ANALYSIS OF INDICATORS OF INCOME INEQUALITY IN IRAQ 2004-2020

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ABSTRACT

The inequality in the distribution of income is one of the most important topics that economic researchers have dealt with on a large scale because of its close relationship to the livelihood of individuals, and their daily life, and on the other hand it is one of the goals of economic development. It turns out that, the path of revenues and public expenditures for the Iraqi economy has fluctuated during the research period .It has been noticed that, Gini coefficient curve recorded its highest point in 2005 as it reached (0.42) while public expenditures were (26374) Billion dinars this is consistent with economic theory; Because the decrease in public expenditures contributes to the increase in income inequality due to the change in the political system and the security turmoil in that year, while the Gini coefficient recorded its lowest point in 2015 as it reached (0.23) while expenditures decreased in that year to reach (70,396).) billion dinars, and this contradicts the economic theory.

Keywords: Gini coefficient, Lorenz Curve, income disparity.

Introduction

The disparity in the distribution of income is one of the topics that occupied a special place among economists, politicians and socialites since ancient times, and all religions came to point out the differences in the distribution of wealth among human beings, and the ways through which they can be addressed and the formation of more just societies, there is still the problem of inequality that attracts attention and research. Researchers focused on the topic of achieving more justice in the distribution of income, whether in developed and developing countries. The great disparity between the groups of society and the concentration of income among a small group of individuals, and the majority of people are deprived and severely poor, and this has serious repercussions, as the disparity in income has negative effects and social, economic and political problems. Therefore, addressing the problem of inequality requires officials to adopt economic policies and programs aimed at reducing inequality, which in turn requires the availability of indicators related to inequality. To achieve this goal, the current study focuses on the analysis of income inequality indicators, using the Lorenz curve and Gini coefficient analysis.

Research problem:

That the Iraqi economy went through conditions and problems that were reflected in the course of things in a way that cast a shadow on the standard of living of the majority of the Iraqi society, which contributed to deepening the disparity in the distribution of income in society, and this is clear through the circumstances experienced by the Iraqi individual.

Research Objective: The research aims to achieve a number of goals, the most prominent of which are the following:

1- Understand the disparity in the distribution of income in terms of concept, importance and methods of distributing and measuring inequality.

2- Analysis of income inequality indicators through the use of the Lorenz curve and Gini coefficient.

Research hypothesis: The political and economic changes during the research period have a clear impact on increasing income inequality.

he importance of the research: The importance of the research lies in explaining the impact of inequality in the distribution of income on achieving justice in the distribution between social classes and its reflection on the level of community welfare.

The first axis: the concept, importance, methods of distribution and

Indicators of income inequality

First: the concept of income distribution:

Distribution from the linguistic point of view means: division and emptying, i.e.: distribute something, distribute it in distribution, if he divides it and divide it, and they share: it means distribute the thing among themselves. Wages, rents, profits and benefits, as a result of their contribution to production processes (**Ibrahim, 2021: 493-520**).

The national income is one of the measures by which one can know the national economi growth, and there are several definitions of income known by a group of researchers, the most important of which are:

National income: It is a measure of the values of goods and services produced by the factors of production in society. National income cannot be equal to the total income of individuals, but rather represents the income and returns of the factors of production (**Abdul Razzaq, 2015: 431-448**)

Income is also defined as the sum of profits, rents, salaries, wages and interest payments received by the owners of production in a specific period of time (**Case & Fair, 2007:54**).

There are those who see that income: the acquisition of returns by the factors of production in exchange for their contribution to the production process, so that the worker receives the wage, the land receives the rent, the regulator receives profits, and the capital receives interest (**Rangelova, 2008; 7**).

Based on the foregoing, income can be defined as the sum of what an individual earns from the ongoing production services that he performs by himself or through what he owns of other production factors during a period that is usually one year.

Second, the importance of income distribution

The importance of income distribution going off from being one of the basic issues that govern the functioning and development of society. The convergence of views among members of society on this issue has implications for the stability and social cohesion of society, while the difference in individuals' view of inequality affects saving, credit, consumption, growth and development in the long run. The long term leads to the deepening of contradictions in society and its division into a rich class capable of satisfying its various needs due to the concentration of wealth in it, and a poor class unable to achieve this, which leads to an imbalance in the system of social values, and due to the increasing concern for the fair distribution of incomes and wealth because it is an important human and social issue In itself and in view of the complementarity between the development of national income and the fairness of its distribution at times, and the conflict between them at other times, as they are two of the main objectives of economic development, as studies concerned with the issue of inequality in income distribution consider that corruption has a significant impact, both at the individual level or at the collective level, by increasing rates Poverty and this is of great importance, especially in developing countries, given that the disparity in the distribution of income affects the livelihood of individuals and affects work Productivity (**Affan, 2018: 31-84**).

Third: Methods of Income Distribution:

1-: job distribution of income

It means the distribution of national income to members of society according to their participation in the production process. A person's income depends on the factors of production he owns, as the prices of production factors are determined as a result of the interaction between supply and demand on various of those factors. In other words, the productive element is the one who gets the income, not the person. Work as a productive element gets its share of income, which is the wage, and the same case for the rest of the elements, the distribution here is the process of dividing the benefits realized from joint production among the factors of production, and it turns out here that there is a relationship between the laws of distribution and the laws of production, which resulted in the elements of production becoming More important than the importance of its owners, the owner follows ownership, and the production process is a coordination between the elements of production, and distribution theories are concerned with the elements of production and their share without paying attention to the interrelationship of those elements with each other, for example, the wages of workers in the manufacture of smart devices differ from the wages of workers in the clothing industry (**Athamna, 2010: 65-79**).

