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## **SCIENTIFIC AND METHODOLOGICAL APPROACH TO THE EARNING QUALITY ASSESSMENT**

**Abstract:** *In economics, earning has traditionally been viewed as a quantitative category. This article provides an original perspective on earning - in terms of quality that allows taking a fresh look at revenue. The author's scientific and methodological approach to assessing the quality of earning, developed in this article, takes into account the following criteria:*

- 1. The official (or shadow) nature of the earnings and their contribution to the staff retirement plan, its creditworthiness, the formation of the earning part of the state budget (payment of taxes);*
- 2. The size, dynamics and comparative characteristics of the actually available earning;*
- 3. Positive or negative consequences of receiving earning for society and the environment (for example, revenue from criminal activity, poaching and other prohibited activities will be of low quality);*
- 4. Contribution of earning to the image of the country (for example, the currency in which revenue is obtained);*
- 5. Consequences of receiving earning for meeting the needs of the employee according to A. Maslow's pyramid (unleashing human potential, building a career, working in specialty);*
- 6. Contribution to the reduction (or increase) of inequality in earning.*

*The advantages of the developed scientific and methodological approach to assessing the quality of earning are that it allows comparing representatives of different professions and sectors of the economy, different regions and countries from the point of view of the quality of earning, as well as studying the dynamics of changes in the quality of earning. Due to this, not quantity (nominal revenue) but the quality will determine the features of employees when receiving income.*

**Keywords:** *Earning Quality, Methodological Approaches, Wages, Earnings Inequality, Households, Earning Quality Concepts*

### **1. Introduction**

A key characteristic of high quality earning is that it is easily reproducible over a number of reporting periods, rather than earning that

is reported only as a result of a one-time event. In addition, the company should regularly provide detailed reports on the sources of its revenue and any changes in future trends in relation to those sources.

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Another characteristic is that the reporting entity adheres to conservative accounting practices so that all related expenses are properly recognized in the correct period and earning is not artificially inflated.

Investors enjoy earning high-quality returns as these results tend to be repeated in future periods and provide more cash flow for investors. Thus, companies that have quality profits are also more likely to have high stock prices. The characteristics that affect the quality of earning are the basis for considering the individual income and the cost items that put together profits. There are various indicators in the financial statements that can be used to assess the earning at a high level.

These indicators include the following:

- the general consistency of accounting policies from year to year or quarter to quarter;
- the general degree of subjectivity assessment in the determining of earning;
- dynamics of the reserved overall surplus;
- transparency of information disclosure in footnotes;
- the availability of provisional profit indicators;
- the disclosure of information about transactions;
- the ratio of net profit to cash from operating activities.

A household's disposable income - that is, the amount that a household can spend or save without using its assets - is measured as the total amount of all earnings received by the household over a given period of time, less the total amount of social reductions and direct taxes, paid by the household and the transfers to other households.

A household can receive three main types of earning: income from work/employment, income from property, and transfers, some of which come from other households (for example, alimony), and most from the government. In this set of components, the

basic unit of earning is more or less obvious: revenue from work and employment, including wages, gains or losses from self-employment, some government transfers related to work (unemployment, sickness and maternity benefits, pensions). Some other social benefits, such as disability benefits or scholarships, and some transfers to other households, such as alimony, are clearly received by people. Concerning reductions, social security reductions related to earnings or pensions are also "individual".

But some of the other components can be individual or "collective": for example, who gets revenue from property depends on who owns it. Referring that earning to a family member then requires detailed information about the property, that is, who owns the assets or, in the case of joint ownership, shares held by different owners.

Taxation can be joint or separate. Some other components are more "collective", such as family or housing allowance. Of course, none of these doubts arises in the case of one-person households where the household and individual earning are the same.

Consequently, the statistical information on earnings currently available in most large-scale datasets does not allow for the calculation of disposable income at an individual level unless the individual lives alone.

