
Chi-square = 12.329; p =.007		

Upon being asked how they would respond to this subject, the individual respondents presented a diverse range of solutions that were incompatible with one another. More than half (42.3 percent) of the participants mentioned that they understood about the Abc method of costing from their college as part of the learning programme, 18.4 % stated that they did learn about it from their employers as part of an in-house training course, 16.3 take a leading role that they managed to learn about the Abc method of costing by attending conferences and seminars, and 15.2 % stated that they did learn about it by reading about that in books and journals. The findings revealed that education in colleges has a substantial role in disseminating education about the Abc method, and that this role is of a relatively high importance in terms of importance. Businesses may be recommended to implement the ABC system as a result of this. Additionally, a statistically significant distinction between the 2 groups of frequencies (2 = 12.329; p=.007) was discovered through further investigation.

Implementation of ABC

They claimed to have implemented ABC, however they were at varied phases of the implementation process. Individual respondents were asked to submit responses based on their own personal experience, which is why we examined their detailed integrated of ABC in order to collect information to verify the authenticity of the answers made by the individuals who provided them. As per Clarke & Mia (1995), early investors of the system of ABC are not able to determine the effectivity of the programme during the initial phases of its implementation.

Reasons to adopt ABC system

Answering question 19 about their agreement of nine things that define the reasons for their choices to adopt the Abc in their companies, the ABC adopter have been enquired to indicating the degree of agreement with each of the items in question 19. Using a Likert scale based on 5-points that ranges from disagreement to strongly agree, respondents were enquired to describe

nine different explanations. The best possible score was agree strongly, with the lowest possible scoring being strongly disagree. As a result of their findings, the causes for failure supplied in the questionnaire were divided into three major categories: inherent deficiencies of the present system, changes in the firm's attributes and corporate setting, and intervention by outside agencies. Every group comprised of 2-to-4 separate pieces of equipment.

According to the results, the most commonly quoted reason for implementing the ABC system was the firm's inherent flaw within the existing structure (mean value = 3.56), accompanied by changes in the group's attributes and corporate scenario (mean value (MV) is 3.40), and the least commonly cited possible explanation was interference from external organisations (mean value (MV) is 2.68). According to the majority of individuals who took part in the study, the requirement for exact cost data (mean value (MV) = 4.50) and difficulty of the current system to transmit relevant details to managers (mean value (MV) = 4.13) were the primary reasons for the implementation of ABC.

Participants in the survey, on the other side, were neither in disagreement nor agreement with another point made in the questionnaire. Items from the company's qualities and work environment group, such as an increased percentage of overhead expenses (mean value = 3.64) and an increased level of competition that organisations face (mean value = 3.39), have been identified as major factors that influence the decision to adopt ABC by those who responded to the survey. The increase of the number of commercial varieties available was a third significant goal of adopting this technology in the firm's attributes and business environment group (mean value = 3.16) after it was first implemented. Only advice from auditors and consultants was reported as a key reason (mean = 3.30) for decisions made by individuals in the assistance from external organisations group; guidance from other sources was absent from the sample.

When it comes to costing, the ABC method is a good model to follow. One of the key selection areas to introduce the Abc technique in industries was the acceptance of more potential strategy that could be used in complex scenarios without requiring a change in thinking. Precise pricing is still at the core of the ABC system's fundamental notion of costing in many industrial fields, even today. As a result, the major purpose of introducing ABC practises in many businesses is to reduce overhead costs.

According to the findings of the study, larger organisations with a diverse and extensive product line, as well as more overhead, is likely to use an ABC costing system. When a larger company sells a product to a customer, it is usual for the actual cost of the product to be considerably inflated, specifically when the cost has been determined using standard pricing procedures. The ABC pricing approach, on the other hand, is not required in the case of smaller enterprises with fewer items that are less varied and complex since the amount of spending on overhead is insignificant when compared to the total amount spent on products. A complete and full explanation of the problem was supplied by Baker (1994). Companies in the present corporate environment, where challenging aspects are met on a routine basis, may opt for a more rigorous system primarily as a result of external limitations, such as the desire to stay one competitive and successful, and other factor. As Cooper (1988b) argues, one of the causes that contributed to the acceptance of ABC by firms was their desire to compete on a level playing field with their competitors. An expense accounting system is more important in businesses that are pushed by intense competition because it allows for more precision when it comes to determining the costing of the things that are manufactured. If a company has a lower financial budget, it may be

more profitable to retain the present system set up rather than transitioning completely to the ABC system.

The findings suggest that the large pharmaceutical enterprises in Odisha are driven to embrace the ABC system because of a "inherent vulnerability in current systems," according to the findings. Also consistent with Anand et al. (2005)'s findings is the fact that the depiction of ABC in pharmaceutical enterprises in India was motivated by the fact that the present system was not useful to managers, as well as the fact that intense competition in the businesses in aspects of quality, price, and performance. Several studies, including those by Al-Omiri& Drury (2007), found that the limitations of the old costing approach were the leading cause for applying ABC, followed by the dynamic world.

