

ISSN 2181-8622

Manufacturing technology problems



Scientific and Technical Journal Namangan Institute of Engineering and Technology

INDEX  COPERNICUS
INTERNATIONAL

**Volume 9
Issue 3
2024**



INCOME STRATIFICATION OF THE POPULATION AND OPPORTUNITIES TO INCREASE INCOMES

GANIEV MUHAMMADJON

Associate professor of Namangan Institute of Engineering and Technology, Namangan, Uzbekistan
Phone.: (0899) 461-2802, E-mail.: ganiyevmuhammadjon@mail.ru

Abstract: The article analyzes the sources of population incomes, the purchasing power of incomes, the stratification of incomes and its variability in the conditions of the market economy.

Keywords: Income, real income, distribution in market economy, decile and quintile, funds and Gini coefficient, social policy.

Introduction. The process of establishing market relations in the country is complicated, economic difficulties, unemployment, changes in the production capacity of enterprises (firms), sometimes bankruptcy, and income stratification of the population are considered a natural process along with achieving economic growth. Because, as we know from international experience, it is not possible to smoothly transition to market relations without difficulties and problems. In addition, there is an imperfect competitive environment in the market, and labor relations are constantly changing. In such conditions, it is important to increase the income of the population, reduce the number of poor people in the country, and stimulate their economic activity. For this purpose, through the social policy of the state, conditions are created to increase incomes, reduce poverty, and increase people's activity in work and entrepreneurship.

Methodology & empirical analysis. A number of scientists have conducted research on the issues of increasing the population's income and reducing poverty, as well as the internal and external factors affecting it. Especially in Amartiya Sen's works[1], the reasons for achieving population well-being and the causes of poverty are studied in detail. Also, the Danish scientist Gesta Esping-Anderson[2], the American scientist Jeffrey Sachs[3] and other scientists have researched the issue of population income and poverty in connection with the problems of the existing socio-economic system. In Russia L. Abalkin, P.V. Savchenko, Yu.P. Kokina[4]'s scientific works describe the essence of population income and the reasons for its variability. Some aspects of these issues, specific to Uzbekistan, A.A. Abdug'aniev, Sh.Sh. Shodmonov, Q. Abdurakhmanov, A. Olmasov, Kh.P. Abulkasimov[5], R.R. were reflected in the scientific works of Khasanov[6] and other scientists.

Results. It is known from the world experience that when every country aims for the well-being of the population, the solution of many problems in this regard directly depends on the income earned by the population. The increase in welfare of the population is usually explained by real income. "Daromad" is a Persian word that means "to enter" or "entrance". It means "money", "profit" or "wealth" received in return for an activity [7]. Usually income is measured in money. The most important, advantageous feature of the market economy is that income is not limited. This is in line with human

nature, as man always strives to live well. The main condition of well-being is to have income. The structure of population income can be divided into 4 groups:

1. Earned income of employees (salary, bonus, etc.)
2. Income from business activities
3. Social income (transfer payments, unemployment benefits, etc.)
4. Income from property (interest on deposits, rent, etc.).

Today, nominal, personal income, and real income indicators are used to assess the level and dynamics of the population's income. Nominal income is income in the form of money received by individuals over a period of time. Real income represents the amount of goods and services that can be purchased with a person's disposable income in a certain period of time, and it depends on price changes. In recent years, the total income of the population has been increasing in Uzbekistan (see Table 1). It can be seen from the table that the primary income of households changed unevenly during 2014-2022. First of all, the negative impact of the coronavirus pandemic on the income of the population is observed. Primary income is market income. If the primary income of the population was 80.4 percent in 2014, then in 2022, it will be 70.2 percent and will decrease. Income from production was 78.4 and 67.9 percent, respectively, in the above years.

Table 1. Total income of the population of the Republic of Uzbekistan [8].