## 2. Methodology

To assess the differentiation and polarization of the population by the earning, in modern demographic statistics, special indicators are used, mainly derived from the ratio of different quantiles of the population by the earning (quintile, decile coefficient). Using the most common indicators of the earning inequality in international statistics, we can analyze this aspect of the quality of earning in Ukraine based on a comparison with the leading country in the corresponding partial process. As well as with Poland, which is

our close European neighbour and the largest recipient of our labour and educational migrants (Table 1).

**Table 1.** Comparison of the values of inequality indicators by the earning in Ukraine, Poland and the leading country in terms of the corresponding indicator in the EU

Indicator	Value in Ukraine	Value in Poland	Leading country	Value of the leading country
Inequality in the earning (%)	9.2	17.5	Ukraine	9.2
Quintile coefficient	3.4	5.2	Ukraine	3.4
Palma ratio	0.9	1.3	Slovenia	0.8
Gini index	24.8	32.8	Ukraine	24.8
Gender inequality	0.286	0.138	Slovenia	0.016
Labour employment (aged 15 and over)	59.4	56.5	Sweden	64.1
Vulnerable employment, %	18.1	17.6	Estonia	5.4

Source: Compiled by the author

In addition to those tools that are widely used by the demographers to characterize the living conditions of households, new analysis tools have been created in international practice, in particular, the Palma ratio proposed only in 2011. We consider its justification to be a true achievement of modern demographic statistics since in this way the differences in the inequality of earning and, consequently, the living conditions of the population become very obvious due to the comparison of the richest decile against the background of the total earning of 40% of the poorest population.

If we take into account that the main form of income is wages, then according to the results of our preliminary analysis, we can confirm a much higher differentiation than it was established according to official data on the distribution of total earning of the population. Thus, the differentiation of wages is very high in small enterprises, and the smaller its size, the greater the disproportion in the remuneration of managers (it is obvious that this group represents the tenth decile in small enterprises) and the rest of the staff, which does not contribute to the motivation of its

development. For example, the ratio of the wages of the tenth to the first decile of workers in enterprises with up to 10 people is 11.94, and for those with 10 to 49 people - 12.12 times, which is much higher than the differentiation of wages at large enterprises (8.98 at enterprises with more than 5,000 employees) (Desai et al., 2017).

Revenue is the primary incentive to create new or develop existing businesses. The opportunity for profit prompts people to look for more efficient ways to combine resources, invent new products that may be in demand, and apply organizational and technical innovations that promise to improve production efficiency. Working profitably, each enterprise contributes to the economic development of society, contributes to the creation and augmentation of social wealth and the growth of the well-being of the people. An important task for every enterprise is to obtain large earning streams at the lowest cost, by saving in spending and increasing the efficiency of their use.

### 3. Literature Review

The quality of the earning, in particular, its assessment, based on the indicators of welfare and differentiation of the income of the population, the time of substantiation of one of the most famous revenue quality indices (The Quality of Life Index) by the British research agency has gone beyond purely scientific research in the field of labour economics. The quality of life is of great interest for monitoring both by individual sociological agencies and recognized international research companies, including the Gallup Institute in the USA, which regularly examines the perception of well-being through the prism of the earning quality indicators obtained based on sociological research. In world practice, one of the most well-known indicators of the quality of earning is the OECD Better Life Index, in which inequality of earning can cause a decrease in the overall estimate due to four of the eleven components of the index: revenue, employment, life satisfaction, work/life balance (Jing, 2018).

The analysis of the quality of working life as an element of the quality of earning (definition of the concept, a system of indicators for measurement, analysis and evaluation), as well as conditions that remove labour alienation and ensure the quality of working life, taking into account the specifics of the Russian economy, is carried out in the works of Russian scientists: V.N. Bobkova, B.M. Genkin, H.A. Gorelova, Yu.P. Kokin, P.S. Mstislavsky, V.G. Makushina, P.V. Savchenko, G.E. Slezinger, P.E. Schlender, etc.

The development of the concept of the quality of labour earning in the context of the need for a qualitative improvement of the entire labour management system, measures of humanization of labour aimed at its improvement in different countries, can be observed in the works of E. Delamot, Sh. Takezawa, K. Walker., and S. Seashore. The

relationship between labour productivity and the quality of workers' working life was studied by Katzell *et al.* (2018), Guzzo *et al.* (2018), Dechow (2010), Ali and Zarowin (1992), Lipe (2017) through the socio-technical methods of changing work organization at the individual and group levels, based on the concept of autonomy.