TABLE1.2.11: BENEFITS FROM IMPLEMENTATION OF ABC

Benefits	N	Mean	SD
Enhanced decisions (like decisions on pricing etc.)	200	4.51	0.504
Enhanced cost control details	200	4.51	0.603
Accuracy in cost	200	4.44	0.493
Enhanced product cost / data on profitability	200	4.32	0.636
Assistance in efforts of cost reduction	200	4.09	0.859
Increased effectiveness in budgeting	200	4.05	0.773
Enhanced insights in cost causation and behaviour	200	3.91	0.668
Promotion of efficiency of resource	200	3.84	1.080
Enhanced waste reduction	200	3.84	0.708
Provision to reliable details	200	3.79	1.107
Enhancement in accessibility of Details	200	3.71	0.967
Enhancement in performance	200	3.46	1.206
Increased competitive capability	200	3.46	1.525
Customer profitability Knowledge	200	3.27	1.052

Success of ABC

In this section, the efficiency of the ABC plan was evaluated in greater detail. The findings of this section of the research will establish the degree to which the ABC system has been implemented successfully in Odisha's main pharmaceutical firms.

A detailed experimental strategy was used to investigate the theory and success of ABC in order to discover the measures of success, as described in earlier parts (Shields, 1995). By examining user attitudes toward ABC deployment (question 21), and then technical features of the ABC system that is in (question 22), user satisfaction of the system (question 23), and estimated influence on organisational processes (question 24), McGowan's method compares the success of ABC implementation (question 24). (Question number 24) In fact, according to the findings of a research conducted by Fei (2010) and Byrne (2011) to examine the success assessment of ABC utilizing firms in Australia and China, McGowan's method has continued in use to this day. To this end, in order to assess the performance of the firms that were investigated in Odisha, the author has done use of McGowan's methodologies in the current analysis.

Hypotheses Verification

H1: The production complexity has significant impact on acceptance of the ABC method by the companies.

For the purpose of confirming the hypothesis, binary logistic regression analysis was carried out. The results of the regression analysis revealed that the Chi-square test was not significant ($p>0.05$) and that the Cox and Snell R2 and the Nagelkerke R2 were also very low, at 0.004 and 0.006, respectively. The statistical significance score of the statistical model was.367 ($p>.05$), indicating that it was non-significant at the 0.05 threshold. As a result, Hypothesis H1, which asserts that production complexity has a substantial impact on the acceptance of the ABC system among pharmaceutical enterprises companies in Odisha, cannot be substantiated.

H2: The level of competition has a significant impact on the level of implementation of the ABC method by the enterprises.

A binary logistic regression analysis was performed in order to test the hypothesis. The Chi-square test was found to be non-significant ($p =.670$; $2 = 0.181$; $p =.670$). Binary logistic regression was used to confirm this. It was found that competition intensity was not significant in predicting the adoption of the ABC system ($p=.670$), and competitive pressure explained only 0.1% of described variability in adoption of the ABC system (Cox & Snell and Nagelkerke R2 =0.001), according to the results of the regression analysis. As a result, the hypothesis H2 is discarded.

Summary of Findings

There were just 56 enterprises (30.1 percent) that were found to have implemented the activity-based costing approach in their organisations. According on the results of the survey, distinct stages of the system's implementation were identified. Among other things, 13 % had approved the implementation, and another 12 percent had completed a feasibility study. A total of approximately 21% had reached the point of gaining acceptance, and the balance (54% had begun using the system in various capacities ranging from occasional to substantial utilisation.

The causes for the deployment of the ABC system were reviewed after being divided into three major groups, which were as follows: intrinsic weaknesses of the current systems, changes in the company's characteristics and business environment, and intervention from external agencies.

When it comes to inherent weaknesses of the existing systems, the group ranked first with a mean value of 3.56, indicating that the most important factors driving the pharmaceutical industries in Orrisa to adopt ABC were the need for more correct information, inability of the present structure to provide useful data to managers, dealing with allocation problems, and improving cost control, among other things. Interestingly, these findings are congruent with the findings of Anand et al. (2005), who believe that the most significant reason for the implementation of ABC in Indian manufacturing organisations was a lack of usable information provided by the existing cost analysis to management.

The changing environment of the corporate group, which includes an increased amount of overhead expenses, an increasing number of product varieties, and more competition, was also indicated as a major reason for implementing the ABC system (mean value = 3.40) by the respondents. The mean value of 2.68 ruled out the possibility of external forces, such as government pressure and recommendations from auditors and consultants, playing any role in the adoption of ABC.

Recommendations

- It was discovered while analysing the findings of this research that many companies who had never used ABC had a high level of product diversification, production complexity and/or intensity of competition. Previous research has conclusively established that employing typical costing techniques in such a setting will almost certainly result in the reporting of erroneous product cost information. The ABC system should be implemented in these organisations because it will allow them to be more efficient in managing and decreasing overheads, which will ultimately lead to an increase in revenues.

