IMPACT ANALYSE OF GINI-INDIX AT REAL LEVEL OF POPULATION'S WELFARE

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The article is part of research on the actual indicator of the «Gini-Coefficient» as a determinant of the level of well-being of the population. The work uses sources of national and foreign statistical committee's and data-banks, annotations and researches carried out in the study field.

Keywords: coefficient-gini; population income; cross-sectoral analysis; EEC.

АНАЛИЗ ВЛИЯНИЯ ИНДЕКСА ДЖИНИ НА РЕАЛЬНЫЙ УРОВЕНЬ БЛАГОСОСТОЯНИЯ НАСЕЛЕНИЯ

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Статья является частью исследования о действительности показателя «Коэффициент Джини», как определителя уровня благосостояния населения. За основу статьи взяты дата-банки, национальные и зарубежные статистические комитеты, приведенные к ним комментарии, аннотации и исследования, проведенные в исследуемой области. Статья представлена на русском и английском языках.

Ключевые слова: коэффициент Джини; доходы населения; межотраслевой анализ; ЕЭК.

One of the main statistical indicators of the degree of distribution of the wealth of a society in a country or region by income is the Gini coefficient, measured from 0 to 1, where «0» means achieving complete equality, and «1» is absolute inequality. In the macroeconomic analysis of countries and regions, this coefficient shows the differentiation of the monetary income of the population in the form of the degree of deviation of the actual distribution of income from their absolutely equal distribution among the residents of the country or region in question. It should be noted that the Gini coefficient has both advantages and disadvantages.

In the analysis of the Republic of Belarus on the dynamics of the Gini coefficient, despite its cyclical rises in 2012, 2016, and 2018, it can be characterized as a gradual movement towards the «equalization» of the socio-economic situation of the population (Chart 1).

In the EAEU member states, the Gini coefficient for the Republic of Belarus is the lowest in relation to the partner countries of the Eurasian Economic Union (hereinafter referred to as the EAEU). The closest to the value of this index is Kazakhstan, where the Gini coefficient was 0.290 in 2019, while Russia, on the contrary, has the highest coefficient-0.411 (Chart 2).

Today, the lowest Gini coefficient among the countries of European Union is Slovakia, where the level of socio-economical stratification is lower that in Belarus and is 0.228. The country with the highest level of stratification is Bulgaria, the Gini-coefficient there is at about 0.408, i.e. actually at the level of the value of this coefficient in Russia

Next chart 3 show dynamics in European Union since 2005 to 2019. As it seen at the Chart 3 index is between 0,29 and 0,31, and for individual countries, the coefficient corridor ranged from 0.26 to 0.33. Growth of EU-Memberships in 2005 and the consequences of the 2008-2009 crisis did not have a significant impact on the dynamics. At the same time, the social wealth and population of the EU has increased significantly.

