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The Methods of Measuring the Well-being at the Level of Local Self-government Communities

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Abstract:

Purpose: *This article aims to identify both the advantages and disadvantages of conducting surveys and face-to-face interviews to measure well-being at the local government community level.*
Design/Methodology/Approach: *The research methodology was based on the analysis and evaluation of questionnaire surveys, which included residents' opinions on the functioning of municipalities in many basic dimensions and their institutions. The research was conducted in seven communes of Lower Silesia in Poland (Wałbrzych, Świdnica, Świebodzice, Strzegom, Jawor, Dobromierz, Mieroszów). When assessing the results obtained, information from other sources was also used, mainly collected statistics and direct knowledge of the surveyed communes.*
Findings: *The developed statistical materials were prepared to make diagnoses necessary to develop new local development strategies for the studied communes and local communities, emphasizing the directly understood well-being of the local community.*
Practical Implications: *During the analysis of the questionnaires, the authors of the study listed the primary types of mistakes made during surveys on prosperity and well-being at the level of local communities in Poland.*
Originality/Value: *The conclusions from the research on survey research carried out in seven Lower Silesian municipalities allow for highlighting the crucial clues that will avoid several basic mistakes that reduce the results' cognitive and implementation value. Knowing the potential advantages and disadvantages of questionnaire surveys may protect against the deterioration of their values, which are very useful for implementing welfare (well-being) at the level of local communities.*

Keywords: *Measuring well-being, local society, welfare, analyze survey research.*

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1. Introduction

Recent years have brought a rapid development of research into new ways of measuring economic and social welfare and criticizing the measures used in national accounts systems, especially gross national (domestic) product. Among the many ideas, research-based on survey techniques is often used. There are specific reasons for this research approach.

The article aims to compile and analyze survey research's main advantages and disadvantages to measure welfare (well-being) in the local self-government communities. The identification and analysis of these elements are based on empirical research carried out in 2020 for selected seven communes of Lower Silesia in Poland (Wałbrzych, Świdnica, Świebodzice, Strzegom, Jawor, Dobromierz, Mieroszów). This research allowed us to see some crucial issues and formulate valuable conclusions based on them. Such applications should be addressed to researchers who prepare and conduct survey studies for individual local communities, not only in Poland.

2. Literature Review

While measuring economic well-being and social welfare, several starting questions arise, in particular:

- how to understand economic and social welfare in the macro (global or national) and micro (local) dimensions (Coyle, 2018);
- what is the purpose of this concept, learning and/or realization of specific practical goals, which is particularly important (Stiglitz *et al.*, 2010); to what extent are the measures used in the systems of socio-economic statistics useful in measuring welfare (well-being) (Stiglitz *et al.*, 2018);
- what measures are available for community welfare (well-being) research.

The above questions are essential for improving the system of measures and indicators of socio-economic statistics. However, they are also crucial for the national economic policy or coordination of activities on a broader scale, up to the global one. This subject matter has rich literature, but its challenges go beyond the study below. For many years, research has been conducted on, among other things, the "greening" of systems of socio-economic statistics (Borys, 1999; 2005) or taking into account the challenges of the so-called information society and knowledge-based economy (Becla, 2010; 2018), as well as other elements considered to be determinants of broadly understood well-being or individual and social welfare.

For representatives of the economic theory, the most interesting questions are the essence of well-being (welfare) and how to understand it (Sen, 2002), and measurement methods. (Nordhaus and Tobin, 1972; Stiglitz, 2020). On the other hand, for economic practitioners, politicians, and local government activists, the methods of implementing projects that shape social and economic well-being are particularly important.

After the initial fascination with the systems of national accounts in the 1950s and the highlighting of their advantages (Kuznets, 1976; Stone, 1951), which resulted in the award of the Nobel Prize to their authors, the first doubts appeared as to the scope of information capacity and the usefulness of the indicators formulated in them. The co-creator of the concept of gross domestic product, S. Kuznets, was aware that it should measure the welfare of a country and not only the production of its economy.

