

# Measuring Economic Inequalities and Perspectives on their Evolution

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## Abstract

*Measuring phenomena such as globalization or economic inequality is often considered an inaccurate approach, subject to a high degree of uncertainty and, why not, is even seen as a deadlock. However, scientists have created tools to measure these phenomena, giving them the scientific dimension needed to use them as a basis for building strong economic theories.*

*This article aims to present the types of methods and techniques used by specialists in measuring economic inequalities, as well as a comparative analysis between what could be called the "present," and "future" of measuring inequalities in Economics. The elaboration of this paper involved documentation, information and synthesis, leading to a systematization of future perspectives on the topic of inequalities, one of the biggest global challenges tackled from two perspectives: within and between countries.*

**Keywords:** inequality, Gini coefficient, Palma Ratio, globalization, measurement index

**J.E.L. classification:** O11

## 1. Introduction

Looking for a worldwide picture, considering the progressions of the contemporary context, the idea of economic inequality is analyzed in the 21st century, from a relative political, intercultural, near point of view. Urbanization, economic development determined by innovation, advancement of exchange on a worldwide scale or industrialization, continually create noteworthy returns for capital holders. Despite the fact that financial structures, accepted practices for political frameworks have changed from the beginning of time, income and inequality not just keeps on distinguishing better approaches to develop, yet in addition creates what we call excessive economic disparity.

Previous research in the field, determined that we launch into debate the hypothesis, that we also validated, according to which the reconfiguration of the world economic order, manifested from three significant points of view, under the arch of globalization, contributes to the emerging of the biggest challenges of the moment: the problem of excessive economic inequalities.

As respects globalization, the genuine epistemological premise of its estimation is unsatisfactory in principle and problematic from an empirical perspective. The development of globalization indicators might be viewed as too restricted to even think about providing helpful data on the phenomenon itself, while when analyzing economic inequality, things are more clear. Inequality is a multidimensional test and can be broke down considering a few distinct measurements. There are different numerical pointers for estimating economic inequality. A widely used index is the Gini Coefficient. Exploration dependent on the investigation of Gini coefficient esteems identified with GDP esteems indicates that a significant level of inequality is keeping down long-term economic development. While globalization has decreased worldwide inequality between and within countries has expanded.

This article aims at a presentation of two methods of measuring economic inequalities, used by specialists in Economics, the Gini Coefficient and the Palma Ratio, aware that there are other less used and less known indices such as the Suits Index or the Atkinson Index. At the same time, we consider useful and edifying a comparative analysis between the measurement method that uses the

Gini coefficient, the present measurement of economic inequalities, and the Palma Report, which could be considered the future of these measurements.

## **2. Literature review**

Starting with the 1980s, particular analysis on the theme were created, as books or articles dealing with the subject of inequalities, frequently related to the political and social perspectives. Extreme financial imbalances are a worldwide concerns managed by market analysts or specialists in universal relations that should be secured in the history of economic evolutions and furthermore react to a few current inquiries with respect to the social furthermore, monetary battle on the globe. Inequality, income distribution, economic development, emerging economies are topics of great concern that have been available in the economic literature since the time political economy was conceived. In the specialized literature of the 19th century, David Ricardo, through works such as "On the Principles of Political Economy and Taxation" (1817) was the one who launched the first conclusions as a result of scientific research on measuring economic inequalities, one of these conclusions being that it is a difficult process to delimit the effects generated by economic inequality from those determined by technological changes. The Marginal Revolution created a profound change at the methodological and epistemological level. Economists such as W. S. Jevons, with his theory of political economy, Leon Walras or Carl Menger, with his Principles of Economics are the ones who determined a paradigm shift. Thus, the 20<sup>th</sup> century brings a new perspective on measuring economic inequality through John Maynard Keynes, who launched the idea that science should contribute to optimizing the allocation of economic resources and maximizing the functions that drive economic growth and reduce economic inequalities. All the more as of late, elective Post-Keynesian distributional models of economic development, well known more than three decades prior, did not clarify disparity however essentially accepted that income and wealth are inconsistent part between "laborers" and "capitalists". With a progressively practical methodology, Simon Kuznets recognized that the decrease of US polarization in the mid 20<sup>th</sup> century as not a characteristic procedure, yet was somewhat brought about by profound financial crisis of that time and the significant consequences of World War II. In his work entitled Economic Growth and Income Inequality, Kuznets establishes the frameworks of the "Kuznets Curve" hypothesis. As per her, imbalance seeks after a "bell curve" during industrialization and economic development. Today, the subject of economic inequality is identified in general perception with Thomas Piketty, who, in contrast to his forerunners from centuries, Marx, or Kuznets, presented theories of economic development and scaling back, being the economist who explained the vulnerability of a pattern in connection to economic growth and inequality. Even if the topic of economic inequalities is widely treated in the literature, it is still insufficiently known, advanced research still being needed.