2-: Personal Distribution of Income:

It means the distribution of national income to all members of society, regardless of whether or not they contribute to the production process. Capital or through retirement salaries, subsidies, work, or any other form of transfers, and this distribution shows the size of the individual income from the gross domestic product in addition to the category to which he belongs, as well as clarifying the reasons for the disparity in income, and this type of distribution has gained great importance In the developed countries, it emerged as a result of

the crises experienced by those countries, where the state's intervention in economic life became a necessary thing to work on redistributing income (**Jassim and Abd, 2015: 333-350**).

Fourth: Indicators of Measuring Disparity in Income Distribution:

Disparity in income distribution can be defined as a numerical depiction of the differences between the incomes of individuals in a particular society, that is, the different characteristics of inequality are summed up by a single number, and one of the most important advantages of a single number is that it answers the following questions: Is the income distribution in a particular country worse or better than it was in previous years? And does the fiscal policy through its financial tools such as taxes and public spending lead to an increase or decrease in the inequality in the distribution of income? This can be clarified through the use of a set of Indications, including (**Al-Fares, 2001: 100**):

1-: Lorenz Curve

It is one of the most widely used graphic forms to express the size of inequality in the distribution of income or wealth, and one of the most important uses in analyzing family income data, to show the extent of fair distribution of incomes, and interest in this indicator has increased in recent years after it was found that the economic growth witnessed by developing countries was accompanied by a rise in Inequality in the income distribution, and it is used to express the fairness of the distribution on the one hand, in addition to its association with a number of many measures of inequality (inequality) derived from it (the Kuznets and Gini coefficient and the coefficient of variation).
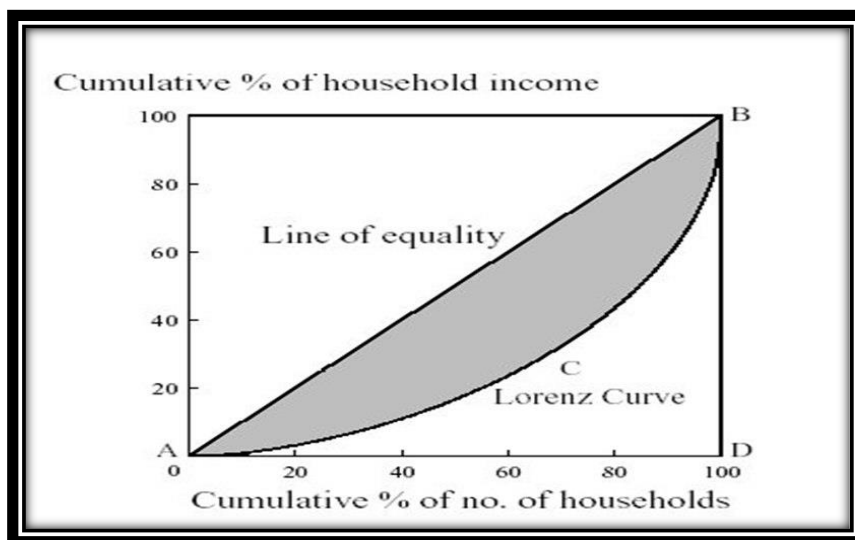

Figure 1: Lorenz curve

Source: From the researcher's work based on**:**

- Barihi, Faris Karim and Rady, Hassan Khalaf (2018) Measuring the inequality in the distribution of individual income and expenditure in the governorates of Iraq using the

Gini index according to the 2012 household survey census, Journal of Baghdad College of Economics, No. 54, p. 177.

There are two cases of equitable income distribution using the Lorenz curve (**Heggy, 2014: 248-265**):

The first case: If the Lorenz curve falls on the guide line, and this means that equality is fair in the distribution of incomes and this is rare, and the closer the curve line is to the guide line, this indicates a fair distribution.

The second case: If the distribution on the curve is below the guide line, then this curve is the Lorenz curve of unfair distribution, and the larger the gap between the curve and the guide line, the more it proves that there is no fairness in the distribution of income and vice versa.

2-: Gini Coefficient

The Italian mathematician (Ginni) proposed, based on the Lorenz curve, a measure of the degree of inequality in the distribution of incomes, expressed by the area between the Lorenz curve and the guide line divided by the total area that lies below the guide line as in Figure (1-1), and the value of the Gini coefficient confined between (0 and 1) and whenever the value of the Gini coefficient is close to zero, it is a good indicator of the fairness of the income distribution. The Gini coefficient increases with increasing inequality in the distribution and decreases with its decrease. It can be found according to the following formula (**Ahmed, 2010: 278-307**):

$$\text{Gin} = 1 - \frac{1}{10000}\sum_{i=1}^{n}(S_i + S_{i-1})W_i \quad \text{--------------(1-1)}$$

Whereas, Gin = value of the Gini coefficient, S_i: the ascending cumulative frequency of the income percentages for class (i),

S_{i-1}= Ascending cumulative frequency of income percentages for the previous category for (i),

W_i = the relative frequency of the number of individuals in class (i), n = the number of classes

The second axis: measuring income inequality in Iraq

The Lorenz curve shows the relationship between the income ratios and the available population ratios during a given year. The disparity in the distribution of income between individuals in Iraq can be measured through the Lorenz curve, which aims to clarify the justice and severity of the inequality in the distribution of income between individuals, and through the statistical surveys of the Central Agency for living conditions. The application of the Lorenz curve for three years during the research period, in order to provide the data required to draw that curve, as follows:

First: Lorenz curve to measure the inequality in the income distribution for the year (2005):