Limitations

• The precise significance of the study cannot be determined because the current study did not validate the impact of factors at each level or as companies proceed from one phase to the next. Researchers such as Krumwiede (1998a) and Byrne (2011) claimed that the primary criteria affecting ABC performance differ at different stages of implementation.

• Because questionnaires were the primary method of collecting data, there was little interaction between both the researcher and respondents. Furthermore, there is a chance that respondents would misinterpret survey questions. The respondent's mindset at the moment of completing the questionnaire may also have an impact on the results.

• The current analysis only included industrial industries. The results of ABC success cannot be extrapolated to all sorts of industries. There is a possibility that other industries will have different perspectives on ABC success and the variables driving ABC adoption and effectiveness.

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SKILL DEVELOPMENT AND ENTREPRENEURSHIP
(An Appraisal of Schemes with Special Reference to PMKVY)

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ABSTRACT:

Being skillful is the boon for an individual because it only makes a person employable resource, but at the same time makes him a contributory towards the economic development of the nation. For a country like India, which is for sure to become the superpower of the world in the time to come, the preparedness of its workforce is a prerequisite. The government of India in the recent past have left no stone unturned to make Indian economy a hub for manufacturing and service sector. Government of India very well recognizes that it is very important to make the youth skillful to make him competitive not only at national level but at international level. In this direction the establishment of Ministry of skill Development and Entrepreneurship is the milestone. This ministry is creating a new milestone with each passing year to make the generation skillful. This ministry has many institutions working under it, and these all institutions are engaged in one way or other in the training to the masses of the Indian economy. Present research paper is in effort to appraise the various schemes run by MSDE (Especially the Prime Minister Kaushal Vikas Yojna). The Study finds that really the establishment of MSDE is proving boon for Indian youths in the provisions of training and other schemes launched by Ministry to create an environment of entrepreneurship. But, at the same time some suggestions are also to offer like making trainers up to date, trainers must have industry knowledge, the attendance of the trainee should be made compulsory. etc.

KEYWORDS: *Msde, Entrepreneurship, Pmkvy, Skillful, Skill Development, Appraisal.*

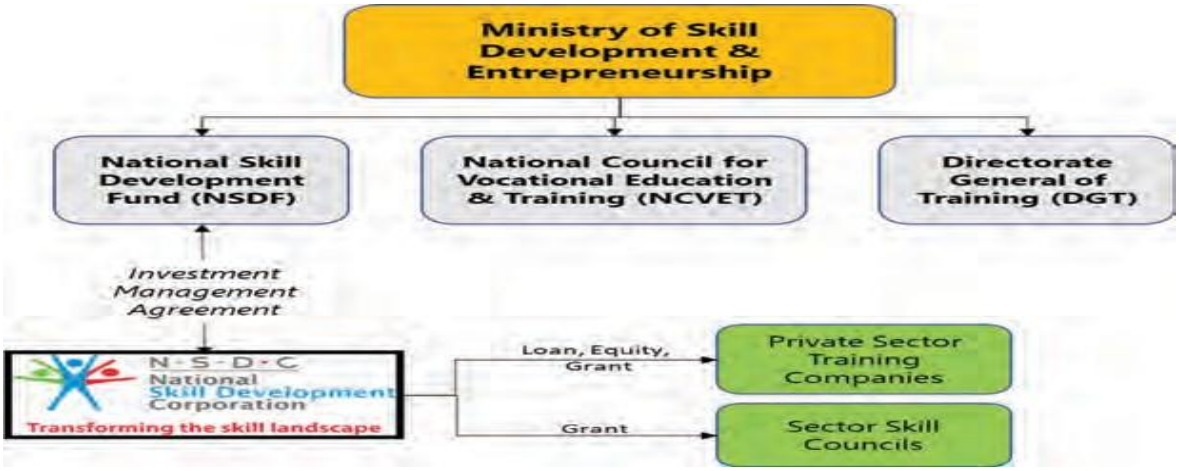
INTRODUCTION

1. Skill Development and Entrepreneurship- An Introduction and historical backdrop: India is emerging as a huge growth accelerated economy in the world. Youth is the biggest power that India possess and if trained and skilled property, India can realize demographic dividend. A separate ministry for skill development and entrepreneurship was set up in 2014. Since, its inception, the MSDE has initiated many schemes and polices to benefit youth and to reap growth. MSDE has collaborated with the central government, state government, academic

institutions and industries to accelerate the skill acquisition path for Indian youth and to make them ready to contribute in the growth and economic development of the country.

India is emerging as the fastest growing economy and this highlights the need to focus on skills and training in apprenticeship. With the aim to foster apprenticeship in India, apprenticeship act was reformed in December 2014, and subsequently NAPS was launched in August 2016. Presently, the Ministry of Skill Development and Entrepreneurship has many institutes which are working as the arms of this Ministry. The Chart given below presents a summarized view of major constituents of MSDE.