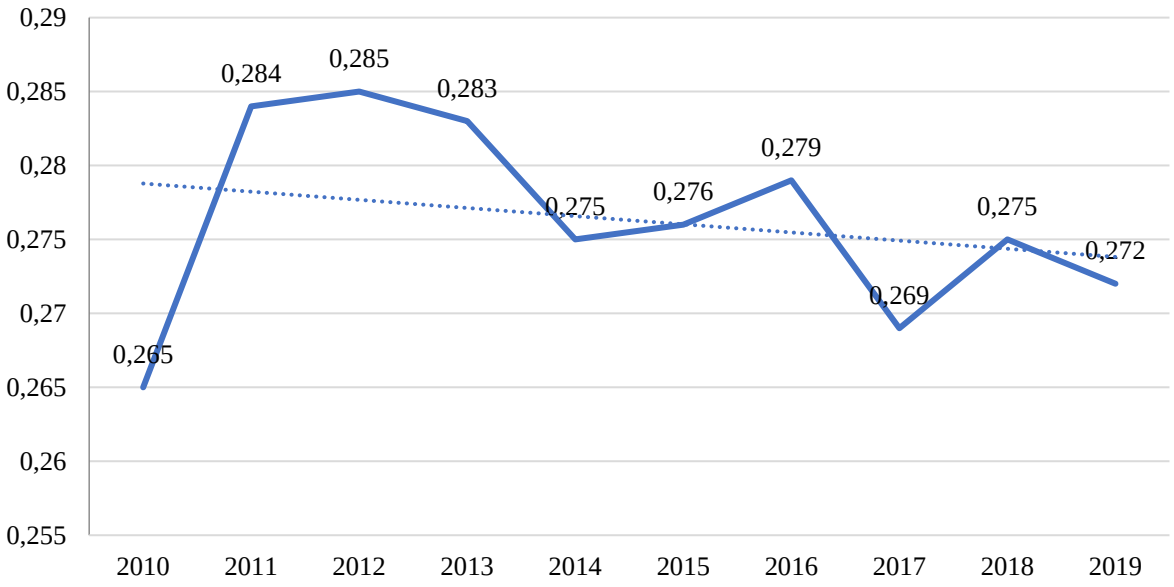

Chart 1 – Gini-coefficient dynamic in Republic of Belarus

Source: Statistical data from Eurasian Economic Commission [2].

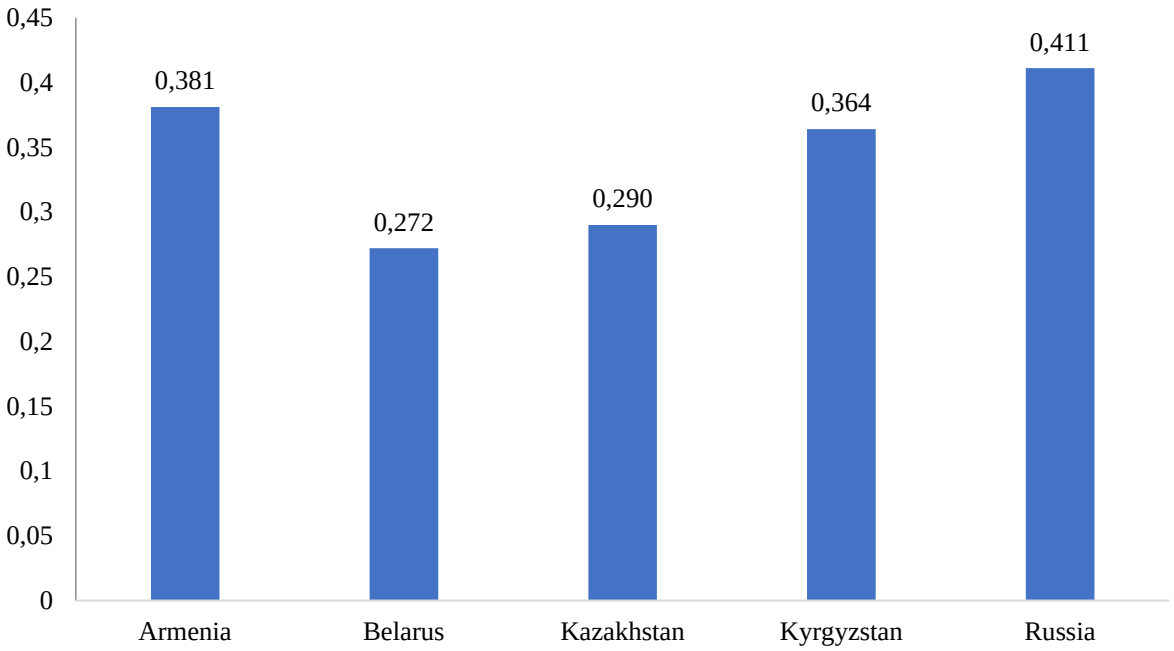

Chart 2 – The value of the Gini coefficient in the EAEU Members States in 2019

Source: Statistical data from Eurasian Economic Commission [2].