No.	Name of indicators	2014	2016	2018	2020	2022
	Total Revenues-Total	100,0	100,0	100,0	100	100
	Including:					
I	Primary income	80,4	84,0	77,5	75,4	70,2
	from which:					
1.	Income from production	78,4	80,9	74,6	73,2	67,9
2	Income from property	1,9	3,1	2,9	2,1	2,4
II	Income from transfers	19,6	16,0	22,5	24,6	29,8

Income from property increased by 0.5% in 2022 compared to 2014. According to the data, the share of income received from transfers in Khorezm and Samarkand regions was more than 30 percent of the total income of the population, while in Navoi region the share of this type of income was low, i.e. 13.5 percent [9].

By its very nature, primary income performs several functions. First, primary income ensures people's livelihoods and reproduce the labor force. Secondly, it encourages a person to improve his potential, earns extra income, arouses the desire to live better than others, and serves economic growth as a financial resource. Thirdly, it leads to a strong but fair differentiation of primary incomes, significantly differentiating the standard of living. Fourth, inequality in primary incomes requires social protection of the population. Characteristics of the primary income depend, first of all, on the development of the private sector in the economy. Because this sector, first of all, provides production for the market[10]. The increase in transfer payments in our country under

the conditions of the transition to a market economy is primarily explained by the fact that the state assumes more social obligations than other sectors. Transfer payments to low-income, poor, single or bereaved families are increasing. Construction of privileged houses for them, increase in the income of budget organizations are among them. In the following years, the property income of the population is also increasing. Table 2

Table 2. Information about the income of the population of the Republic of Uzbekistan.

No.	Name of indicators	2014	2016	2018	2020	2022
1	The total income of the population is bln. Soum	117888,9	185036,5	282762,5	401501,5	634797,0
	in % compared to last year	116,0	116,6	128,1	115,9	122,3
2	Total income per capita, thousand soums	3832,8	5810,0	8580,0	11728,8	17807,3
	in % compared to last year	114,0	114,6	125,9	113,7	119,8
3.	Real total income of the population, bln. Soum	110766,6	175273,8	240587,5	355531,3	569631,0
	in % compared to last year	109,0	110,4	109,0	102,6	109,7
4	Real total income per capita, thousand soums	3601,3	5503,5	7300,2	10385,9	15979,3
	in % compared to last year	107,1	108,5	107,1	100,7	107,3

Source: Annual reports of the State Statistics Agency of the Republic of Uzbekistan

From the data in the table, it can be seen that the general indicators of the population's income have increased in our country. In particular, the total income of the population was 117,888.9 billion soums in 2014, and it reached 634,797.0 billion soums in 2022, or the total income of the population for 8 years was 516,808.1 billion. The total income per capita in 2022 will be 17,807.3 thousand soums, the annual growth rate will be 119.8 percent compared to 2021, and uneven movement of income will be observed, that is, from 114.0 percent to 114.6 percent compared to the previous year from 2014 to 2016. There was an increase of 0.6 percent. From 2018, there was another increase in total income.

The pandemic and its economic consequences have led to a decline in income. The total income per capita of the population increased from 3832.8 thousand soums in 2014 to 11728.8 thousand soums in 2020. Looking at these indicators over a period of 12 months, there are no gratifying big results. In particular, in 2020, the annual income of 11,728,800 soums per capita will be 977,000 soums if divided by 12 months, or 97 dollars if determined by the exchange rate set by the central bank to the US dollar, and this will partially cover the consumption expenses of the population, but will not allow savings.

In the conditions of inflation, the real total income of the population in 2014 was 110,766.6 billion, amounting to 569,631.2 billion soums in 2022. Real total income per capita increased to 3601.3 thousand soums in 2014, and 15979.3 thousand in 2022. In the

conditions of yearly 12-15 percent inflation, it negatively affects the purchasing power of the general per capita income of the population and remains one of the reasons for the increase in the number of poor people in the country.

Based on the analysis and observations, we divided the income level and inflation indicators by regions into 3 groups:

First group: Regions with the highest income per capita. These regions include Tashkent, Navoi and Bukhara regions, where the inflation rate is higher than the general inflation rate of the republic. 30 percent of the total population of the republic lives in these areas. Industrial production is relatively highly developed. The areas are rich in minerals. Gross regional product per capita is ranging from 21.4 million to 37.5 million soums.