Schipper and Vicent (2018) and Gidey *et al.* (2014) found a significant correlation between the quality of working life of managers from three industrial sectors, namely public, private and cooperative, with all motivational variables such as job satisfaction and job involvement.

In general, the range of definitions of the quality of earning, as already mentioned, is ambiguous - from an extremely narrow understanding of it as a subjective perception to a broader one that includes indicators of human well-being and development. Modern concepts of earning quality, influenced by the work of Sena and Zaworin (2017) place great emphasis on, without denying the role of earning, the empowerment of individual choice.

Schipper and Vicent (2018) measured the quality of earning in terms of analytics. Their idea is that consistent use of accounting methods leads to sustainable communication, which is considered to be of high quality and can be used to predict future revenues.

However, Teets *et al.* (2018) define earning quality as accounting profit, which reflects information about the value of the company. Unlike Penman and Zhang (2018), Teets *et al.* (2018) defined the quality of earning as the extent to which the reported revenue actually reflects Hicks income. The quality of earning under this definition is measured with reference to Hicks' income, where the proximity of Hicks' income to earning presupposes a higher quality. Later, Setterberg (2019) defined earning quality as the level at which reported income is indicative of a company's key operating indicators. This quality metric is concerned

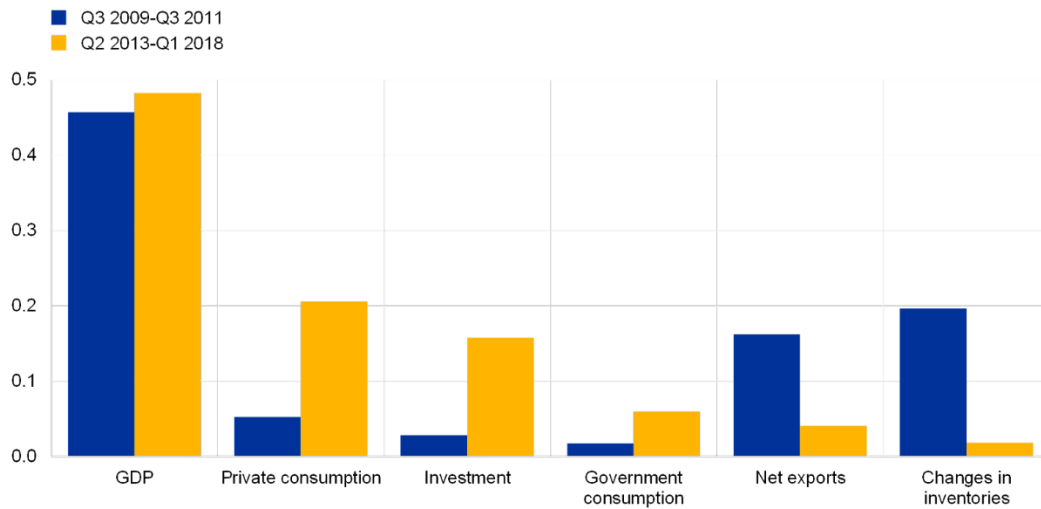
with the ability of the reported earnings to predict the future performance of the business.

Likewise, Cahan et al. (2004) defined the quality of earning as the utility of the solution for the users of the reported earning. In this context, the quality of earning is how market participants benefit from information about earning when deciding whether to allocate resources in the capital markets.

Schipper and Vicent (2018), describes earning quality as the ability of the current reported earning to reflect future cash flow and profits. In this context, earning quality refers to how much better the current reported earnings can predict the future performance of an entity. In the same way, Bellovary et al. (2005) defined the quality of earning as the ability to reflect earning.

