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Message

Editor in Chief / Managing Editor

Dear Academicians & Research Scholars,

My dear valuable authors & writers as you know that our open access a double peer reviewed referred an international research journal listed with many research organizations like, Global Impact Factor Australia, SJIF, Google scholar, LinkedIn and also approved in Higher Education Supreme Authority Uzbekistan. We are also member of PILA (Crossref) USA. The real motive of our international research journal is to publish worthy research papers after double blind peer review process. There is no doubt that today we have completed 10 years of our successfully publications and given international platform to our authors for publication in this journal from worldwide. I say thanks to all those authors, who belongs in the management or related field supported me direct or indirectly for the same. During the last previous years of our research journey, you can see that there are so many research papers, case studies, book reviews coming from across the world, in the field of management or related. Many academicians, research scholars & students have approached from different countries like USA, Thailand, Indonesia, Saudi Arabia, Iran, Spain, Nigeria, Kenya, Nepal, Pakistan, Sri Lanka, Uzbekistan to publish their research papers in our esteemed International research Journal. We have considered most of them to publish after peer blind review process. We have also published many research papers from different management institutes of our country. They are sending regularly for publication in the upcoming issues. In addition to, it, there are many academicians, research scholars and institutes subscribing for our journal for reading by students and faculties. There are so many academicians who are approaching for being associated with our editorial & advisory board or as a review expert. We have selected some of them from foreign countries like USA, Nigeria, Uzbekistan and Sri Lanka, Nepal. The standard of our all research papers like empirical, conceptual, book review and case study is increasing the popularity of this Journal day by day. The most inspirable things of our journal are Motivational quotations which are appreciated by readers. Our renowned advisory board & editorial board members giving me advise to maintain quality of the journal and its become a real mile stone of our success. Research is a need of today's life, without research nothing is possible in the universe. Because, research bringing revolutionary change in the life. Research based study always support academicians & scholars to upgrade their innovative skill and academic profile as per UGC and AICTE norms. I would also like to request those, who are interested to get their research papers published in the field of Retail, Tourism, Hospitality, Event Management, Import and export, HRM, Finance, Marketing, Advertising, Accounting, Economics, Aviation, and IT etc. to send their research papers through email.

Dr. P. S. Bhadouria

FUNDAMENTALS OF COOPERATION OF EDUCATIONAL INSTITUTIONS AND INDUSTRIAL PRODUCTION ENTERPRISES

Samatov Zokir Oloqulovich[1]

ABSTRACT

The article elaborates on the development of absolutely new requirements for the improvement of the integration of industrial production enterprises with higher educational institutions and the creation of the necessary conditions for the training of highly qualified personnel on the basis of these measures.

Keywords: *Employment of the population directed at the development of the social sphere, increase real income, improving the system of social protection of the population, development of education, culture, science, literature, improvement of state policy on youth.*

Large-scale reforms carried out during the years of independence in the Republic of Uzbekistan have become an important foundation for strengthening national statehood and sovereignty, ensuring security and Law Order, inviolability of borders, rule of law in society, human rights and Freedoms, an atmosphere of national harmony and religious tolerance, necessary conditions and opportunities were created for our people to live a decent life and realize the creative potential of our citizens.

Decree of the president of the Republic of Uzbekistan “On the action strategies for the further development of the Republic of Uzbekistan” on February 7, 2017 was adopted in order to further increase the effectiveness of the reforms carried out, create the necessary conditions for the comprehensive and accelerated development of the state and society, modernize the industrial enterprises of the country and implement of priority directions on the liberalization of all spheres of life. In accordance with this decree, "The action strategies on five priority directions of development of the Republic of Uzbekistan in 2017-2021" developed as a result of a comprehensive study of topical issues of concern to the population and entrepreneurs, analysis of current legislation, law enforcement practices and advanced foreign experience, as well as a broad public discussion was put forward.

Consistent increase of employment and real incomes of the population, directed on development of social sphere, improvement of the system of social protection and health care of the population, increase of social and political activity of women, restoration of affordable housing, implementation of targeted programs for the development of road transport, engineering-communication and social infrastructure, as well as modernization of industrial enterprises are defined strategic tasks in the priority directions action strategy.

In the first annex of the decree of the president of the Republic of Uzbekistan dated February 7, 2017 № PF-4947, the 4.4 paragraph of action strategy "development of education and science", the following are defined as priority tasks of organizations of education system:

- Further improvement of the system of continuous education, increasing the opportunities of quality education services, continuing the policy of training highly qualified personnel in accordance with the modern needs of the labor market;

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- To take targeted measures to strengthen their material and technical base by constructing, reconstructing and overhauling educational institutions, equipping them with modern educational and laboratory instruments, computer equipment and educational and methodical manuals;
- Implementation of targeted programs for the development of Road Transport, Engineering-Communication and social infrastructure, as well as modernization of industrial enterprises;
- Promotion of scientific research and innovation activities, creation of effective means of introducing scientific and innovation achievements into practice, Organization of specialized scientific-experimental laboratories, high technology centers and technoparks in the presence of higher educational institutions and research institutes, industrial enterprises.

In order to radically revise the content of personnel training in accordance with the priority tasks on socio-economic development of our country, to create the necessary conditions for the training of specialists with higher education at the level of international standards, decree of the president of the Republic of Uzbekistan "on measures for the further development of the higher education system" dated 20 April 2017 № PQ-2909 was adopted.

With this decision, the program of development of higher education system in 2017-2021 on qualitative improvement and radical improvement of the level of higher education, strengthening and modernization of the material and technical base of higher education institutions, equipping with modern educational-scientific laboratories, information and communication technologies was approved.

Furthermore, a number of topical issues including timely training of highly qualified personnel meeting the modern requirements for socio-economic development of the regions of the Republic on the basis of the need of economic spheres and sectors in the necessary specialties, formation of the content of Higher Education directly in accordance with the technical, technological, industrial production relations and prospective development programs in the institutions of industrial enterprises, employment of personnel by profession and specialty have not been fully resolved.

In particular, on the basis of the results of the analysis conducted on the study of the educational system of the Republic of Uzbekistan in January-June 2017 by a group of influential foreign experts involved in the cooperation of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the consulting organization (DGP Research & Consulting), a number of shortcomings are noted, such as the fact that in the process of Higher Education the integrity of theory and practice is not ensured, the transfer of qualification practices of students in industrial production enterprises is not effectively organized, the majority of graduates are studying their profession, specialty again after employment, instead of becoming ready specialists, the mechanism of control over the quality of Education does not meet modern requirements, the lack of qualified pedagogical and managerial personnel in educational institutions, effective cooperation with foreign educational institutions is not sufficiently established. Formation of orders of economic sectors for the training of personnel in the future, development of qualification requirements for graduates, participation in the process of ensuring the quality of training of specialists necessary for the network are not in demand.

Due to interruptions between higher education — science-production, integration processes are not provided. Scientific research institutes are not involved in the process of training personnel in higher education to the required level, scientific research is carried out in them without proceeding from the real

needs of the economic sphere. The lack of systematic training of highly qualified scientific and scientific-pedagogical cadres contributes to the decline of scientific capacity of higher education institutions.

The decree of the president of the Republic of Uzbekistan dated July 27, 2017, № PQ-3151 was adopted with the aim of radically improving the content of training highly qualified competitive personnel in the system of higher education of the Republic on the basis of modern achievements of the country's socio-economic development prospects, needs of society, science, culture, techniques and technologies by further expanding the participation of economic spheres and sectors in improving the quality of training specialists with higher education.

In accordance with the program of development of higher education system in 2017-2021, Decree of the President of the Republic of Uzbekistan dated July 27, 2017 N PF-5121 "On advanced training of promising young pedagogues and researchers, further improvement of activity of" Istedod "foundation" and Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated July 18, 2017 № 515 "On organization of activity of the State inspection quality control of education under the Cabinet of Ministers of the Republic of Uzbekistan" were adopted and heads of relevant ministries and departments are instructed to carry out the following main tasks and measures:

- Implementation of internships in order to organize systematic study by professors and teachers of higher educational institutions dealing with the formation of the content of direct education of the requirements of industrial production enterprises and organizations for the quality of training of specialists;
- Organization of development and gradual introduction of educational plans and programs of science, educational literature, educational and methodological standards on the basis of modern, completely new requirements in-depth study of the most advanced experience of developed foreign countries;
- Development of the need for highly qualified personnel on the basis of calculations that provide a clear balance between the specific address, directions and specialties of the profession and education over the years, taking into account the current and prospective development programs of industrial enterprises and regions;
- To systematically conduct qualification practices in certain organizations and enterprises of the relevant network (sphere), as well as to organize their practical activities in direct production, and to take specific measures for the employment of graduates from the 2nd course of each student on the relevant educational directions of higher education institutions;
- Formation of a database of topics devoted to the problems of scientific and technical development directions of the ministries and departments of industrial production, science and education in order to deepen the integration and systematic involvement of young scientists and researchers in solving these problems with the conclusion of economic agreements with higher educational institutions;
- Sending talented young teachers and doctoral students to internships in leading foreign educational institutions, establishing special scholarships for them, increasing the scientific and pedagogical potential of professors, teachers, doctoral students and students of higher education institutions by organizing international experience exchange;
- Introduction of modern forms and methods of teaching, computer and information and

communication technologies into the educational process, provision of higher educational institutions with modern educational-laboratory equipment and educational-methodical literature, support and promotion of research and innovation activities taking measures to establish and develop modern scientific laboratories of higher educational institutions and others.

The resolution of the president of the Republic of Uzbekistan "On measures for the further development of the higher education system" creates an opportunity to radically improve the higher education system, to radically revise the meaning and content of training of personnel in accordance with the priority tasks of socio-economic development of our country, to systematically implement the creation of the necessary conditions for the training of highly qualified specialists at the level of international standards.

Moreover, the results of the study show that in the majority of higher educational institutions of the Surkhandarya region, the scientific and pedagogical potential still remains low. Because the educational and methodological and information supply of the educational process is not in line with modern requirements, the material and technical base needs systematic updating.

The decree of the president of the Republic of Uzbekistan "on measures for further development of the higher education system" is a practical step towards the development of the continuous education system, providing the consistently developing economy of the country with highly qualified personnel, expansion of the participation of the higher education system in the resolution of the issues of strategic development of all regions and sectors.

In conclusion, it is important to note that as a result of large-scale reforms in the modernization of the state to improve the cooperation of educational institutions and industrial enterprises, fundamental foundations were created, conditions were created for the people to live a prosperous life and realize their potential. In accordance with the priority tasks on socio-economic development on the basis of modernization of the country in order to further increase the effectiveness of these reforms, it will be necessary to develop measures to implement the program of development of higher education in 2017-2021 based on such priority tasks as radical enrichment and updating of content of personnel training, creating conditions for training highly qualified specialists in accordance with international standards, improving the quality of higher education, strengthening the material and technical base of higher education institutions, equipping with modern educational and scientific laboratories, information and communication technologies.

Based on the legal norms adopted and used in practice, deepening integration between production, science and higher education institutions, training of qualified personnel in accordance with the demand of industrial production enterprises, conducting practical training directly at industrial enterprises for the purpose of training qualified students, in-depth study of the experience of advanced foreign countries, development of educational plans, science programs, educational literature on the basis of international standards on completely new requirements provide an opportunity to create the necessary conditions for the training of highly qualified personnel.

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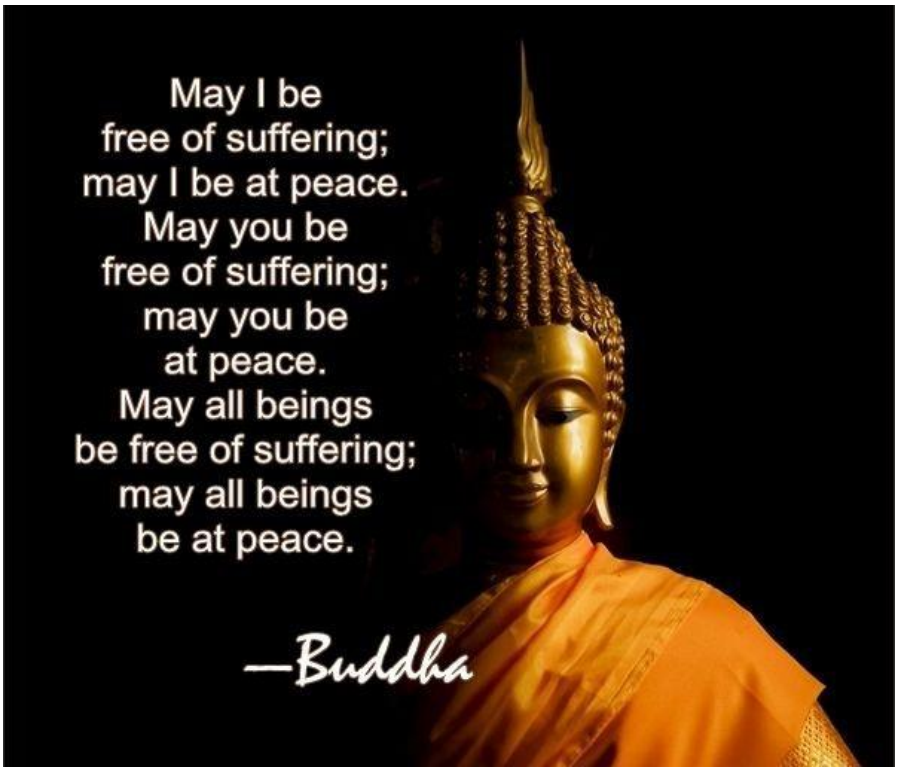
- *Decree of the president of the Republic of Uzbekistan "on measures to further expand the participation of economic spheres and sectors in improving the quality of training of specialists with higher education" № PQ-3151.*



DIGITAL MONITORING METHODS OF THE GRADUATORS' COMPETITIVENESS OF HIGHER EDUCATION INSTITUTIONS

Adizov Baxtiyor Ismatovich[1]

ABSTRACT

This article discusses the effective use of databases of government agencies in monitoring and managing the competitiveness of graduates of higher educational institutions in the Republic of Uzbekistan, the goals and objectives of monitoring employment, as well as the stages of its organization, an analysis of the Uzbek and Russian experience in organizing and monitoring employment. An effective alternative model is proposed for studying and analyzing the employment of university graduates.

Key words: *Digital Economy, Competitiveness, Labor Market, Innovation, Employment Monitoring, Digital Monitoring*

Introduction

It is highly required and necessaryto gain digital knowledge and modern information technologies in order to achieve progress. This will allow us to follow the shortest way of proseperity.The creation of a comprehensive and effective management system is requisite for the great tasks ahead [1].It will improve the management system and its mechanisms in the transition to a digital economy.

In the context of market relations, the development and implementation of information and communication technologies in various spheres of human activity is important for society development.Education is, also, no exception. Laws of market economy sets its own requirements for education system, form the curriculum development till the preparation of the specialists for particular spheres. It is necessary to pay particular attention to the training of personnel for the management of the social system and to feel a great responsibility as it is directly related to the future development progress and internationally development of the state.In this condition, the management of the educational process and the provision of a variety of educational services focused on the needs of the labor market is one of the important tasks in the development of a new, modern society[2].It's possible to analyze the real market demand of the state, society and social sphere, ensure and implement reforms consistent with the principles of marketing management. In the conditions of a developed market, marketing becomes an effective solution to the issue of the quality and competitiveness of goods and services.In the context of socio-economic changes taking place in the republic, the state management of theformation of the labor market, process of training, employment of personnel are particularly important. [3].By Implementation of the Decree of the Cabinet of Ministers of the Republic of Uzbekistan № 967 " Gradual transfer of higher education institutions to the system of self-financing ", radical improvement of the financial management system of higher education institutions, creating more opportunities for attraction of extra-budgetary funds, further

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improving the efficiency and quality of educational reforms, creating modern conditions for professors and students have passed to the next stage of the progress [4].

The reforms in the new directions, which began in 2016, are very wide and all sectors and their structures must be covered by these reformations. Today, improving the quality of education in the higher education system, the mechanisms for effective management of competitive staffing, increasing the quality of higher education and the employment of graduates are occurring the objective necessity for upgrading the quality of employment monitoring and recording the success of the graduates on the career ladder.

It has been studied by many researchers that the most important and necessary issue in improving the quality of education and competitiveness of the staff is the mutually beneficial cooperation between the training of human resources and production.

The main purpose of higher education is to train competitive specialists and provide competitive services. However, nowadays the process of applying the best practices in the field of quality management to determine the best system for the organization of higher education remains relevant.

One of the main factors determining the competitiveness of the graduates is, of course, the degree of employment and success of the graduators in their job [5].

The fact that, satisfying demand of the customers to the gradutator of the higher education istitutions, adapting the graduators to the local employement market (Bukhara region), recording the range of the employement, analyzing the quality of the employees are still remaining relevant and it's becoming more important to continue the researches.

Traditionally, a comprehensive monitoring of employment of graduates of higher educational institutions of the Republic of Uzbekistan is conducted in September-December of each academic year.This comprehensive monitoring is organized on the basis of the order of the Minister of Higher and Secondary Special Education, with the internal order of rectors of all higher educational institutions.Minister of Higher and Secondary Special Education and management(rector, director, or responsible vice-rector)of the higher education institutions are provided the results of the gross monitoring (figure 1) [6].

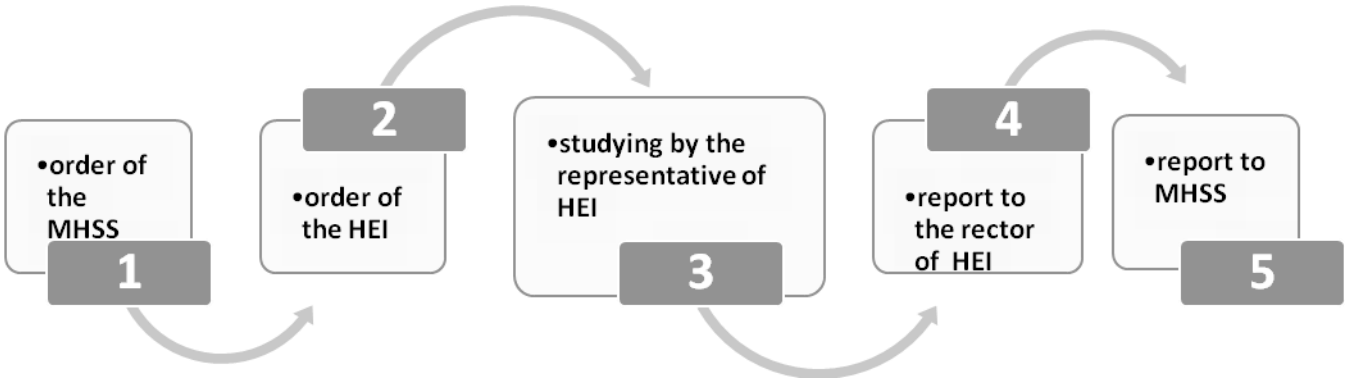

Figure 1. Organizational scheme of employment monitoring of graduators of higher educational institutions.

Source: Prepared by the author according to the orderNo. 846 of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan of September 20, 2019 "On monitoring of final employment of graduates of higher education institutions for the 2018/2019 academic year"

According to the current procedure, representatives of higher education institutions (professors, responsible staff, etc.) visit each graduate's place of work (home) to monitor employment.This itself requires extra transportation expenses and time.This research paper presents an analysis of the problems, difficulties and costs associated with monitoring the employment of Bukhara State University graduates and the object is the employment of graduators for the 2018/2019 academic year.

Table 1. The number of graduates of Bukhara State University yearly.

No	Name of the Higher education institution	In the 2016-2017 academic year			In the 2017-2018 academic year			In the 2018-2019 academic year			Total		
		Number of graduators (person)			Number of graduators (person)			Number of graduators (person)			Total number of graduators (person)		
		Total	of which		Total	of which		Total	of which		Total	of which	
			grant	*contract*		*grant*	*contract*		*grant*	*contract*		*grant*	*contract*
Total in Bukhara region universities:		3 409	1 096	2 313	3 514	1 156	2 358	3 775	1 212	2 563	10 698	3 464	7 234
	Including:												
1	Bukhara State University	1 697	486	1 211	1 594	479	1 115	1 740	469	1 271	5 031	1 434	3 597
	Bachelor degree	1 626	468	1 158	1 565	466	1 099	1 677	449	1 228	4 868	1 383	3 485
	Master's degree	71	18	53	29	13	16	63	20	43	163	51	112

Source: Prepared by the authorbased on the My.edu.uz platform's information of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan (https://hisobot.edu.uz/#/rep01#46=76=7:)

An average 1,650 students graduate Bukhara State University annually (Table 1) [7]. In the 2018/2019year, 1,740 graduators have completed their studies and become active participants in the labor market. The demographic distribution of graduators by region is shown in Tables 2a and 2b.

Tables 2a and 2b. Geographical distribution of Bukhara State University graduators of 2018/2019 academic year by district and region. 2a table (regions) 2b table (districts)

Source: Prepared by author according to the information of the “Formation of the orders’s portfolio, distribution of the graduators to work and monitoring” department.

The monitoring included the calculation of transportation expenses and overtime expenses of the professors for only 1,567 graduatorswho live and employed in Bukhara region (Table 3).In the study, all

№	Regions	Number of graduators	in percentages
1	Bukhara	1567	90,1
2	Navoi	68	3,9
3	Tashkent city	25	1,4
4	Khashkhadaryo	24	1,4
5	Samarkand	17	1,0
6	Khorazm	13	0,7
7	Surkhondaryo	9	0,5
8	Tashkent region	8	0,5
9	Rep of Karakalpakstan	3	0,2
10	Andijan	2	0,1
11	Jizzakh	2	0,1
12	Namangar	2	0,1
Total		**1740**	**100**

№	District(City)	Number of graduators	in percentages
1	2	3	4
1	Bukhara dist.	144	9,2
2	Bukhara city	437	27,9
3	Vobkent	114	7,3
4	Gijduvon	122	7,8
5	Jondor	142	9,1
6	Kogon dist.	71	4,5
7	Kogon city	37	2,4
8	Korakul	101	6,4
9	Korovulbozor	18	1,1
10	Olot	50	3,2
11	Peshku	95	6,1
12	Romitan	83	5,3
13	Shofirkon	153	9,8
Total		**1567**	**100,0**

expenditure indicators were calculated as minimal.

Table 3. Transportation expenses related to the monitoring

No	District (City)	Number of graduator (person)	Transportation expenses	
			Road distance (km) (2S)	Total transportation expanses (in soum) (Cs)
1	2	3	4	5 (=3x5x109c)
1	Bukhara region	144	28	439 488,00
2	Bukhara city	437	6	285 798,00
3	Vobkent	114	75,2	934 435,20
4	Gijduvon	122	100,4	1 335 119,20
5	Jondor	142	48,2	746 039,60
6	Kogon dist.	71	46	355 994,00
7	Kogon city	37	26,4	106 471,20
8	Korakul	101	129,2	1 422 362,80
9	Korovulbozor	18	106,8	209 541,60
10	Olot	50	152,4	830 580,00
11	Peshku	95	76,8	795 264,00
12	Romitan	83	49,4	446 921,80
13	Shofirkon	153	94,8	1 580 979,60
Total		**1567**		**9 488 995,00**

Source: prepared by author based on the information of the Bukhara regionAuthority and Bukhara region transport administration.

Note: 1 USD 9500.54 soums (as of 16.03.2020)

According to Table 3, the geographical location of the graduates depending on their place of residence and employment is analyzed based to the fact the fare is 109.0 sums per kilometer for one passenger (1 passenger | km).

The total costs associated with transportation during the monitoring period amounted to 9,448,995 (nine million four hundred eighty eight thousand nine hundred ninety five) soums (Table 3), and the expenses related to the additionaltime spent by professors costed 56 970 676 (fifty six million nine hundred seventy thousand six hundred seventy six) soums (Table 4).

Table 4. Calculation of additional expenses related to the time spent by professors to monitor gross employment.