Figure 1 Ministry of Skill Developments and its Major Constituents



Source: Annual Report MSDE 2021-22 (P. 25)

All around growth and success can be assured by investing in twin aspects viz. acquisition of skill and starting of enterprise to make India self-reliant. To promote culture of entrepreneurship among youth, MSDE started National awards in 2016 to recognize and encourage young people to become a successful entrepreneur.

2. Challenges in skill development and entrepreneurship in India:

Acquisition of skills and know-how is pre-requisite for the success of any country. In fact, skill development and entrepreneurship play a very important role in the economic development and growth of the country. However, India is facing a lot of bottlenecks and challenges. A few of them are numerated below:

- Inclination of youth towards jobs: most of them view themselves as job seekers instead of job creators.
- Skill development programmes and initiatives of central governments lack their complete implementation at the grass root level i.e. first-generation entrepreneurs are not getting much benefits of these schemes and initiatives.
- Lack of finance (Seed Capital) to start ups specially to non-technical entrepreneurs.
- Paucity of efficient and capable trainers for imparting right skills as per the need of the hour.
- Acquiring skills is seen as last option of those who have not been successful in getting good jobs.
- Skill curriculum is obsolete and needs revision as per current scenario.
- Paucity of experience among young entrepreneurs and not availability of right guidance to first generation entrepreneurs.

- There is a great mismatch between industry requirements and skills imparted in educational and training institutes.

3. Objectives of the study:

Acquisition of skills is must for the growth and development of a nation andof itscitizen. This need of skill acquisition is a must for all the countries irrespective of their level of development. But this is beyond doubt that this need is emergent for a developing country, because in the absence of skillful labour the untapped natural resources shall remain unutilized or underutilized. India is a strong emerging nation with potential to excel in all the fields may it be information technology, production, agriculture, so on and so forth. Therefore, the government of India has launched several schemes to impart skills and training to its citizens. The present research work is undertaken by keeping the following objectives into consideration:

- To highlight the present status of skill development and entrepreneurship.
- To appraise various schemes and initiatives launched (especially PMKVY) by Ministry of Skill Development, Government of India, so as to identify the gray areas and suggest for future roadmap.

4. Present status of skill development and entrepreneurship:

At present the government of India's fullest thrust is on skill development and on the creation of environment which is conducive to the entrepreneurship. Lack of skills not only hampers the qualitative aspects of goods and services, but also leads to several serious issues viz. unemployability, less production, more accidents, health issues, less national income, lower level of competitiveness not only at national level but at international level as well.

The aforesaid reasons and many other factors have worked as an input for brainstorming in the political as well as at ministerial level to think upon the ways to develop skills among the masses of India. One such big step towards the creation of skills developmental friendly environment in the country, the Government has established a separate ministry i.e. Ministry of Skill Development and Entrepreneurship. The ministry has its own vision, a broad organization, and it has something for everyone regarding the requirements of skills and entrepreneurial facilities. Severalseparate organizations[1] are working under the umbrella of this ministry viz.

- Directorate General of Training (DGT)
- Directorate of Jan Shikshan Sansthan (DJSS)
- National Council for Vocational Education and Training (NCVET)
- National Skill Development Corporation (NSDC)
- National Skill Development Fund (NSDF)
- Regional Directorate of Skill Development & Entrepreneurship (RDSDE)
- National Skill Training Institute (NSTI)
- National Institute of Entrepreneurship and Small Business Development (NIESBUD)
- Indian Institute of Entrepreneurship (IIE)
- National Instructional Media Institute (NIMI)
- The Central Staff Training and Research Institute (CSTARI)
- Sector Skill Councils (SSC)

Apart from above leap initiative of Ministry of Skill Development and Entrepreneurship,several schemes and incentive programmes for the promotion of skill development and entrepreneurship are also launched. These schemes and initiatives cater both short-run as well as long-run skills development requirements of the citizens of India.

Government of India has not only created a separate ministry for skill development and entrepreneurship but has a mindset to nurture this ministry. This positive intention of government

of India is very much evident from the budget allocation for this Ministry. As is evident from the table given below which shows the detail of budget allocated to the Ministry on year to year basis that Crores of rupees are earmarked for creating an skill development and friendly environment in the country.

In the year 2021-22 the budget estimate to be spent on MSDE was 2711.53 Crore rupees for revenue nature, and 73.70 crore rupees for capital nature spending, which presents a total of 2785.23 crore rupees to be spent on the creation of skill development infrastructure in the country. This budgeted estimate is further increased to 2847.54 crore rupees and 151.46 Crore rupees respectively for revenue and capital purposes in the year 2022-23. On year to year basis the budget estimate is increased by 7.13 % in the year 2022-23 in comparison to the year 2021-22.