#### 4. Results

Since the beginning of the current economic growth in 2013, the increase in earning has been driven mainly by private consumption. Since personal consumption is the largest expenditure item, this can be considered normal; in 2017, private consumption accounted for about 55% of gross domestic product (GDP). However, this stands in stark contrast to the recovery in 2009–2011, when, on average, only about 10% of eurozone GDP growth was conditioned by private consumption (Figure 1). This observation is not limited to the eurozone. During the recent economic recovery, many industrialized countries have witnessed strong consumption dynamics, often with consumption growth exceeding investment growth.

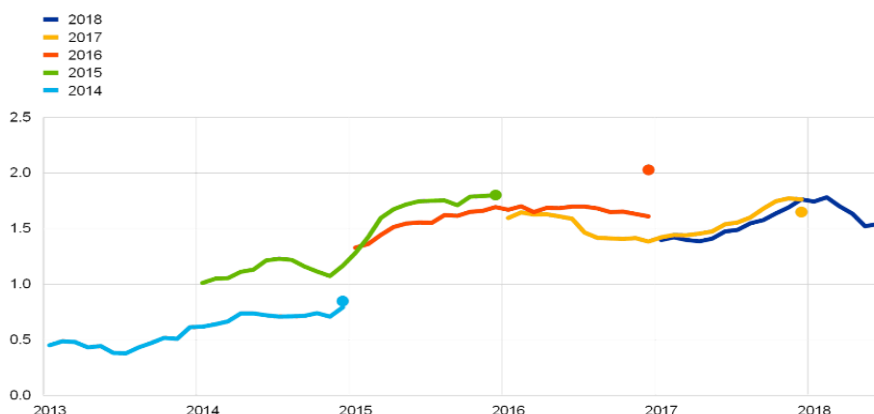


**Figure 1.** The average contribution to GDP growth

Source: Eurostat and ECB calculations.

Growth in private consumption systematically exceeds the initial expectations of professional forecasters. Figure 2 shows how for each year since the beginning of the current economic growth, the actual annual growth in consumption has exceeded the original projections for private consumption. This is especially evident in 2014–2015 when initial forecasts of

consumption growth significantly underestimated the final dynamics of this component of expenditures (Dimitropoulos & Asterious, 2019). This period coincided with an unexpected drop in oil prices, which significantly increased the purchasing power of the population in the eurozone. Since then, consumption growth has floated around 1.7% per year.

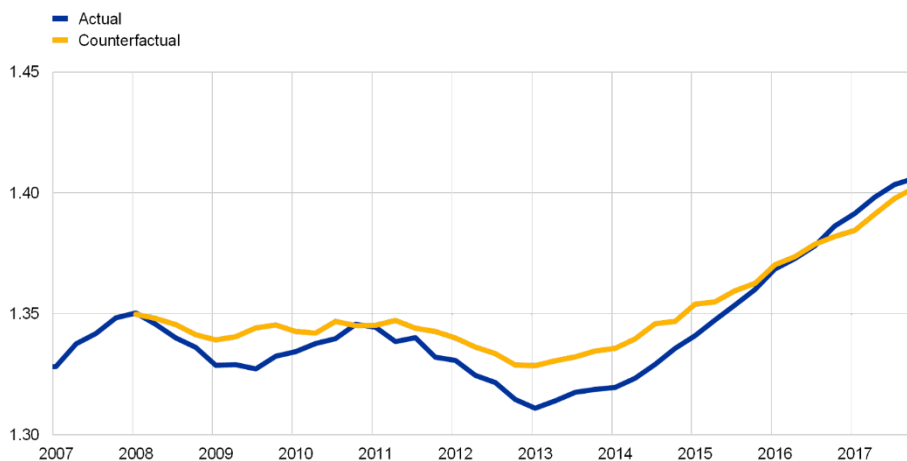


**Figure 2.** Monthly Eurozone private consumption forecast (annual percentage change)  
 Source: Consensus Economics, Eurostat and ECB calculations

Since 2013, private consumption has been closely related to the dynamics of earning and household wealth. Figure 3 presents a counterfactual consumption trajectory similar to that developed at Pistaferrri, based on the assumed relationship between pre-crisis private consumption and household earning and changes in wealth. The two textbook determinants of private consumption, household income and wealth, apparently explain the largest share of consumption growth since 2013. It was only

during the Great Recession and the sovereign debt crisis that private consumption was lower than this simple relationship to income and wealth (Ebaid, 2015).