The Lorenz curve, which measures the severity of the inequality in the distribution of income between individuals and with the aim of applying the curve and based on the statistical surveys

of the Central Statistical Organization for the year 2005 in Iraq, the income ratios, household ratios and the cumulative ratio of income can be clarified through Table (1) and as follows:

Table 1: Percentages of income and households in Iraq for the year (2005)

family lineage%	10	20	30	40	50	60	70	80	90	100	
Income Ratios%	1.5	4.1	5.7	7.2	9.0	10.6	12.2	14.1	16.6	19.1	100
Cumulative percentages of income	---	1.5	5.6	11.3	18.5	27.4	38.0	50.2	64.3	80.9	

Source: From the researcher's work based on Appendix (1)

Referring to the data in Table (4), which shows the values of the Gini coefficient, we find that the value of the Gini coefficient is high for the year (2005) as it reached (0.42), and that year was characterized by a high degree of disparity in income between individuals in that year, through Table (1) a curve can be drawn Lorenz by finding the cumulative ratios of the population and the cumulative ratios of income, as shown in Figure (2) as follows:
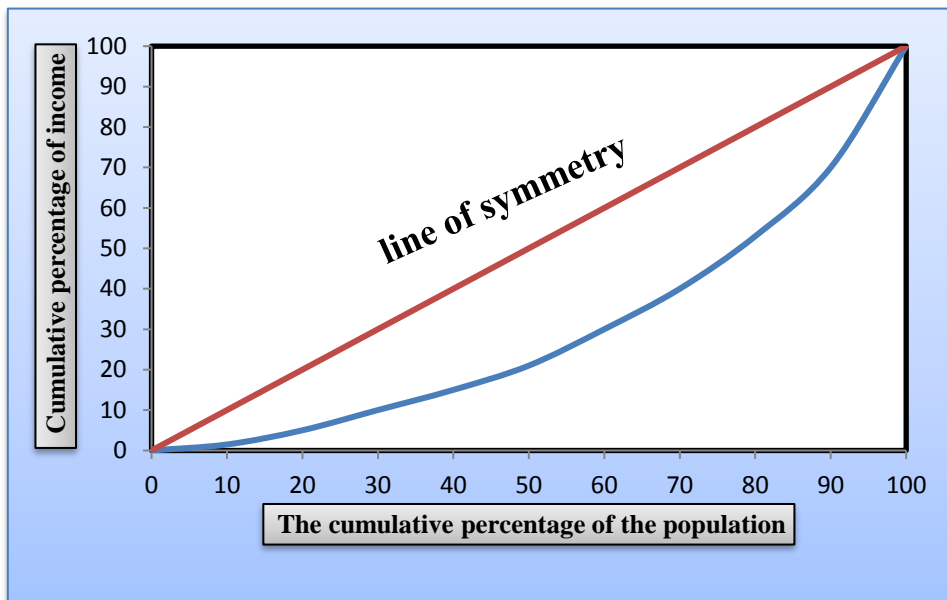

Figure 2: Lorenz curve to measure the inequality in the distribution of income in Iraq for the year (2005)

Source: From the researcher's work based on the data in Table (1).

Through Figure (2), we find that the distance between the line of symmetry and the Lorenz curve represents the value of the Gini coefficient (0.42). When focusing on the drawing, we find that (30%) on the horizontal axis of the population receive (10%) of the income on the vertical axis, which Cumulative percentages of income and this is evidence that the lower groups have a low income when compared to the higher groups for the year (2005).

Second: Lorenz curve for measuring inequality in income distribution (2007)

When referring to the data in Table (4), we find that the value of the Gini coefficient amounted to (0.33) which is less than the value of the Gini coefficient for the year (2005), and this means that the disparity in the distribution of income is less, and through the statistical surveys of the Central Statistical Organization for the year (2007), which concern the percentages of Income and population ratios shown in Table (2) below:

Table 2: Percentages of income and households in Iraq for the year (2007)

family lineage%	10	20	30	40	50	60	70	80	90	100	
Income Ratios%	1.8	3.6	5.5	7.3	9.1	10.9	12.7	14.5	16.4	18.2	100
Cumulative percentages of income	---	1.8	5.4	10.9	18.2	27.3	38.2	50.9	65.4	81.8	

Source: From the researcher's work based on Appendix (2)

Depending on the data in Table (2), the Lorenz curve (2007) can be drawn, which measures the degree of inequality in the distribution of incomes among individuals through graph (3), as follows
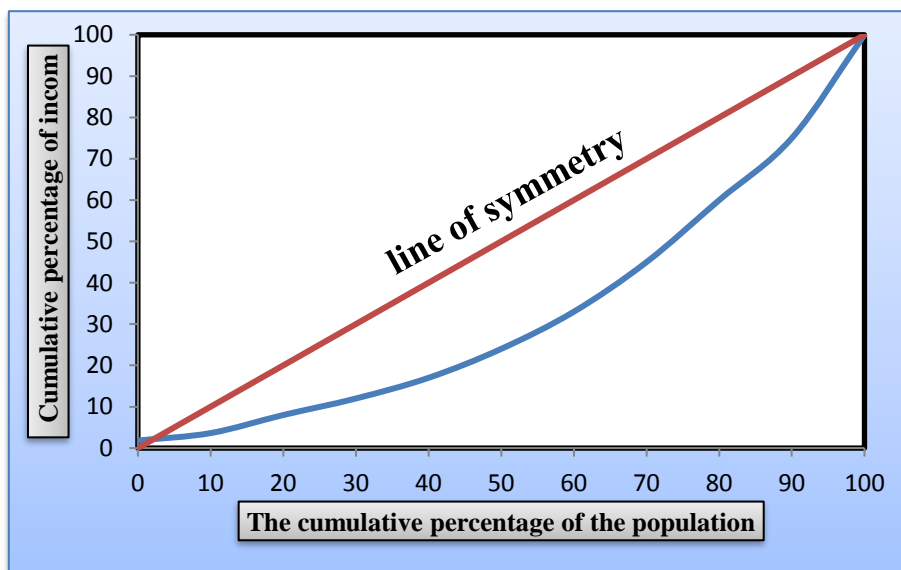

Figure (3) Lorenz curve to measure the inequality in the distribution of income in Iraq for the year (2007)

Source: From the researcher's work based on the data in Table (2).