"National income estimates would be handy to remove from the total the elements representing harm rather than benefit from the perspective of a social philosophy more enlightened than that which drives a greedy society. Such assessments would subtract from existing estimates of national income all arms expenditure, most advertising expenditure, a large proportion of the costs associated with financial and speculative activities, and, perhaps most importantly, the expenditure necessary to overcome the difficulties, strictly speaking, inherent in our civilization economics. All the huge investments in urban culture, subways, expensive housing, and so on, are generally included in our estimates according to the value they have in the market, do not represent the services provided to individual members of the nation, but - from their point of view - the necessary evil, indispensable for them to survive. " (after Mitra-Kahn, 2011).

Then other measures were proposed, such as Nordhaus-Tobin's Measure of Economic Welfare (Nordhaus and Tobin, 1972), pure welfare measure (NNW Report, 1979), Beckerman-Bacon (Beckerman and Bacon, 1966), the Geneva method (Drewnowski and Scott, 1966) and a little later the Human Development Index HDI (proposed in 1990 by Mahbub ul Haq), Index of Sustainable Economic Welfare ISEW (Daly and Cobb, 1989), an indicator of real progress (Genuine Progress Indicator), Economic Well-Being or Better Life Index. They were precious for improving the measurement of economic and social phenomena and processes, including welfare. It turned out that the measures existing in practice, such as gross domestic product, do not consider many essential elements of economic activity and its consequences.

The second half of the 20th century brought, among others:

- progressive degradation of the natural environment with all its consequences, such as increasing outlays for the protection of the natural environment and maintenance of environmental services that increase gross domestic product, not necessarily welfare;
- the complications of market structures, overconsumption, and rising transaction costs, the coverage of which also increases gross domestic product;
- external effects, which regardless of the means of internalization, whether in the form of the Pigou tax or the Coase theorem, are elements included in the macro meters;

- an increase in expenditure in the arms race and military conflicts that increase gross domestic product, but not socio-economic well-being (welfare);
- the development of speculation and various financial services that work similarly to increase gross domestic product, not necessarily socio-economic well-being,
- the emergence of a vast and diversified market of information and IT services, significantly increasing the gross domestic product and, at the same time, information chaos, which reduces the socio-economic welfare,
- technical and technological progress with all its consequences for gross domestic product and welfare, especially individual welfare.

There is still an unsolved problem of the informal economy and other forms of the wasteful economy, deepening income disparities (inequalities) or the cost of living of the public sector, including state-political bureaucracy, low operating efficiency, and many others. Each new proposal regarding understanding socio-economic well-being and its measurement generates new challenges and problems that will increasingly absorb economists (Stiglitz, 2020).

3. Research Methodology

Socio-economic statistics systems are good at collecting and processing large data sets (information), often aggregated. However, serious problems arise at the local level (the minor administrative units, e.g., municipalities, cities, housing estates) and regional (slightly larger units of this type, e.g., voivodships or regions) as well as in the microeconomic dimension, which concerns individuals people, individual economic events or households. There are no systems for the regular collection and processing of data and information (Becla, Czaja, and Zielińska, 2010). Hence, we can have more accessible and more complete national or international data access than municipal data. Moreover, the whole projects that shape the well-being of individuals are carried out close to the inhabitants. In order to reduce these disproportions, methods of obtaining data (information) based on relatively cheap and straightforward survey techniques are used.

Survey research uses the indirect measurement method, characterized by the fact that the questionnaire goes directly to the respondent, who answers the questions in writing or electronically. Surveys are most often used to survey numerous groups as quickly as possible. The form of the research depends on the way of contacting the respondents. It is always conducted on a representative sample for the survey to be credible using a standard interview questionnaire or polling (Zasępa, 1972; Steczkowski, 1995).