Since 2013, private consumption has renovated strongly; since mid-2016, it has been worth even higher than it was estimated before the crisis. This is also consistent with a gradual decline in the household savings ratio over the same period.



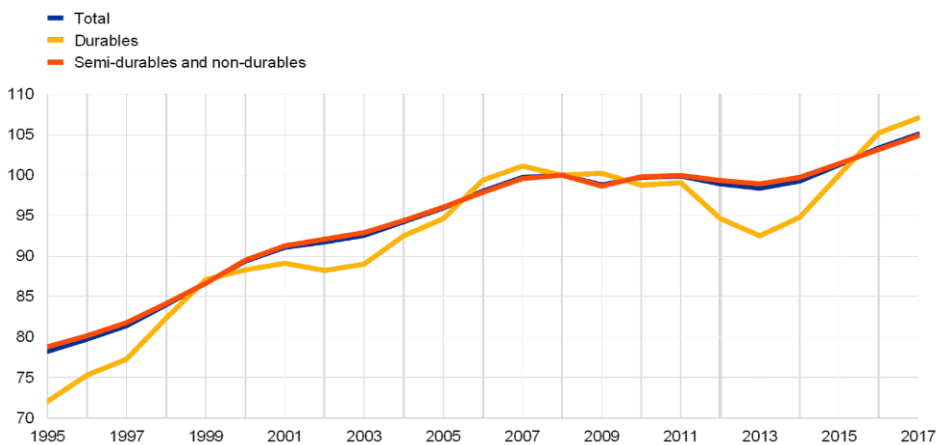
**Figure 3.** Consumption dynamics depending on the earning and household wealth (trillions of euros, at constant 2010 prices)  
 Source: ECB, Eurostat and ECB calculations

Household spending on durable goods is the part of private consumption that is most sensitive to the business cycle. Durable goods usually have an expected average life of more than three years, while durable and non-durable goods have a much shorter life expectancy (Abdelghany, 2005). Households derive utility not directly from spending on durable goods in the current period, but rather from the flow of services they provide throughout their lives. Households can reduce these purchases with low earnings with relatively little decrease in utility, postponing them until their earnings recovers. As a result, consumption of durable goods changes to a greater extent during the business cycle.

Consumption of durable goods has recovered to “normal” levels. Pent-up demand has been an important factor supporting the recent

consumption of durable goods. The sharp fall in consumption of durable goods during the crisis led to a decrease in the effective stock of durable goods and a commensurate increase in its average age (Krivokapic et al., 2013).

In the countries that have been hit harder by the financial crisis, the average age of durable goods stocks has also increased more, leading to pent-up demand once economic conditions have improved. As the economy recovered, households were able to increase spending on durable goods and offset earlier declines in their durable goods inventories. However, since 2015, the positive impact of pent-up demand on durable goods has been declining (Richardson et al., 2018). After a long catch-up phase for private consumption, this can be seen as normalization (Figure 4).



**Figure 4.** Consumption of durable and non-durable goods (index: 2008 = 100)

Source: Eurostat and ECB calculations.

The consumption of basic necessities that satisfy basic human needs suggests that there are more possibilities for recovery in consumer spending. Private consumption can also be divided into basic necessities (such as food, medical care and rent) and basic necessities (such as electrical appliances, celebrations and dining out), each of which accounts for approximately 50% of total private consumption in the eurozone (Srinidhi et al., 2018).

When households survive the negative shock of earning, they generally adjust their consumption of basic necessities. As a result, the basic necessities (such as food, medical care and rent) have a higher elasticity in earning than the basic necessities (such as electrical appliances, celebrations and dining out). However, in the long-term outlook, both components of consumption can be expected to grow at the same rate (Chan et al., 2006).

## 5. Discussion

The versatility of the concept of “quality of life”, the impossibility of a direct quantitative measurement causes the complexity of the assessment and significant difficulties in the interpretation of the results. Although indicators of well-being are an integral part of the system of indicators of earning quality, their application has its peculiarities. Well-being in the concept of earning quality is assessed, as noted, not so much in terms of increasing consumption, but in terms of progress in human development. Consideration of the quality of consumption is also of great importance (Desai *et al.*, 2017).