№	District(City)	Number of graduators	Extra time spent by professors to monitor gross employment			Payment for 1 spent minute of the professor by the duration of the working hours (soums) (K)	Total Expenses for the spent time by professors (soums) (Ct)
			Time spent for road till the district's center (t_1)	Time spent for formalization of the act through interview (minutes) (t_2)	total spent time (minutes) ($t=t_1+t_2$)		
1	2	3	4	5	6 =(4+5)	7	8
1	Bukhara dist	144	40	20	60	419,2	3 621 496,6
2	Bukhara city	437	18	20	38	419,2	6 960 482,9
3	Vobket	114	86	20	106	419,2	5 065 065,3
4	Gijduvon	122	110	20	130	419,2	6 647 793,5
5	Vobkent	142	54	20	74	419,2	4 404 477,5
6	Kogon dist	71	70	20	90	419,2	2 678 398,5
7	Kogon city	37	38	20	58	419,2	899 506,0
8	Korakul	101	134	20	154	419,2	6 519 532,1
9	Korovulbozor	18	108	20	128	419,2	965 732,4
10	Olot	50	146	20	166	419,2	3 478 984,0
11	Peshku	95	94	20	114	419,2	4 539 445,4
12	Romitan	83	62	20	82	419,2	34 370,7
13	Shofirkon	153	110	20	130	419,2	54 490,1
Total		**1567**	**1074**		**1330**		**56 970 676,0**

Source: prepared by author

Summarizing the results of the study, the total costs associated with the monitoring of gross employment can be highlighted as follows.

$$X = \frac{Cs + Ct}{1567} = \frac{9\,488\,995 + 56\,970\,676}{1567} = 42\,412$$

soums.

X- Theaverageexpenseofthemonitoringpergraduator.

Cs–transportation expenses

Ct–expenses related to the additional spent time.

To sum up, if the average expense, 42 412 soums, is multiplied with the number of graduators in 2018-2019, 1740, it can be seen that professors spent overall (42412*1740) 73 796 880(seventy three million seven hundred ninety six thousand eight hundred eighty)soums for gross employement monitoring . If it's

calculated for 4 Higher educational institutions' graduators of the Bukhara region, the total cost is (42412*3775) 160105300 soums. (one hundred sixty million hundred five thous

Russian experience of organizing an employment monitoring of graduates of higher educational institutions.

Monitoring of employment of all graduates of higher education institutions operating in the Russian Federation is carried out on a centralized automated system.At the same time, employment status indicators of graduates are determined by processing data from two separate sources.

These are followings:

1. Information of the Pension Fund of the Russian Federation.

2. Federal Registry of Education Documents (FRED) .

The Federal Registry of Education Documents is a single electronic registry that must be submitted by educational institutions (including institutions of higher education) within 60 days of issuance of documents (diploma, certificate) certifying graduator's education[8].

These processes will be published on the initiative of the Ministry of Education and Science of the Russian Federation on the "Graduators' Employment Monitoring" web-portal.The Portal Database not only provides all the statistical information about the regions and higher education institutions, areas of study, but also provides an opportunity to evaluate the migration of graduates within the Russian Federation.It should be noted that when compiling various national and international rankings, employment rates or other similar features are analyzed [9].

The main purpose of employment monitoring is to evaluate the effectiveness of graduates' employment (Figure 2).

Figure 2. Indicators that can be identified and analyzed by the automated portal "Monitoring of employment of graduators" of the Ministry of Education and Science of the Russian Federation [10].

Source: Prepared by author based on the internet- portal information of the Ministry of Education and Science of the Russian Federation "Monitoring of graduators employment " (http://vo.graduate.edu.ru)

Employment monitoring, based on the analysis of indicators presented in Figure 2, includes the following tasks:

- Processing information on employment of graduates provided by the Pension Fund of the Russian Federation, Federal Service for Education and Science of the Russian Federation and educational institutions;
- Analysis and evaluation of demand in the labor market for graduates of secondary specialized vocational education;
- To provide parents of the entrants reliable information about employment of graduators.

The process of employment monitoring through the automated system is given in the following steps (Figure 3).

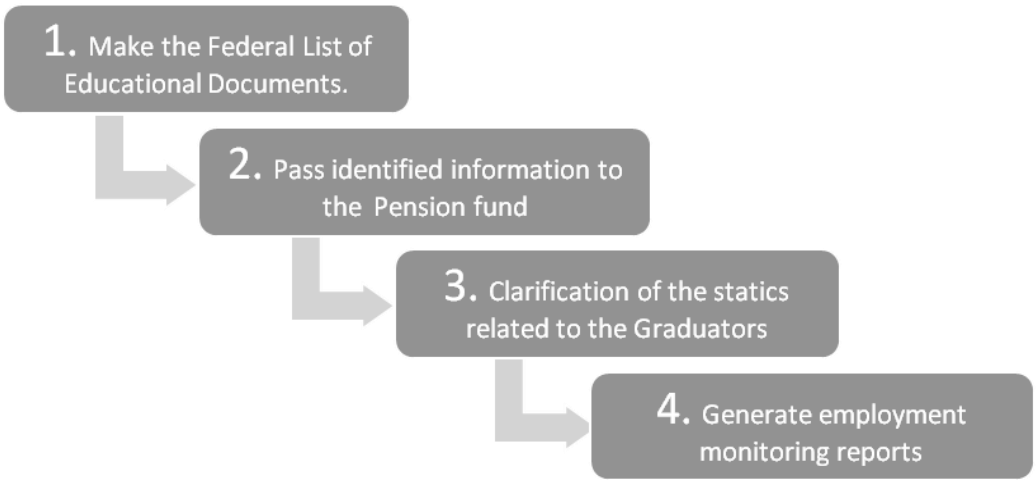

Figure 3. Stages of employment monitoring of educational institutions' graduators (Russian Federation).

Source: Prepared by author based on the internet- portal information of the Ministry of Education and Science of the Russian Federation "Monitoring of graduators employment "

Figure 3 shows that employement monitoring process of the Russian Federation's graduators of the higher education institutions has 4-stages.

In the first stage, theinformation provided by the all educational institutions(also includes high educational institutions)about documents (diploma, certificate) given to graduator will be added in to the database.

In the second stage, the provided information will be checke by the Federal Service for Control of Education and Science of the Russian Federation ("Rosobrnadzor") and the following categories will be excluded:

- Graduators continuing education;
- Graduators of foreign universities;
- Foreign citizens and graduators who don't have citizenship;

- Graduates of additional education programs.

After verification, the data are grouped by a number of characteristics: educational institution, year of graduation, direction and specialty, qualification, gender, citizenship, form of education, and first higher education. The created data will be sent to the Pension Fund database to determine the employment status of graduates.

In the third stage, the Pension Fund will identify the list of the graduators with wrong data (birthdate, name, surname, etc.) and return in order to eliminate errors, after which the following initial quantitative indicators for each will be set:

- Incorrectly entered "personal insurance numbers" (as well as those with the same birth date or many other identities that do not include their father's name which makes the identification process unclear).
- Not found "personal insurance numbers" (Graduators which are not registered in Pension Fund of the Russian Federation)
- Identified "personal insurance numbers" (Graduators which are registered in Pension Fund of the Russian Federation)

In the third stage, various indicators are calculated and reports are generated:

- Shareofgraduators' employment
- The amount of the average paid
- Number of graduates engaged in active individual entrepreneurs;
- The geographical location of the graduates of each educational institution by their average age;
- Separate, complete infographic information of each educational institution, etc.

Conclusions:

To sum up, even russian experience give opportunity to monitor the employment with small expenses in short time and several times in a year, it's little bit complicated to gain the information about some graduators, who work inLaw enforcement agency, on maternity leave, in military service, who is abroad or continue education.Because the data is determined by the graduate's contributions to the pension fund.For graduators in the above category pension contributions are not calculated and transferred to the Pension fund.

However, graduators of this group cannot be included in the category of unemployed.

With the improvement of various databases and platforms supported by ministries, committees and agencies in the state structure, firstly, it will allow for better monitoring of employment using these databases, and secondly, not only employment monitoring status but also provides an opportunity to do researches for useful analysis.

We think, establishing "Employment Monitoring" center under the Ministry of Employment and Labor at the republic level and then in the non-commercial form is purposeful.

It is expedient for the “Employment monitoring” center to develop a software system integrated with the databases used in the public administration of the Republic of Uzbekistan (Figure 3).

Figure 3. Ministries, committees, agencies and institutions, which are proposed to integrate databases to automatedly monitor the employment in Uzbekistan.

Source: prepared by author

The following information can be obtained from government agencies' databases, as shown in Figure 3:

- State Statistics Comitte -General reports about graduators of the higher education institutions;
- State Tax Committee -Information on income tax deductions;
- Pension fund under the Ministry of Finance - deductions from salary fund to extra-budgetary pension funds;
- Ministry of Higher and Secondary Special Education - information and identification of the educational document issued to the graduators;
- Ministry of Employment and Labor - information on graduators who are registered as unemployed;
- Khalq bank- information on contributions made to the accumulative pension fund of citizens;
- Information on contributions made to the accumulative pension fund of citizens;
- Ministry of Mahalla and Family - Information about child care, temporary military service or information about graduators who have gone abroad.

We can obtain reliable information through processing and integrating data.

The employment status of graduates, their success in career, and their current status (employed, child caring, military service, leaving abroad, disability or unemployment, etc.) provides an opportunity to quickly and reliably carry out market research and develop specific recommendations for successful employment of young professionals entering the labor market.

For formation innovative marketing and management strategies, a completely new, not only intelligent, but also interconnected semantic web technologies are being developed with advancement of digital technology through which the efficiency of the process can be increased several times[13].

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SPECIFIC FEATURES OF ORGANIZING STRESS TESTING IN THE ACTIVITIES OF LEASERS

Latipova Shakhnoza Makhmudovna[1]

ABSTRACT

In present it is vital to assess the changes in the activities of credit institutions in relation to the macroeconomic situation in the country. To achieve this, a stress test should be used. The article describes the importance of stress testing in the financial system of the country, its content. The study of the practice of applying the stress test process in the activities of lessors as a credit institution determines the purpose of the chosen topic. The author studies the theoretical views of foreign economists on the implementation of stress testing in credit institutions and presents their relevance to the national financial system. The importance of stress testing as a complement to the methods of risk management and risk measurement that can be observed in the activities of lessors is highlighted. One-factor and multi-factor methods of applying stress testing in leasing companies as a credit institution, the specifics of each method are shown. In particular, the macroeconomic variables used in the empirical model used in stress testing are discussed. Based on the fact that the solvency of the lessee (borrower) is the main factor influencing the activities of the lessor, it is proposed to use a score-rating equality developed on the basis of correlation analysis of its default status. In addition, at the end of the article there are several suggestions for the implementation of this process in the leasing market of the country, without the methodological basis of stress testing in the activities of lessors.

Keywords: *stress test, risk, credit risk, default, single factor method, multifactor method, empirical model, historical scenario analysis method, hypothetical analysis method.*

Introduction

In recent years, in the context of globalization of the economy, it is important to pay special attention to risk management and strategic management as factors that serve to ensure the financial stability of credit institutions. One of the key components of risk management in the activities of organizations providing financial services, in particular, commercial banks, insurance companies and lessors, is a stress test. At a time when financial market regulators in many foreign countries have set requirements for the implementation of stress tests, its use in the activities of lessors is relevant.

These days, one of the most important issues on the agenda of the leasing market of our country is the transformation of lessors into financially stable and competitive institutions. Therefore, it is necessary to develop and conduct a mechanism for organizing stress tests on different scenarios for a specified period in the activities of lessors.

Before organizing a stress test in the activities of lessors, it is necessary to consider the main content of this concept.

Stress testing is a method of measuring the vulnerability of a portfolio, institution or the entire financial system under the influence of various hypothetical events and scenarios [1].

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It is known from international financial practice that stress-testing measures are an exception to the financial condition of credit institutions under the influence of risk factors, but an assessment of the potential impact of events that are likely to occur [2]. The main content of the stress test is aimed at obtaining objective information about the potential damage of credit institutions as a result of unforeseen events.

It was first used in the United States in 1997 by JP Morgan Chase & Co. as a means of an internal management system from stress testing to assess market risk in the event of an exogenous shock. Since that this process has been used by Credit Suisse as well [3]. Today, stress testing is widely used in international practice in financial institutions. For example, in 2010, the largest bank holding company in the United States with information about the results of stress-testing legislation has been strengthened [4]. At present, U.S. banking regulators are required to conduct annual stress tests at major banks and publish their results. In addition, starting in 2013, individual corporations will have to conduct a stress test twice a year and publish its results [5].

Based on the above, it can be noted that stress testing is a method that clearly shows the resilience of the system (institution, asset portfolio) to these factors and impacts, as well as its stability when the impact of various factors on the financial system (institution, asset portfolio) increases.

Review of Literature

The views of foreign economists on the nature of stress testing and its application in the financial system are noteworthy. Economists of the CIS countries, in particular the Russian Federation Selyutin V.V., Vlasenko E.A., Mesropyan K.E., Suchkova E.O., Masterovenko K.V. describes the essence of stress testing, its application in banking practice, implementation models, ways to develop and improve approaches to stress testing, the evolution of approaches to stress testing by IMF mission experts and the publication of results [6]. These scholars highlighted the positive aspects of macro stress testing, such as the coordination of macro-stress testing with various stakeholders (central and commercial banks, regulators and the general public), quality control of micro-models, the relevance of macro stress testing to credit and liquidity risk, and it is important that the target indicators to be taken into account when conducting a stress test are given.

The widespread use of stress testing in the foreign financial system indicates that foreign scholars pay special attention to its theoretical aspects. According to A. Foglia, including the most common type of risk in the banking system emphasized as a credit risk (Fig. 1).

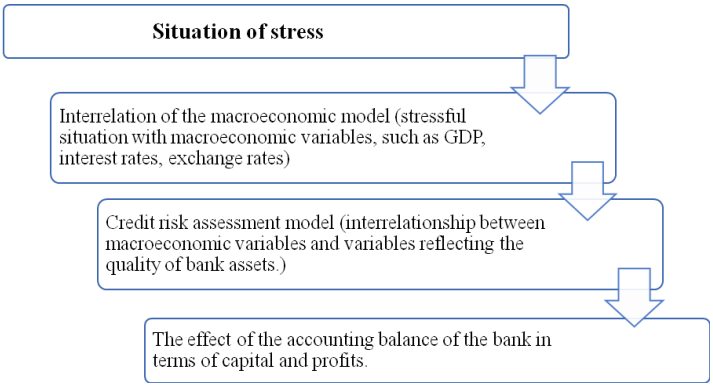

Fig.1. The process of macrostress testing of credit risk

Foreign economists Daniel Forssén and Ricard Radomski in their research have focused on the stress-testing methodology of the corporate loan portfolio [8]. They were able to assess the impact of macroeconomic shock cases through special programs. It is noteworthy that the research conducted by economists identified macroeconomic factors that negatively affect the financial system, the use of Matlab program in the analysis of macroeconomic variables in the Swedish corporate loan portfolio through stress testing. In addition, the fact that the default rate for each sector is modeled through a system of equations and that future losses on the loan portfolio are modeled using the Monte Carlo method means that different methods can be used by each economist to assess risks.

The main part

Stress testing is an important tool for risk management in the activities of lessors, which is used by lessors as part of the internal risk management system. The stress test allows lessors to inform and warn of negative and unintended consequences associated with various risks, as well as to identify and determine the minimum amount of capital required to cover losses in the event of significant adverse effects. Stress testing plays an important role in the following processes as a complement to other approaches to financial risk management and risk measurement methods that may arise in the activities of lessors:

- Prospective risk assessment;
- Ensuring external and internal data exchange;
- Introduction of liquidity and capital planning procedures;
- Preparation of information on the risk tolerance of lessors;
- Developing an action plan based on a series of stressful situations when unforeseen circumstances arise, and so on.

As noted above, stress testing requires an independent approach to risk assessment as one of the important elements of a risk management system in the activities of lessors, unlike other elements, stress testing allows the management of leasing companies to warn of losses and large losses in risky conditions. Therefore, stress testing helps to form a sustainable approach to strategic planning for the development of the risk situation of landlords, its resistance to external and internal shocks (negative impacts) and the development of their activities.

Typically, a stress test is used to determine the solvency of credit institutions. In particular, leasing companies determine the adequacy of capital to cover losses, and the availability (liquidity) of funds to cover loans and other liabilities. For example, in the form of lease payments by the recipients of the term of the lease of its failure to fulfill its obligations through stress-testing the problem.

As a result of the study of the financial situation, in particular the scientific work on the application of solvency forecasting models, we have witnessed the selection of some indicators that are relatively commonly used in these models. Then, based on the statistical assessments of scientists on the models, the indicators that have the greatest impact on the solvency of the subjects were grouped into specific groups. Then, the most common indicators in each group (coefficients that are important in the process of financial and economic analysis of the borrower's creditworthiness) were selected [9].

In addition, it was noted that the proposed indicators should include the market value of the property, and the following formula should be used to calculate this indicator:

$$M = \frac{market value of the debtor's property\ (assets)}{book value of the debtor's property\ (assets)}$$

After that, on the basis of correlation analysis, the following score-rating equation was developed.

$y = 11{,}5207 * x_1 + 0{,}1945 * x_2 + 0{,}4993 * x_3 + 0{,}01 * x_4 + 2{,}886 * x_5 + 0{,}0628 * x_6 + 0{,}014 * x_7$[10],

here:

y - an indicator of bankruptcy, insolvency of the subject;

x_1 - return on assets;

x_2 - quick liquidity ratio;

x_3 - coefficient of financial independence;

x_4 - the turnover ratio of fixed assets;

x_5 - an indicator of the market value of the property;

x_6 - net working capital (share of total assets);

x_7 - is the return on non-current assets.

For bankrupt entities, especially lessees, the value of "y" is in the range (-9.88; -2,176), and for entities with a positive financial position (lessees) is in the range (2,172; 3.8). The average value of "y" for bankrupt entities (lessees) -6.03; for entities with a positive financial position (lessees) is 2.99. This model, proposed for forecasting the financial condition of a potential lessee, is characterized by simplicity of use. It is believed that it would be appropriate for lessors operating in the national leasing market to use this model at the initial stage of the stress-testing process.

Different models are used to perform the stress test. In general, one of the models used in stress testing in banking is the empirical model, which is based on macro variables[11].

The empirical model reflects the positive effect between the probability of default (PD) and the percentage of losses in the default state (DS), as well as their unique behavior observed with business processes. In this case, the model consists of two equations for PD and DS, which are determined on the basis of a series of temporary credit losses in banks. At the same time, a system of time series models for exogenous macro variables is created to detect major macroeconomic fluctuations, which is then used in stress testing.

Based on the above considerations, we propose to determine lessors' losses (LL) under lease agreements using the following formula:

$$LL = PD * DR * ASD$$

PD - the probability of default of the debtor (lessee);

DR - the share of assets prone to default risk arising from the non-return of lease payments and similar factors;

ASD -the absolute size of the debt in the event of default;

When conducting stress testing by credit institutions, special attention should be paid to a number of factors that cause “unforeseen losses” (extraordinary losses) in the asset portfolio or to the precise regulation of risk management measures. The components of market risks (interest rate risk, price risk, fund risk), credit risk and liquidity risk are these factors.

The stress test includes elements of quantitative and qualitative analysis. Quantitative analysis will be aimed at identifying fluctuations in macroeconomic indicators and assessing their impact on the assets of credit institutions. In qualitative analysis, the main tasks of the stress test are emphasized.

In international practice, the method of scenario analysis based on historical and hypothetical events is widely used in stress testing (Fig. 2)

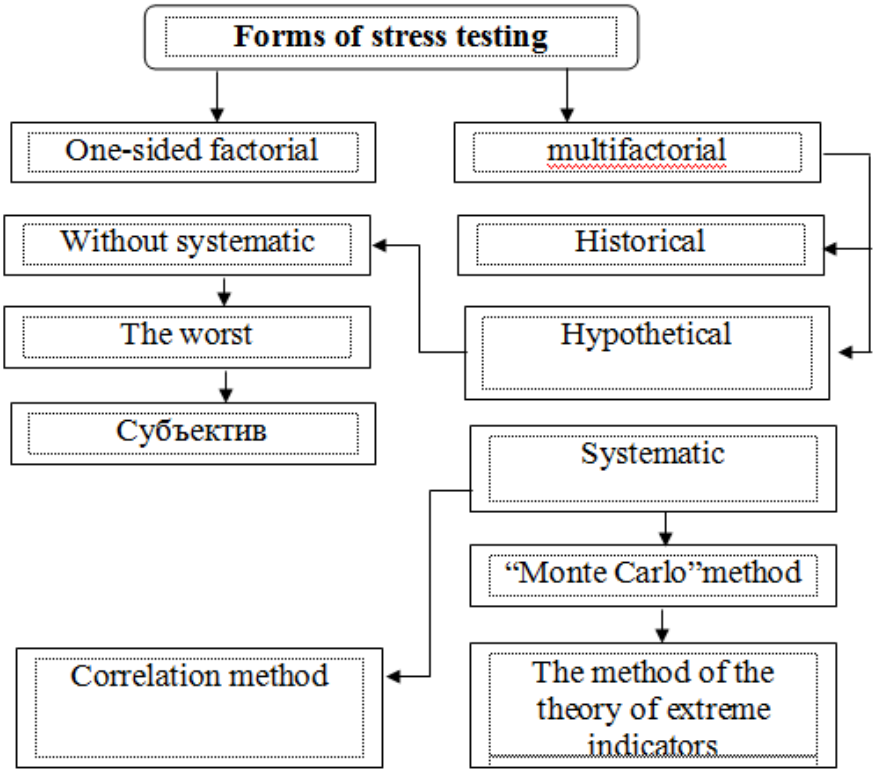

Fig. 2. Models of stress tests used in the experience of foreign countries

It also determines the sensitivity of the lessor's asset portfolio to the variability of risk factors and the value of maximum losses. Scenario analysis will focus primarily on a strategic assessment of the lessor’s prospects. Through this method, it will be possible to assess the impact of individual factors on the lessor's performance.

Sensitivity detection analysis is applied in the short term, unlike scenario analysis. In particular, this method is used when assessing the effect of the risk of changes in exchange rates and interest rates on the asset portfolio of lessors.

The application of the method of determining the maximum value of losses allows the lessor to determine the combination of risk factors that cause maximum losses in its activities and their negative dynamics.

In practice, the lack of normative documents regulating the conduct of stress testing complicates the development and application of models of its conduct by lessees. Here we consider the stages of implementation of a model based on historical data due to the existence of different models of stress testing in international practice.The first step in applying a historical data-based model to lessors 'activities begins with the study of reliable information about the lessor's activities. It is possible to use financial reporting forms (for example, the balance sheet).

The next step requires a thorough analysis of the lessor's portfolio of lease agreements and the identification of risks that are likely to arise in the lessor's activities. At the same time, the main focus should be on the portfolio of leasing agreements, the implementation of agreements.

In the final stage, an analysis of the dynamics of the factors that change the nature of the risk over a given period of time is performed. Thus, based on the historical scenario of stress testing, organizations (institutions) providing financial services try to make the right decision on their future activities. This method is distinguished by its simplicity and objectivity. Therefore, this method is useful not only in the control process, but also in conducting external audits.

However, it should be noted that we may not be able to fully assess the risks of a stress test based on a historical scenario, i.e., an analysis of past events. Therefore, financial service providers (including lessors) are required to develop hypothetical scenarios that, along with historical scenarios, allow them to take into account the maximum risks and losses that can be observed in their operations.In doing so, lessors periodically analyze the risk management process and try to ensure its integrity, reliability and validity. The analysis should be carried out in the following areas:

- The need for the process of assessing the charter capital of the lessor, based on the characteristics (complexity, scope) of its activities;
- Monitoring of risk-prone situations;
- Reliability and completeness of the initial data used by the lessor in the evaluation process;
- Stress testing and analysis of assumptions and preliminary data.

When conducting a stress test, it is possible to analyze not only one factor, but several factors that affect the financial condition of the lessor. The one-factor analysis model is very useful in the regular monitoring of lessors 'activities. However, in a crisis situation, the effectiveness of such models is low, and changes in a number of factors are usually noted.

The simplest method is used to select the maximum value of deviations for all risk factors studied during the specified period of previous years (2, 3, 5 years) and to use them in determining the current value of risk factors. Also, a one-sided study of the risks encountered in the activities of lessors over a specified period of time is not always effective. This is due to the fact that the magnitude of risk factors can be "deviated" from

its average size at the same time. One way to solve this problem is to use the same "weighted" method of assessing different risk factors over a specified period of time and then compare the average size of each of them.

In the leasing market today, the risk of non-repayment of payments (principal and interest) is one of the most common types of risk in the activities of lessors. Therefore, the lessor should continuously conduct stress tests to increase the risk of non-repayment of payments, and the impact of these test results on potential changes in the state of the leasing market should be identified and assessed.

In assessing the risk of non-repayment of payments, the presence of systematic directions of analysis by the lessor of the lessee's ability to repay payments in a timely manner is important. Most importantly, the identified routes should be comparable in the event of default of the lessee, which is characterized by the same level of insolvency risk.