Figure (3) above shows that (30%) of the lower groups receive (12%) of the income, and this percentage is high if compared to the percentage of the year (2005), as it is noted that the lower groups receive higher income in (2007) than in (2007) Hoehleh in (2005), and that the distance between the line of symmetry and the Lorenz curve is less, and therefore the closer the Lorenz curve to the line of symmetry, this indicates justice in the distribution of incomes among individuals.

Third: Lorenz curve for measuring inequality in income distribution (2011)

Referring to the data in Table (4), which includes the values of the Gini coefficient for the duration of the research, it is clear that the inequality in the distribution of income decreased in (2011), as it is noted that the value of the Gini coefficient (0.31) and therefore the lower groups will get a higher income than the years (2005 and 2007), which The Lorenz curve has been applied to it in this study, and we can show the income and household ratios for the year (2011) through Table (3) as follows:

Table 3: Percentages of income and households in Iraq for the year (2011)

family lineage%	60	80	100	120	140	160	180	200	400	400 or more	
Income Ratios%	3.1	4.1	5.2	6.2	7.2	8.2	9.3	10.3	20.6	25.8	100
Cumulative percentages of income	---	3.1	7.2	12.4	18.6	25.8	34.0	43.3	53.6	74.2	

Source: From the researcher's work based on Appendix (3).

Relying on the data in Table (3), it is possible to draw a Lorenz curve to measure the disparity in the income distribution for the year (2011), which shows us the degree of severity of inequality that exists between the groups of Iraqi society, as shown (4) as follows:
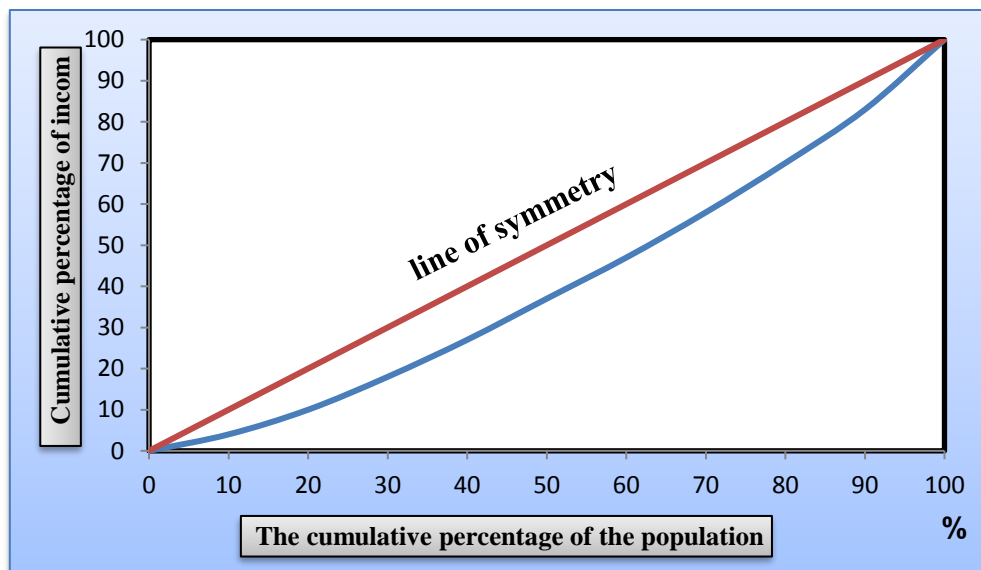

Figure 4: Lorenz curve to measure the inequality in the distribution of income in Iraq for the year (2011)

Source: From the researcher's work based on the data in Table (3).

It can be seen from graph (4) of the Lorenz curve, which includes two axes, the vertical axis represents the percentages of income, while the horizontal axis represents the relative distribution of the population divided by the line of symmetry, and that the area between the line of symmetry and the Lorenz curve is a small area and close to the line of symmetry, and that (30%) of the lower groups receive (20%) of the income and we conclude that the rate of

disparity in the distribution of income for the year (2011) is less than the rates of inequality for the years (2005 and 2007). Thus, the low-income groups receive a higher income as a result of the different income ratios in the year (2011) in favor of the poor classes, and therefore the inequality in the income distribution in (2011) is small, because the Lorenz curve is close to the line of symmetry.

From the above, it can be said that the area between the Lorenz curve and the line of symmetry represents the values of the Gini coefficient, and thus the values of the Gini coefficient correspond analytically and mathematically for each year separately with that area. For example, we find that the value of the Gini coefficient in (2011) was low, And that the Lorenz curve is close to the line of symmetry for the same year, that is, the proportion of justice in the distribution of incomes among members of the community is acceptable.

It should be noted here that the application of the Lorenz curve to measure the inequality in the distribution of income was limited to some years during the research period, due to the lack of annual statistical surveys issued by the Central Statistical Organization on living conditions.