The second group: Regions with average income per capita. These regions include households in Khorezm, Tashkent, Syrdarya, Andijan, Jizzakh, Kashkadarya and Samarkand regions. The inflation rate there is almost the same as the general inflation rate in the republic. More than 43 percent of the total population of the republic lives in these areas. Relatively, industrial and agricultural production is developing. The amount of GDP per capita is ranging from 15.5 million to 19.7 million soums.

The third group: Regions with low income per capita. These regions include households in Surkhandarya, Namangan, Fergana and Karakalpakstan regions, where the inflation rate is lower than the general inflation rate in the republic. More than 27 percent of the total population of the republic lives in these areas. The amount of GDP per capita is around 13.1 million to 14.9 million soums. In order to describe the social stratification of the population in Uzbekistan, indicators such as the grouping of the population according to the average per capita monetary income, decile and quintile of the total monetary income of the population, funds and the Gini coefficient are used. The difference in income is called its differentiation and consists of inequality. When analyzing income inequality, households are divided into 5 quintiles (groups) (Table 3).

Table 3. Uneven distribution of incomes of the population of the Republic of Uzbekistan by 20 percent groups of the population. (in % based on household sample observations)

Quintile groups	2017	2018	2020	2022
I	9,3	9,3	8,5	8,6
II	13,6	13,6	13,3	13,1
III	17,3	17,2	17,2	16,8
IV	21,8	22,0	22,6	22,0
V	37,9	37,8	38,4	39,5

Source: Annual reports of the State Statistics Agency of the Republic of Uzbekistan. T: 2023

Households are arranged from bottom to top, i.e. from low income to high income (1st quintile — extremely poor, II-quintile — poor, III-quintile — middle-poor, IV-

quintile — rich, V-quintile — super-rich). The share of households in different quintiles in the total number of households (as a percentage) is compared with their share in total income. This will determine what part of the households received what part of the income. Households in the lower quintiles usually have a smaller share of income. It can be seen from the table, based on the data of sample observations of households, that the share of the 1st quintile – the extremely poor in total income in our country is decreasing from 9.3% in 2017 to 8.6% in 2022. IV — the share of the rich stratum in total income by quintile increased by 0.2% from 21.8% in 2017 to 22.0% in 2022.

The reason for the increase in the income of the population was, firstly, the easing of quarantine measures at the end of 2020 and the restoration of economic activity, secondly, the minimum amount of wages has increased by 10% starting from February 1, 2021 and 2022, and thirdly, the financial incentive payments for employees of budget organizations have been restored since 2021.

Conclusions. In conclusion, in order to reduce poverty in the country, it is necessary to focus on the following issues:

1. Encouraging entrepreneurial activities of the unemployed in the neighborhoods, especially women and young people, included in the "Iron Book".

2. Based on the possibilities of the region, expanding the income opportunities of the unemployed population by allocating land for the cultivation of agricultural products.

3. Income increase can be achieved through self-employment through family business and home development. However, to ensure timely payment of monthly wages to domestic workers in the fields.

4. As one of the important conditions for improving the standard of living of the population and ensuring well-being, attention should be paid to reducing the level of unemployment. In this regard, it is important to conduct an active and effective policy that creates employment opportunities, along with the relevant state bodies, increases the responsibility of citizens, takes into account the personal circumstances of each person, supports those who cannot help themselves, and attracts the resources of society and the private sector for these purposes.

Along with social protection of the unemployed in our country, the activity of the state in managing the labor market is increasing significantly in the next two years. First of all, this is clearly visible in the support and encouragement of citizens' labor and business initiatives, in the provision of social guarantees in the field of employment, and in the complete abolition of forced labor.

References:

1. Sen A. The Idea of Justice. - M.: Monograph, Gaidar Institute Publishing House; Liberal Mission Foundation, 2016. - 520 p. - ISBN 978-5-93255-457-9.

2. Esping-Andersen, Guest (1990). Three Worlds of Welfare Capitalism. Monograph, Princeton University Press. ISBN 9780069028573 .