Conclusion

Analyzing the above methodological bases of stress testing in the activities of lessors, we make the following recommendations for the implementation of this process:

- Lessors should carry out stress tests as soon as possible during their operation. This allows them to quickly adapt (respond) to changes in financial markets;
- Analysis of the stress test only on the basis of historical, ie events, does not allow a complete analysis of risks. Therefore, lessors should develop hypothetical scenarios that maximize the risks in their operations and reflect potential losses, in addition to the historical scenario;
- Lessors should constantly monitor this process, paying special attention to the relevance of stress tests, to determine the prospects for development of the organization in the financial market and to take full account of the current situation;
- The stress-testing process should be carried out using the most appropriate methods of risk assessment. Our national legislation does not provide for the concept of stress testing in the activities of lessors. It is necessary to create a legal basis for this process using foreign practice.

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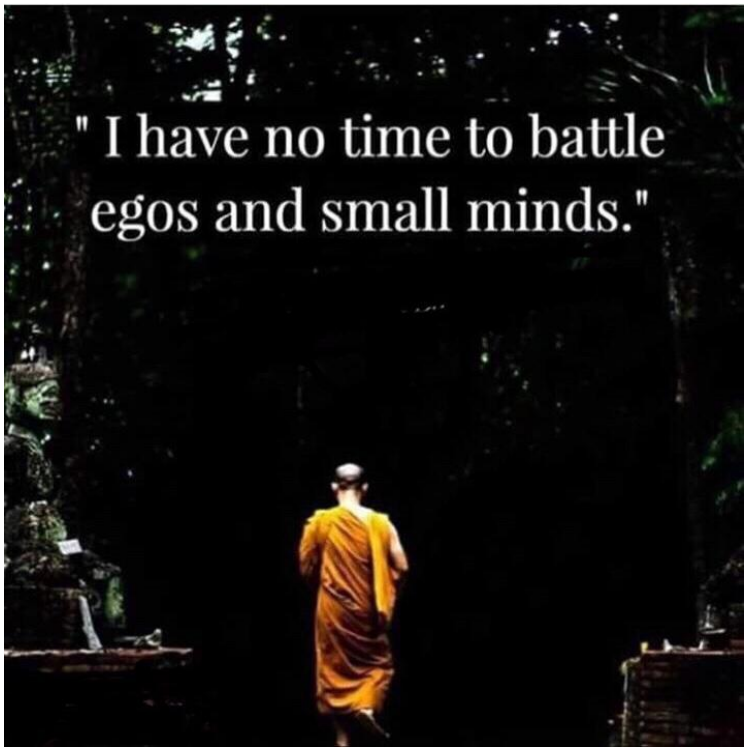

DEVELOPMENT OF INTELLECTUAL TRANSPORT SYSTEMS IN THE REPUBLIC OF UZBEKISTAN

Yusupkhodjaeva Gulchehra Bakhodirkhodjaevna[1]

ABSTRACT

The research examines the foreign experience of Asia, Europe and the United States of America in the implementation of intelligent transport systems, as well as the possibility of applying this experience in Uzbekistan. It also considers intelligent transport systems as an intensive way to solve transport problems in the leading countries of the world.

Keywords*: intelligent transportation system, traffic accidents, ITS Japan, ITS Europe, the emergency call, traffic jams, bandwidth, traffic flow.*

For successfully promoting the transition to sustainable mobility requires a new approach to the development of existing transport systems. Ensuring sustainable transport and sustainable mobility requires a systematic approach aimed at reaching achievable results, including in terms of improving road safety. As an improvement to this process, information and communication technologies can be used. The adoption of conventional measures to improve transport systems is no longer enough to solve the accumulated systemic and interconnected problems in a way that would not only mitigate the negative aspects of transport systems, but also guarantee their global transformation into systems that provide universal access to mobility for each person individually and society as a whole. In addition, the transport systems of the future should provide a higher level of safety and reliability and at the same time have a minimal side effect on the environment and social conditions. The advent of ITS technology and the use of transport systems development has come to an important milestone.

Intelligent Transport Systems (ITS) is a complex of engineering design that can reduce accidents and danger on the road through the implementation of integrated information systems that provide traffic management and allow you to quickly turn to emergency medical care in the event of a traffic accident. ITS plays an important role in terms of national security. It is no coincidence that this transport management technology was widely used 20-30 years ago in the United States of America, Japan, Germany, France, and China. At the dawn of the development of ITS, the above countries are just like today, Uzbekistan faced with the ability to use the means available to control traffic on the roads.

ITS includes the most modern devices that are developed taking into account specific needs and allow transmitting incoming information to road users and law enforcement agencies in real time. ITS, built into vehicles and installed on the roads, use technologies that are related to assistance in driving and driving automation, control of traffic flows and vehicles; these technologies increase the safety of vehicles and infrastructure and ensure an uninterrupted and convenient mode of transportation through the use of appropriate vehicle functions and interactive interaction with road infrastructure and other vehicles. Such

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decisions are to help drivers maintain safe speed and distance, stay within the lane, avoid overtaking in critical situations and drive safely at intersections, which has a positive effect on safety and traffic management. However, additional benefits would be obtained if individual vehicles could constantly communicate with each other and with the road infrastructure.

For the development of ITS in Uzbekistan, by Decrees of the President of the Republic of Uzbekistan No. PP-2158 dated April 03, 2014 and No. PP-2569 dated August 01, 2016 “On measures for the further implementation of information and communication technologies in the real sector of the economy”. The development and implementation of SMPO-UZGPS is carried out in accordance with the feasibility of introducing UzGPS mobile objects.

Since 2014, the Center, with the support of Uzbektelecom, has been working on the development, development and implementation of the Satellite Monitoring System for UzGPS mobile objects in the activities of various government bodies and departments.

UZGPS is a 100% local development, taking into account modern technologies in the field of satellite monitoring of vehicles and has the ability to flexibly configure, modify and make the necessary changes depending on the tasks that arise.

To implement this work, the state unitary enterprise Toshkent Transport will be created in the structure of the khokimiyat of Tashkent. The first center for traffic management appeared in Uzbekistan in accordance with the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan.

On measures for the further development of road transport infrastructure in the city of Tashkent. In the Decree of the President of the Republic of Uzbekistan "On a legal experiment on the introduction of a special management order in the city of Tashkent" No. UP-5515 of 08/17/2018, in order to further improve the city's road transport infrastructure Tashkent with the implementation of universally recognized international standards and best practices in the road sector, in close interconnection with modern requirements for ensuring road safety.

The first new enterprise will be introducing in 2019-2021 a unified concept of public transport stops, providing the necessary conditions for people with disabilities, the availability of Wi-Fi and an electronic display that shows the rest of the time until the arrival of the next public vehicle.

2-Among other tasks of the new structure - the introduction of a system of automated accounting and payment acceptance at car parks, the organization of the Unified Center for Management of Parking Space in Tashkent. The company will also be involved in the organization of the "Evacuation Service of the Tashkent City Administration" for evacuating cars in violation of traffic rules, non-payment of parking services, traffic accidents and other cases.

3-Another interesting area of work is the planning, design, implementation of safe and effective programs and schemes for organizing traffic, including traffic control systems, modern intelligent information and communication systems, traffic modes of traffic lights to prevent traffic jams, ensuring the efficient use of roads and road objects. It is planned to create a single center for managing all traffic lights objects online.

4-The enterprise will have to deal with the expansion of an automated system of photo and video recording violations of traffic rules. Among previously unannounced projects is the launch of a system for checking vehicle insurance and vehicle inspection online.

The company will monitor and coordinate the movement of passenger vehicles, all utilities and emergency services (regardless of their legal form and departmental subordination), create conditions for the unhindered movement of ambulances and fire services through GPS equipment installed on them.

5- the structure will create a single call center to receive and process citizens' appeals regarding transport and the city's road transport infrastructure.

A distinctive feature that must be used in Uzbekistan is the selected form of ITS implementation, which is under total state control. There are five-year plans integrated into the economic development system.

Assessments of the financial performance of indicators take into account the financial consequences of its implementation for participants.

The following aspects of improving the financial efficiency of the project can be distinguished:

- Increase in revenue through the provision of additional services based on the infrastructure of the Emergency Response System in road accidents
- Reducing the cost of creating a system based on the results of technical design and commercial negotiations with equipment suppliers;
- Reduction of the tax burden associated with the provision of communication services through the adoption of the necessary regulatory legal acts.

Transport monitoring and control systems are used not only for tracking purposes, but also perform a number of other functions when installing additional navigation-related equipment. For example, it becomes possible to control fuel consumption, tracking systems can more efficiently plan routes, as well as reduce unauthorized downtime.

In the field of improving international road transport, in addition to the above directions, it is necessary to provide:

- Phased approximation of national legislation with international norms and requirements, taking into account the creation of the most favorable conditions for increasing the competitiveness of carriers;
- Development of the production and technical base (modern vehicles, terminal and logistics centers, etc.);
- Creation of mechanisms for tariff-price, tax and investment-financial regulation of international transport, including the establishment of reasonable fuel prices, tariffs for transportation, adequate tolls with foreign countries;
- Introduction of a system of electronic and logistical support for motor vehicles and goods on major international routes and border crossing points with the organization of their passage through the "green corridor" with a significant simplification of the system of all types of control at the border.

Intensive development of foreign economic relations makes it necessary to organize international freight transport, including by road. In this case, the subject of international contracts will be not only the supply of goods, but also the ian transport services. “Export” of the transport service provides foreign exchange earnings and saves its material resources within the country.

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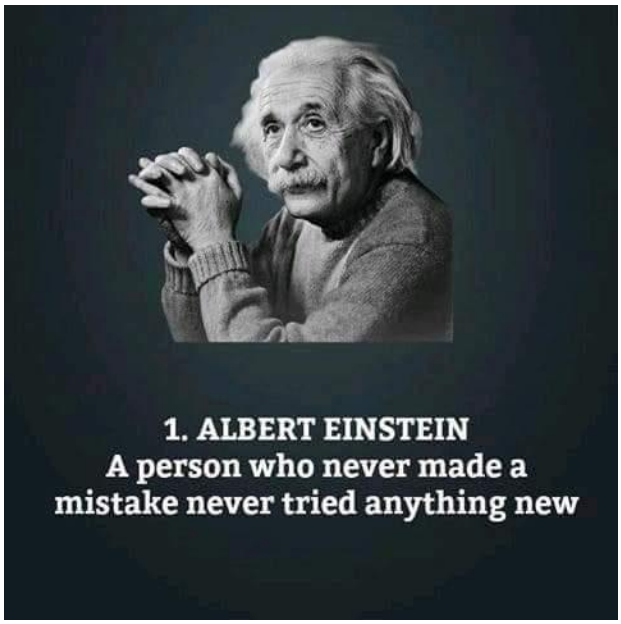

THE IMPORTANCE OF DOMESTIC TOURISM IN LOCAL ECONOMY OF BUKHARA REGION

AzimovKh. Otabek[1]

ABSTRACT

Tourism is an industry that has a significant impact on the socio-economic development of any interested country. This type of national economic activity is characterized by a multiplier effect, generating income generation in related sectors of the economy. Among the types of tourism, domestic tourism began to play a key role as the main source of financial income from tourism activities. In the regions of the Republic of Uzbekistan, domestic tourism is poorly developed, due to the imperfect infrastructure of the industry, the mismatch of prices for tourist products with their quality, and the lack of qualified personnel. Recently, the influence of external factors, such as the turbulent geopolitical situation in a number of countries, the crisis in the economyhas gained particular importance for this area . For the Bukhara region, domestic tourism is one of the very important areas of tourism, which needs to be developed rapidly.

Key words. Tourism, economics, domestic tourism, revenues, strategy, marketing, tourism management, destination, tourism resources.

Introduction

In 2019, important documents were adopted in the tourism sector, in particular, Decree of the President of the Republic of Uzbekistan dated January 5, 2019 No. UP-5611 “On Additional Measures for the Accelerated Development of Tourism in the Republic of Uzbekistan”, Resolution of the President of the Republic of Uzbekistan dated January 5, 2019 No. PP -4095 “On measures for the accelerated development of the tourism industry” and Decree of the President of the Republic of Uzbekistan dated August 13, 2019 No. UP-5781 “On measures for the further development of the tourism sector in the Republic of Uzbekistan”. In Uzbekistan, for the first time, the Tourism Development Concept for 2019-2025 was approved, in accordance with which the main directions of tourism development until 2025 are determined and, most importantly, the industry targets are determined. As a result of the implementation of practical measures based on the results of 8 months of 2019, more than 4.3 million foreign tourists visited the republic. This is 26.7 percent more than for the same period last year (3.4 million tourists). According to the results of the export of tourist services amounted to 854.5 million dollars. Compared to the same period last year ($ 666.8 million), the export of tourism services increased by 28 percent. By the end of 2019, it is expected that more than 6.5 million foreign tourists will visit the republic, which is 15% more than last year (5.3 million).

In Uzbekistan, domestictravel involving movementnationals for tourism,not fully developed. Meanwhile, in the economy of foreign countries (USA, China,Japan and others) it provides up to 80% of cash receipts in the structure of types of tourism.

Thus, the relevance of thisresearch due to contradictionbetween high socioeconomicrelevance of domestic tourism andinsufficient level of its development in the regions of Uzbekistan in modern

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economicconditions. The aim of the study isscientific substantiation of directions ensuring the development of domestic tourism in the region, taking into account the influence of externalfactors. To achieve it, the existing approaches to the concept were considered.

"Domestic tourism", analysisdevelopment of this sphere in the Russian regions, as well as the impact on itexternal factors.

The Japanese managed to achieve a lot in this direction by providing the tourism industry with all the necessary resources in the right quantity and quality. We only need to study and implement this in the tourism sector of our country. Having been in Japan in 2003, I personally became convinced that the Japanese tourism service system is more than just tourist service. In the Japanese customer service system, the client / tourist / guest is placed above the attendants, the entire system is tailored to the tourist, and sometimes it seems that the tourist feels excessively relaxed. But at all levels of service there are standards, where compliance with these standards is strictly mandatory for all personnel.

Literature review

The scientific works of various researchers provide different approaches and information on the development of domestic tourism. Outbound tourism tour operators have direct contacts with the Ministry of Foreign Affairs, and tourists traveling abroad can directly contact diplomatic staff if significant problems arise. Representatives of the travel industry also prefer to work only with reliable, trusted partners to reduce their risks to a minimum.

The literature dedicated to domestic tourism is a relatively narrow one. Nonetheless, a strong case is made for the important contribution of this side of tourism to local and national socio-economic success .

Domestic tourism accounts for upwards of four fifths of all tourism flows (Scheyvens, 2002). Even in nations with internationally orientated tourism industries, domestic tourism is demonstrated to be greater in terms both of size, and economic contribution (i.e. New Zealand; Pearce, 1990, Spain and Italy; Cortes-Jimenez, 2008, Italy: Massidda and Etzo (2012: 609). Estimates put the value of the UK domestic tourism industry in 2009 at around £70bn, more than three times the size of international (VisitBritain.org).Additionally, domestic tourists have been suggested as providing more economic input to local communities, because they tend to use locally owned facilities, reducing leakage rates. For example, domestic tourists are more likely to use small businesses in different places, rather than be concentrated in a few major resorts, to avoid pre-paid packages, and purchase local products and services (Shackley, 1996, Gossling et al, 2005, Schmallegger et al, 2011). Domestic tourism may be a means for destinations to reduce seasonality, and dependence on few originating markets, or declining markets (Sindiga, 1996).

Suggestions are also made that domestic tourists may be less negatively influenced by poor weather (Jacobsen et al, 2011), or susceptible to changing tastes and fashions (Wheeler, 1993, Urry, 2002), and have more realistic expectations of local attractions (Fennell, 2008).

As a domestic tourist there are typically three key matters to be dealt with after choosing the travel destination: the mode of travel; activities in which the tourist will participate and the people they will travel with. If the trip includes an overnight stay, the tourist must also choose accommodation. In order to gather information before and turning their trip, people turn to both promoted and un-promoted sources (e.g. advertising, printed material, travel review sites and friends and family). Factors such as the distance of the destination from place of residence, the costs associated with travelling, accommodation and other facilities,

and knowledge about the destination influence their decision. Blumenberg (2013) identified six factors which influence the travel behavior of immigrants: individual and household characteristics; spatial assimilation; access to ethnic resources; employment patterns; government regulations; and cultural differences. Modes of transportation have been shown to affect the way to immigrants' travel as tourists (Chatman & Klein, 2009). Blumenberg (2013) found that immigrants generally use public transportation, bicycles and walking. Word of mouth communication between friends and family, and personal preferences has been shown to govern the destination choice (Govers& Go, 2004). A favorable image of the destination is also an important factor in attracting tourists (O'Leary & Deegan, 2005; Pike, 2002). Communication about the tourist attractions and events is typically focused on expanding the knowledge of non-resident international tourists and to persuade them to go that location (Sigala and Leslie, 2005).

Research Methodology

Methodological approaches to research are based on general scientific methods of comparison, generalization, analysis, synthesis, PEST analysis, and the method of expert survey. The information base of the study was the work of domestic and foreign economists in the field of methodological and practical issues of tourism development management, taking into account regional characteristics. Regional development issues are highlighted in the writings of such scholars as A.G. Granberg, S.Yu. Glazyev, R.S. Greenberg and others. Theoretical and practical approaches to the development of tourism have also been widely studied in the works of foreign scholars who, as applied to domestic tourism, consider the importance of its development for the economy of the territory, focusing their attention on its problems. As a research method, an analysis was made of the current state of the domestic tourism market in recent years. Based on these analyzes, certain conclusions can be made. For example, Japan ranks 9th in the world and 2th in the region of the Asia-Pacific countries. In 2018, nearly 30 million people visited this country. The success of Japan may be due to the rich cultural resources (6th place in the world) with unique UNESCO monuments and efficient transport infrastructure (17th place in the world). Tourists and businessmen also praised the paid WiFi network deployed throughout the country.

Analysis and results

Making analyzes of the above facts, one can observe that the internal tourism of Uzbekistan is developing slowly. But the resources that we have available allow us to more rapidly develop tourism in different directions. The role played by domestic tourism in tourist activity is still limited in Jordan, and this suggests that domestic tourism contribution in Jordan's tourism industry is still bounded. In the past decade, the domestic tourism contribution in the Kingdom was almost 7% out of the total tourist activities. Therefore, this requires the need to double the public-private sector efforts to expand the contribution of tourism media in stimulating and encouraging domestic tourism to support the tourism activity in Jordan. This is done through the distinctive tourism media. These difficulties are, however, linked to these constraints weakness of cultural awareness toward the value of these sites and tourist attractions. This was seen as the limited and weak media programs that target different categories of Jordanian society. In addition to this, we can add the weakness of the motivations and benefits needed to enhance domestic tourism. From analyzing the national strategy which was set for the development of Jordan's tourism sector for the years 2011-2015, it has been concluded that this strategy is empty of any kind of the development of the Tourism media that deals with the domestic tourism. Furthermore, this indicates the importance of reviewing this strategy to develop and support the concept of appropriate tourism media. The study aimed to identify the effect of the Uzbektourism business to stimulate domestic tourism. This was fulfilled through the identification of the

following objective: 1. The importance of the Tourism business that deals with the improvement of domestic tourism. 2. State the weaknesses in the tourism media in Bukhara and propose the best mechanisms to raise its efficiency. 3. Build a partnership with the media, working to strengthen its capacity to deliver messages related to domestic tourism issues, and to consider the media as one of the tourism development tools which help to highlight those issues in the public dialogue in order to influence tourism policy-makers. 4. Create networks that work to widen the awareness of tourist sites in Bukhara. This is done through monitoring and exchanging information about the good management, encouraging the exchange of expertise and experiences among network members, and giving the educational qualification to people who work in the field of Tourism business on how to use modern technical means.

In addition, a number of benefits have been announced specifically for the tourism sector. There are all possible conditions for developing of domestic tourism. When conducting a survey with local tourists, they replied that they could not find, open and reliable information about all the services in any electronic database. And they gave their recommendations to address the existing problems in the tourism sector.

Conclusion/ Recommendations

The research has concluded that there is an in-depth understanding of the role that can be played by internal tourism in Bukhara region. It emerged from the research that there is a significant potential for development tourism and to be involved in travelingthrough Uzbekistan. However, the number of internal tourists can be increased by capitalizing on the marketing strategies available to tourism and hospitality operators. Based on the outcomes of the study, the results show that there are seasons for internal tourism especially the Easter, New year and School holidays. The study has revealed the need for tourism operators to accommodate internal tourists and appeal to them using certain marketing strategies. The tools that can be used to appeal to internal tourists could include the use of advertising, direct sales, the print and electronic media as well as the Internet. Promotion could include the use of group discounts, special packages, incentives and competition involving international tourists. It emerged from the study that tourism and hospitality operators need to fully utilize publicity to effectively position their offerings to international tourists.

The creation of legal and economic conditions to stimulate the development of domestic tourism requires:

- A certain adjustment of the current legislation regarding tourism development, including amendments and additions to existing regulatory legal acts in related fields;
- The introduction of financial responsibility in the implementation of tour operator activities;
- Effective management of state property in the tourism industry;
- Creating the necessary conditions for the successful development of hotel accommodation facilities and other tourist infrastructure;
- Creating a favorable investment climate for local and foreign companies investing in the development of tourism infrastructure in Bukhara;
- Development and adoption of new normative acts on standardization and certification of accommodation facilities services, including those governing the classification of hotel

accommodation facilities; empowerment in this area of the local executive authority in the field of tourism;

Strengthening and further development of intersectoral and interregional coordination in order to increase the efficiency of the domestic tourism industry should be carried out by:

- The creation of an interdepartmental commission under the local executive body in the field of tourism in order to improve intersectoral and interregional coordination in this area;
- The creation of an interdepartmental commission to streamline the use of state property in the tourism industry;
- The formation of regional tourism development concepts with the development of economically feasible plans for their implementation, including within the framework of regional targeted programs for socio-economic development.

Improving the quality of tourism services requires:

- Development of new rules for standardization and certification of accommodation facilities services;
- Development and implementation of a modern classification of hotel accommodation facilities, taking into account international best practices;
- The creation of a modern system of training, retraining and advanced training of personnel, including the development and implementation of modern industry educational standards based on existing qualification requirements for employees of the tourism industry;
- The creation and implementation of training programs that are relevant to industry needs and provide for practical training of personnel, including in-hotel and in-house training (practice), within the funds provided for in the respective education budgets;
- The implementation of specialized continuing education programs for managers of the top management of the tourism and hotel business, including the organization of internships abroad at the expense of extrabudgetary sources;
- Support of promising applied research in the field of tourism within the framework of funds allocated for these purposes to the federal executive body in the field of tourism.

In conditions of priority support for the development of the tourism industry, the state will ensure more efficient use of human, information, material and other resources, taking into account the labor market and the tasks of the country's socio-economic development.

The effective development of tourism will significantly increase the flow of local tourists to Bukhara, as well as ensure, on the one hand, an increase in tax deductions to budgets of various levels, and on the other hand, given the impact of tourism on all aspects of society, - development of related sectors of the economy and increasing employment.

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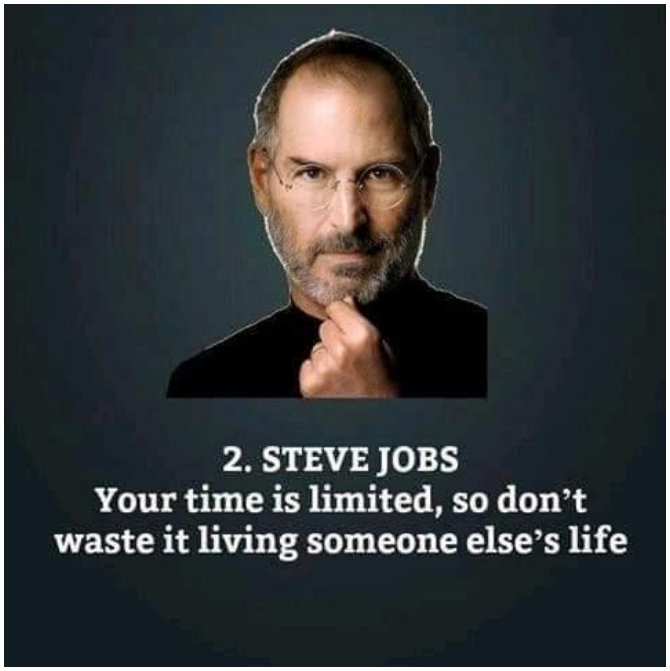

METHODOLOGICAL BASES OF MANAGEMENT OF COMMERCIALIZATION OF RESULTS OF INNOVATIVE ACTIVITY IN HIGHER EDUCATION

Asror Norov Egamberdievich[1]

ABSTRACT

A detailed definition of the concept of innovation is presented in the article. Moreover, this article identifies key components of the innovation life cycle and provides recommendations for reducing the credit limits for Uzbek enterprises as well as advice on developing the financial system.