TABLE 1 BUDGET ALLOCATED TO MSDE

GRANTNO.91-MinistryofSkillDevelopmentandEntrepreneurshipDetailsofBudgetAllocatedtoMinistry(Rs.incrore)												
	BE2021-22			RE2021-22			ActualExpenditure2021-22 (upto31.12.2021)			BE2022-23		
	Revenue	Capital	Total	Revenue	Capital	Total	Revenue	Capital	Total	Revenue	Capital	Total
MSDE	2106.30	45.17	2151.47	2065.33	19.17	2084.50	1362.38	0.03	1362.41	2245.54	30.17	2275.71
DGT	605.23	28.53	633.76	636.20	64.53	700.73	248.41	37.06	285.47	602.00	121.29	723.29
Total:MSDE	2711.53	73.70	2785.23	2701.53	83.70	2785.23	1610.79	37.09	1647.88	2847.54	151.46	2999.00

Source: Annual Report MSDE 2021-22 (P. 7)

It is worthy to note that such a huge budget each year and hefty increase on year to year basis is done keeping future requirement of skill development into consideration. India now has become an economic superpower and a world leader too! The whole world is eying on India's growth story and its global competitiveness, which can not be fructified without skilled manpower. Different sectors need different types of skill sets and therefore different types of training needs. Below table exhibits the incremental human resource requirements and training needs:

TABLE 2 INCREMENTAL HUMAN RESOURCE REQUIREMENTS AND TRAINING NEEDS SECTOR WISE

Sl.No.	Sector	IncrementalHumanResourceRequirementandTrainingNeed

1	Agriculture	24.5
2	AnimalHusbandry	18
3	Fertilizer	1
4	TextileHandloomandHandicraft	60
5	Automotive,AutoComponents&CapitalGoods	41*
6	Gems&Jewelry	35
7	FoodProcessing	33.7
8	Leather	25
9	Pharmaceuticals	14
10	Chemicals & Petrochemicals	12
11	Steel	7.5(by2025)
12	Rubber Manufacturing	6.7
13	RoadTransport&Highways	62.2**
14	Ports&Maritime	25
15	Aviation&Aerospace	14.2
16	Railways	0.12(by2018)
17	Power	15.2
18	Oil&Gas	7.3
19	Renewable Energy	6
20	Coal&Mining	2.6
21	Construction	320**
22	Furniture & Fittings	52.6
23	Paints&Coatings	9
24	Electronics and IT-ITeS	69#
25	Telecom	38.6
26	Retail	107**
27	Beauty & Wellness	82

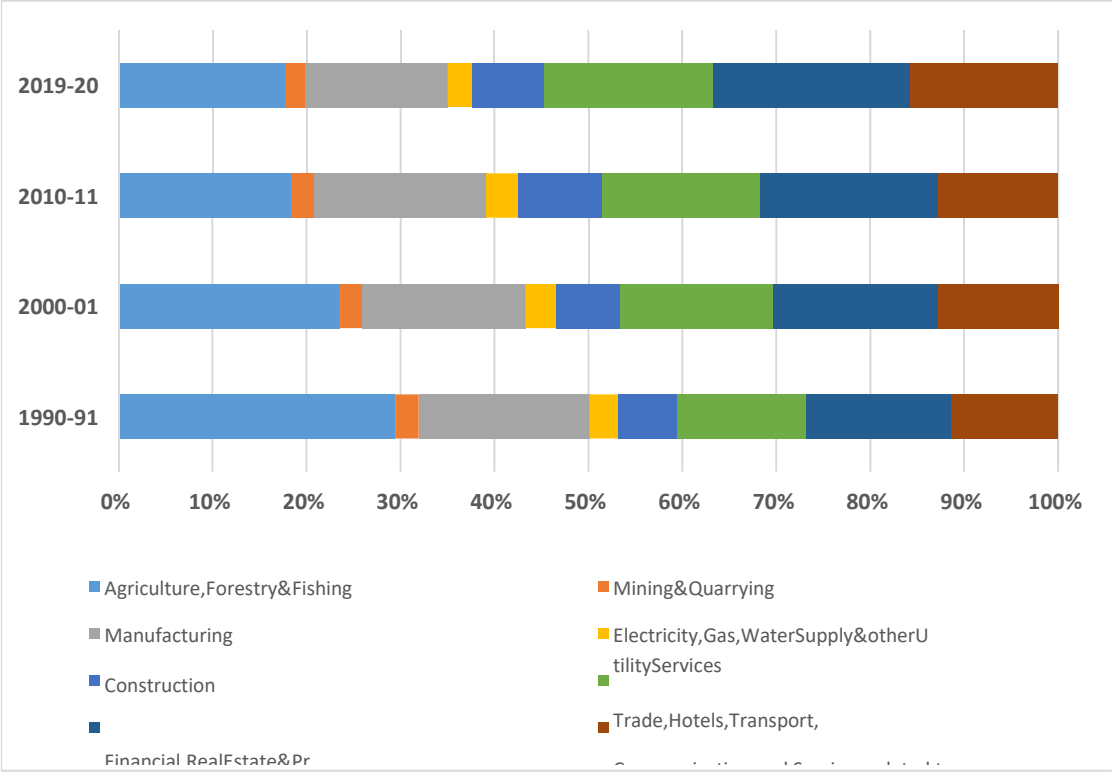
28	Media & Entertainment	13
29	Tourism & Hospitality	49
30	Banking,FinancialServicesandInsurance(BFSI)	12
31	Logistics	42.9**
32	Healthcare	32(by2025)
33	Security	31
34	Media & Entertainment	13
	Total	1282.12