## **3. Research methodology**

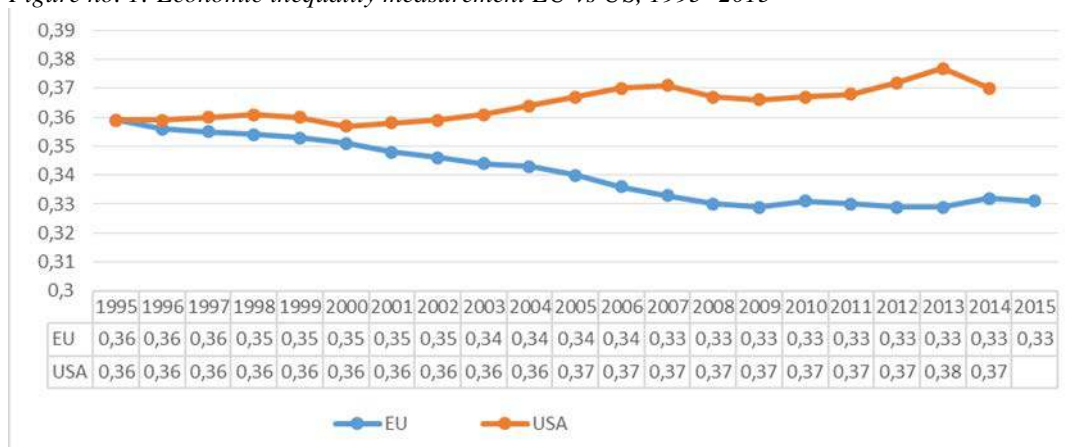
From a methodological point of view, this article investigates the main methods of measuring economic inequalities, launching and verifying the hypothesis that the Gini coefficient can no longer be considered sufficient to render a realistic situation in the issue of inequality. Measurement methods were analyzed such as the Gini Coefficient, the Palma Ratio, the Suits Index or the Atkinson Index and in order to support the hypothesis launched and mentioned above, a comparative analysis is performed between the measurement that uses the Gini coefficient and the one that uses the Palma Ratio. The methodological approach in this article included several stages: information search and assortment; data management - data processing (preliminary analysis: methods, techniques and tools for data processing, logical analysis and interpretation and formulation of assumptions, procedures for constructing statements and solutions, provisional, to be verified); constructive by testing hypotheses; generalization and theoretical construction (final part of the research): methods and techniques of synthesis and generalization, principles and rules of theoretical and applied construction.

## 4. Findings

### 4.1. The Gini Coefficient

The Gini Coefficient is the most popular instrument used to gauge worldwide inequality. It measures the distribution of income, looking at the salary proclamation of every family unit with the pay explanation of every single other family unit. In view of its measurement formula, the coefficient is communicated as an incentive somewhere in the range of 0 and 1. A Gini coefficient equivalent to 0 shows an ideal income equality; a Gini coefficient equivalent to 1 would imply that all salary got in the economy would have a place with a solitary family unit, which would demonstrate perfect income inequality. The estimation of the inequality coefficient is in a pattern of auxiliary development around the world. To represent the estimation of economic inequality, we have decided to examine the advancement of the Gini Coefficient for the EU.