Key words: *innovation, innovation process, innovation activity, commercialization, participatory principle, intellectual property, basic innovation.*

Introduction

Government pays special attention to comprehensive support and encouragement of active entrepreneurship, the introduction of innovative ideas and technologies, the creation of the necessary conditions for the rapid development of science and innovation, which will increase the socio-economic potential of the regions and the steady growth of living standards and welfare.

At the same time, the results of the analysis indicate that there are a number of systemic problems in the country, including those that hinder the further improvement of conditions for the development of active entrepreneurship and innovation [1].

Nowadays, the world is experiencing an information-innovative era. The driving forces of the process are the changes based on scientific advances, rapid adoption of new technologies and effective management. As a result, the relationship between the subjects of economic activity related to the exchange and implementation of innovations is becoming more and more evident.

Radical changes in economic processes (globalization of the market, widespread use of information technology, managing the development, structural changes in business organization) are leading to an increase in the scale of reforms in various enterprises.

The inventions and discoveries that are applied in various areas of the organization and lead to the creation of innovations tend to be the basis of scientific and technological progress. After practical application, inventions become innovations. They are an active link in all spheres of life and activity of society. Modern space cannot be imagined without such changes. The concept of "innovation" is used in almost all areas, both at home and at the professional level, and itbecomes an actual topic at the level of heads of state and international organizations.

Despite the fact that economic development is carried out through the introduction of innovations, the slow pace of this process in the last century did not allow it to be fully tested. Rapid economic development in the post-industrial period has acquired qualitatively new features: innovative processes have become a

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condition for development; innovation is becoming a leading factor in production; the rate of change is increasing.

Innovative activity is a claim to the status of the main activity and is a necessary condition for the strategic development of the enterprise. There are various definitions of the concept of "innovation" in the literature, which are oftenconfused with the concept of "novelty". In this regard, it is necessary to payattention to their specific differences.

Research methodology.

The methodological base of the research is the application of a comprehensive approach in the analysis of the problems of commercialization of innovations and the formation of innovative infrastructure.

Analysis and results.

Based on the results of the analysis, the financial and economic foundations and effectiveness of innovative activities of organizations and methods of commercialization of innovations in the territory of the Republic of Uzbekistan are assessed in detail.

Innovation is a novelty introduced to ensure the quality growth efficiency of processes and products based on market demand. It is the end result of human intellectual activity, their imagination, creative process, discoveries, inventions andrationalizations.

The supply of products (goods and services) to the market through new consumer features or a qualitative increase in the efficiency of production systems can be an example of innovation.

Innovation is a new or significantly improved product (goods, service) or process introduced for use, a new style of sales or a new organizational style in work practice, job creation and external relationships.

The term "innovation" is derived from the Latin word "novatio", which means "update" (or "change"), and the suffix "in" is translated from Latin as "in the direction". If we translate it as a whole, the word “innovatio” is explained as “in the direction of change”. The concept of innovation first appeared in scientific researches in the nineteenth century.

The concept of "innovation" began its new life in the early twentieth century in the scientific work of the Austrian and American economist J. Schumpeter, as a result of the analysis of "innovative combinations", changes in the development of economic systems. Schumpeter was one of the first scientists to introduce the term into scientific use in economics in the 1900s.

We should look at innovation not as any kind of novelty, however, as a factor that significantly increases the efficiency of the existing system. Despite widespread misconceptions, innovations are different from inventions:

The difference between innovation and scientific discoveries and inventions

Science is the transformation of certain resources into knowledge and ideas.

Innovation is the transformation of knowledge and ideas into capitals.

An invention is the creation of a new concept.

Innovation is the highlighting of the practical significance of an invention and its transformation into a successful marketable product [2].

Novelty is the result of intellectual activity; it is a new strategy, a new business model, a new organizational structure, a new marketing method, a new process, a new technology, a new product or a certain combination of them. Figure 1 shows the main stages of the innovation life cycle.

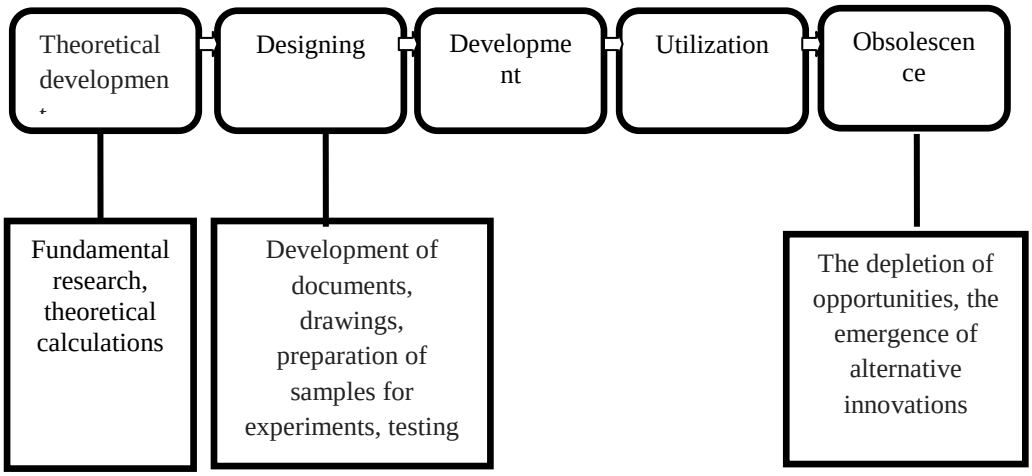

Figure 1.1. The main stages of the model life cycle of innovation [3]

Unlike novelty, innovation is an event that consists of putting novelty into practice in order to obtain economic benefits. Figure 2 shows the key components of the innovation life cycle.

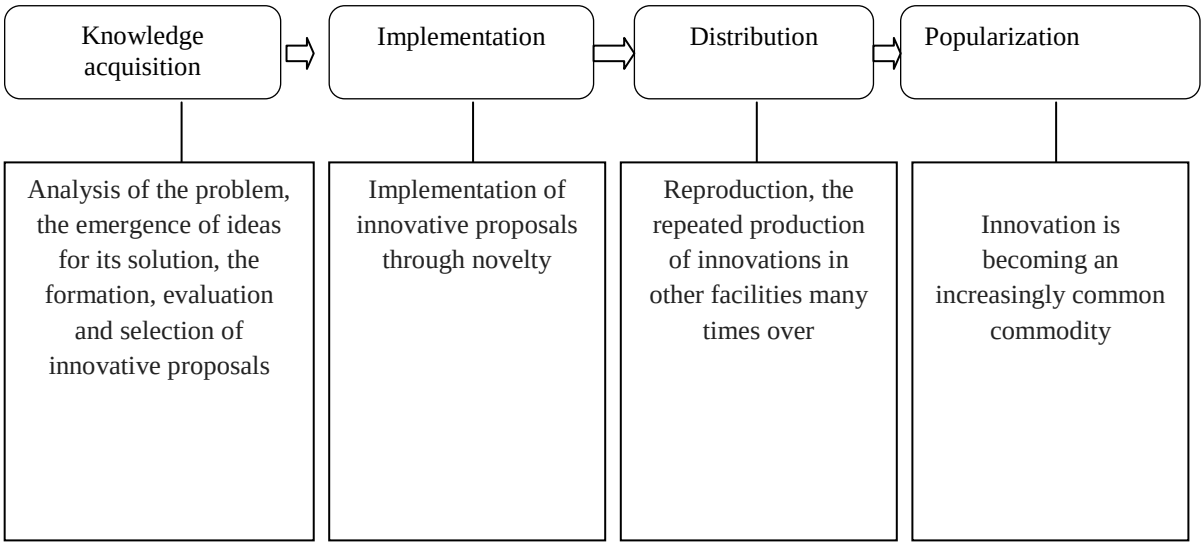

Figure 1.2. The maincomponents of the life cycle of innovation [5]

Different approaches have begun to emerge in the economic literature to define the concept of “innovation”. According to E.A. Utkin's approach, innovation is "an object introduced into production" [3].

According to I. Stepanova, the concept of "innovation" is interpreted as the process of creating real, new products and technologies of scientific and technical potential [4].

L. Vodachek and O. Vodachkova describe innovations as "targeted changes in the enterprise as a system" [5].

The above definitions of the concept of "innovation" reflect the microeconomic nature of change, and here they are considered as a factor in the modernization of the organization.

According to B. Santo, innovation is a technical, socio-economic process in which high quality technologies are created. According to LA Baev and EV Shugurov, there are the following approaches to define the concept of "innovation" [6]:

Object based approach;

Process approach;

Object-validity approach;

Process-validity approach;

Process-financial approach.

According to the **object-based approach**, the result of scientific and technological progress - new techniques and technologies - serves as innovations. The object criterion allows highlighting the following:

- **Basic innovations** - innovations that lead to the creation of a new generation of technologies, consisting of the implementation of major inventions;
- **Improving innovations** are the innovations that implement small inventions that arecommon at the stage of sustainable development of the scientific and technologicalcycle;
- **Counterfeit innovations** (rationalization innovations) are aimed at partially improving the outdated generations of techniques and technologies, which usually lead to a slowdown in technical progress because they have no effect or negative impact on society.

According to the **object-validity approach**, innovation is defined as a new consumption value produced on the basis of the introduction of new scientific and technical achievements. Here, the validity function of innovation predominates - the ability to meet the needs of a society with high validity.

In the framework of the **process-validity approach**, in contrast to the object-validity approach, the category of "innovation" is considered as an integrated process of creating, disseminating and applying a new practical tool.

From the point of view of a **process-financial approach**, innovation is the process of investing in novelty, investing financial resources to develop new equipment, technology and research.

According to I.Abdurahmanov, "If sciencebecomes money, it is innovation" [7].

Thus, the concept of “innovation” is often defined by the specific purpose of a particular researcher. Any innovation, including one that is not very advanced, can be described as an innovation.

Various definitions of the concept of "innovation" in the literature describe it as a new or improved product or technological process that provides the result of innovative activity, market entry and change in the quality characteristics of manufactured goods or services (Table 1).

The data in Table 1 show that in describing innovations, the authors focus on qualitative-technological change rather than on reproduction and market aspects of the product or service. At the same time, the evolutionary approach analyzes the continuity of the innovation process, and the economic content of each innovation is determined only in terms of the "innovation sector" of the economy.

However, the new combination of factors of production and the resulting qualitative changes in the structure of the market of goods and services is a clear manifestation of innovative processes.

Table 1 Comparative analysis of the definitionsof the innovation category [9]

Author	Definition
1	*2*
Prigojin A.I.	The innovations in the organizations were reviewed, which were described as specific targeted changes (goals, technologies, procedures, etc.) introduced into the new stabilization components.
Zub A.T.	Defines innovation as the process of developing innovative ideas, concepts that are then applied in the organization. At the same time, he explains that change is a process of rapid and profound changes in working methods associated with changing conditions.
Asayl A.N, Karpov B.M., Perevyazkin V.B, Starovoytov M.K..	The authors say that innovation is a unique demonstration of scientific and technological progress, a technological process characterized by elements of innovation, the ability to produce products or services that meet market demand, efficiency, the result of creative activity in the form of new or modernized products.
Orlov L.I.	Considers the concept of innovation as close to the concepts of novelty and change. Defines innovation as a result of decision making. It focuses more on scientific and technical and management innovations based on different solutions - scientific and technical and organizational solutions, respectively.
Molchanov N.I.	Defines innovation as a new product or service, the method of their production, novelties invarious fields - organizational, research, financial and others. Innovation is understood as anyimprovement that creates the conditions for cost savings or those savings.
Gromeko V.I.	Innovation is the process by which a scientific idea or invention is brought to the stage of practical application that yields economic benefits.
Nikson F.	Innovation is defined as a set of various measures (technical, production, commercial) that lead to the emergence of new or improved industrial processes and equipment on the market.
Santo B.	He defines innovation as a socio-economic process and explains that inventions lead to the creation of improved products and technologies through the practical application of ideas. In some cases (if the innovation is focused on profit, economic efficiency), its entry into the market can bring additional income.
Schumpeter J.	He defines innovation as a new scientific-organizational combination of factors of production based on entrepreneurial ability.
Морозов Ю.П.	It focuses more on economic efficiency and defines innovation as the effective application of innovations in the form of new technologies, products, socio-economic, technological and organizational decisions.
Zavlin P.N, Kazantsov A.K, Mindeli L.E.	The use of the results of intellectual, primarily scientific and technical activities aimed at improving the production process and / or its results is considered an innovation.
Allen J. A.	He sees innovation as the introduction and mass consumption of new products, services, processes, or behavioral patterns.
Pavitt K.,Walker B.	Innovation is a set of actions (technical, industrial and commercial actions) aimed at launching a new or improved product or technological process.
Tviss B.	It focuses more on economic aspects and considers inventions or new ideas to be a process that has economic meaning as innovation.
I. Abdurahmonov	In Uzbekistan, many potential scientists and researchers work in various research centers, institutes and universities. "They don't have knowledge, they have it," he said. So, first, money was given, and then it became knowledge. But in this state of knowledge, if we turn knowledge into money, that is, knowledge-based economy, it will be an innovation.

The reason for the different interpretations of the category "innovation" is the multifaceted nature of innovation phenomena. In a broad sense, the concept of "innovation" reflects the result of radical modernization of the technological basis of production and, due to its novelty, is characterized, firstly, by a high degree of uncertainty of a particular economic entity, and secondly by its long-term efficiency. It follows that innovation combines originality and permanence.

The economic categories of “innovation” and “innovation process” are close to each other, but not the same. The innovation process is a set of successive stages such as the creation, assimilation and dissemination of innovations, i.e. a necessary component of a reproductive innovation system.

In the modern economy, innovations are not only a factor of economic growth, development, structural growth, but they cover all sectors, sectors of the economy and social life in general. According to Joseph Schumpeter’s innovation theory, innovation is a factor that alters the macroeconomic production function, including new product development, technological advancement, and improvement of production methods. In addition, Schumpeter also viewed changes in consumer choice as a factor in changes in production functions, i.e., the power of influence by demand shifted to the supply side.

In the absence of change, the economic system achieves a stable balance, which slows down the development of key systems of the national economy in conditions where the influence of external factors is low. According to J. Schumpeter's theory, because the main subject is an entrepreneur, it is he who is engaged in the production of innovations to ensure an increase in income. Therefore, the high income achieved as a result of innovative entrepreneurial activity is based on innovation.

For an entrepreneur who produces innovations, the only way to get a high level of profit (according to K. Marx) is to introduce innovations on a regular basis. This is because when innovations spread in the economy, other economic entities imitate the innovator, as a result of which its economic benefits become the benefits of the industry. This determines the social significance of the entrepreneur in society in the theory of J. Schumpeter: the entrepreneur is the driving force of development. The main result of innovation is profit, which encourages the innovator to constantly create innovations that will lead the society to sustainable development.

As Schumpeter points out, "with the appearance of a new product, the entrepreneur gets rid of competitors and sets prices in accordance with the basic principles of monopoly prices, which indicates the existence of a monopoly element of profit in a capitalist economy." Thus, according to Schumpeter, a mechanism is created to benefit from innovation.

In Schumpeter’s theory of innovation, it has been repeatedly emphasized that there is a correlation between uncertainty and innovation. At the same time, innovations are activated under the influence of a number of external factors (new laws, globalization, etc.), on the basis of which innovations can be described as changes in production or validity functions. An innovator-entrepreneur introduces uncertainty into the production and economic process.

Clearly, the innovation decision-making process is characterized by a high degree of uncertainty and incompleteness of information, but an enterprise’s performance without innovation is also associated with uncertainty about how the market economy will develop in the future. According to F. Knight, the essence of entrepreneurship involves making decisions in conditions of uncertainty and taking responsibility for them.

The entrepreneur in J. Schumpeter introduces innovations that cause uncertainty and thus serves as a major source of uncertainty. Knight, on the other hand, points out that entrepreneurship is primarily about people who can innovate. According to Schumpeter, changes and innovations later become commonplace, and technological advances become the work of highly qualified professionals, forcing them to work in a pre-planned manner [8].

The classification of innovations into specific groups according to certain criteria is given in Table 2 [9].

Table 2 Classifications of innovations

Measurement	Type of innovation
By distribution:	- unique; - scattered.
By role in the production cycle;	- raw materials; - productive; -secured.
In connection with other innovations:	- disclosure; - denial; - alternative; - repeatitive.
In terms of market share:	- local; - systematic.
In terms of potential and level of novelty:	- radical; - enhancer; - mixed.
In the field of activity:	- technological; - economical; - marketing; - social; - ecological.

In addition to the data presented in Table 2, it should be noted that intellectual property, which is defined as the product of intellectual labor and the sum of the rights to implement it in practice, is an important result of innovative activity.

There are many different types of intellectual property that make up a portion of an enterprise's capital, including acquired rights, franchising, and goodwill (which can be described as an enterprise's business reputation).

Intellectual property is an intangible asset. The result of intellectual property is the intellectual product of the intellectual and creative activity of an individual or research group. This product can take many forms: the results of scientific inventions, research and development, as well as consulting services in various fields, ie objects intellectual property (OIP).

Objects of intellectual property are divided into patent rights (objects of industrial property) and objects of copyright. Objects of industrial property include inventions, industrial designs, as well as trademarks, business names, and so on.

In many cases, innovations are created as a result of the introduction of various inventions into the real sector of the economy, which can include world-class innovations, new devices, substances, technologies, natural cells (plants and animals) with high technological level and industrial consumption [10] (Figure 3) .

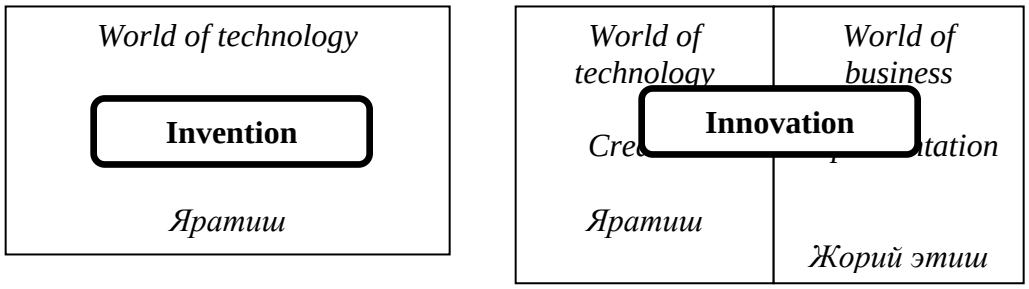

Figure 3. Comparative analysis of the concepts of "invention" and "innovation"

When analyzing Figure 3, it should be noted that **all copyrighted items can be divided into two groups:**

- Technical group, which includes monographs, dissertations, research reports, articles at scientific conferences, technical documents, computer programs and databases, integrated circuits, etc.;
- Humanitarian group, which includes various works of art.
- An important part of intellectual property is the normative legal acts that give the right to use the objects of intellectual property.
- It should be noted that patents, certificates of property, as well as license agreements apply to the use of industrial property. At the same time, the use of copyrighted objects is formalized by copyright agreements and purchase agreements.
- Innovation can be both a product and a technological process (in whole or in part). Innovations by level of novelty are classified into the following types:
    - basic innovations, that are aimed at the development of new generation machines and materials and are designed to master radically new technologies in conjunction with existing innovative technologies;
    - improving innovations, the ones that improve the quality or value characteristics of an existing product, as well as innovations related to the application of significantly improved methods of production. These innovations are aimed at popularizing and improving technologies;
    - Counterfeit (fake) innovations, which include small technical and technological and external changes in products and services.

In the transition from innovation to direct innovation activity, it is necessary to list its main types:

a) preparation and organization of production, which includes the acquisition of technologies and equipment, as well as changes in production methods, standards and processes of quality control;

b) pre-production developments, (improvement of products, equipment and technologies, as well as retraining of personnel for their proper use);

c) marketing of new products - the implementation of the main activities related to the introduction of new products to the market (including market research, adaptation, advertising, etc.);

d) external acquisition of intangible technology in various forms (for example: patents, licenses, know-how, trademarks, as well as models and services in the technological sense);

e) acquisition of material technology - works involving machinery and equipment and associated with the implementation of product or technological changes;

f) production design - preparation of plans and drawings to determine the technical processes and characteristics.

Innovative activity is based on the below:

1) the principle of superiority of innovations over traditional, simple production;

2) the principle of economy of innovative production (it is assumed to achieve commercial efficiency);

3) the principle of flexibility (an independent innovation structure is created for each new idea, but it in turn may not be absolutely suitable for solving other problems);

4) the complex principle (for example, a single vivid discovery can lead to the emergence of several small innovations related to it).

Knowledge of the rules of management of innovative activities and the technology of its application will help to formulate the appropriate strategy and tactics.

The effectiveness of any innovative activity requires the development of the organization in this direction. The content of innovation development management can be expressed by the following rules:

- It is necessary to anticipate and develop innovations;
- It is necessary to accelerate and introduce novelties;
- It is necessary to prepare for innovations;
- Innovative processes can be suspended and smoothed to a certain extent;
- Provide a certain level of management of innovative activities of the organization.

The general features of the principles of management of innovative development of the enterprise can be distinguished:

- The generality of the principles that affect the development process of any organization;
- Changes in principles that are constantly evolving as management objects evolve.

The laws of development of the enterprise are determined by the principles of management and create motivation for the movement of its members, and they involve the characteristics of innovative development of the enterprise.

The principles of management of innovative development of the enterprise are the rules that determine the content of innovative activity.

Appropriate use of principles creates the necessary basis for performance and reduces the likelihood of negative results from innovation.

The principles of innovation strategy are the basis of innovative activity of the enterprise and determine the directions of its development. The following principles of the enterprise innovation strategy can be listed:

- the principle of scientific and analytical prediction in the development of strategy;

- The principle of the supremacy of the human factor;
- The principle of compatibility of enterprise strategy and available resources;
- The principle of analysis of external and internal factors affecting the development of the enterprise;
- The principle of organizing a strategic management system in the enterprise;
- The principle of compatibility of enterprise strategy and general management tactics;
- The principle of expediency of the company's strategy in terms of existing technologies.

The above principles tend to be general requirements, rules for managing the innovation strategy of the organization, the most important of which we can group into three groups:

1) The principles of organization of the management system of innovative development of the enterprise (the principle of predicting, compliance, progress, consistency);

2) Principles that guide the further development of the innovative management system in the enterprise (flexibility, connectivity, continuity, etc.);

3) The principles that determine the nature of the relationship with the subjects of innovative practice in the organization, including the principles of synergetism, participatory and anthropological realism.

According to the principle of anthropological realism, it is emphasized that an individual can unconsciously and consciously hinder or facilitate innovation. Scientifically proven and hastily prepared innovations must truly be compatible to the competencies, needs and capabilities of specific subjects of scientific and educational activity.

Thus, along with the innovative development of the organization, there is a process of improving the innovative potential of employees, which requires continuous training and professional development of innovators.

Hardy-Weinberg’s law of genetic stability of populations can also be applied to human creative abilities. The number of talented people per million population is relatively unchanged. The management of the development of the innovative potential of the enterprise should be organized in such a way that it is necessary to constantly look for talented people inside and outside the organization, as well as to pay sufficient attention to their personal and professional development.

According to the principle of participatory, each subject of innovative activity has a deep understanding of this activity and receives objective information, because he is involved in the planning of this process. Eventually, the results of innovative activities become very personal, and new incentives emerge for people to create innovations again later. The professional development of the specialist takes place, he acquires new knowledge and expands his personal capabilities.

For the successful implementation of the participatory principle, it is necessary to take into account Florian Znanetsky's "human coefficient", which takes into account the views of those involved in the socio-pedagogical situation and takes into account the important aspect of this situation for them. According to F. Znanetsky, everyone is often faced with an alternative choice: either the established rules divide the person, or the person destroys them.

According to the principle of synergetism, the more the impact of management on the development of the enterprise corresponds to the internal directions of enterprise self-development, the more effective it is, according to the law of self-preservation, employees are not opposed to innovation and strive for synergy. The organization of innovative development of the enterprise should be based on knowledge of the possible and non-possible aspects of the analyzed environment, as it is not expedient to forcefully determine the directions of innovative development of the enterprise from the outside. Development cannot be managed externally for long periods of time because external influences cannot replace or cancel internal processes in the development of the enterprise.