3. Jeffrey Sachs. The End of Poverty: Economic Opportunities for Our Time. - M.: Gaidar Institute Publishing House, Monograph, 2011. - 424 p.
4. Savchenko P.V., Kokina Yu.P. et al. Income and Wage Policy. - M.: Jurist, 2002 (Monograph).
5. Abulkosimov Kh.P. Shakllanayotgan bozor iktisodiyotida inson omili va uni faollashtirish yo'llari. – T: Monograph, TMI, 2005. – 203 b.
6. Khasanov. R.R. Bozor daromadlari: mohiyati, tarkiby tuzilishi va tabakalanishi. Tashkent: Monograph: TMI, 2004. -192 b.
7. Tozhiboeva D. Iktisodiyot nazariyasi. -T.: 2003 yil, O'quv q'llanma, ikkinchi kitob, 330-b.
8. Uzbekistan Republic and statistics q'ymitasining yillik hisobotlari. T.: 2019
9. Uzbekistan Republicsining izhtimoiy-iktisodiy holati. Uzstat. –T.; 389 - b.
10. Khasanov R.R. Shakllanayotgan bozor munosabatlari tizimida daromadlar va ularning tabakalanishi. Iqtisodi fanlari ilmiy darazhasini olish uchun yozilgan dissertation abstract. - T.; 2005, 21-b.

C O N T E N T S

PRIMARY PROCESSING OF COTTON, TEXTILE AND LIGHT INDUSTRY

Dadadzhonov Sh., Akhunbabaev O., Muxamadrasulov Sh., Akhunbabaev U., Erkinov Z.	3
Practice of production of polycomponent threads from a mixture of natural and chemical fibers	
Korabayev Sh.	13
Determining the direct resistance coefficient of cotton fiber in the confuser tube	
Kulmatov I.	19
Study of a new technological equipment for cleaning cotton raw materials from gross pollution	
Musayeva L., Polatova S.	24
Choosing the main features of special clothing for riders, taking into account the requirements of consumers	
Djurayev A., Khudayberdiyeva M., Urmanov N.	31
Kinematic analysis of a cam mechanism with elastic elements of the mechanism with elastic elements of paired cams of a boel mechanism of a weaving loom	
Rakhmonov H., Matyakubova J., Sobirov D.	41
Analysis of the influence of the filling coefficient of the screw cleaner system with seeded cotton on the current consumption of the system	
Madrahimov D., Tuychiyev Sh.	48
Impact of saw spacing on lint removal efficiency and quality in the linting process	
Monnopov J., Kayumov J., Maksudov N.	53
Analysis of mechanical properties of high elastic knitted fabrics for sportswear design	
Kamolova M., Abdulkarimova M., Usmanova N., Mahsudov Sh.	59
Study of the Prospects for the Application of Digital Technologies in the Fashion Industry in the Development of the Creative Economy	
Ergasheva R., Khalikov K., Oralov L., Samatova Sh., Oripov J.	71
Comprehensive assessment of two-layer knitted fabrics	

GROWING, STORAGE, PROCESSING AND AGRICULTURAL PRODUCTS AND FOOD TECHNOLOGIES

Aripov M., Kadirov U., Mamatov Sh., Meliboyev M.

Experimental study of sublimation drying of vegetables by applying ultra – high frequency electromagnetic waves	74
Alamov U., Shomurodov D., Giyasova N., Zokirova Sh., Egamberdiev E.	81
Chemical composition analysis of miscanthus plant leaves and stems	81
Vokkosov Z., Orifboyeva M.	88
Production of technology for obtaining oil from peanut kernels and refining the oil obtained in short cycles	88
Khalikov M., Djuraev Kh.	95
The importance of systematic analysis in the drying process of fruit and vegetable pastilla	95