Figure no. 1: Economic inequality measurement EU vs US, 1995 -2015



Source: Own interpretation after <http://bruegel.org>

Starting 1995, inequality within the EU has consistently declined until 2008, outstanding generally stable from that point forward. In the US, then again, pay imbalance has likewise risen consistently from the late 1970s to 2013. Because of the worldwide and European monetary and financial crisis, Central European Member States have kept on tending to the issue of work deficiencies, attempting to level the circumstance among the most extravagant EU Member States, while some Member States in southern Europe, for example, Italy and Greece, fall behind.

Our analysis presents the fact that significant inequalities exist among EU states: while Spain, Greece, Bulgaria or the Baltic states register a Gini Coefficient around the figure of 0.35, states like Slovenia, Czech Republic, Belgium or the Scandinavian nations register national Gini Coefficients around 0.25. The average estimated Gini Coefficient for the EU (0.33) is above that of Japan (0.30) or Canada (0, 31). A partial conclusion might be that we live in a world deeply and generally characterized by economic imbalance.

Regardless of whether the utilization of the Gini Coefficient offers a few focal points, for example, the way that it is sufficiently straightforward to be contrasted among nations and with be effectively deciphered, or demonstrates how the circulation of pay has changed in a nation in a period after some time, it additionally brings to the frontal area several issues: comparing the pay conveyances between nations, in light of the estimations of the Gini coefficient, can be troublesome, as the arrangement of advantages may vary from nation to nation; precise and arbitrary blunders consistently happen in the assortment of introductory income information; the circumstance where the information are less exact makes the Gini Coefficient have a lower significance; nations may gauge insights distinctively and, therefore, it isn't commonly possible to analyze estimations between countries. All of these conditions make a potential circumstance wherein economies with similar pay rates and Gini coefficients may regardless have entirely unexpected pay scatterings. Also, the way that in many studies just the Gini Coefficient is referred to, without a corresponding depiction of the quantum extents utilized for estimation, can make incorrect breaks down.

Analyzing the information in the table measuring economic inequality presented above, we can say that the strength of the Gini Coefficient, which combines information about all individuals in a society, is also its main weakness.