It is important to ensure freedom of movement to implement different models of development. It should be taken into an account that the expected changes in management (their speed, direction, nature) are related to the internal components of the enterprise system, its innovative potential, the participation of all parts in the changes.

Enterprises that choose the path of innovative development will become competitive and become leading companies in the market. Competition based on high-quality and timely innovations is an important condition for the sustainability of enterprises and will be a decisive factor in the development and commercialization of new scientific results.

Thus, on the one hand, in a competitive environment, enterprises are forced to provide a high level of scientific results, adding to this the quality of educational services, advertising and information activities, and on the other hand, it should be noted that important scientific and practical innovations are not accepted if they don't meet the interests of the market.

Competition not only contributes, but also forces companies to participate in the creation and development of innovation markets in the following areas:

- Creation and improvement of the scientific and experimental base for carrying out research work;
- Organization of joint research with other organizations;
- Fulfillment of orders for various research and development work for education and other institutions.

However, practice shows that most large enterprises are not innovative enterprises. The external environment changes very quickly, so innovations need to be implemented in a timely manner. This problem is not only closely related to competition, but also directly related to time, because a significant reduction in the time spent on the production of a new product is an objective necessity for the effective operation of the organization. The above descriptions are the means of success of the enterprise, which are interconnected and enhance the effectiveness of the organization from innovative activities.

Today, the success of enterprises depends in many ways on various factors, including global competition, rapid technological development and innovative environment. In managing them competently, management must take these processes into account in its development.

The uniqueness of the enterprise is determined by the innovative component in its development, which includes the position of the enterprise in the market, the quality of scientific and educational activities, the level of intellectual potential, development strategies and innovative culture.

The main features of the innovative activity of the organization are its focus on continuous development, making prognosis and the quality of scientific and educational activities.

Enterprises need to provide high-quality training of their specialists to ensure and increase competitiveness, which requires great effort and resources in the areas of production and distribution of products or services.

Innovative development management of the enterprise should be organized on the basis of the capabilities of this environment. That is, it is not expedient to identify and manage the innovative development of the organization from the outside, because such management cannot replace the natural development processes within the enterprise. It is also necessary to ensure a certain degree of freedom of movement in order to implement alternative development options.

Results and well-known suggestions that support employees when planning for effective management of innovation in the enterprise, it is better to involve production in innovative activities, simply to replace other participants with a plaque and not to engage.

Thus, we can conclude that there are no universal management principles that apply to all innovations. The indicators of each situation are different and the result is directly related to them, which is important not only for the impact of the external environment, but also for the stages of the innovation process, such as innovation itself, collecting information about innovations, deciding on their implementation. The same principles can both contribute to and hinder the innovation process at different stages. Based on these characteristics, it is possible to determine how important this quality step is in the development of the enterprise.

If a certain stage of the innovation process requires significant changes in the structural indicators of the enterprise, it is primarily overcome by the behavior of employees, removing barriers between them and innovation, training them and teaching them to apply innovations.

In this process, the organization is a social system that does not introduce innovations under the influence of external forces or as a result of a sudden increase in the propensity of employees to innovate, but consciously analyzes the problems in the enterprise, as well as organizes innovations to solve these problems.

Most models of innovation and related change management are based on K. Levin's hypothesis that there is a dynamic equilibrium of two groups of forces in the enterprise, which are divided into "for" and "against" directions. Changes in the enterprise should be carried out in three stages: "melt", "move" and "freeze", while maintaining the balance of forces.

In the first stage, the need for change is met by creating an innovative environment that evokes a sense of dissatisfaction with the current situation. In the “mobilization” phase (or the process of making changes), the information needed to implement innovations is provided, and new forms and patterns of behavior are explored. In the “freezing” phase, there is a stabilization of change, new technologies, new forms of behavior, patterns, and others applied.

Thus, innovative activity can be described as a set of technological, scientific, organizational and financial measures aimed at the commercialization of accumulated technologies, knowledge and equipment. Results of innovative activity, innovations are new or improved goods (services), as well as goods or services of new quality.

Innovative activity can also be described as the creation, development, dissemination and use of innovations, the development of research results to expand or update the range and improve the quality of

products, goods, services, improve their technology, effective sales in domestic and foreign markets. Described as an output, application, and commercialization activity, all of these require a set of measures and ultimately lead to innovation. leads. Figure 1.4 shows the specifics of innovation activity [11].

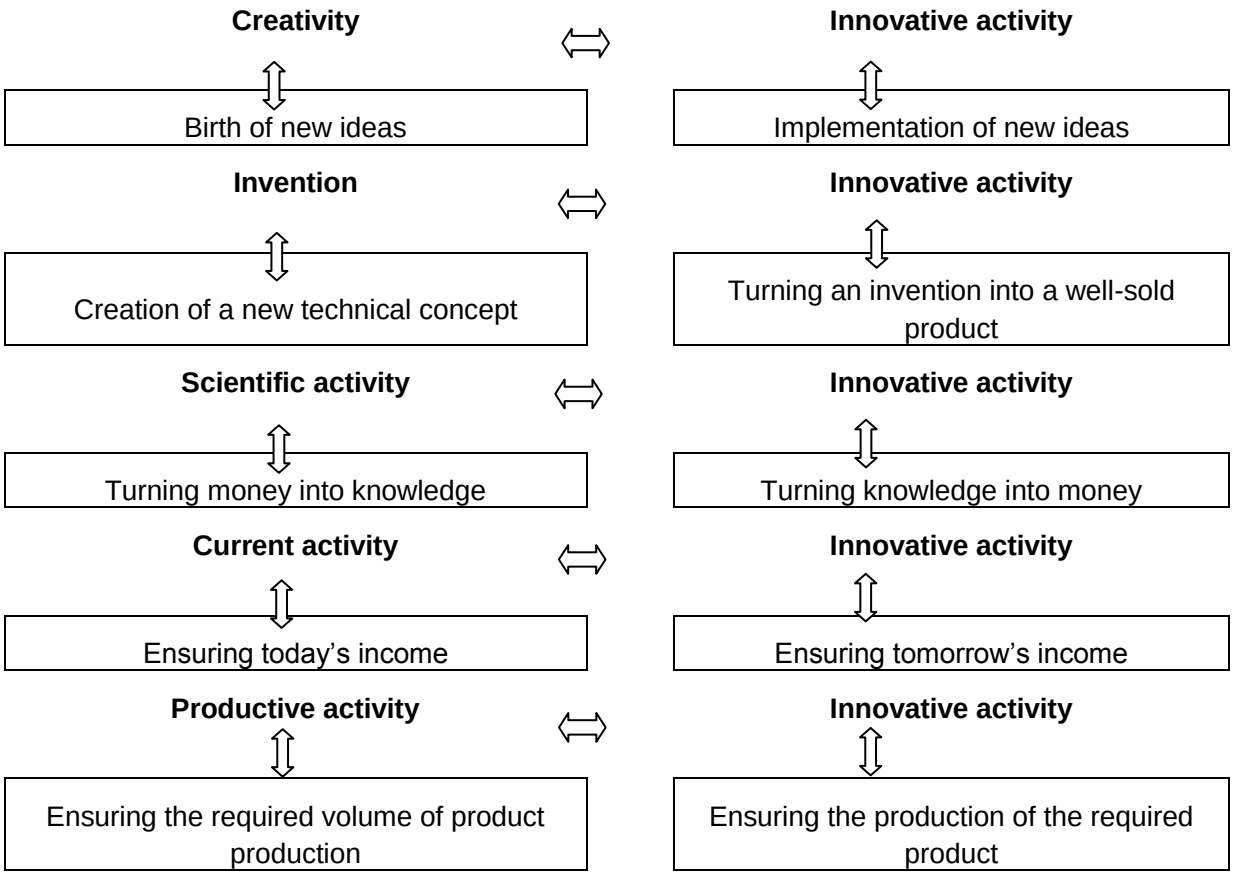

Figure 4. Peculiarities of innovative activity

Despite the fact that modern local entrepreneurs are innovators, technologies that have proven their effectiveness abroad are being introduced into production. The reason for this can be explained by the fact that today our country is not a leader in terms of technology. In this regard, the imitation development strategy is very effective for us. However, institutional changes are needed to encourage Uzbekistan to embark on its path of innovative development.

Often enterprises blame the state for the lack of budget funds for their research activities, identifying this factor as a major obstacle to their innovative activity.

However, according to the survey, only half of the organizations with free funds have spent them on introducing innovations. Thus, the solution of the existing institutional problem will not significantly increase the innovation activity of Uzbek enterprises. Moreover, in a planned economy, for example, government support for organizations has not helped increase the volume of innovation.

It should be noted that innovations are carried out by more competitive foreign companies, so measures to create a competitive environment in the markets, reduce restrictions on access to credit for Uzbek enterprises and the development of the financial system as a whole are more effective than direct state funding of innovative projects. Such a strategy is a necessary condition for the transition of the national economy from an imitation model to a path of innovative development.

The development of innovations is done by scientists and engineers, but it is the innovation managers who organize the process, seek funding sources, introduce developments, and place the finished product on the market. Since they are almost non-existent in Uzbekistan, organizations implementing innovation-imitation development strategies send their managers abroad for training or internship. In our opinion, in order to solve this problem, it is necessary to have a targeted state policy in the field of increasing the innovative level of the national economy.

Transformation of Uzbek business schools into Western-style educational institutions will increase the innovative activity of national organizations, which in turn will lead to sustainable economic growth, as innovation management will become a system of increasing the competitiveness of the Uzbek economy. field of knowledge is formed.

Investing in innovation development is an integral part of the innovation process. The main thing here is to introduce innovation, to turn it into a form of innovation or to achieve a positive result. As a result of the economic development of society, new, more efficient factors of production, investments and advanced innovations appear.

Innovation-based development should take place not only in the economy but also in science-intensive sectors, although they contribute to improving the quality of production facilities and saving resources at the stages of the innovation life cycle, but also in education, which provides intellectual transformation of socio-economic systems.

Thus, the description of the category of "innovation" indicates that its main element is the end result of innovative activity - a new product, as well as a newly created or improved technical and technological process.

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THE ROLE OF LIVESTOCK DEVELOPMENT IN IMPROVING HOUSEHOLD WELFARE AND REDUCING UNEMPLOYMENT

Narmanov Ulugbek Abdugapparovich[1]

ABSTRACT

This article analyzes the factors affecting the increase in household incomes and welfare through the livestock industry, as well as substantiated proposals and recommendations for the development of livestock and reduce unemployment in a market economy.

Keywords: *Agriculture, Employment, Domestic Consumer Market, Livestock Products, Income.*

Introduction

Developing countries are characterized by the major portion of population living in the rural areas, engaged in agricultural activities. Agriculture sector has been defining the livings of the poor people, givingthem employment opportunities in the past few decades.[2]

A disproportionate portion of the agricultural production is left in the hands of these smallholder farmers with average holding of about 1.0-3.0 hectares [CTA, 2000]. With little or no access to modern improved technologies their general situation does guarantee them reasonable investments in capital, inputs and labour.[3]

Livestock is one of the leading agricultural sectors in Uzbekistan, which accounts for about 45 percent of agricultural production in the country. The main feature of the network is that most livestock products are produced in personal subsidiary and peasant farms. The development of livestock breeding in particular has shown that the livestock industry has a serious positive effect on the well-being of rural families.

Materials and method

Livestock is a very important sector for Uzbekistan. Agriculture plays an important role in economic development and increasing the welfare of the population.

Key indicators of agriculture

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Agricultural sown area, thousand hectares	3609,7	3608,6	3708,4	3601,6	3628,1	3658,6	3678,2	3694,2	3706,7	3474,5	3396,0
The growth rate of agricultural production, as a percentage of the previous year	104,5	105,8	106,3	106,2	107,2	106,6	106,3	106,1	106,3	101,0	100,2
including:											
agriculture	103,3	104,1	105,9	104,9	107,1	106,1	105,9	105,5	105,7	98,2	95,8
livestock	105,8	108,1	106,9	108,0	107,4	107,3	106,7	106,9	107,0	104,1	105,7

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[3] Prof Ismail B Baba, DrRajeani MD Zain, Hussayn U Idris, Akoge Naseer Sanni. The Role of Women in Household Decision-Making and their contribution to Agriculture and Rural Development in Nigeria.

[4]According to the table, livestock production growth rates in 2008 decreased by 1% compared to 2018. This has not been a steady growth rate for livestock for 10 years.

In 2019, under the “every family entrepreneur” program, $ 175 million was allocated for livestock development, $ 36 million in soft loans for poultry farming. As a result, the number of cattle increased by 550 thousand heads, poultry by 6 million 130 thousand.

Livestock efficiency is also more important for family income. While the average representatives of low- and high-income groups differ from pets in terms of expressing the quality of pets, the difference in the number of pets that care for them is insignificant. For example, in families with a high per capita income, the average per capita livestock of cattle is 1.4 times higher than in families with a low income, while the prices for these goods are 2 times higher than for cattle products 2.8 times. In high-income families, milk from one cow is 1.2 times more. In other words, the welfare of peasant families depends not only on the size of the land used, but also on the quality and livestock content to a certain extent.

Livestock farming performs its specific task of collecting and reproducing funds in the family on peasant farms. In Uzbekistan, the population still does not use services such as spending accumulated funds on profitable bank deposits and securities. This is especially true for rural residents who do not have wide access to financial infrastructure. The acquisition and care of pets for them is one of the ways to spend and increase their funds.

The existing opportunities for the development and strengthening of private subsidiary farms, peasant and private farms, primarily cattle breeding and population growth, as well as raising the incomes of the rural population, are not fully utilized. In particular, livestock should not be grazing. It takes a lot of hard work and time. Income from the sale of livestock products accounts for the majority of family income in rural areas.

To achieve productivity in animal husbandry, first of all, it is necessary to pay special attention to breeding issues.An urgent problem in the livestock industry is the issue of uninterrupted power supply. To date, the need for livestock feed is only 30-35 percent satisfied.

The analysis shows that at present the main part of livestock products (92-95 percent) is grown in peasant farms, the breeding and hereditary properties of which do not allow a sharp increase in the production of milk and meat products in the republic. This leads to the need for work to increase the pedigree of cattle, taken care of at the disposal of peasant farms. For this, it is necessary to improve the livestock breed and create a system of farms that will grow pedigree goods for the population. At the same time, the development of the service sector of veterinary agro service in rural areas is of great importance.

Another important area of livestock commercialization is the development of a livestock sales system and the solution of accumulated problems. The absence of such a network and its underdevelopment leads to the fact that all efforts to commercialize the sphere are wasted. Because for the product it is necessary to find a buyer, while the producer of the product must cover the costs and make a profit.Expanding the practice of processing livestock products by the farms themselves will increase the range of products, and thus increase the commercialization and sale of farms.

[4] State Committee of the Republic of Uzbekistan on Statistics

Information on livestock in the Republic of Uzbekistan 2018 year

Territory	Number of cattle	including cows	Number of sheep and goats	Number of horses	Number of poultry of all kinds
The Republic of Uzbekistan	12722567	4520530	21280850	238462	81513035
The Republic of Karakalpakstan	1094187	315346	1087106	23394	4165570
Andijan region	1042275	356903	1425900	6524	7180800
Bukhara region	1212472	394695	2121180	5207	4440945
Jizzakh region	884712	249357	2057699	24657	3338293
The Kashkadarya region	1565681	526147	4543156	31436	6138539
Navoi region	484036	199549	2060239	17878	2595191
Namangan region	702344	224247	759514	6447	5333814
Samarkand region	1554059	682841	2369109	25557	13045428
Surkhandarya region	956705	332419	2263559	13594	4554402
Syrdarya region	432693	152049	333171	15437	1921319
Tashkent region	882193	387507	993359	53862	16017287
Fergana region	1001574	355540	842924	8895	7479742
Khorezm region	909636	343930	423934	5574	5301705
Tashkent					

[5]The data in the table indicate that livestock production cannot currently provide for the domestic market and that problems should be addressed.

The decree "on measures to further develop and support the livestock industry", aimed at addressing rural employment issues, was announced on March 18, 2019. This decision is one of the practical measures aimed at further clarifying previous work and deepening reforms in rural areas.

Results and discussion

According to the analysis, 94% of cattle, 84% of sheep and goats, and 58% of poultry are raised in households. Therefore, the establishment of continuous production of quality food products for livestock, poultry and fish is one of the urgent issues. It is necessary to reduce imports and develop high-capacity feed production locally. In poultry farming, 85% of the feed is imported, and still a large amount of soybeans and sunflower seeds, corn is imported.

Livestock productivity is also of greater importance for family income. Although the difference in the number of livestock cared for by the average members of low- and high-income groups is small, the difference in the quality of livestock is significant. For example, the average number of cattle in high-income families is 1.4 times higher than the number of herds in low-income families, and the price of these goods is 2 times higher than the price of cattle 2.8 times. In high-income families, the milk yield per cow is 1.2 times higher. In other words, the welfare of peasant families depends not on the size of the plot of land used, but on the extent to which it is used. It also depends on the quality of the livestock and their care.

[5] State Committee of the Republic of Uzbekistan on Statistics

The accelerated development of the livestock industry at all times plays an important role in providing the population with affordable and high-quality meat and other food products, especially in increasing employment and increasing incomes of citizens living in rural areas.

Practical assistance will be provided to citizens in the provision of soft loans under the “Every Family is an Entrepreneur” program for the introduction of drip and sprinkler irrigation technology and the purchase of pedigree cattle on land allocated in accordance with the decree.

Conclusion

Livestock plays a unique role in farming, such as saving money in the family and increasing it. In Uzbekistan, the population does not currently have access to such services as useful bank deposits and securities. This is especially true for the rural population, who do not have extensive access to financial infrastructure. spend their own money and buy and care for livestock for them is one of the methods of reproduction.

The decree also provides for the provision of permanent or long-term lease of land plots of dumb and pastures in the reserve of district with an area of 0.5 hectares for the cultivation of fodder crops for citizens wishing to engage in livestock farming, subject to turning them into a real source of income within 2 years.

Today, as an independent economic entity, it has special agricultural knowledge and work experience, that is, knowledge and farming skills are integral parts of the quality of human capital in the livestock industry. This means that the agricultural sector will also contribute to the development of animal husbandry and increase the efficiency of work in such areas as management, capital and personnel management, marketing, business law, acquiring new skills.

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IMPROVING THE MANAGEMENT OF INVENTORIES IN THE COMMODITY MARKET

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ABSTRACT

Ensuring the continuity of production of finished products is associated with the stock of inventory in the commodity market. Attention is paid to issues related to the creation of inventories, determining the volume of reserves, replenishment of reserves. This article also highlights the specifics of the logistics approach in inventory management.

Keywords:*inventory, raw materials, reserves, product supply chains, logistics concepts, guaranteed (reserve) inventory, warehousing, fixed volume (quantity) method of inventory management, fixed period (time) method of inventory management.*

INTRODUCTION

At the current stage of reforms in Uzbekistan, great attention is paid to increasing the production of industrial products, processed and consumer goods. Production continuity is directly related to the supply of raw materials. In this regard, the address of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis on January 24, 2020 also identified the need to provide the industry with uninterrupted raw materials and modern infrastructure as one of the priorities [1]. Their reserves play an important role in providing manufacturing enterprises with commodity resources, ie raw materials, semi-finished products, spare parts, equipment.

The continuous operation of commodity market entities is associated with the stock of inventory. Inventories are created so that production does not stop for a certain period of time, ie to eliminate the deficit. In the system of movement of goods and materials, the relationship between the supplier and the producer is based on the balance of supply and demand. The fact that the period of preparation and cultivation of commodity production and raw materials is not the same, and the ratio of supply and demand is not always proportional, necessitates the creation of inventories.

Therefore, the creation of stocks of commodity and material resources in the commodity market, the management of organizational and technological, socio-economic processes associated with them is an urgent issue.

Analysis of the relevant literature

The topic, i.e. resource management, has been extensively studied in scientific research, mainly in logistics. It has also been researched in research related to management and marketing. Since logistics is a science that deals mainly with reserve policy, the specialists who have conducted research in this area deserve special scientific research on product supply system management, inventory management. Including Bowersox D.J., Closs D.D., Hedfeich O.K. In his extensive research on logistics management, he

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focused on the problems of inventory management, the organization and management of stocks in each link of the logistics chain [2].

S.James, F.Donald, D.Woods studied the role of stocks in product supply chains, including the supply of primary raw materials to manufacturing enterprises, the principles of stockpiling, adaptation to supply chains in stock management and integration and coordination of logistics activities in key solutions [3].

The scientific research of CIS scientists on resource management is also commendable. S.V.Tokmanev studied the methodology of resource management in wholesale and brokerage activities in the development of logistics infrastructure [11]. O.Yu. Grisheva's research studied the logistical coordination of the integration of material flows in the sale of industrial products [9].

Inventory management has also been studied in the work of scientists who have conducted research on marketing. The formation of trade channels of marketing research, the regulation of stocks as a link in the movement of commodity and material resources are studied. The term marketing-logistics is also widely used in the research of Philip Kotler, Kevin Lane Keller [7]. Marketing and logistics have also been studied in the work of Martin Christopher and Helen Peck [6].

Based on the methodological basis of the above research, the issue of inventory management in the commodity market is studied.

RESEARCH METHODOLOGY

In writing the article, an attempt was made to explain the problem using methods such as analysis, synthesis, and logic. The information required for the study was obtained mainly from foreign literature, statistical and regulatory databases.

ANALYSIS AND RESULTS

The policy of allocation of inventory, which is an important element of the marketing activities of suppliers, consists mainly in the formation of all types and kinds of stocks required for the activities of suppliers, determining their optimal quantities and effective management of stocks. As part of the distribution policy, raw material suppliers carry out the following activities related to the formation of reserves:

- Identification of inventory resources and their range;
- Determining the optimal amount of inventory;
- Control over the rate of inventory;
- Order management.

Inventories consist of stocks in the production shops and warehouses of manufacturing enterprises and stocks of suppliers of raw materials. Each link or organizational structure in the movement of producers and inventories acts as both a supplier and a consumer of inventories.

Inventory management is a problem that is common to all businesses, including suppliers and manufacturers. Production, delivery to the channels of movement of inventories, wholesale activities require the creation, storage, control and management of inventories. There are several reasons for the need to create inventory and optimal management of inventories:

1) Ensuring the continuity of the production process. The cessation of the technological process due to the lack of sufficient inventory resources can lead to significant losses to the business entity.

2) The seasonality of the production of raw materials, which mainly applies to the activities of enterprises engaged in the processing of agricultural products.

3) The seasonal nature of changes in the price of raw materials used by producers. That is, creating sufficient stocks when prices are low and using them in production when prices are high.

4) Positive response to changes in market conditions. Being the main source of market saturation in situations where supply is low and demand is high;

5) Channels of movement of commodity and material resources, ensuring the continuity of intermediaries. Being able to continue trading at the expense of inventories when production is declining or there are interruptions in raw materials.

In general, at all stages of the movement of inventory, inventories are created in suppliers, B2B wholesalers and manufacturing companies. That is, the stocks of goods in the warehouse of the supplier and the manufacturer, the goods on the road loaded on the transport, the stocks of goods in the wholesale enterprise. In the system of movement of inventories, the management of inventories is carried out through the study of the producer's production capacity and inventories, the rate of turnover of supply channels and inventories. The central role in the management of inventories is played by the channels of movement of inventories. The reason is that the channels of movement of inventory carry out optimal management of inventory based on the study of consumer demand and the study of the capabilities of the manufacturer. The cornerstone of this process is a simple model of inventory management. A simple model of inventory management can be explained using Figure 1 below.

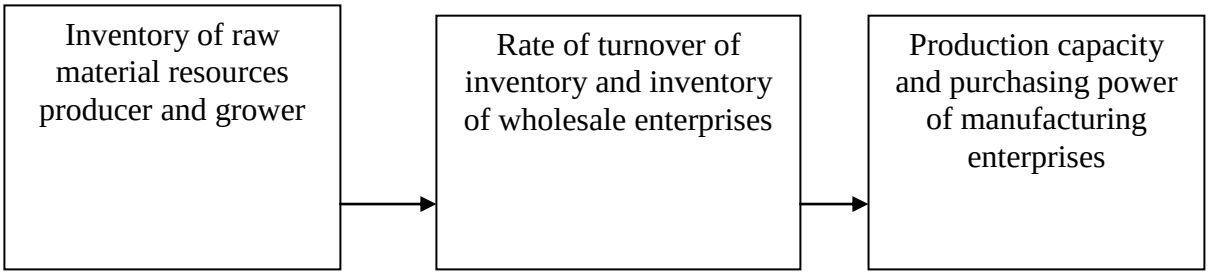

Figure 1. A simple model of inventory management[1].