Most frequently, to assess the quality of earning, complex indices of the physical quality of earning, demographic transition, human suffering, and human development are used. The last indicator, the Human Development Index, is especially widespread. The method for calculating it involves taking into account such a complex category as opportunities, in particular, a long and healthy life, education, economic prosperity (Lipe, 2017).

In addition, the Gender Human Development Index (GDI) and the Women’s Empowerment Index (WED) are calculated. The GDI takes into account the existence and extent of inequality in these areas between men and women. The GEM is designed to measure the relative opportunities of women and men in political and economic spheres of activity. As the authors themselves admit, the Human Development Index is not perfect, and work is in progress to improve it. However, it is recognized that it is much superior to the still in use today GNP per capita for cross-regional and cross-country comparisons (Chan *et al.*, 2006).

It should be noted that the lack of the necessary statistical information makes it difficult to use complex indices at the level

of individual regions, as well as for interregional (intra-country) analysis.

The second group of indicators for assessing the quality of earning is private indicators. This name is quite sketchy since among them there are many of those that, while not being integral by the method of estimation, are such in their essence. First of all, these are indicators of health, population density, and ecology. Another feature of the formation of a system for measuring the level of revenue is the change in the socio-economic content of individual indicators, as well as the emergence of new ones. These changes are based on new theoretical approaches that reflect changes in the socio-economic conditions of the population (Jing, 2018).

The understanding of the essence of efficient labour and, accordingly, the total result of the economic activity of the society is changing. The new methodology for calculating the annual production of a social product is based on an expanded interpretation of the economic sphere, including non-material production. This is reflected in the SNA methodology introduced into the practice of statistical service.

Accordingly, the range of well-being indicators expands significantly, their content changes. First of all, we are talking about such indicators as national income, national disposable income, final consumption and actual final consumption of households, disposable income and adjusted disposable income, indicators of transfers in monetary and in-kind (Demerjian *et al.*, 2013).

The role of the consumption sphere in economic development is changing. Households are becoming one of the main sectors of the economy. Accordingly, the role of indicators characterizing the economic behaviour of households increases. Revenue and household consumption expenditure are becoming one of the main



indicators of wealth. Distribution of earning, sources, and differentiation are met.

The quality of an earnings report helps determine the value of a business by analyzing and reporting detailed aspects that cannot be easily identified by a seller, buyer or investor when viewing financial statements.

The report is not an assessment, but it plays an important role in the negotiation and structuring of the transaction. And also, it reduces the risk and possibility of regret for the buyer or seller.

Accordingly, the group of indicators characterizing earning, etc., changes. Almost all conditions of human life have changed, and a system of new indicators is being formed. Moreover, it is still being formed, the practice of statistical accounting lags far behind the ongoing changes, and its information base does not yet allow a sufficiently satisfactory reflection of all aspects of welfare. In many cases, the source of information is only information obtained in the course of sociological surveys, which further increases their value and significance (Sharma et al., 2012).

## 6. Conclusions

To assess the differentiation and polarization of the population by the income, in modern

demographic statistics, special indicators are used, mainly derived from the ratio of different quantiles of the population by earning (quintile, decile coefficient). Using the most common indicators of earning inequality in international statistics, we can analyze this aspect of the quality of earning in Ukraine based on comparison with the leading country in the corresponding partial process, as well as with Poland, which is our close European neighbour.

The increase in earnings is estimated depending on whether it is caused by internal or external forces. Internal factors are variables that are under the control of management and include measures such as cost reduction measures. External factors are variables that are explained by external factors. The quality of earning improvement may depend on whether the impact was a result of external or internal factors, with the former being considered to be of a lower quality improvement than the latter. Most often, to assess the quality of earning, complex indices of the physical quality of earning, demographic transition, human suffering, and human development are used. The last indicator, the Human Development Index, is especially widespread.

To date, a significant amount of research has documented the impact of earning on quality in resource allocation.

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