CHEMICAL TECHNOLOGIES

Kuchkarova D., Soliyev M., Ergashev O.	101
Production of coal adsorbents by thermochemical method based on cotton stalks and cotton shells and their physical properties	101
Askarova D., Mekhmonkhonov M., Ochilov G., Abdikamalova A., Ergashev O., Eshmetov I.	108
Some definitions about the mechanism of public-private partnership and its role in strengthening the activities of business entities and small businesses	108
Ganiyeva N., Ochilov G.	117
Effect of bentonite on benzene vapor adsorption in order to determine the activation conditions of log bentonite	117
Kayumjanov O., Yusupov M.	122
Synthesis of metal phthalocyanine pigment based on npk and calculation of particle size using the debye-scherrer equation	122
Mukumova G., Turaev Kh., Kasimov Sh.	127
Sem analysis and thermal properties of synthesised sorbent based on urea, formaldehyde, citric acid	127
Amanova N., Turaev Kh., Beknazarov Kh., Sottikulov E., Makhmudova Y.	133
Corrosion resistance of modified sulfur concrete in various aggressive environments	133
Eshbaeva U., Alieva N.	141
Study of the effect of adhesive substances on paper strength properties	141
Turayev T., Bozorova G., Eshankulov N., Kadirov Kh., Dushamov A., Murtozoeva Sh.	146
Cleaning of saturated absorbents used in natural gas cleaning by three-stage filtration method and analysis of their properties	146

Muxamedjanov T., Pulatov Kh., Nazirova R., Khusenov A.	158
Obtaining of phosphoric cation-exchange resin for waste water treatment	

MECHANICS AND ENGINEERING

Abdullaev A., Nasretdinova F.	165
Relevance of research on failure to power transformers, review	

Muhammedova M.	173
Anthropometric studies of the structure of the foot	

Sharibayev N., Nasirdinov B.	181
Measuring the impact of mechatronic systems on silkworm egg incubation for premium silk yield	

Abdullayev L., Safarov N.	189
Electron beam deposition of boron-based coatings under vacuum pressure and experimental results of nitrogenation in electron beam plasma	

Kadirov K., Toxtashev A.	195
The impact of electricity consumption load graphs on the power	

Makhmudov I.	204
Theoretical basis of the methodology of selecting wear-resistant materials to abrasive corrosion	

Adizova A., Mavlanov T.	209
Determining optimal parameter ratios in the study of longitudinal vibrations of threads in weaving process using a model	

Turakulov A., Mullajonova F.	215
Application of the dobeshi wavelet method in digital processing of signals	

Djurayev Sh.	222
Analysis and optimization of the aerodynamic properties of a new multi-cyclone device	

Djurayev Sh.	228
Methods for improving the efficiency of multi-cyclone technology in air purification and new approaches	

Ibrokhimov I., Khusanov S.	236
Principles of improvement of heavy mixtures from cotton raw materials	

Utaev S.	241
Results of a study of the influence of changes in oils characteristics on wear of diesel and gas engine cylinder liners	

Abduvakhidov M.	249
Review of research issues of determination of mechanical parameters of compound loading structures and working bodies	

Abduvakhidov M.	256
Equilibrium analysis of flat elements of the saw working element package	

Kudratov Sh., Valiyev M., Turdimurodov B., Yusufov A., Jamilov Sh.	
Determining the technical condition of diesel locomotive diesel engine using diagnostic tools	262
Juraev T., Ismailov O., Boyturayev S.	
Effective methods of regeneration of used motor oils	269
Umarov A., Sarimsakov A., Mamadaliyev N., Komilov Sh.	
The oretical analysis of the fiber removing process	276
Tursunov A.	
Statistical evaluation of a full factorial experiment on dust suppression systems in primary cotton processing facilities	282
ADVANCED PEDAGOGICAL TECHNOLOGIES IN EDUCATION	
Yuldashev A.	
Historical theoretical foundations of state administration and the issue of leadership personnel	294
ECONOMICAL SCIENCES	
Israilov R.	
Criteria, indicators and laws of small business development	299
Eshankulova D.	
Demographic authority and its regional characteristics	305
Kadirova Kh.	
Assessment of the efficiency and volatility of the stock market of Uzbekistan	310
Mirzakhlikov B.	
Some definitions about the mechanism of public-private partnership and its role in strengthening the activities of business entities and small businesses	316
Ganiev M.	
Income stratification of the population and opportunities to increase incomes	321
Aliyeva E.	
Assessment of innovation activity enterprises using the matrix method	327
Azizov A.	
Industry 4.0 challenges in China	335
Azizov A.	
Industrie 4.0 implementation challenges in Germany	341