As shown in the diagram, the production capacity and purchasing power of manufacturing enterprises affect the turnover rate and inventory of wholesale and medium-sized enterprises, inventories of suppliers of raw materials and producers.

Figure 2 below shows a slightly expanded form of a simple model of inventory management.

[1]Author's development.

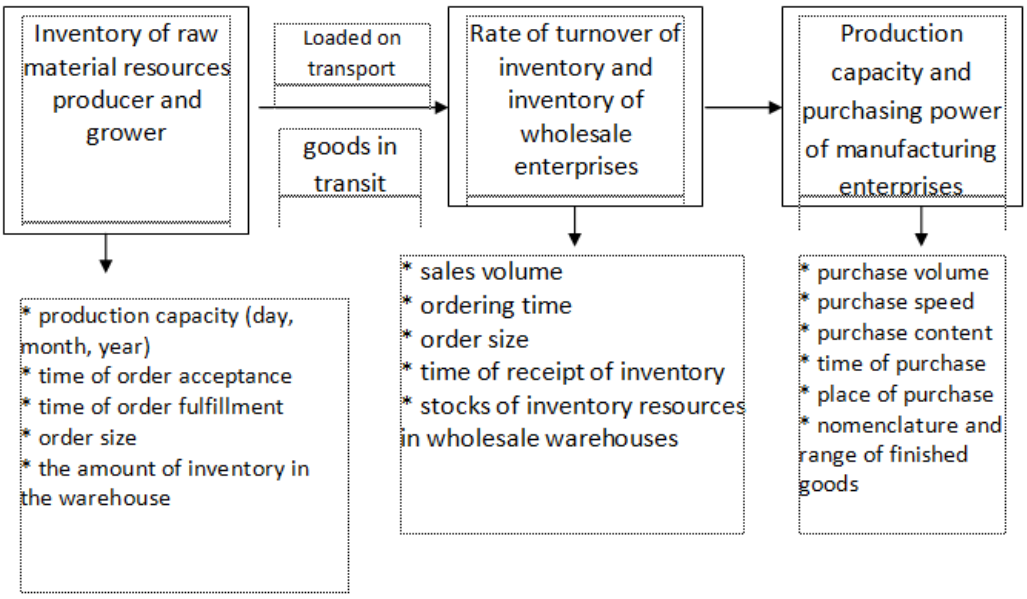

Figure 2. An extended model of inventory management[1].

Inventories are a variable quantity that increases as a result of production in manufacturing enterprises and decreases as a result of processing orders. Excess or shortage of inventories is detrimental to any manufacturing enterprise and the channels of movement of inventories. Commodity resource movement channels face two questions in solving this problem: when to order and how much to order. Finding the right and reasonable answers to these questions will create the basis for the smooth functioning of the channels of brand movement.

In general, there are scientifically based logistics methods in the world practice of optimal management of inventories in commodity markets. These methods ensure that the dynamics of changes in the dynamics of changes in inventories of resources are maintained within the limits that should be within the economically justified norm. These are the following two methods:

1. Fixed volume (quantity) method of inventory management;

2. Fixed period (time) method of inventory management.

When using the fixed volume (quantity) method of inventory management, the order quantity is a constant quantity, and each subsequent order is issued with a decrease in the amount of inventory in the warehouse, close to and equal to the so-called order point. This process is illustrated in Figure 3.

[1]Author's development.

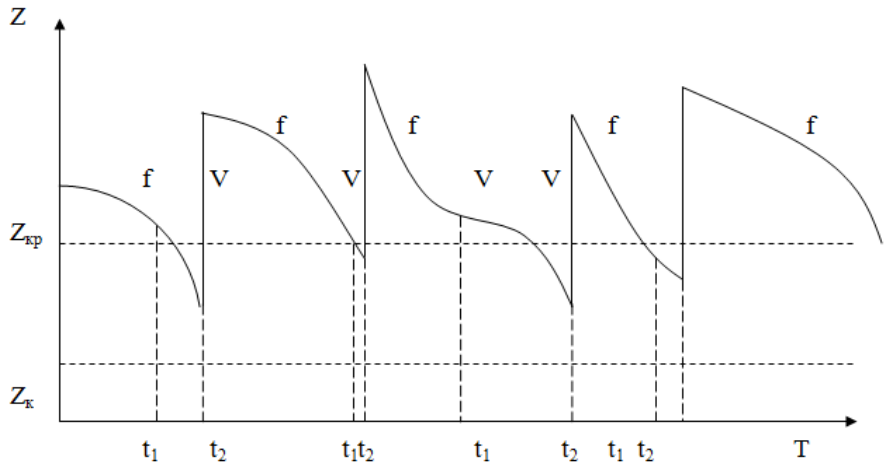

Figure 3. Graphical representation of the fixed volume method of inventory management.

Definitions used:

Z - reserve amount, in natural terms;

T - time,

Zkr is the critical point or ordering time;

Zk - guaranteed reserve amount;

f is the function of the change intensity of the reserve;

t1 - ordering time;

t2 - time of order execution;

V - order size.

The fixed volume (quantity) method of inventory management is based on finding the order volume that minimizes the total cost of inventories.

The use of this method in the organization of the movement of commodity resources in the commodity market, ensuring the continuity of the circulation of commodity resources in the channels of commodity movement, its efficiency (stability) depends on maintaining a certain amount of inventories. Excessive, as well as insufficient stocks of inventories undermine the stability of the turnover of raw materials in the channels of movement of inventories. To replenish the reduced part of inventories, it is necessary to find a size (volume) of the order in which the total cost of creating and maintaining inventories is minimal. Expenditures on inventories consist of the following three components:

1. The order given for replenishment of inventories, ie the amount of purchases of raw materials - TN, where:

T - amount of raw material resources, pcs.

N - unit cost of raw materials, soums.

2. Order Costs -, - indicates the number of orders, where:

V - unit order price, value;

T - annual demand for raw materials, pcs.

V - order size (volume) pcs.

3. Costs of storage of inventories -, where:

F - storage costs, as a percentage of the value of inventories.

The total cost of inventories consists of the sum of the three types of costs listed above, ie

$$J_x = TH + \frac{BT}{V} + \frac{FHV}{2} \qquad (1)$$

As noted in the statement:

J_x, T, H, B, F s constant quantities;

V is the variable to be determined.

The total cost (J_X) is required to be minimized, ie $J_X \to \min$.

(1) gives the optimal value of the order (V) volume, which minimizes the total cost of the differential on ***equation V, i.e.*** $d(J_x) = d(TH + \frac{BT}{V} + \frac{FH}{2}V)$, $d(J_x) = d(TH) + d\left(\frac{BT}{V}\right) + d\left(\frac{FH}{2}V\right)$, $0 = 0 - \frac{BT}{V^2} + \frac{FH}{2}$,

$\frac{BT}{V^2} = \frac{FH}{2}$, $V^2 = \frac{2BT}{FH}$, $V = \sqrt{\frac{2BT}{FH}}$ ***(2)***

2 - is called the formula for determining the optimal value of the order volume.

The amount of order volume calculated using this formula is constant, and each repeated order is issued when the level of inventories of available inventories decreases and reaches a certain critical point.

Other parameters of the model are defined as follows:

The amount of guaranteed (reserve) inventory$Z_к$by multiplying the number of possible delays in delivery of the order by the average daily decrease;

Marginal inventory, ie the critical point of ordering$Z_{кр}=Z_к\cdot(t_2 - t_1)$ (3)

The average level of inventory$Z_y=Z_к+V/2$ (4) determined by formulas.

In the fixed period (time) model of inventory management, the time interval between orders is fixed, fixed, which ensures that the level of inventories is uniform. In this case, the order size can be variable and the optimal size model is not used directly.

The number of orders in the period under consideration (D) is equal to the ratio of the demand for inventories in this period (T) to the optimal volume of orders (V), ie $Д = \frac{T}{V}$ or $V = \frac{T}{Д}$. *V*If we put the value of

in formula (2) in the constant volume model, $\frac{T}{Д} = \sqrt{\frac{2BT}{FH}}$ will be. From this formula $Д = \sqrt{\frac{TFH}{2B}}$ (5) is determined.

If we divide the number of working days (K) in the period under consideration by the number of orders (D), the optimal value of the time interval (I) (period) between orders is determined.

The application of the logistics method of optimizing the inventory in the commodity market is carried out in two stages.

In the first stage, the nomenclature and range of raw materials, basic and auxiliary materials, as well as semi-finished products, the inventory of which is optimized, will be determined.

In the second stage, the stocks are the parameters of the optimized finished product and the optimization models for each of its assortments. These parameters are:

1. Optimal value of order volume – V
2. The amount of guaranteed finished goods stocks – $Z_к$
3. Critical note of marginal reserve or order – $Z_{кр}$

All three parameters are defined in natural dimensions.

Maintaining the right amount of inventory in each enterprise is done through order management.

Order management is first and foremost about deciding what, how much and when to order and monitoring its execution.

CONCLUSIONS

Management of inventories in the commodity market is based on a logistical approach. If businesses operating in the commodity market know the parameters of optimal inventory management, support them, place orders and manage their execution, suppliers and manufacturing companies will always have a reserve of raw materials. The cost to them will always be minimal. To do this, the inventory manager compares the amount of marginal inventories by type of inventory with the balances of inventories in the reports of materially responsible persons. If the difference between them is close to or equal to zero, the ordered quantity is ordered. If the difference is small and less than zero, the execution of the given orders is controlled, measures are taken to speed up their execution. If the difference is small and it is equal to or greater than zero, orders can be executed on a schedule basis.

Our proposals and recommendations for improving the management of inventories in the commodity market are as follows:

- Inventory management in the digital economy to place orders, receive and process orders online, create digital platforms for warehouse operations;
- Establishment of central warehousing farms in the industrialized regions of Uzbekistan, Tashkent, Fergana, Samarkand, Navoi, Kashkadarya regions;

- Establishment of free trade zones in the Republics of Tashkent, Navoi and Karakalpakstan specializing in the sale of raw materials, mineral resources, spare parts and components for further development of trade in raw materials;
- Development of an online model of forecasting the volume of inventories in the organization of optimal management of the movement of inventory "meeting the needs of manufacturing enterprises in a timely manner, in the required volume and at the required level of quality";
- Establishment of clusters between producers and producers of raw materials in the commodity market and manufacturing enterprises and the creation of "Kanban" micrologistics systems for inventory management.

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FINANCIAL INCLUSION AND AWARENESS

Dr. Shuchita Singh[1], Sagar Saikat Chatterjee[2]

ABSTRACT

The Centre had last year launched three social security programmes – the Pradhan Mantri Suraksha Bima Yojana (PMSBY), the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and the Atal Pension Yojana (APY) – to bring the excluded under the fold of formal financial services. The process by which the low income and financially excluded communities get an access to the formal financial mainstream is known as financial inclusion. Conversely absence of this access and the deprivation of financial services is known as "financial exclusion".

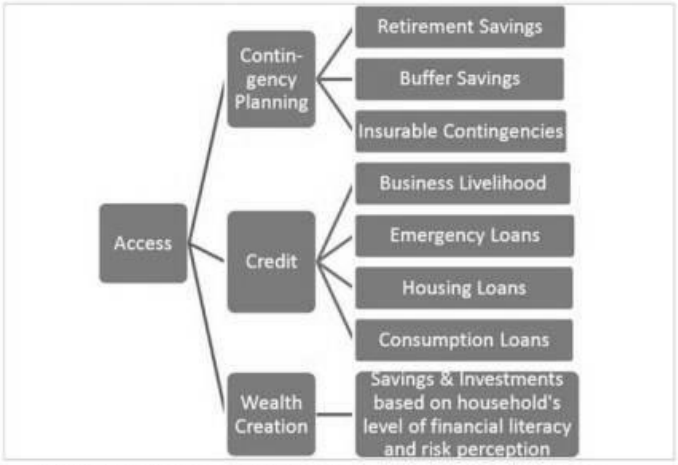
This research paper focuses on Financial Inclusion, Investors Education and awareness in context of India. This paper will also focus on their implicationsand how it affects overall economy and the holistic growth of the country.

Key Words: *Financial Inclusion, Financial Exclusion, Financial Literacy, Payment Interfaces.*

INTRODUCTION:

Financial Inclusion, broadly defined, refers to universal access to a wide range of financial services at a reasonable cost. These include not only banking products but also other financial services such as insurance and equity products (The Committee on Financial Sector Reforms, Chairman: Dr Raghuram G. Rajan). Household access to financial services is depicted in Figure I.

Figure I: Household Access to Financial Services



Source: A Hundred Small Steps - Report of the Committee on Financial Sector Reforms (Chairman : Dr. RaghuramRajan).

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[2] Student- PGDM, Institute of Technology and Science, GZB

The essence of financial inclusion is to ensure delivery of financial services which include - bank accounts for savings and transactional purposes, low cost credit for productive, personal and other purposes, financial advisory services, insurance facilities (life and non-life) etc.

OBJECTIVE:

In India the term Financial inclusion was used for the first time in April 2005 by the then Governor of RBI: Y Venugopal Reddy. There are several measures taken to achieve greater Financial Inclusion, especially by the Government**,** World Bank and the Reserve Bank of India, such as facilitating no frills accounts and GCCs.

The objective of this study is to highlight various parameters of financial inclusion, India's current position, to address the constrains that exclude people from participating in the financial sector & make financial services available to them to meet their specific needs without any kind of discrimination.

Study Limitations:

- The study is majorly base on secondary data with usage of data from RBI, MINISTRY OF FINANCE and various research papers as a reference.
- Secondary data can be general and vague and may not really help with decision making. The information and data may not be accurate.
- The source of the data must always be checked. The data maybe old and out of date. The sample used to generate the secondary data may be small.

LITERATURE REVIEW:

Chima (2010) observed that the sub-prime crisis that hit US and UK showed how FI measures can failwhen not backed by strong policy and regulatory measures. The sub-prime crisis brought to fore the fact that inclusion at higher than normal rates and indebtedness arising out of it, cannot be sustainable. Appleyard (2011) studied the role of Community Development Finance institutions (CDFIs) in certain geographical areas of US and UK in providing enterprise finance to SMEs. CDFIs help overcome financial exclusion by providing local sources of loan finance to micro, small-and-medium-sized enterprises and social enterprises. According to Appleyard, inspite of laudable work done by CDFIs, due to policy initiatives, significant gaps in the market and uneven geographical coverage got created that has led to financial exclusion. Cohen and Nelson (2011) presented the various facets of financial literacy. Determining the type of delivery channelwhether it will be a classroom face-to-face training or through print, mass media or digital technology, whether it should be undertaken by financial institutions or informal institutions and their scope of coverage are important to building a financial literacy model. How to evaluate the success of the model, whether by the incremental number of accounts opened, or by the increased savings rate in accounts or by improved financial condition is also explained in their research work. A research article published in 2009 titled —

Financial Inclusion and Its Determinants: Evidence From State Level Empirical Analysis In India ǁby Nitin Kumar. The study utilizes state-wise panel data spanning over a period from 1995to 2008 in an attempt to asses s the behavior and determinants of financial inclusion in India. In line with the economic intuition,

increase in bank branch network (captured by average population per branch) is having a beneficial impact on deposit and credit penetration.

Overview of financial inclusion and micro credit is a work by D.T. Pai in January 2010.the paper deals with global concerns of financial inclusion and policy initiatives taken in developed and under developed countries and their experiences. Special coverage is given for the policy initiatives in India

A policy paper titled as ―Assess to Financial Services And Financial Inclusion Agenda Around the World‖ published by world bank as on January 2011.the persons behind the research paper are Oya Pinar Ardic, Maximilien Heimann, Nataliya Mylenko. The paper is a product of the Financial Access Teamin Consultative Group to Assist the Poor, Financial and Private Sector Development. It is part of a larger effort by the World Bank to provide open access to its research and make a contribution to development policy discussions.

PRESENT INDIAN SCENARIO:

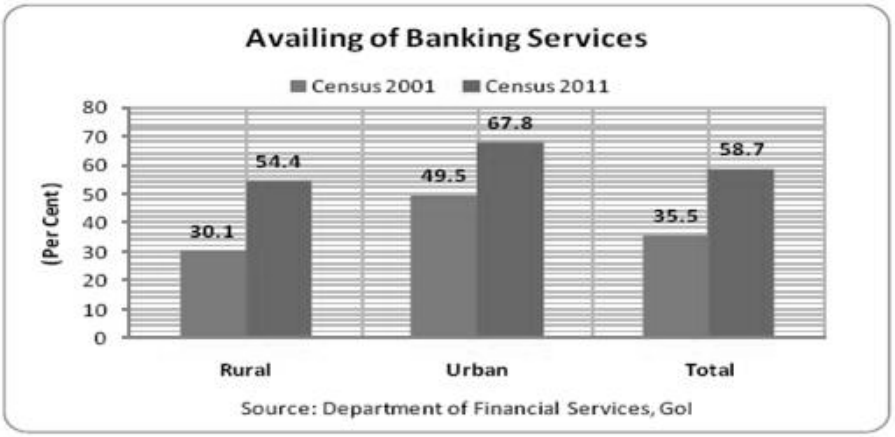
The extent of financial exclusion from different perspectives / angularities is presented based on different data sources viz.:

- Government of India Population Census 2011
- NSSO 70th Round Survey Results
- CRISIL - Inclusix
- RBI reports
- IMF 'Financial Access Survey' Results
- NABARD All India Rural Financial Inclusion Survey 2016-17

Government of India Population Census 2011

As per census 2011, only 58.7% of households are availing banking services in the country. However, as compared with previous census 2001, availing of banking services increased significantly largely on account of increase in banking services in rural areas (Chart 2).

Chart 2: Availing of Banking Services



NSSO 70th Round Survey Results

- At the all-India level, institutional and non-institutional sources of credit have almost identical shares (viz. 49 per cent and 51 per cent).
- Regarding the role of different entities/banks within the institutional source's category, cooperatives are found to have played a relatively more important role in states like Maharashtra, Gujarat, Kerala, and Punjab in providing loans to farmers. More than one-third of loans in these states come from cooperative societies.
- In most southern states, commercial banks and Regional Rural Banks have played a major role in providing credit to farmer households. Close to one-fourth of the loans in these states come from banks directly and indirectly through SHGs which are bank linked.
- Amongst farmers who have accessed credit, 83 per cent of the total loans taken by large farmers are from institutional agencies, while around 60 per cent of marginal farmers' loans are from institutional agencies. Farmers in general, and small and marginal farmers in particular, depend quite substantially on moneylenders

CRISIL-Inclusix

- In June 2013, CRISIL first time published a comprehensive financial inclusion index (vizInclusix). For constructing the index, CRISIL identified three critical parameters of basic banking services namely branch penetration, deposit penetration and credit penetration.
- The CRISIL Inclusix indicate that there is an overall improvement in the financial inclusion in India.
- CRISIL –Inclusix (on a scale of 100) increased from 35.4 in March 2009 to 37.6 in March 2010 and to 40.1 in March 2011. It stood at 58.0 at the end of fiscal 2016.

RBI Reports

- Sadhan Kumar (2011) worked out an Index on financial inclusion (IFI) based on three variables namely penetration (number of adults having bank account), availability of banking services (number of bank branches per 1000 population) and usage (measured as outstanding credit and deposit). The results indicate that Kerala, Maharashtra and Karnataka have achieved high financial inclusion (IFI >0.5), while Tamil Nadu, Punjab, A.P, H.P, Sikkim, and Haryana identified as a group of medium financial inclusion (0.3)

IMF 'Financial Access Survey' 2017 - India statistics

Access and use of Financial Services

Indicator	2013	2014	2015	2016
Automated Teller Machines (ATMs) per 100,000 adults	12.87	17.80	19.70	21.24
Branches of commercial banks per 100,000 adults	11.85	12.87	13.54	14.06
Deposit accounts with commercial banks per 1,000 adults	1,160.72	1,337.41	1,541.79	1,731.27

Loan accounts with commercial banks per 1,000 adults	142.48	151.27	154.45	170.77
Mobile money transactions: number per 1,000 adults	36.32	117.21	273.05	635.22

NABARD All India Rural Financial Inclusion Survey 2016-17

- Distribution of Households who took loan - 59 % only Institutional, 32 % - Only Non-Institutional and the rest were from both sources.
- Among Agricultural Households owning more than 0.4 ha land and those who took any loan for agricultural purposes from a cooperative/ commercial/ rural bank, 32% reported to be having Kisan Credit Cards. These households utilized 83% of the sanctioned limit in the last one year.
- On the whole, 23% households reported that any of its members were associated with a microfinance group at the time of survey. When asked about the type of group, 20% reported to be associated with Self Help Groups.

Financial Inclusion Initiatives:

The Government and RBI have undertaken various measures for financial inclusion in the country. Some of these are as follows:

- All banks to open Basic Saving Bank Deposit (BSBD) accounts with minimum common facilities such as no minimum balance, deposit and withdrawal of cash at bank branch and ATMs, receipt/ credit of money through electronic payment channels, facility of providing ATM card.
- Relaxed and simplified KYC norms to facilitate easy opening of bank accounts, especially for small accounts with balances not exceeding Rs. 50,000 and aggregate credits in the accounts not exceeding Rs. one lakh a year. Further, banks are advised not to insist on introduction for opening bank accounts of customers. In addition, banks are allowed to use Aadhar Card as a proof of both identity and address9.
- Simplified Branch Authorization Policy, to address the issue of uneven spread bank branches, domestic SCBs are permitted to freely open branches in Tier 2 to Tier 6 centers with population of less than 1 lakh under general permission, subject to reporting. In North-Eastern States and Sikkim domestic SCBs can open branches without having any permission from RBI. With the objective of further liberalizing, general permission to domestic scheduled commercial banks (other than RRBs) for opening branches in Tier 1 centres, subject to certain conditions.
- Compulsory Requirement of Opening Branches in Un-banked Villages, banks are directed to allocate at least 25% of the total number of branches to be opened during the year in un-banked (Tier 5 and Tier 6) rural centers.
- Opening of intermediate brick and mortar structure, for effective cash management, documentation, redressal of customer grievances and close supervision of BC operations, banks have been advised to open intermediate structures between the present base branch and BC locations. This branch could be in the form of a low-cost simple brick and mortar structure consisting of minimum infrastructure such

core banking solution terminal linked to a pass book printer and a safe for cash retention for operating larger customer transactions.

- Banks have been advised that their FIPs should be disaggregated and percolated down up to the branch level. This would ensure the involvement of all stakeholders in the financial inclusion efforts.

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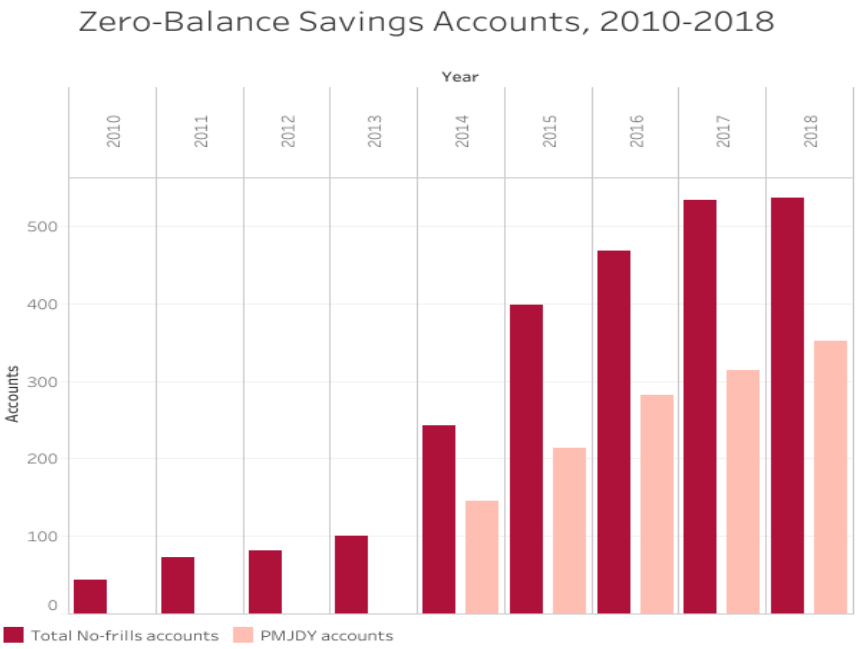
IMPLICATIONS: Effect of Government's financial inclusion efforts can be analyzed through following data:

(1) As many as 15% of accounts were zero-balance as of January 23, 2019, according to data submitted to the Rajya Sabha by the finance ministry.Further, 84% accounts are still only "operative" – that is, they have seen at least one transaction in the last two years – according to government data submitted to the Rajya Sabha in January 2019.