As can be seen from the above statistics: neither in Belarus, nor in Western countries-there is no special run-up and sharp changes in the Gini coefficient. For a clear understanding of the level of social stratification in conjunction with the Gini coefficient, we will consider the structure of changes in the monetary income of the population of the Republic of Belarus over a 10-year period (Chart 4).

A positive trend is the growth of monetary incomes of the population for the period from 2016 to 2019 by 34.63%. Negative – the nominal average monetary income of the population did not exceed the amount of US$ 451 over the past 10 years.

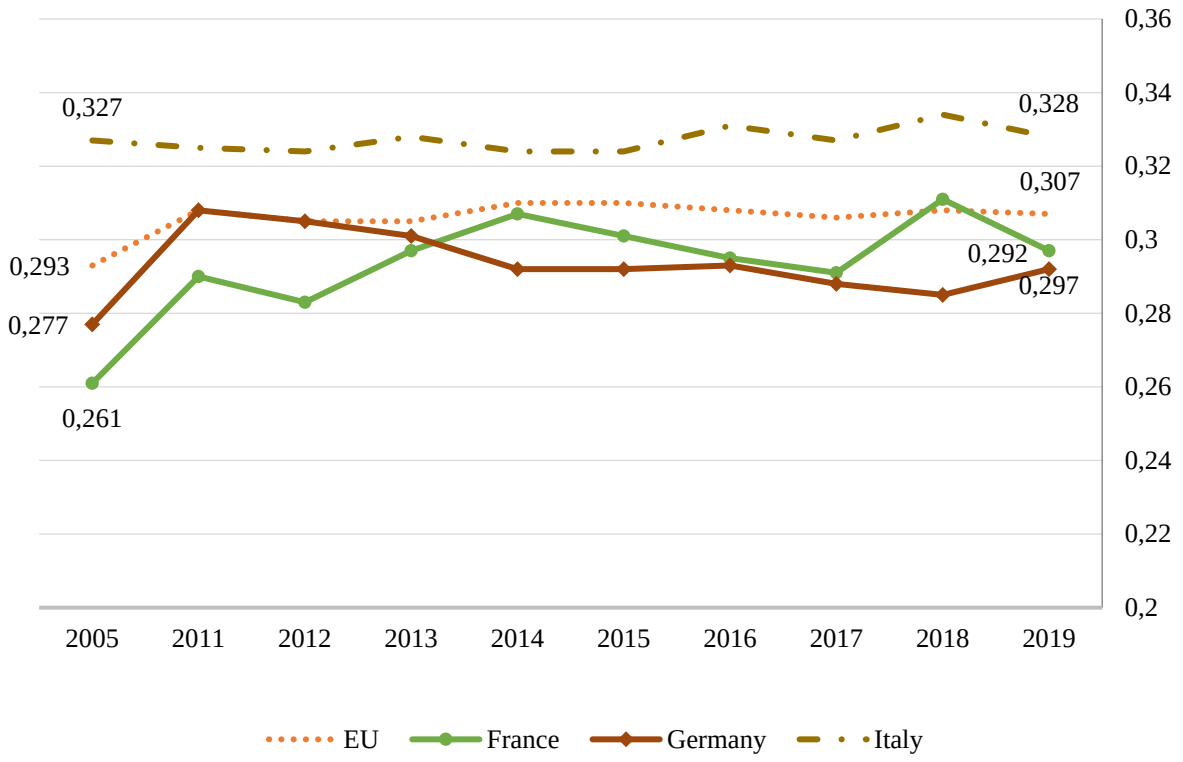

Chart 3 – Dynamics of the Gini coefficient of the leading EU countries

Source: authors own development based on Eurostat data [3].