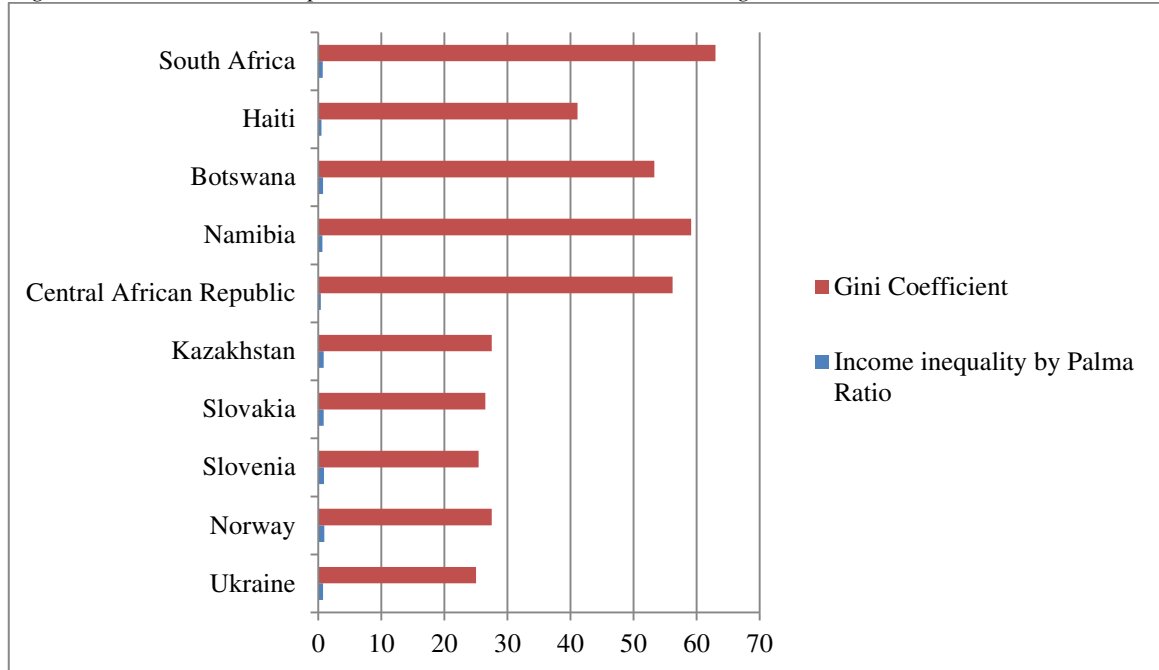
#### 4.2. The Palma Report

*The Palma Inequality Report* was proposed by Alex Cobham and Andy Sumner in 2013, based on the "Palma hypothesis" consisting in a remark by Jose Gabriel Palma according to which "currently changes in income or consumption inequality are due almost exclusively to changes in the share of the most rich 10% and the poorest 40%, because the "middle" group between the richest and poorest always gets about 50% of the gross national income". At present, this type of measurement technique is used by various experts conducting specialized analysis of the income evolution and by some national working environments and has won the opportunity to become the unique marker for the United Nations Goal 10: Sustainable Development (SDG 10). It is at present possible that Palma will be added to SDG 10 during the review strategy, with conspicuous supporters, including Oxfam and South Africa. Some National Statistical Institutes (NIS) and other universal advancement organizations (for example, the World Bank, the United Nations, and so on.) have picked to deliver the Palma report to enhance the Gini Coefficient. The Palma report partitions the pay portion of the principal 10% to the base 40%. The outcome is an estimation that, in Cobham's and Sumner's words, can be considered "too sensitive to changes in distribution at extremes, rather than in the relatively inert medium."

A total dispersion of inequality or whatever else can't be featured by a solitary measure. Furthermore, as Tony Atkinson saw during the 1970s, any measure that is utilized should unavoidably mirror a regulating perspective on which parts of circulation are progressively significant. For example: the Gini Coefficient, the most common used extent of inequality, is known to be merciless toward limits of movement and relentless toward huge degrees of difference - precisely when and where we may be generally intrigued. Financial experts contend that it isn't expected to supplant the restrictive utilization of the Gini Coefficient in estimations with a select utilization of the Palma proportion, yet rather to challenge the unintentional utilization of the Gini Coefficient, prompting a fragmented point of view on inequality. Regardless of whether the utilization of a few kinds of pay appropriation estimation is suggested, if just one path is to be utilized, this ought not be the Gini Coefficient.

The Palma report is an option in contrast to the Gini Coefficient and spotlights on the contrasts between the upper and lower pay classifications. The Palma proportion is made between the estimation of total national output (GDP) relating to a portion of 10% of the richest and the estimation of GDP comparing to a portion of 40% of the least fortunate populace. This strategy for estimation has gotten well known as exploration on pay imbalance centers around the developing hole between the richest and least fortunate in the public eye. As indicated by Palma figures from the UN Human Development Index, Ukraine, Norway and Slovenia were the nations with low disparity while considering the dispersion of salary among the richest and least fortunate in the public eye. South Africa, Haiti and Botswana recorded the most grounded salary disparities, in view of the Palma report.