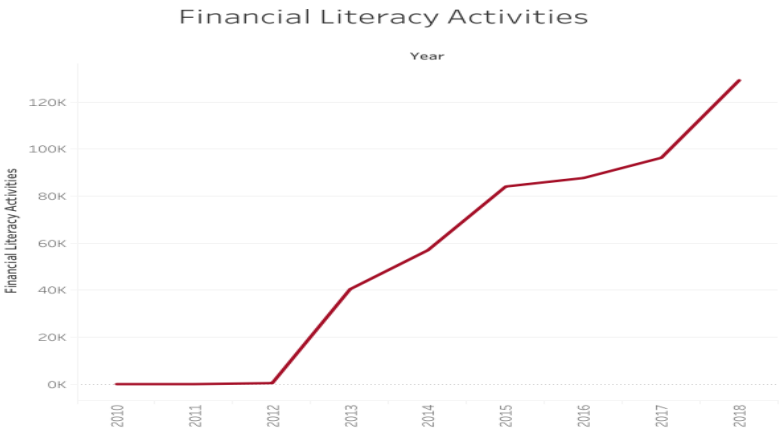
Source: Reserve Bank of India, Pradhan Mantri Jan Dhan Yojana website

(2) The overdraft facility has been availed by no more than 1% of account holders – that is 3.17 million of 340 million accounts as of January 2019 – according to data submitted by the government to the Rajya Sabha. Part of the explanation lies in the required active usage. Those who need the overdraft facility are unlikely to save and have regular transactions.

Average financial literacy scores in India are low – at 11.9 out of 21 as calculated in data submitted by the finance ministry to the Rajya Sabha in January 2019. Financial literacy was defined as a combination of financial knowledge, attitude and behavior.

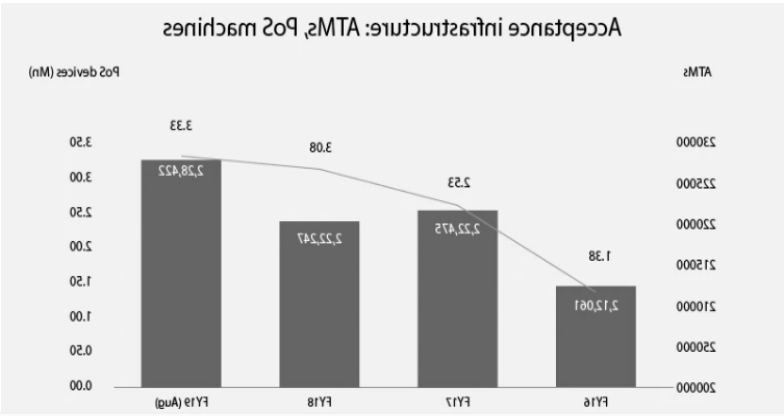
This is probably because only 10% of Indians have attended any financial information sessions between 2014 and 2017 – 9.4% in rural and 13.2% in semi-urban areas.

This is despite a 126% rise in financial literacy activities between March 2014 and March 2018, according to Reserve Bank data.



Source: Reserve Bank of India

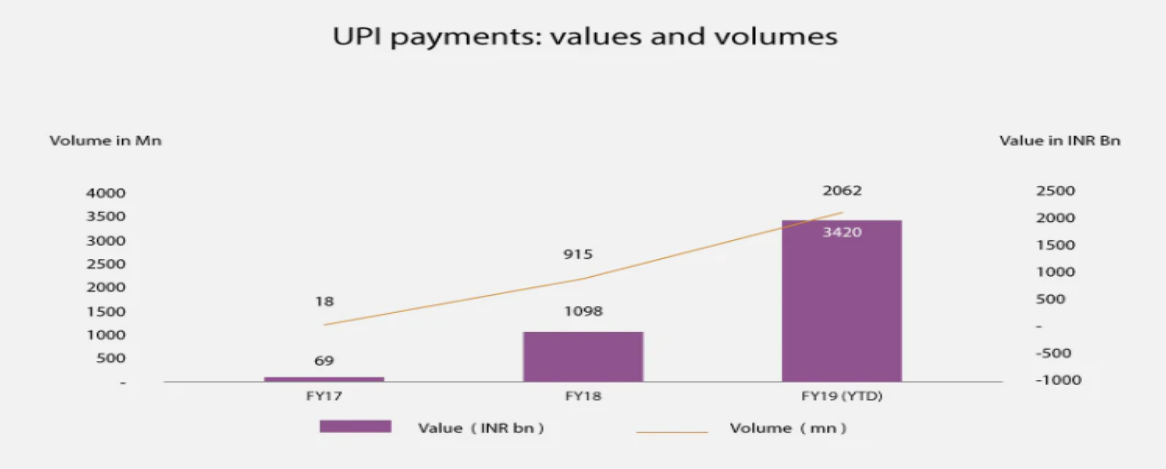
Acceptance of digital infrastructure: Acceptance of digital infrastructure has grown since demonetization with the number of Point of Sale (POS) terminals increasing by 24 percent from 2.53 million in 2016-17 to 3.08 million in 2017-18, according to the RBI. During the same period, the number of ATMs deployed by banks witnessed a marginal decline from 222,475 to 222,247. The digital infrastructure still needs to expand as currently, for a total 1.02 billion credit and debit cards in the country, there are only 3.3 million PoS devices and only 228,422 ATMs. That means for every 309 million cards in the country there is one PoS machine available as an acceptance point.



(Source: RBI)

UPI – The real winner: When it comes to digital payments, Unified Payments Interfacehas been the real winner.

In 2017-18, after the adoption of UPI by private players like Google, Paytm and others, the total number of transactions skyrocketed by more than 5,000 percent. In FY18, the total number of UPI transactions stood at 915.2 million and total funds transferred on the service stood at Rs 1.09 lakh crore. Within eight months of this year, according to data from National Payments Corporation of India (NPCI), UPI transactions in the country have already crossed the 2 billion mark.



Source: RBI & NPCI

ROAD AHEAD: For growth to be truly inclusive requires broadening and deepening the reach of banking. A wider distribution and access of financial services helps both consumers and producers increase welfare and productivity. Such access is especially powerful for the poor as it provides them opportunities to build savings, make investments, avail credit and more important, insure themselves against income shocks and emergencies. As the real economy is dynamic, it is imperative that the banking system is flexible and competitive to cope with multiple objectives and demands made on it by various constituents of the economy.

Now to outline the way forward for meeting our possible dream of Financial Inclusion:

1. New BankLicenses: To ensure that the banking system grows in size and sophistication to meet the needs of a modern economy and for improving access to banking services, the process of evaluation of new bank license applications is expected to go beyond simply beefing up infrastructure like handheld devices, smart cards, better vendors and service providers, etc. necessary to scale up the FI activities. These new banks are expected to bring new technology innovative models bring in new business and delivery models which would speed up the roll out of financial services to remote areas.Financial Inclusion will work on the ACTA model Accounts, Cash in Cash Out ,Transactions and adjacencies which will help to build a revenue stream.

2. Business and Delivery Model: Sustainability and scalability of the Business Correspondent model is essential. More and more innovative products will have to be introduced which would benefit both banks as well as the rural people and at the same time make the BC model more viable. Review of the cash management practices for delivery of banking services through the branchless modes needs to be done for ensuring scaling up of the various models.

3. Usage of banking services - Using the first phase of our FI initiative, we have successfully opened 74000 outlets in the rural areas. Going forward the idea is to enable more transactions in these accounts by providing more credit products, which will not only help rural people to avail of credit at comparatively lower rates of interest but at the same time also make the BC model viable for banks. Skills and capacity building of BC is as important

4. Financial Education - We have to adopt an integrated approach for financial inclusion wherein the supply side initiatives will be ably supported by initiatives on the demand side. In this direction banks will have to support financial literacy and awareness drives to make people understand the benefits of linking with the banking system. Including financial education in the school curriculum so as to educate children about the benefits of banks and banking services.

CONCLUSION:

FI has been a cherished policy objective pursued with the intent of reaching out to the masses. It is pertinent to draw reference to a profound International Labor Organization (ILO) Declaration of Philadelphia (1944), which states, “Poverty anywhere is a threat to prosperity everywhere.” Policymakers in India too had an early realization that poverty has implications for financial stability, and have endeavored to ensure that poverty is tackled in all its manifestations and that the benefits of economic growth reach the poor and excluded sections of society by connecting them with mainstream banking.

SUGGESTIONS:

- In my opinion, the reasons identified for slow progress of FI are many and can be divided into technological and others. The technological issues like frequent machine breakdowns, frequent problems with connectivity, lack of uniform application of technology across banks hampers the seamless experience and impacts confidence of the customers in formal banking.
- Amongst non-technological reasons, important ones are lack of confidence in salesman-like BCs and their high attrition rate disrupting banking services; limits on daily transaction deterring big ticket customers from using BCS, kiosks and ultra-small branches imposing restrictions on earnings and commission; and time taken, typically seven to10 days in rural areas, in administrative formalities for account opening, credit appraisal etc.
- To achieve success in financial inclusion, the government would need to consider out-of-the box ideas to make a difference. To address the issue of credibility of Banking Correspondents, banks could take advantage of a wide network of post offices and fair price shops and provide banking counters for the unbanked population. Even multi-language ATMs with audio-video services could be considered.
- The banks could pay a ‘rent fee’ to India Post and fair price shops, for use of their facilities/premises. To address the high attrition rate, ascribed to low commission/earnings, banks could consider

nominating housewives, and owners of fair price shops, retired people and people with limited disabilities to become Banking Correspondents to supplement their regular income.

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A STUDY OF RELATION BETWEEN ANXIETY & LIFESTYLE BEHAVIOUR AMONG THE COLLEGE STUDENTS OF DESIGN EDUCATION

Yuvraj Garg[1]

ABSTRACT

*This research aims to study **the relationship between Anxiety and Lifestyle Behaviour of College students of Design Education**. The subject population was the student population from various design colleges across the various cites of India. The survey was designed specifically to gather data on how does the lifestyle behavior design college-going students affect their anxiety levels. Both qualitative and quantitative methods of data gathering and analysis were used. Firstly, ten semi-structured interviews and two focus group discussions were conducted among the students. Also, an interview with a clinical psychologist was administered. Based on the findings of these qualitative techniques, a questionnaire was prepared for conducting a quantitative structured questionnaire survey among the students of various design colleges from four metro, namely Delhi, Mumbai, Chennai, Bangalore; and three non-metro cities, namely Jaipur, Chandigarh, and Lucknow. The data was analyzed using tools, such as Pearson's coefficient of Correlation, Bar Graphs, Tables, and Chi-square test to investigate the anxiety levels which was assessed based on BFNE scale (Brief Fear of Negative Evaluation) and the Lifestyle Behaviour patterns, such as Parent-Child relationship, Sleep pattern, intoxication consumption, exercises.*

A significant correlation of the parameters, such as have a problem in waking up, are on any kind of medication to maintain sleep cycle, and if their parents are less likely to be worried about them; with the anxiety levels of the respondents as reported from BFNE scale (Brief Fear of Negative Evaluation) was found.

For all other variables; namely, eating habits, consumption of non-vegetarian items and its frequency, smoking, alcohol consumption, bad dreams, exercise type, exercise time, etc.; were not significantly related to anxiety levels of the respondents as reported from BFNE scale (Brief Fear of Negative Evaluation).

The results indicated that the students of various design colleges suffer from usually moderate to high anxiety levels according to the scales used in the research. Their lifestyle behavior and patterns affect the same.

The researchers would add knowledge to identify the root cause of Design Student Anxiety and its possible branches.

Keywords: *Anxiety, Lifestyle Behaviour, BFN Scale, Students, College Students, design education*

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Introduction

Design as a career appears glitzy and yet challenging at the same time for the students as they are not very clear about the place of a designer in the industry. Design is still a relatively new field for India. The number of design colleges and universities is increasing day by day. Creative Burnout, defending your work, professional and work-related disrespected, missing a deadline, and lack of creative control are commonly cited challenges faced by design students (Blake, 2016).

There is constant pressure on any college student to juggle school, work, family, and friends while trying to brainstorm about the next chapter of their life. The World Health Organisation (WHO) considered mental health to be an important component of Human Health. (Kulsoom B, 2015). Apart from being a psychological response, anxiety is also a physical response to treat a self-concept characterized by subjective, consciously perceived feelings of tension (Spielberger, 1983). It's the most important problem that is faced by the students in their education worldwide in general, specifically in the design students (Khosravi & Bigdeli, 2008).

Asadullapoor (2010) defined Anxiety as feeling that undesirable and unclear like when a person predicts a dangerous situation (Asadullapoor, 2010). Impairment in cognition is caused by high stress and anxiety levels and thus produces distortion in perception. (Saipanish, 2003) Almost all design college students are subjected to various stressors such as but not limited to- academic pressure, social life, time management issues. It is thus extremely important to note down their pattern and its relation to their lifestyle behavior to improve the overall quality of life and ultimately help them (Vitaliano PP, 1984).

Statement of the problem

India is experiencing tremendous growth in design education. British Council (2016) published a report stating that India will need more than 60,000 designers by 2020 working in a market of the potential market for design in India is expected to be INR 188.32 billion (GBP 1.43 billion) (Deshpande, 2016).

It's a well-known fact that psychological distress among students tends to harm their self-esteem which ultimately causes problems like dropping out, impaired working ability, poor academic scores, disturbed relationships, and worst-case scenario, suicide (Sharif F, 2004).

Anxiety disorders are rising among students. (Leta, 2001). Design College students have a great deal to anxiety, especially in the learning process. These are like the difficulty of courses, new roommates, identity crises, cultural shock, and relationship problems that might cause an increase in anxiety levels. Creative Burnout, defending your work, professional and work-related disrespected, missing a deadline, and lack of creative control are commonly cited challenges faced by design students (Blake, 2016).

It is a well-known fact in human life that influences an individual's accomplishment in several situations, a mean level of anxiety is useful in sustaining individuals' hardworking and being responsible for what they have to do. (Kahan, 2008)

Other sources as the assumption in anxiety, family factors contribute to the development of anxiety disorders among many students for example children of parents with anxiety have a higher rate of anxiety disorders. (Susan & Margareth, 2006)

Symptoms of social anxiety often vary among students (Cooley, 2007). In that scenario, it comes upon the researchers to identify the root cause and its possible branches to help mankind.

Research objective

This research aims to gauge the individual and combined associations between various aspects of lifestyle choices and anxiety levels within a representative community sample of students from various design colleges all across the nation of India.

The research was carried out in two segments of an online survey. The first segment included a BFNE Scale (Brief Fear of Negative Evaluation) to measure the anxiety levels of the students and the second segment included the evaluation process of the lifestyle patterns to establish a relationship between the two.

BFNE, i.e., Brief Fear of Negative Evaluation, is related to specific personality dimensions, for example, anxiousness, submissiveness, & social avoidance. People who tend to score highly on the BFNE scale are highly concerned with seeking social approval or avoiding disapproval by others and may tend to avoid situations where they may face extreme social judgments. High FNE subjects are also more responsive to situational factors. This has been associated with conformity, pro-social behavior, and **social anxiety**. It was developed by David Watson and Ronald Friend in the year 1969.

With the combined evaluation of the BFNE Scale and the Lifestyle Behaviour patterns, this report discusses various connections or relationships between the two amongst our subject population of the design college-going students' community.

Limitations of the research

There were multiple limitations faced in the completion of this research, for example-

- The BFN scale (Brief Fear of Negative) only measures social anxiety, other anxiety disorders are not covered.
- The results presented mainly focuses on students from 1st to 3rd academic years and students from 4th academic are not equally represented, **due to their physical absence** during the time of collection of qualitative data.
- The qualitative data over-represents female students over male students due to physical constraints.

Design of study

The survey was designed specifically to gather data on how does the lifestyle behavior of Design College students affects their anxiety levels. This included gathering input from students of various colleges belonging to age groups and departments. Upon discussion, it was agreed that a better response rate would be achieved if students from all academic years are taken into consideration. The final respondent pool consisted of 400 Design College going students. The survey questions were based on, *Helping your Child with Fears and Worries: A self-help guide for parents'* by Prof Cathy Creswell and Lucy Willetts, *'An overview of Indian research in anxiety disorders'* by J.K Trivedi and P K Gupta, *Diagnostic and statistical manual for the assessment of mental disorders.* Washington, DC: American Psychiatric Association, *Hydroxyzine hydrochloride in the management of children with behavior problems* by Manchanda SS, Kishore B, Jain CK, Singh G, Kashyap UB, and many others.

Sections of the survey included:

- Respondent's demographic,

- Anxiety level calculations,
- Eating habit analysis,
- Sleeping pattern analysis,
- Childhood experiences,
- and exercise routines.

A similar survey from the **Social Interaction Anxiety Scale (SIAS)** was consulted before, this survey was developed. Faculty mentors and students had input on the survey design and finalization.

Research design and procedures used

To address the key research objectives, this research used both **qualitative and quantitative** methods and a combination of primary and secondary sources. The qualitative data support the quantitative data analysis and results.

This report presents the findings of the survey, 'Investigating a relationship between anxiety and lifestyle behavior of college students.' Which was taken up by men and women of various age groups and different lifestyle preferences studying in different parts of India who are currently studying in the college or have been a college graduate? They were asked to reflect upon their eating habits, sleeping patterns, childhood experiences, to study the relationship between anxiety level and lifestyle behavior.

This study employed a mixed type of method. The first part consisted of **semi-structured** interviews of College students, for this 50 students from different departments and colleges were interviewed about their personal experiences and what they understood by the term, Anxiety. It was followed by 2 group discussions. The first discussion talked about different factors that lead to anxiety in students, whereas the second group discussion focussed on **the link between lifestyle behavior or past experiences** of College students with their anxiety levels.

The second consists of a structured survey conducted online through Google Forms which was circulated through electronic means. Sections of the survey included:

- Respondent's demographic,
- Anxiety level calculations,
- Eating habit analysis,
- Sleeping pattern analysis,
- Childhood experiences,
- and Exercise routines.

Data Collection and Sampling procedures

The primary data were collected using both qualitative and quantitative methods. The details are mentioned as follows.

Primary Data Collection Methods:

Primary data collection was both, qualitative and quantitative. The qualitative sources were observations, interviews, and informal discussions. A quantitative data source is a survey questionnaire. The qualitative method included two semi-structured verbal interviews and two focus group discussions that were conducted from 19-1-2020 to 12-2-2020 were conducted.

Further, the quantitative data was collected from the students of various design colleges from four metro, namely Delhi, Mumbai, Chennai, Bangalore; and three non-metro cities, namely Jaipur, Chandigarh, and Lucknow. A structured survey was circulated amongst the students via electronic means from 30-03-2020 to 03-04-2020. Students of different genders, age groups, departments, and academic years were interviewed. The care was taken care of for equitable representation from all areas. The study population consisted of various college-going students from the design stream. The population of the data was from various streams like Accessory Design, Fashion Design, Knitwear Design, Communication Design, Visual Merchandising, Jewellery Design, etc. The care was taken care of equitable representation from all areas A total of 400 respondents responded to the questionnaire survey

Qualitative Data Collection through Interviews and Focus Group Discussion

Two qualitative in-depth interviews were conducted, especially with the students who were considered particularly knowledgeable about anxiety and issues related to it. The semi-structured interview was conducted face to face, which gave new insights to the research. The interview asked the respondents about their college lifestyle and their perception of anxiety. The interviews were recorded and transcribed. The interviews provided opportunities for refining data collection efforts.

To draw further insights, an informal Focus group discussion, in 2 parts was also conducted with students. The first Focus group discussion talked about a student's lifestyle and how College life has affected their routine. The second Focus group talked about student's perceptions about anxiety and their experiences at their respective colleges which led to anxious situations.

Qualitative Data collection from Experts' Opinion:

The data was also obtained from the expert's opinion, **Clinic Psychologist** related to anxiety in college students. The data obtained in this way was used for forming the questionnaire and finalizing the reference questionnaire.

Qualitative Data Analysis- Focus Group Discussion

The interview and discussion were designed to assess the students' awareness of anxiety, to determine a link between students' fears and anxiety, to analyze the students from different departments as to how college environment link with anxiety and get pre-emptive major causes.

Findings from the focus groups:

A total of 10 participants took part in the focus groups made a mixed group of males and females. The key findings from focus group discussions are mentioned as follows

1) The Students group perceived anxiety as a combination of negative and suicidal thoughts, which leads to self-harm.

2) We got to know how students relate fear with anxiety. The connections were reported on the factors, such as inherited fears and childhood traumas, dietary habits, physical activity, sleeping habits, family medical history, smoking, and drinking, etc.

3) The adverse effect of college environments on students' anxiety level was highly visible. The factors for leading to heightened anxiety levels included:

- Group Projects
- Unhealthy Class Competition
- Time Management
- Self Esteem
- Trust Issues
- Separation Anxiety

Questionnaires Design

The main tool used for gaining primary information as a questionnaire, 'Relation between anxiety and lifestyle behavior of College students'.

The pre-test for the questionnaire was conducted to validate that the questionnaire is valid or not in the sense of the respondent's understanding. The pilot test made for the questionnaire test was on 5 sample size selected randomly from the target population and was corrected by our mentors as well, multiple times before finalization. Following the feedback process, a few changes were made to the originally designed questionnaire.

The questionnaire was divided into 2 parts, Part A required the respondents to answer questions which were used to calculate their anxiety level based on **Brief Fear of Negative Evaluation Scale Leary (1983).**

The questionnaires developed were based on a five-item Likert scale. Responses were given to each statement using a five-point Likert-type scale, for which 1 = “strongly disagree” to 5 = “strongly agree.” The responses were summed up to produce a score for the measures.

_____ 1. I worry about what other people will think of me even when I know it doesn't make any difference.

_____ 2. I am unconcerned even if I know people are forming an unfavorable impression me.

_____ 3. I am frequently afraid of other people noticing my shortcomings.

_____ 4. I rarely worry about what kind of impression I am making on someone.

_____ 5. I am afraid others will not approve of me.

_____ 6. I am afraid that people will find fault with me.

_____ 7. Other people's opinions of me do not bother me.

_____ 8. When I am talking to someone, I worry about what they may be thinking about me.

_____ 9. I am usually worried about what kind of impression I make.

_____ 10. If I know someone is judging me, it has little effect on me.

_____ 11. Sometimes I think I am too concerned with what other people think of me.

_____ 12. I often worry that I will say or do the wrong things.

Part- B of the questionnaire required respondents to answer about their lifestyle habits, including eating habits, sleeping patterns, childhood experiences, and exercise routine. These questions were developed based on personal interviews and focus group discussions.

The Questions on Parent-Child relationship

Statement	The respondents were asked to rate the following:- Always (5), Mostly (4), Sometimes (3), Rarely (2), Never(1)
My parents/guardians understood my problems & worries	
I saw/heard my family member being yelled at and/ or humiliated	
I was humiliated/ screamed or physically hurt by my parent/ household member	

The Questions on Sleep pattern

Statements	The respondents were asked to rate the following:- Always (5), Mostly (4), Sometimes (3), Rarely (2), Never(1)
I sleep at a fixed time	
I wake up in the middle of the night or early morning	
I cannot breathe comfortably	
I have bad dreams	
I take medication to fall asleep	

The Questions on intoxication consumption

Statements	The respondents were asked to rate the following:- **One pack a Day (4), One Pack a week (3), One pack a month (2), Rarely (1)**
Cigarette	
Tobacco	
Others	

Do you consume alcohol?

☐ Yes ☐ No

Mark the frequency of consumption:

Daily	
Weekly	
Monthly	
Yearly	

Qualitative Data Analysis and Hypothesis development

Based on the focus group discussions and personal interviews following the alternative hypothesis were developed.

"There is a significant relationship between anxiety level and lifestyle behavior among the respondents"

Quantitative Data Analysis

The key findings from the analysis are presented as follows.

Profile of respondents

Out of a total of 400 respondents, 390 of them disclosed their age. From this data, we divided the age group into 3 categories. Out of a total of 400 respondents, all of them disclosed their gender. The frequency distribution is presented as follows.