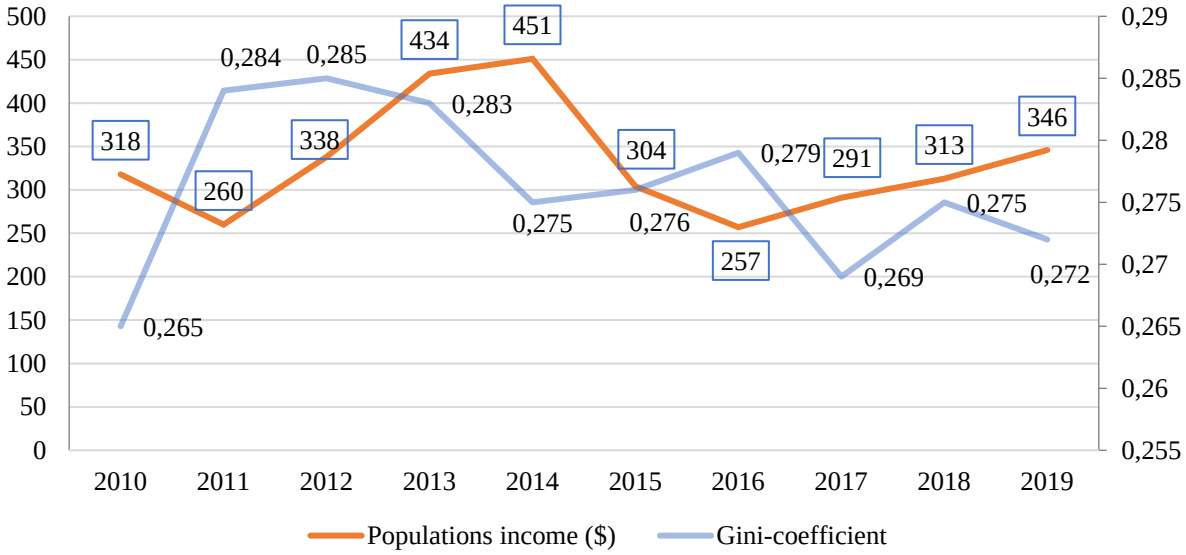

Chart 4 – Dynamics of money income of the population in the Republic of Belarus

Source: Statistical Data from Belstat [1].

To determine the validity of the Gini coefficient in the Republic of Belarus, we will refer to the data on the number of employees and the level of wages for individual sectors of the economy and conduct an analysis according to the set of statistical data for economic sectors and classify them as subjects with a certain level of wages with a step interval of 400 BYN.

Table 1 – Statistical data on the number of employees and the nominal accrued average salary by type of economic activity (sort by min to max nominal accrued average salary)

Industry	Number of employees	Nominal accrued average salary	Summary income of industry
Textiles, textile products, leather and footwear	83 425	732,5	61108812,5
Temporary accommodation and food services	76 659	732,9	56183381,1
Education	414 108	774,3	320643824,4
Agriculture, hunting, forestry and fishing	309 619	787,1	243701114,9
Other services	31 792	798,5	25385912
Administrative and support service activities	84 188	829,1	69800270,8
Arts, entertainment and recreation	69 850	833,3	58206005
Retail, without vehicles and bikes	278 134	834,4	232075009,6
Health and social services	308 394	852,8	262998403,2
Manufacture of pulp, paper, products, printing and publishing	62 981	905,6	57035593,6
Real Estate	36 100	953,9	34435790
Water supply; sewerage, waste management and remediation activities	34 690	965,7	33500133
repair of motor vehicles and motorcycles	432 876	977,2	423006427,2
Manufacture of rubber and plastics products, and other non-metallic mineral products	77 890	1 012,40	78855836
Wholesale and retail trade, repair of motor vehicles and motorcycles	34 566	1 035,20	35782723,2
Food products, beverages and tobacco	138 157	1 053,90	145603662,3
Transportation and storage	241 795	1055	255093725
Production of other finished products; repair, installation of machinery and equipment	66 427	1 061,10	70485689,7
Electrical and optical equipment	31 657	1 088,40	34455478,8
Manufacturing industry	738 968	1 112,10	821806312,8
Manufacturing	875 641	1 125,50	985533945,5
Production of machinery and equipment not included in other groupings	86 010	1 155,30	99367353
Construction	204 156	1 159,10	236637219,6
Electricity, gas, steam and air conditioning supply	91 370	1 209,90	110548563
Transport Equipment	43 806	1 218,70	53386372,2
Metallurgical production. Manufacture of finished metal products, other than machinery and equipment	57 712	1 227,70	70853022,4
Production of computing, electronic and optical equipment	19 396	1 273,70	24704685,2
Wholesale trade, excluding trade in cars and motorcycles	120 176	1291,1	155159233,6
Public Administration	174 469	1 321,00	230473549
Production of basic pharmaceutical products and pharmaceutical preparations	10 365	1 330,60	13791669
Professional, scientific and technical activities	92 143	1435,2	132243633,6
Finance and Insurance	58 627	1713,8	100474952,6
Production of coke and refined petroleum products	13 057	1 820,90	23775491,3
Production of chemical products	48 085	1 838,00	88380230
Mining and quarrying	10 613	1 854,80	19684992,4
Information and Communication	100 763	3178,8	320305424,4
Total	**3 511 180**	**1 092,90**	**3837368622**