Fourth: The evolution of the Gini coefficient of inequality in the income distribution

The development of inequality in the distribution of income in Iraq (Gini coefficient values) for the period (4200-2020) can be seen through Table (4) and as follows:

Table (4) shows that the Gini index for the year (2004 and 2005) represents the highest period for the rise in income inequality during the study period, as it reached (0.41) for the year (2004). Unemployment, by forcing many individuals to leave their jobs in the state through the measures taken by the occupation authority, including the dissolution of the Iraqi army and other security services. In 2005, the Gini index reached (0.42) due to a deterioration in the security situation that led to The high unemployment rates, the increase in income disparity and the widening of the base of the poor, as well as the decrease in the vocabulary of the ration card during that period and the withholding of subsidies for some commodities, and that all these measures contributed to the increase in the value of the Gini coefficient,

Table 4: Evolution of Gini coefficient values in Iraq for the period (2004-2020)

years	Gini coefficient	years	Gini coefficient
2004	0.41	2013	0.27
2005	0.42	2014	0.25
2006	0.38	2015	0.23
2007	0.33	2016	0.24
2008	0.31	2017	0.27
2009	0.32	2018	0.29
2010	0.32	2019	0.31
2011	0.31	2020	0.33
2012	0.36		

Source: From the researcher's work based on:

- **The years (2004-2014) Al-Mohammadi, Nazem Abdullah and Obaid, Muhannad Khalifa (2016) Measuring and analyzing the reciprocal relationship between inequality in income distribution and economic growth in Iraq for the period (1996-2014), Journal of the Islamic University of Economic and Administrative Studies, Volume (24) , number (4).**

- **Years (2014-2020) Ministry of Planning and Development Cooperation, Central Agency for Statistics and Information Technology, Survey of Living Conditions in Iraq.**

As for the years (2006), (2007), (2008), we note that the value of the Gini coefficient began to decline, as it reached (0.38), (0.31) and (0.31), respectively. This decrease is attributed to an increase in employee salaries and an increase in government support allocations. And absorbing part of the unemployment in the public sector, that is, the disparity rate in the distribution of income between the upper and lower groups has become close, and this indicates that the living situation of individuals has begun to improve because it is directly related to the rate of income obtained by the lower groups of the poor. As for the years (2010) -2009) witnessed an increase in the value of the Gini coefficient, as it reached (0.32) for those two years, due to the decrease in government support for the ration card, which covered the needs of a large volume of community members, which led to high rates of inequality in the distribution of income, which had a significant impact on the income The individual, while the years (2013, 2014, 2015) witnessed a decrease in the value of the Gini coefficient to reach (0.27) (0.25) (0.23), respectively, and the reason for this imbalance is due to the security instability during that period, especially since (2014).) Because the country was exposed to attacks by terrorist organizations, which affected Either directly or indirectly on the rates of disparity in income between individuals due to the displacement of people from their areas of residence and the cessation of all interests and economic activities in those occupied areas by terrorists, as well as a decrease in job opportunities in areas of displacement, while the years (2018-2019) witnessed an increase compared to the year (2015) where the value of the Gini coefficient reached (0.29) (0.31), respectively, and is attributed to the improvement of the economic situation as a result of the rise in international oil prices and the increase in the number of people covered by social welfare salaries, which contributed, even in a small part, to reducing inequality, as well as the end of most military operations. As for the end of the research period, the value of the Gini coefficient was (0.33). This increase is attributed to the spread of the Corona epidemic worldwide and Iraq in particular, the lack of movement within the country and the decrease in most of the incomes of workers in the private sector, which negatively affected the lives of citizens as well as the decrease in public revenues.
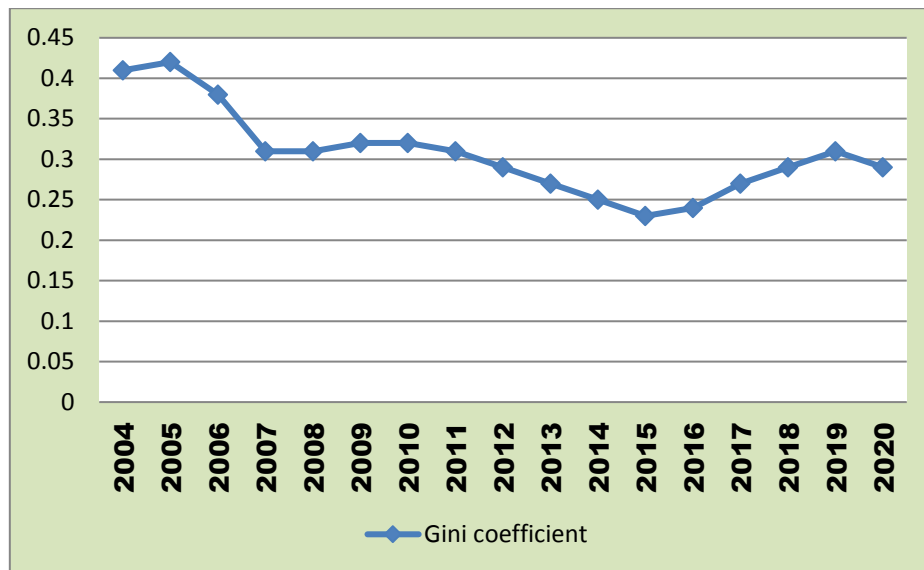
Figure 5: the evolution of the Gini coefficient in Iraq for the period (2004-2020)

Source: From the researcher's work based on the data in Table (5)

Figure (5) shows that the values of the Gini coefficient have witnessed a kind of stability during the research period, despite the country being attacked by terrorist organizations and the occurrence of military battles to confront these terrorist organizations in (2014), as we note that the Gini coefficient achieved a relative decrease during the years (2014, 2015, 2016) and this is due to the businessmen's exposure to losses in investment projects, especially in areas that have been subjected to the control of terrorist groups. Through the aid provided by the state to the displaced, and all of these things combined have reduced the disparity among members of society during this period.