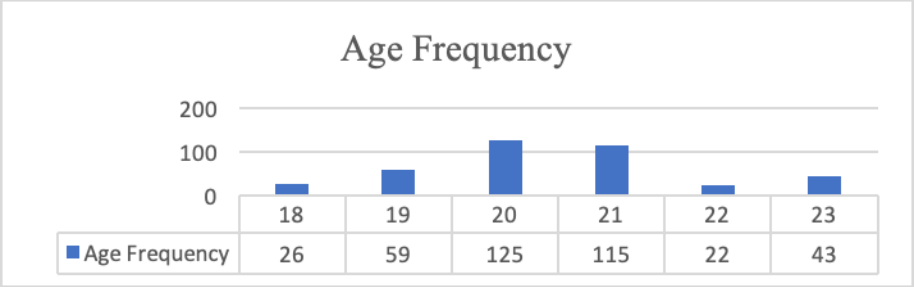


Figure 1: Age Distribution

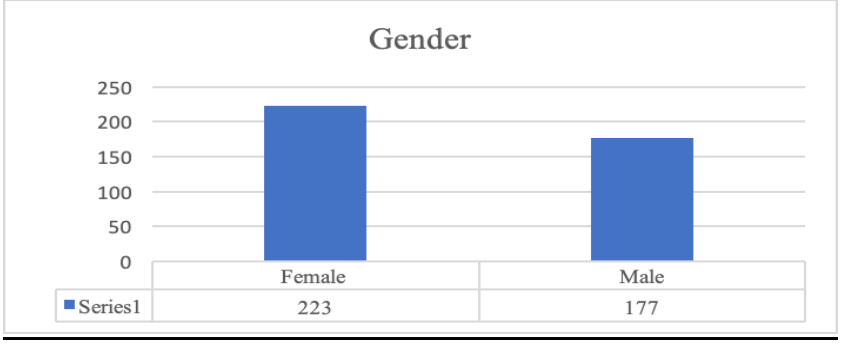


Figure 2: Gender Distribution

Finding Testing the hypothesis.

To briefly summarise for the readers, from Subject Analysis, we got to know about the demographics of the respondents, the frequency of the genders participating, and their response to the BFNE (Brief Fear of Negative Evaluation) score and produced the anxiety levels. A relationship between Anxiety levels and Sleeping Patterns and Childhood Problems was noticeable after combined graphs analysis.

As mentioned earlier, the questionnaire was divided into two parts:

a. BFN (Brief Fear of Negative) Evaluation
b. Lifestyle Choices

In this segment, we will discuss the evaluation of the anxiety score of each respondent via their answers to the statements of the BFN evaluation scale. An example has been attached for the readers as to how the statements are recorded and then their subsequent respondents.

Statement: I worry about what other people will think of me even when I know it doesn't make a difference.

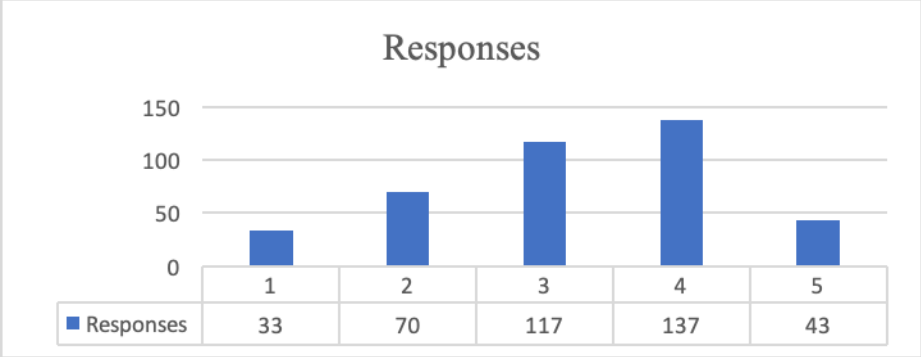


Figure 3: Response to Statement 1

It was noted that there was a tie between the selection, i.e., out of 400 people, 117 of them felt that the statement moderately affected them and the other 137 felt that it highly affected them.

The anxiety level of respondents

There were a total of 9 other statements apart from this one. By analysing these statements, general levels of anxiety were induced which range from 1-5, depicting very less anxiety level to extremely high anxiety level.

The following chart represents the anxiety level of the respondents with their computed anxiety levels by analyzing their statements

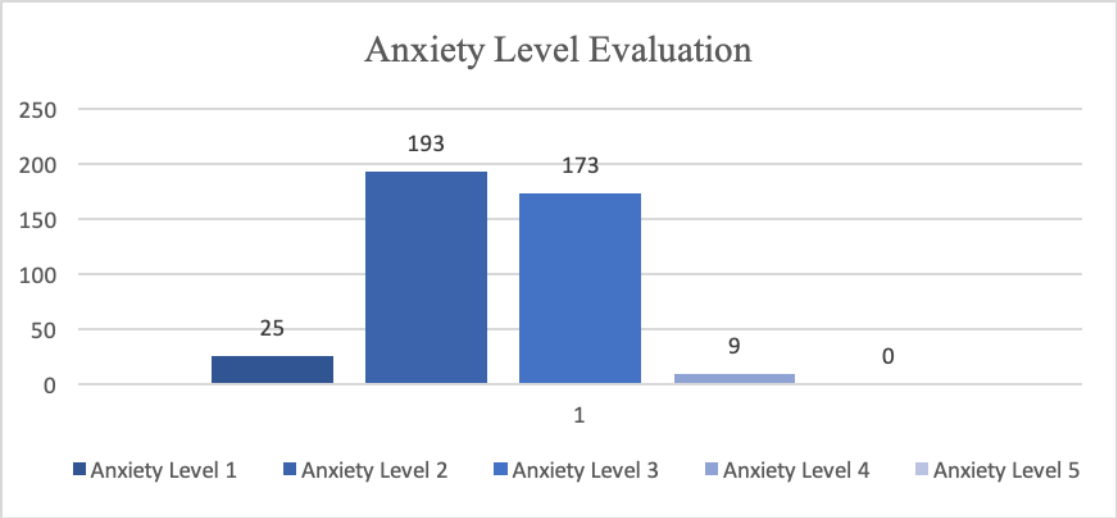


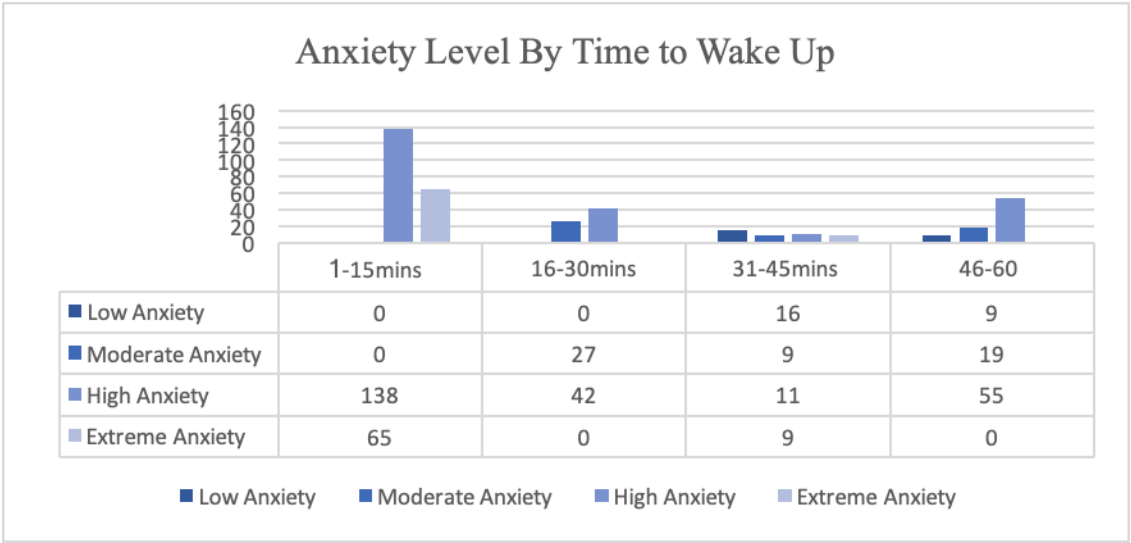
Figure 4: Anxiety Levels

Combined graphs

In the second part of the questions, various lifestyle choices were evaluated like-Dietary Choices, Sleeping Habits, Childhood Traumas Exercise Routines, etc..

Combined Graphs were then computed to establish their relationship with parameters involving demographic variables, anxiety levels, and lifestyle choices for a better understanding of the relationship involved. Out of all the parameters, 3 stood out to show a significant relationship:

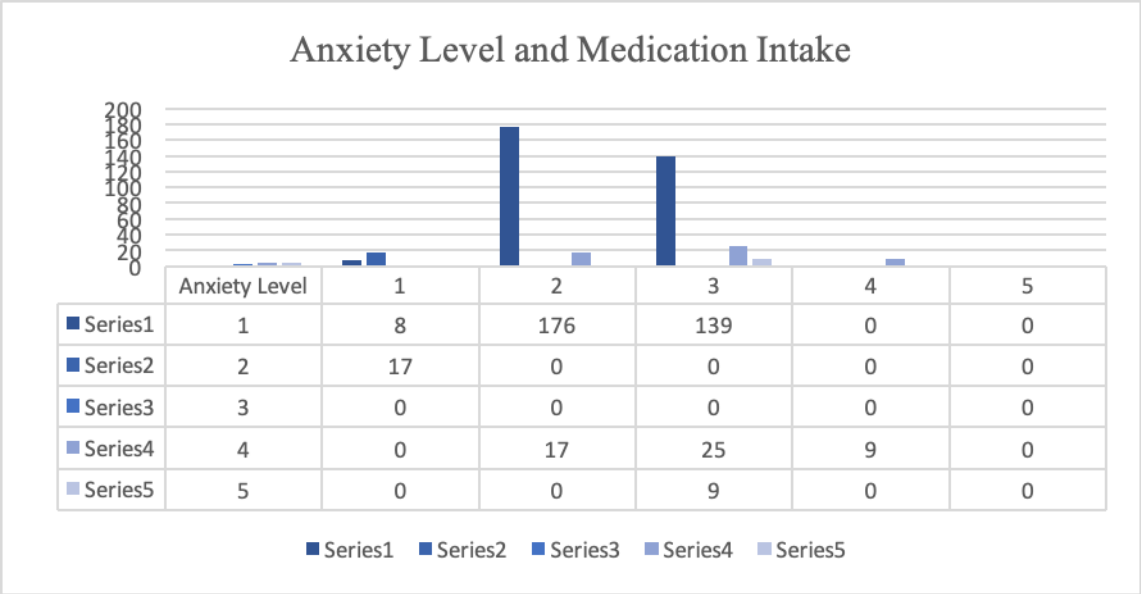
1. **Anxiety Level and Sleeping Habits (Time to wake up)**



	1-15mins	16-30mins	31-45mins	46-60
Low Anxiety	0	0	16	9
Moderate Anxiety	0	27	9	19
High Anxiety	138	42	11	55
Extreme Anxiety	65	0	9	0

It was noted that respondents who took more than 45 minutes to sleep, i.e. range 46-60 minutes suffered from High and Extreme Anxiety issues. While extreme anxiety wasn't noted in any other range.

2. Anxiety Level and Sleeping Patterns (Intake of Medicines)

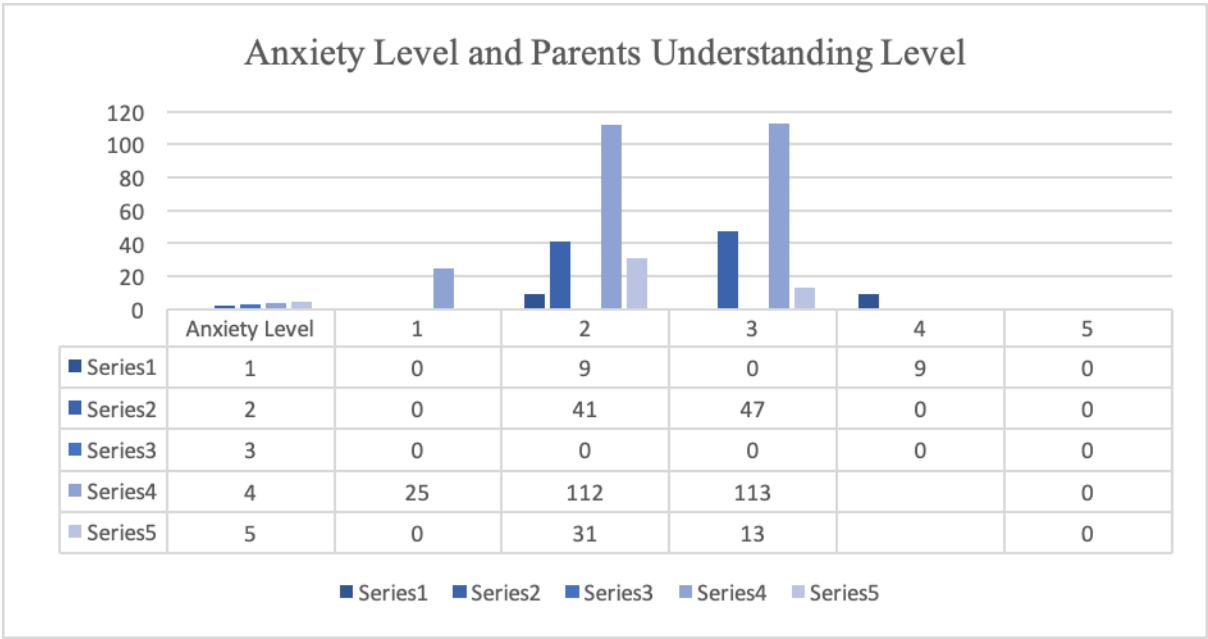


Anxiety Level	1	2	3	4	5
Series1	1	8	176	139	0	0
Series2	2	17	0	0	0	0
Series3	3	0	0	0	0	0
Series4	4	0	17	25	9	0
Series5	5	0	0	9	0	0

Figure 6: Anxiety Level by Frequency of Medication Intake

From this combined graph, readers to infer that respondents who never took medication to fall asleep suffer from moderate to high anxiety levels, and the respondents who take their medication religiously also suffer from high anxiety levels.

3. Anxiety Level and Childhood Trauma (Parents' Support and Worries)



Anxiety Level	1	2	3	4	5
Series1	1	0	9	0	9	0
Series2	2	0	41	47	0	0
Series3	3	0	0	0	0	0
Series4	4	25	112	113		0
Series5	5	0	31	13		0

It was observed that respondents with anxiety levels 3, 4, and level 5 had parents who rarely or never understood their problems and worries.

Coefficient of Correlations

After combined graphs, to understand the depth and the significance of the relationship further, the correlation was calculated. There were multiple important information disclosed but again the three that stood out were the same as above, i.e., Time to Wake, Medication, and Childhood Experiences.

		Anxiety_level	Sleeping_ Hours	Fall_Asleep	Wake_Up	Tick the following: [I sleep at a fixed time]	Sleeping_ Pattern	Bad_Dreams	Medication
Anxiety_level	Pearson Correlation	1	-.180**	.020	.093	-.072	.127*	.222**	.215**
	Sig. (2-tailed)		.000	.695	.063	.154	.011	.000	.000
	N	399	399	399	399	399	399	399	399
Sleeping_Hours	Pearson Correlation	-.180**	1	-.152**	-.208**	.191**	-.228**	-.040	.012
	Sig. (2-tailed)	.000		.002	.000	.000	.000	.421	.815
	N	399	399	399	399	399	399	399	399
Fall_Asleep	Pearson Correlation	.020	-.152**	1	.020	-.413**	.206**	.239**	.200**
	Sig. (2-tailed)	.695	.002		.683	.000	.000	.000	.000
	N	399	399	399	399	399	399	399	399
Wake_Up	Pearson Correlation	.093	-.208**	.020	1	-.037	.101*	.119*	.314**
	Sig. (2-tailed)	.063	.000	.683		.455	.043	.017	.000
	N	399	399	399	399	399	399	399	399
Tick the following: [I sleep at a fixed time]	Pearson Correlation	-.072	.191**	-.413**	-.037	1	-.083	.164**	-.126*
	Sig. (2-tailed)	.154	.000	.000	.455		.097	.001	.012
	N	399	399	399	399	399	399	399	399
Sleeping_Pattern	Pearson Correlation	.127*	-.228**	.206**	.101*	-.083	1	.335**	.370**
	Sig. (2-tailed)	.011	.000	.000	.043	.097		.000	.000
	N	399	399	399	399	399	399	399	399
Bad_Dreams	Pearson Correlation	.222**	-.040	.239**	.119*	.164**	.335**	1	.362**
	Sig. (2-tailed)	.000	.421	.000	.017	.001	.000		.000
	N	399	399	399	399	399	399	399	399
Medication	Pearson Correlation	.215**	.012	.200**	.314**	-.126*	.370**	.362**	1
	Sig. (2-tailed)	.000	.815	.000	.000	.012	.000	.000	
	N	399	399	399	399	399	399	399	399

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Figure 7: Anxiety Level and Parents' Understanding Level

Coefficient of Correlations between Sleep at a fixed time and fall asleep

The sleep at a fixed time and fall asleep have a statistically significant linear relationship. ($p < 0.05$). The direction of the relationship is negative. (i.e. the variables are negatively correlated). The strength of the association is moderate ($0.3 < |r| < 0.7$).

Coefficient of Correlations between Sleep at a fixed time and fall asleep

Medication and wake up

The medication and wake up have a statistically significant linear relationship ($p < 0.05$). The direction of the relationship is positive. (i.e. the variables are positively correlated). The strength of the association is moderate ($0.3 < |r| < 0.7$).

Coefficient of Correlations between BFN (Brief Fear of Negative) Score and Childhood Experiences

Correlations

[DataSet2]

Correlations

		Anxiety_level	Parents_ Worries	Family_ Humiliated	Assault	Family_Drugs	Bullied
Anxiety_level	Pearson Correlation	1	-.198**	.298**	.285**	-.150**	-.094
	Sig. (2-tailed)		.000	.000	.000	.003	.059
	N	399	399	391	399	399	399
Parents_Worries	Pearson Correlation	-.198**	1	-.133**	-.302**	.037	.106*
	Sig. (2-tailed)	.000		.008	.000	.464	.033
	N	399	399	391	399	399	399
Family_Humiliated	Pearson Correlation	.298**	-.133**	1	.447**	-.099	-.128*
	Sig. (2-tailed)	.000	.008		.000	.051	.011
	N	391	391	391	391	391	391
Assault	Pearson Correlation	.285**	-.302**	.447**	1	-.228**	-.264**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	399	399	391	399	399	399
Family_Drugs	Pearson Correlation	-.150**	.037	-.099	-.228**	1	.241**
	Sig. (2-tailed)	.003	.464	.051	.000		.000
	N	399	399	391	399	399	399
Bullied	Pearson Correlation	-.094	.106*	-.128*	-.264**	.241**	1
	Sig. (2-tailed)	.059	.033	.011	.000	.000	
	N	399	399	391	399	399	399

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Figure 8: Correlation 3

Coefficient of Correlations between Assault and Family humiliated

The assault and family humiliated to have a statistically significant linear relationship ($p < 0.05$). The direction of the relationship is positive. (i.e. the variables are positively correlated). The strength of the association is moderate ($0.3 < |r| < 0.7$).

Coefficient of Correlations between Assault and Parents worries.

The assault and parents worry have a statistically significant linear relationship ($p < 0.05$). The direction of the relationship is negative. (i.e. the variables are negatively correlated).

The strength of the association is moderate ($0.3 < |r| < 0.7$).

Chi-square tests

These tests were done against all parameters, the one that stood out are explained as follows.

1. **Anxiety and Wake uptime**

A Chi-Square test of Independence was performed to examine the relation between **Anxiety level** and the **Time taken to wake up** by the students, the relation between the variables was significant.

X^2 (9, N= 399) = 198.839[a], p= .000, where (**9** = *Degree of Freedom*, **399** = *Sample size*, **198.839** = *Chi-Square statistic value*, **0.000** = *p value*), respectively.

Since**, P= 0.000 < 0.05,** our null hypothesis is **rejected** and hence there is a significant relationship between **Anxiety level** and **Time Taken to wake up.**

2. **Anxiety and Medication**

A Chi-Square test of Independence was performed to examine the relation between **Anxiety level** and the **Intake of Medication** by the students, the relation between the variables was significant.

X^2 (9, N= 399) = 349.966[a], p= .000, where (**9** = *Degree of Freedom*, **399** = *Sample size*, **349.966[a]** = *Chi-Square statistic value*, **0.000** = *p value*), respectively.

Since**, P= 0.000 < 0.05,** our null hypothesis is **rejected** and hence there is a significant relationship between **Anxiety level** and **Intake of medicines.**

3. Anxiety and Parents Worrying

A Chi-Square test of Independence was performed to examine the relation between **Anxiety level** and the **Parents Worrying** for the students, the relation between the variables was significant.

X^2 (9, N= 399) = 222.205[a], p= .000, where (**9** = *Degree of Freedom*, **399** = *Sample size*, **222.205[a]** = *Chi-Square statistic value*, **0.000** = *p value*), respectively.

Since**, P= 0.000 < 0.05,** our null hypothesis is **rejected** and hence there is a significant relationship between **Anxiety level** and **Parents Worrying.**

Results, Discussions and Hypotheses Testing

From correlation analysis we deduced, students who were on medication had a disturbed sleeping pattern, these people were even subjected to bad dreams.

Chi-Square tests of Independence deduced positive significance by **rejecting** the null hypothesis and accepted the following alternative hypotheses.

1) A significant relationship was observed between **Anxiety level** and **Time Taken to wake up** among the respondents.
2) A significant relationship was observed between **Anxiety level** and **Intake of medicines** among the respondents.
3) A significant relationship was observed between **Anxiety level** and **Parents Worrying** among the respondents.

Depending upon the results from data analysis and hypothesis testing by chi-square tests, it was concluded that there is a significant relationship between Time taken to wake up, medication taken and frequency of parent involvement in a student's life and the anxiety level of the student. Hence, for this three lifestyle behavior, alternate hypothesis: **"There is a significant relationship between anxiety level and lifestyle behavior among the respondents"** was accepted.

After the analysis, a significant correlation of the parameters like Sleeping Patterns, Childhood Trauma; with the anxiety levels of the respondents as reported from the BFNE scale (Brief Fear of Negative Evaluation) was found.

For all other variables; namely, eating habits, consumption of non-vegetarian items and its frequency, smoking, alcohol consumption, bad dreams, exercise type, exercise time, etc.; were not significantly related to anxiety levels of the respondents as reported from BFNE scale (Brief Fear of Negative Evaluation).

Conclusion

This research aims to identify **the relationship between Anxiety and Lifestyle Behaviour of College students of Design Education**. The survey was designed specifically to gather data on how does the lifestyle behavior design college-going students affect their anxiety levels using the BFNE scale (Brief Fear of Negative Evaluation).

For the completion of this research both qualitative and quantitative methods of data gathering were used. In a qualitative survey, two focused group discussions, one discussion with clinical psychologist experts, ten semi-structured personal interviews were conducted.

An online survey was generated regarding the possible parameters affecting the lifestyle behavior of the students concerning Anxiety. The subject population that has derived this report is the student population of 400 from various design colleges across the various cites of India including four metro and three non-metro cities. Different statistical tools on SPSS and Excel were used for data analysis.

A significant relationship of the parameters, such as *have a problem in waking up, are on any kind of medication to maintain sleep cycle, and if their parents are less likely to be worried about them*; with the anxiety levels of the respondents as reported from BFNE scale (Brief Fear of Negative Evaluation) was found.

For all other variables; namely, eating habits, consumption of non-vegetarian items and its frequency, smoking, alcohol consumption, bad dreams, exercise type, exercise time, etc.; were not significantly related to anxiety levels of the respondents as reported from BFNE scale (Brief Fear of Negative Evaluation).

The results indicated that the students of various design colleges suffer from usually moderate to high anxiety levels according to the scales used in the research. Their lifestyle behavior and patterns affect the same.

This research gave an insight into the anxiety levels of College students and their relation to their respective lifestyle patterns. The researchers would add knowledge to identify the root cause of Design Student Anxiety and its possible branches. The following are a few of the topics that can be covered for further investigation:

1. Relationship between Depression and Lifestyle behavior of College Students
2. Post-Traumatic Stress Disorder amongst College Students
3. Anxiety and its relation with academic scores
4. Obsessive-Compulsive Disorder amongst College Students
5. Panic Disorder caused by Lifestyle choices of College Students
6. The link between Anxiety and Depression amongst college students.

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