Source: the author's own development based on the statistical data of the National Statistical Committee of the Republic of Belarus-Belstat [1].

Thus, we will form the following cluster of subjects, where «X» is the conditional value of the interval (Table 2).

The analysis showed that the Gini coefficient is valid for the Republic of Belarus, most of the working-age population receives wages in the range from 700 to 1100 BYN, while the number of industries whose subjects are citizens is 19. The higher level of profitability accounts for 12 industries. To the highest, there are only 5.

Table 2 – Summary analysis of the indicators shown in table 1

Interval	Total number of employees	Total income in economic sectors
X ∈ [700;1100]	2 813 308	2 498 357 792
X ∈ [1100;1500]	2 514 212	2 934 505 559
X > 1500	231 145	4 389 989 713

Source: author's own development.

Compared to 2017, the number of low-income industries increased by 2, while the number of medium-income industries decreased by 2. The number of high-income industries did not change. Total revenue, which has changed enormously in the high-tech sector, has actually grown by 4bn. BYN.

With the exception of certain industries, such as «Education» and «Health and Social Services», the distribution of wages looks like a structure based on the knowledge and skills necessary to perform a particular activity. Thus, a large share in the intervals from 1100 to 1500 BYN is occupied by industrial sectors, which are mainly domestic activities.

The next stage is occupied by industries that operate primarily in the interests of attracting foreign capital, as well as industries associated with high health risks.

Based on the above, it can be determined that the economy of the Republic of Belarus is developing at a uniform pace, as evidenced by the relatively high level of the Gini coefficient. If it were lower, the stratification of the population would be more deeply traced in the level of wages and the quality of services provided. As part of the long-term planning, it can be noted that the ratio will decrease, as new jobs appear on the market for highly qualified employees, whose wages will definitely be higher than the current median.

In the alternative case, that is, a decrease in the value of this coefficient, it will be possible to indicate the outflow of highly qualified personnel to lower-level industries, which is unlikely in the case of the Republic of Belarus. Or in the case of intelligent migration, which is most likely.

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АНАЛИЗ ВЛИЯНИЯ ФАКТОРОВ, ВОЗДЕЙСТВУЮЩИХ НА ПРИТОК ПИИ В СТРАНУ

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Данная работа выполнена студентом 4 курса, специальности экономика. В работе рассмотрены основные характеристики предприятия, виды деятельности. Проведен анализ финансового состояния и сделаны соответствующие рекомендации для улучшения показателей. Также рассмотрены факторы, влияющие на приток прямых иностранных инвестиций в страну.

Ключевые слова: иностранные инвестиции; ПИИ; SWOT-анализ.