Fifth: The development of national income in Iraq:

The national income is the net value of the goods and services produced by the constituent sectors of the national economy in the country during a year, and the net value means the value added for each production process and has been taken into consideration in order to avoid double counting, which shows whether the country in question is growing or declining the average white the mean persons share from national income, as it is one of the tools for measuring development and progress in a country, as it measures the material well-being of a person (**Al-Jubouri and Al-Saadawi, 2013: 234-249**).

Table (5) shows that the population is constantly increasing over the duration of the research, and that the national income for the year (2004) amounted to (46923) billion dinars, and the average per capita income amounted to (1728000) thousand dinars, to witness the years from (2005, 6200). (7200, 2008) a successive rise in national income to (65798) (85431) (100,100) (147641) billion dinars and a positive rate of change, as well as an increase in the average per capita share (2,353,000) (2965,000) (3372,000) (4628000) thousand dinars over This successive rise is due to the improvement in public revenues during that period, as well as the

change in the salary scale for state employees, which increased the rise in per capita national income, so that the year (2009) witnessed a decrease in national income to reach an amount of (120429) billion dinars, at an average rate of 120429 billion dinars. A negative change (18.43%) and a decrease in the average per capita national income to reach (3803,000) thousand dinars, and this decline is attributed to the global crisis,

Table 5: Evolution of national income at current prices and average per capita share

years	Population (thousand people)	National income (billion dinars)	rate of change of national income	average per capita Thousand dinars
2004	27139	46923	-----	1728000
2005	27963	65798	40.23	2353000
2006	28810	85431	29.84	2965000
2007	29682	100100	17.17	3372000
2008	31895	147641	47.49	4628000
2009	31664	120429	(18.43)	3803000
2010	32490	146453	21.61	4507000
2011	33338	192237	31.26	5766000
2012	34208	227221	18.20	6642000
2013	35096	243518	7.17	6938000
2014	36005	237554	(2.45)	6597000
2015	35213	178908	(24.69)	5080000
2016	36169	186397	4.19	5153000
2017	37140	205918	10.47	5544000
2018	38124	247501	20.19	6492000
2019	39128	253065	2.25	6467000
2020	40150	206616	(18.35)	5146000

Source: From the work of the researcher, relying on:

- Central Bank of Iraq, Directorate General of Statistics and Research, Annual Economic Report, different years (2004-2020)

-The values in parentheses () are negative

Average per capita national income = national income / population

As for the years (2012-2013), it witnessed an increase in the national income to reach an amount of (227,221) (243518) billion dinars and a positive rate of change, in addition to an increase in the average per capita income to reach an amount of (6642000) (6938000) thousand dinars, respectively. This increase is attributed to the improvement in economic conditions as

a result of high oil prices and a rise in oil revenues, which constitute the largest proportion of public revenues. The years (2014-2015) witnessed a decrease in the level of national income to reach an amount of (237554) (178908) billion dinars, with a negative change rate as It reached a rate of (2.45%) (24.69%), bringing the average per capita national income down to reach an amount of (6597000) (5080000) thousand dinars, respectively. This decrease is attributed to the deteriorating security situation and the control of terrorist groups over some governorates of Iraq, which To the displacement of people from their areas of residence, as well as the drop in international oil prices, which affected the world in general and Iraq in particular; Because public revenues depend to a large extent on oil, but the years (2017-2018) witnessed an improvement in the national income, which rose to an amount of (205918) (247501) billion dinars and a positive rate of change, in addition to an increase in the average per capita national income to reach (5544,000). (6492000) thousand dinars, respectively, and this rise is attributed to the improvement in the security situation by liberating the Iraqi provinces from the control of terrorists, as well as economic stability through the rise in oil prices. (206616) billion dinars and a negative rate of change, as it reached (18.35 - %), in addition to the decrease in the average per capita national income to reach (5146000) thousand dinars. This decrease is attributed to the exposure of the world and Iraq in particular to the spread of the Corona epidemic, which negatively affected the During the disruption of all business at the individual or international level.
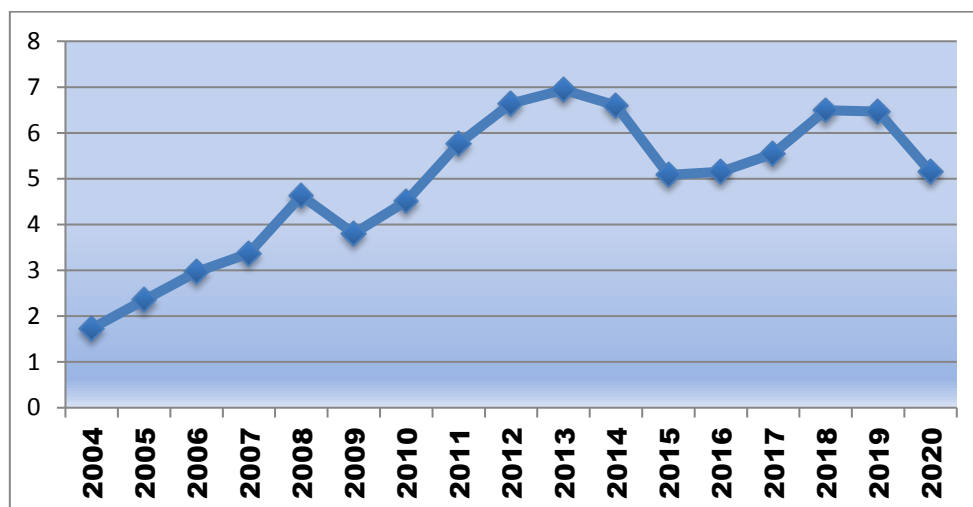

Figure 6: Average per capita national income

Source: From the researcher's work based on the data in Table (5).