Figure no. 2: The current top and bottom ranked countries according to the Palma Ratio



Source: Own processing after UN Human Development Index data

### 4.3. The Gini Coefficient vs. The Palma report

Up until now, the Gini Coefficient has commanded the scene of imbalance markers. In any case, of late, numerous basic voices have risen, saying that the Gini Coefficient can't give any response to the inquiry "What befalls the richest and poorest people?". In any case, this is the issue that appears to concern many people. It isn't essentially pretty much all the adjustments in salary dispersion, however about the most minimal workers, deserted at the degree of society and the individuals who win at an extremely significant level. It is about poor people and the rich.

Then again, the Gini Coefficient gauges the adjustments in the appropriation of pay similarly, regardless of whether it occurs at the top, at the base or in the salary scale. Seeing as an euro can have an alternate an incentive for the top and base champs, this can be seen as an issue. Along these lines, contrasted with a typical comprehension of imbalance, the record is excessively touchy to changes in the circulation, while being unfeeling toward changes in the top and base of the appropriation. Notwithstanding, this is as yet the most generally utilized marker with regards to estimating salary inequality. The ubiquity of the Gini file can be clarified by its high understanding (which demonstrates the coefficient and how it is determined), which makes clarification, correspondence and dispersal generally simple.

In any case, the Palma report is progressively used to address the hole in information about the top and base of the income scale. This proportion is characterized as the proportion of the richest 10% of the populace to GDP, partitioned by the least fortunate 40%. This implies in an organization with a Palma proportion of 4, the top 10% arrives at multiple times the salary of the base 40%. In contrast to the Gini coefficient, the Palma report along these lines estimates changes just in the dispersion of pay, demonstrating whether it influences the least champs or the greatest victors and is in this way better identified with the regular comprehension of inequality.

We find interesting to mention that, in March 2013, 90 experts in Economy (counting now Nobel laureate business analyst Joseph E. Stiglitz, scholastics and improvement specialists approached the United Nations for a key board on monetary advancement to put inequality at the core of any potential post-2015 strategy to eradicate extreme poverty in the entirety of its measurements by 2030. They emphatically recommended utilizing the Palma report for potential estimations.

## 5. Conclusion: future perspectives on the evolution of major economic inequalities

Inequality is already the subject of extensive research in the social sciences. The multitude of studies and reports from the economic environment has helped to identify important gaps in the awareness of economic inequalities. Multiple inequalities, which often intersect, require multidimensional knowledge. Making progress in understanding the mechanisms that lead to inequality and finding the most effective strategies to combat it means penetrating research beyond current technical debates, such as measuring economic inequality, even if they are important. A move to incorporating an a lot more extensive scope of disciplinary focal points is required while building up techniques and characterizing structures for research, including human sciences, social science, brain science, geology, political theory and law, yet additionally expressions of the human experience and humanities. Tending to issues, for example, training, wellbeing, political interest, which surpass pay, utilization, business and riches, is helpful. There is additionally a need to coordinate very much structured and oversaw subjective and participatory strategies and to create inventive blends of quantitative and subjective examination to all the more likely get why and how disparities endure. Improving our insight into imbalance likewise includes dissecting how sociology can be utilized to challenge them, subsequently adding to an increasingly equivalent and simply world.

A Report on Inequalities by UNESCO proposes 7 directions for action in managing global inequalities: Increasing support for the creation of information about inequality and the procedures of social consideration and rejection, in the spots generally influenced by them; Improving the capacity to survey, measure and look at the elements of imbalance after some time and around the world; A more profound comprehension of the different encounters of inequality; Understanding how various inequalities are made, kept up and recreated; A more profound comprehension of how nearby and worldwide types of inequality associate and cooperate; Promoting research on combating inequality; Supporting cross-cutting approaches to inequality and equality theory.

A new economic framework requires rethinking the meaning of prosperity and well-being. This involves, for example, redefining growth beyond GDP. Various economists have argued that GDP and GNI are outdated and advocate for measuring well-being using the human development index and indicators of well-being and happiness. Another option, proposed by Francisco Ferreira from the World Bank, could be an Index of Economic Opportunity, which could provide us with much more accurate information about deprivation and exclusion from society.

## 6. Acknowledgement

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