Source: Annual Report MSDE 2021-22 (P 10-11)

Above table represents training needs of the workforce across 34 sectors of the economy. These sectors more of less constitutes the whole Indian economy. This table shows the highest number of trained/skilled workforce is needed in Construction, Retail, and Electronics and for road and transport sector where a total number of 320, 107, 69, and 62.2 lakh trained/skilled people are required respectively. At the same time railways require 12 lakh people who are trained (this figure shows estimates up to 2018). Another important shift or transformation noticed is from public sector to private sector, from manufacturing sector to service sector.

As the students prepared by academia are having more of conceptual knowledge than practical skills on the one hand, and sectoral transformation that contribute to GDP and employment on other hand, necessitates the need of changing in the training patterns by the ministry of skill development. The figure given below represents changing patterns or transformation by different sectors in the contribution towards GDP and employment generation.

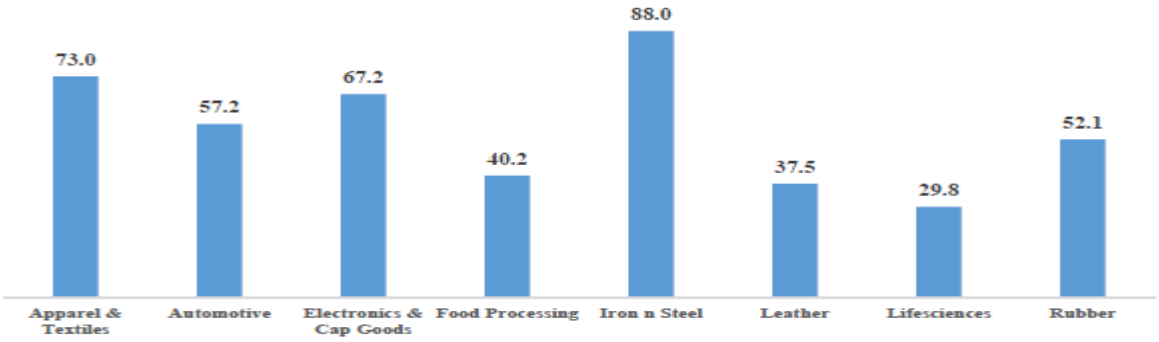
Figure 2 Sectoral Makeup of Indian Economy through the years



Source: Ministry of Statistics and Programme Implementation

But at the same time the contribution made by manufacturing sector to GDP and employment generation cannot be ignored as it constitutes the base of India. However, different manufacturing sectors needs different level of skillfulness. Below table makes the situation clearer:

Figure 3 Skill Intensity across Various Manufacturing Sectors



Source: MSDE Skill Assessment and Anticipation Study P. 37

From the detailed analysis made from above section it is very clear that the present level of skillfulness and initiatives of government represents a very promising future. The efforts put in by the government via its ministry of skill development and entrepreneurships. The following section further deals with and highlights the promotional schemes and initiatives at government

level (in particular PMKVY), which will further strengthen the charm of our country towards making its workforce more skillful.

5. Schemes and initiative of ministry of Skill Development and Entrepreneurship - A Study of Pradhan Mantri Kaushal Vikas Yojana (PMKVY):

Since the inception of Ministry of Skill Development and Entrepreneurship, and even before this the importance of skill enhancement and to have skilled manpower was duly recognized by India.But it is beyond any doubt, that all the efforts to make manpower skilled before the establishment of Institutions of Ministry of Skill Development and Entrepreneurship were more or less unorganized. A formal shape to the environment of skill development and launching of several schemes in this direction is initiated at mass level by this Ministry.

Presently and in the recent past a plethora of schemes for making manpower skill full both in the short run as well as for long run are in existence. Some of the schemes are under the aegis of National Skill Development council (NSDC), while several are under the control of the Director General of Training (DGT) and some are for boosting entrepreneur landscape. These schemes today have become the backbone of the country about developing infrastructure for skill development. Present study takes a deep look in the working and present status of Pradhan Mantri Kaushal Vikas Yojana. However, for reference purposes below given description exhibits these all schemes[2] briefly.