Sixth: Public expenditures and public revenues and their impact on the Gini coefficient in Iraq:

Fiscal policy and through its tools that the state is trying to reach to achieve goals and objectives, including the effect on the development of economic growth, which in turn reduces the disparity in the distribution of income between individuals. Table (6) shows the extent of the relationship between public revenues and expenditures and its reflection on the disparity in

the distribution of income. Table (6) and figures (5) (7) show that the path of revenues and public expenditures for the Iraqi economy fluctuated for the period (2004-2020), as we note that the Gini coefficient curve reached its highest point in (2005) to reach (0.42) in While public expenditures in the same year amounted to (26374) billion dinars, which is in accordance with economic theory; Because the decrease in public expenditures contributes to an increase in income inequality, and this rise in inequality is attributed to the change in the political system and its transformation from a socialist system to an open market system, as well as the dissolution of the security services that increased the unemployment rate, as well as the instability of the security situation during that period. As for the lowest point, the Gini coefficient reached in 2015 when it amounted to (0.23), while expenditures decreased in that year to reach (70396) billion dinars, and this contradicts the economic theory; Because the decrease in public expenditures will harm low-income people, and since the goal of public spending is to achieve a public benefit regardless of the material return for this service, and the reason for this contradiction is that Iraq has gone through the stage of the control of terrorist organizations.

Table 6: Public expenditures and public revenues and their impact on the Gini coefficient in Iraq

years	Gini Coefficient	public expenditure	Annual rate of change in spending %	general revenue billion dinars	ate of change general revenue
2004	0.41	32117	----	32981	-----
2005	0.42	26374	(17.88)	40502	22.80
2006	0.38	38806	47.14	49054	21.12
2007	0.33	39030	0.58	54597	11.30
2008	0.31	59402	52.20	80250	46.99
2009	0.32	65658	10.53	55208	(31.20)
2010	0.32	83823	27.67	69520	25.92
2011	0.31	69640	(16.92)	99997	43.84
2012	0.36	90375	29.77	119465	19.47
2013	0.27	106873	18.26	113765	(4.77)
2014	0.25	83556	(21.8)	105386	(7.37)
2015	0.23	70396	(15.75)	66469	(36.93)
2016	0.24	67067	(4.73)	54408	(18.15)
2017	0.27	75489	12.56	77334	42.14
2018	0.29	80872	7.13	106568	37.80
2019	0.31	111723	38.15	107566	0.94
2020	0.33	76081	(31.90)	63198	(41.25)

Source: From the researcher's work based on:

- The years (2004-2014) Al-Mohammadi, Nazem Abdullah and Obaid, Muhannad Khalifa (2016) Measuring and analyzing the reciprocal relationship between inequality in income distribution and economic growth in Iraq for the period (1996-2014), Journal of the Islamic University of Economic and Administrative Studies, Volume (24) , number (4).

- Years (2014-2020) Ministry of Planning and Development Cooperation, Central Agency for Statistics and Information Technology, Survey of Living Conditions in Iraq.

The trend of public expenditures and revenues can be illustrated through Figure (7) and the Gini coefficient through Figure (5).
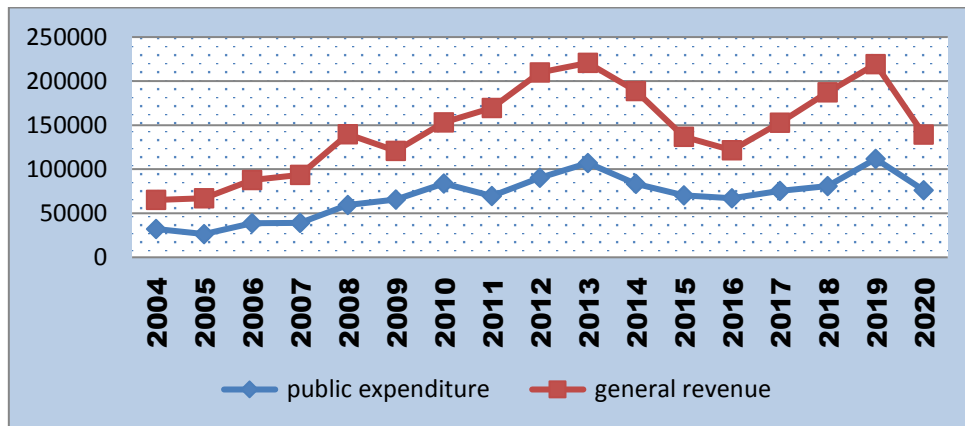

Figure 7: the path of public expenditures and public revenues in Iraq for the period (2004-2020)

Source: From the researcher's work based on the data in Table (6)
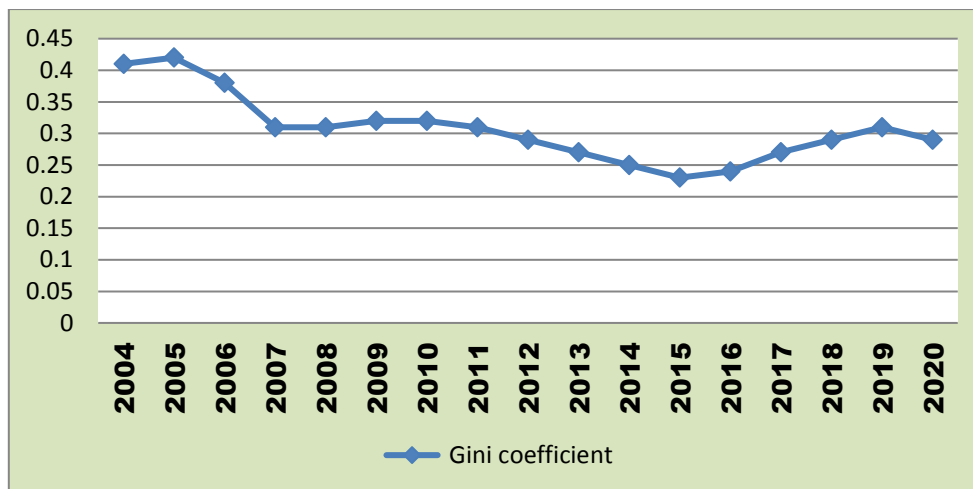

Figure 5: Evolution of the Gini coefficient in Iraq

Source: From the researcher's work based on the data in Table (4)

Which prompted citizens to leave their homes and migrate to more stable security areas in the north and south of Iraq to protect themselves and their families, leaving all their investments and businesses, and the owners of the rich classes became close to those with low incomes, which prompted relief organizations and organizations of the international community to

provide assistance to families to overcome this crisis, In addition to the decline in public revenues as a result of the decline in oil prices.

We also note that the general trend of the Gini coefficient curve was going in the opposite way with public spending and public revenues, in other words, the increase in public revenues, which reflects the increase in public spending, had a clear impact on reducing income inequality.

Conclusions:

1. In light of the review of the degree of inequality in the distribution of income in Iraq represented by the Gini coefficient, it was found that the inequality started high and then began to decline since the beginning of the research period, reaching (0.41) for the year (2004) to (0.32) in (2010) until it reached (0.23). In (2015), the lowest year in which the value of the Gini coefficient reached, and in the year (2020), the value of the Gini coefficient rose to (0.33).

2. The study concluded that there are several reasons behind this disparity, including, for example, the limited interest in this issue by planners and decision-makers, as well as the change of the political and economic system from a socialist system to a market economy system on the one hand and on the other hand, which led to the layoffs of workers in The security services, which increased unemployment and decreased incomes, and on the other hand, decreased support for the ration card items in that period and withheld support for some commodities, and that all these measures contributed to the rise in disparity, and that wars and military operations during the research period also contributed to the disparity, and the global crisis that affected On the world and Iraq in particular, the spread of the Corona disease has also increased inequality, and all these reasons were increasing the severity of the inequality in the distribution of income.

3. It was found that the mean of persons share from the national income reached the highest value as it reached (578) thousand dinars per month in (2013), while the value of the Gini coefficient for the same period amounted to (0.27), and this indicates that the distribution of incomes between categories Society was more justice, due to the security stability and the rise in oil revenues as a result of the rise in international oil prices, as well as the establishment of large infrastructure projects that contributed greatly to the employment of manpower.

Recommendations:

1. Adopting macroeconomic policies aimed at reducing the disparity in the distribution of income through the harmonization of fiscal policy tools (expenditures and revenues), for the purpose of redistributing income in favor of the poor and low-income groups, and thus alleviating poverty.

2. The need to work on directing spending and work to reduce income disparity between the different segments of society and to resort to distributive justice, which contributes to economic and social stability.

3. Ensuring the state's role in setting policies to reduce disparity, implementing and following up plans, improving their mechanisms, and monitoring these plans for fear of financial corruption and such projects (small march loan projects, support for ration card items, and social protection network), and encouraging expansionary policies practiced by the state in some cases. times.

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Annex No. 1 The average monthly income of the individual according to the categories of the individual's income and the source of income for the year 2005   (Iraqi Dinar)

Categories	total income
10 or less	4529
-15	12464
-20	17256
-25	21827
-30	27224
-35	32140
-40	36978
-47	42925
-54	50423
-62	58039
-70	65374
-80	74135
-95	85939
-120	105442
-150	131005
-200	165867
-300	228717
300 or more	871102
total	1160282

Source: Ministry of Planning and Development Cooperation, Central Agency for Statistics and Information Technology, Living Conditions Survey, Iraq.

Annex No. 2 Average per capita income by source of income 2007 (thousand / dinars)

provinces	Total income at market price	provinces	Total income at market price
Dohuk	192.8	Karbala	128
Nineveh	101.7	Wasit	151.5
Sulaymaniyah	184.4	Salahaddin	134.7
Kirkuk	145.8	Najaf	170.2
Erbil	236.6	Qadisiyah	120.9
Diyala	104.2	Double	124
Anbar	119.4	Dhi Qar	92.4
Baghdad	142.6	Maysan	112.2
Babylon	139.7	Basra	130.7

Source: Ministry of Planning and Development Cooperation, Central Agency for Statistics and Information Technology, Living Conditions Survey, Iraq.

Annex No. 3 Average per capita expenditure on the main aggregates at market prices by governorate (1,000 dinars) for the year 2011

provinces	total spending	provinces	total spending
Dohuk	193.12	Karbala	179.30
Nineveh	123.84	Wasit	139.64
Sulaymaniyah	318.71	Salahaddin	175.65
Kirkuk	177.15	Najaf	182.61
Erbil	271.23	Qadisiyah	152.12
Diyala	146.36	Double	111.16
Anbar	154.15	Dhi Qar	96.78
Baghdad	217.05	Maysan	145.45
Babylon	161.11	Basra	132.25

Source: Ministry of Planning and Development Cooperation, Central Agency for Statistics and Information Technology, Living Conditions Survey, Iraq