A. **Short Term Training Schemes/Initiatives**

- Pradhan Mantri Kaushal Vikas Yojana 4.0 (PMKVY 4.0)
- Pradhan Mantri Kaushal Vikas Yojana 2.0 (PMKVY 2.0) 2016-20
- Pradhan Mantri Kaushal Vikas Yojana 3.0 (PMKVY 3.0) 2020-21
- Pradhan Mantri Kaushal Kendras (PMKK)
- Jan ShikshanSansthan (JSS)
- School Initiatives and Higher Education
- Pre-Departure Orientation Training (PDOT)

B. **Long Term Training Schemes/Initiatives**

- Craftsmen Training Scheme (CTS)
- Crafts Instructor Training Scheme (CITS)
- Advanced Vocational Training Scheme (AVTS)
- Vocational Training Programme For Women
- Schemes for Upgradation of ITIs
- Flexi MoUs
- STRIVE
- Initiatives in the North East and LWE Regions
- Dual System of Training (DST)
- Polytechnics

C. **Apprenticeship Training**

- National Apprenticeship Promotion Scheme (NAPS)

D. **Entrepreneurship Schemes**

- Pilot Project on Entrepreneurship

E. **Other Schemes/Initiatives**

- SANKALP
- Aspirational Skilling Abhiyan
- Rozgar Mela
- Indian Institute of Skills (IISs)
- Skill Loan Scheme

As the present study concentrate on the appraisal of Pradhan Mantri Kaushal Vikas Yojna, therefore, the following section deals with the detail study of PMKVY. For the convenience of analysis, the PMKVY may be divided in to three stages viz.

- PMKVY (1.0) - 2015
- PMKVY (2.0) - 2016-2020
- PMKVY (3.0) - 2021 (Launched on)

In order to create Skill development infrastructure in the country National Skill Development council launched PMKVY in 2015 as a pilot project. This scheme offers free short-term training programs to the youth of the country and monetary incentive to the candidates undergoing training modules. Keeping the impressive success of this scheme into consideration phase 2.0 of PMKVY was launched in 2016 and the period covered under the scheme was from 2016 to 2020. In the second phase lakhs of youth of the country got training under PMKVY. The third phase of this Yojana was launched in 2021 and this phase is continuing.

In the third phase the district level skill committees were given comprehensive role to identify the training requirement at district level. So far up to 31st October 2021, 252 lakh youth have got training under PMKVY.

✓ **PMKVY (1.0)**

As a pilot project this yojana was launched in 2015-2016 and it was the pilot project of NSDC. This project was jointly supervised by NSDC,Sector Skill Council, and training providers. The data so available about PMKVYof theyear 2015-16 shows that from all over India 19,85,937 youth were enrolled and trained under the scheme out of these 1451285 were certified and finally 251689 were placed. The placed candidates are 17% of the trained candidates.

✓ **PMKVY 2.0**

The second phase of the scheme was launched on 2nd October 2016 with the objective of providing skill development training of 200-500 hours to school and college dropouts and to other unemployed youths. In this Yojana participation of state was increasedto make available the skill development programmes available for the whole country and have balanced opportunities for candidates of the country.

The data available suggest that in the phase II of PMKVY a total of 48,39, 665 candidates were provided training out of which 39,60,710 are certified and finally 20,92,957 candidates were placed, which were 52.84% of the total candidates certified. In the phase I of PMKVY the %age of placed candidates' was17% and in the phase II of PMKVY the percentage has gone to 52.84%.This leap jump in number of pleased candidates from phase 1 to phase II shows the success of PMKVY.

✓ **PMKVY 3.0**

PMKVY was launched in January 2021 with the objective of providing greater choices to the youth, providing training support, promote greater participation of private sector.

Prime features of this scheme are:

- Targeting youth of the age group of 15-45 years with impressive aim of training at least eight lacs youth
- District level committee shall be given comprehensive roles
- Enhanced role of states and union territories
- NSDC shall provide IT support

So, for this scheme has shown a massive improvement in the quantum of providing training and certifying the candidates. The table given below summarizes the trend about Training Certification and candidates placed in PMKVY.

TABLE 3 THE PROGRESS UNDER PMKVY3.0 IS PROVIDED BELOW (ASON31.10.2021)

Component	Trainingtype	Enrolled	Trained	Assessed	Certified	Placed
CSCM	ShortTermTraining(STT)	87,436	67,603	48,391	7,561	7,454
	SpecialProjects(SP)	737	0	0	0	0
	RecognitionofPriorLearning(RPL)	1,04,049	1,01,973	60,441	7,349	NA
	SubTotal	1,92,222	1,69,576	1,08,832	14,910	7,454
CSSM	ShortTermTraining(STT)	61,142	30,471	16,977	9,667	1,861
	SpecialProjects(SP)	191	120	41	37	0
	RecognitionofPriorLearning(RPL)	53,556	51,862	27,407	15,640	NA
	SubTotal	1,14,889	82,453	44,425	25,344	1,861
	GrandTotal	3,07,111	2,52,029	1,53,257	40,254	9,315

Source: Annual Report MSDE 2021-22 (P 71)

The above table indicates that in phase 3 of this scheme of PMKVY up to 31-10-2021 a total number of 40254 youth have been trained with it which includes 14910 from CSCM category and remaining 25344 from CSSM category. Further, a total number of 9315 certified candidates are placed which represents 23% of total certified candidates.

It is worthy to not that this picture is up to October 2021 and the training programs under third phase are still going on. So far, the training programs have shown a very promising scenario. Further, on comparing the performance of phase I, II, and III of PMKVY a very progressive trend may be noticed. So far up to now a total number of 1,46,19,812 youth having trained and out of these 1,14,14016 are certified. However, from certified persons only 23,53,961[3] are placed which represents 20.62% only. Though a very concrete and progressive steps are taken under the scheme, but keeping a low level of employability rate, still a lot more needs to be done.

TABLE 4 SUMMARY: ACHIEVEMENTS SKILL DEVELOPMENT PROGRAMMES

Scheme	Trained				TotalCertified	TotalPlaced
	STT	RPL	SpecialProjects	TotalTrained		
STAR	14,00,844	0(NoRPLinSTAR)	0(NoSpecial Projects)	14,00,844	8,68,880	NA*
PMKVY1.0	*18,04,170*	*1,81,767*	*0(Nospecial project)*	*19,85,937*	14,51,285	2,51,689*
CSCM-PMKVY2.0	38,02,653	61,41,337	2,13,3411,	01,57,331	84,15,502	18,80,742**
CSSM-PMKVY2.0	8,16,884	0	6,787	8,23,671	6,38,095	2,12,215**
CSCM-PMKVY3.0	67,603	1,01,973	0	1,69,576	14,910	7,454**
CSSM-PMKVY3.0	30,471	51,862	120	82,453	25,344	1,861**

Source: Annual Report MSDE 2021-22 (P 76)

6. Findings and Conclusion:

This is beyond any doubt that the discussions made in the previous sections that an economy like India is putting all the efforts to make India skillful the creation of Ministry of Skill Development and Entrepreneurship has strengthened the infrastructure. Several Initiative and schemes launched by this Ministry under the aegis of NSDC and DGT which are milestones (especially the flagship scheme Pradhan Mantri Kaushal Vikas Yojana). Training provided under the scheme has not only provided certified skillful manpower but has also placed lakhs of Indian unemployed youths.

Different versions of this scheme that is phase 1 phase,II, and III are creating new milestones each year. In this Yojana with each passing versions the needed modifications are incorporated. Further, the role of district level council, states, and other stakeholders have been enhanced over the time, but still a lot more is needed to be done to gain full benefits of this Yojana.

However, at present this scheme suffers from some weaknesses like; lack of proper dissemination of schemes among people, lack of proper monitoring, and small percentage of youth who are trained under this scheme gets employment. Further, proper monitoring should be introduced for fully harvesting the fruits of this scheme. These monitoring machinim as will not only check the dilutions from the scheme but will also make it more productive. Following suggestions maybe adhered for monitoring purposes:

A) The infrastructure for imparting training shall be updated and must provide for ultra-modern facilities

B) Trainers should be benchmarks of the industry concerned.

C) The attendance of candidate must be compulsory, and it should be adhaar enabled

D) Lab facility should be at highest level as per global standards

E) The schemes and initiative under the scheme must be duly communicated and publicise.

F) A detailed study should be Made at government or ministerial level to check the gaps between certified train people and the youth who are getting placed. Huge gap between these two should be thoroughly analyzed and proper administrative and policy amendments must be incorporated accordingly from time to time under the scheme of PMKVY.

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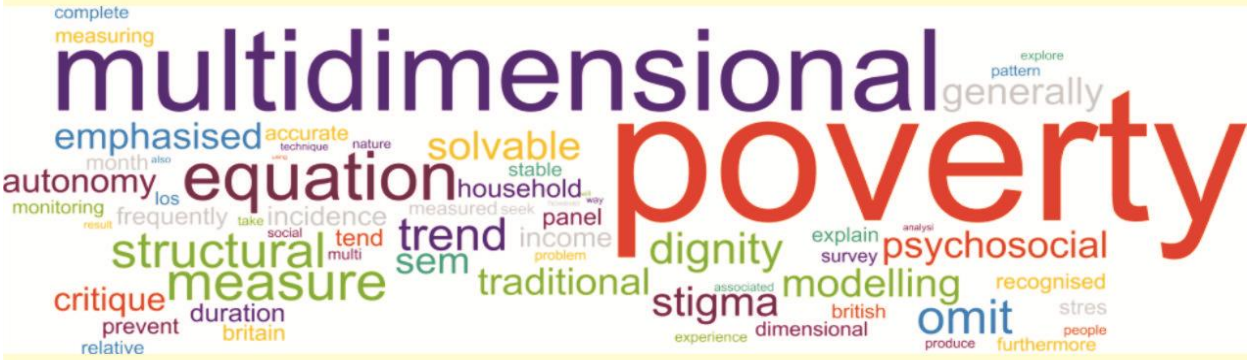

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