Surveys have gained importance in public opinion polls (sounding), market research, and scientific research. Their first character is the most popular and focused on capturing society's consciousness or opinions regarding current, often controversial, political, economic, and social events. The second focuses on getting to know the preferences, tastes, and possessions of various goods and services of many groups differentiated by sex, age, income level, level of affluence, or residence. This type of research is also used to test the effectiveness of advertising campaigns to date. Their primary purpose is a factual description. On the other hand, scientific research is used to obtain empirical material to verify hypotheses and formulate theoretical statements of a higher level of generality.

The studies carried out for the survey below were to identify which advantages of the study may be used to measure welfare at the local self-government communities and which disadvantages make such measurement difficult and unreliable. Therefore, the survey was assessed, which included residents' opinions on the functioning of municipalities in many basic dimensions and their institutions. When evaluating the results obtained, information from other sources was also used, mainly collected statistics and direct knowledge of the surveyed communes. Statistical materials were prepared to make diagnoses necessary to develop a local development strategy for the examined communes and local communities. In these cases, 2020 is the end of the time horizon of the existing strategies and the beginning of a new period of strategic analysis.

As there is no universally accepted definition of socio-economic well-being (welfare), a different understanding of these concepts can be formulated, especially from the local perspective. In research carried out in seven selected communes of Lower Silesia, the following issues can be considered as problems directly related to the understanding of prosperity (well-being) at the local level: (1) evaluation of a commune as a place to live; (2) reasons for choosing a given living space; (3) durability of the choice made; (4) assessment of the level of public safety; (5) assessment of the state of the natural environment in the place of residence; (6) evaluation of the municipal educational offer; (7) evaluation of the local cultural offer; (8) evaluation of the communal recreational and sports offer; (9) assessment of the state of medical care and health services; (10) employment opportunities in the commune; (11) openness of the commune and local community to various forms of inhabitants' activity; (12) general evaluation of the commune's activities; (13) shortcomings and investment needs, (14) advantages and strengths of the commune noticed by the inhabitants, and (15) weaknesses and disadvantages identified by the inhabitants.

These elements relate directly to the needs of residents. The latter and the scope of their satisfaction in a given commune will determine the local level of socio-economic well-being and individually perceived welfare. Elements identified by the needs of the inhabitants are essential, even leading ones, for the local self-government policy.

4. Results and Discussion

Surveys have several interesting, potential advantages that determine their popularity. Belong to them:

- the simplicity of carrying;
- out both the surveys and the research, especially in the conditions of using online tools and the Internet;
- quick implementation, especially in the conditions of modern interpersonal and social communication techniques;
- low cost of implementation, which is facilitated by modern information and IT communication systems;
- short time needed to collect responses and analyze the results, in the conditions of information and IT support and statistical programs;
- flexibility regarding both the subject matter of the surveys and the direct way of filling them out;
- being able to reach multiple respondents at the same time, especially with online surveys;
- accessibility in analysis, directly related to the form of the questionnaire;
- convenience in the presentation of results, also with the use of visualization and computer graphics;
- anonymity, which can stimulate greater "openness" of the respondents;
- automatism is related to the lack of the need for coding, creating a self-contained database, and online orientation.

It should also be remembered that questionnaire research is also burdened with the potential possibility of certain defects and limitations, such as:

- the superficiality of the results;
- tendency to behave differently in the network (virtual world) compared to the real world;
- inability to aggravate the problem;
- no direct contact with the respondent;
- exclusion of non-verbal communication elements (e.g., body language, gestures) from the analysis.

Surveys are not suitable for studying social processes over time; therefore, observation is also a popular tool, allowing for a better understanding of lifestyles, subcultures, or small communities. However, for the usual questions about opinions, attitudes, and evaluations, surveys using the survey method are worth choosing due to the low cost and accessible analysis of the data obtained.

The questionnaire surveys provide exciting results describing the awareness and assessment of the life situation of the inhabitants of the surveyed seven communes carried out in their area among the inhabitants. As with any other use of survey techniques, this type of study has its advantages and disadvantages. The first ones include: (1) potentially any wide range of analyzes, (2) relative technical ease of carrying out this type of studies, (3) low cost of survey research, and (4) the possibility of obtaining reliable results, provided that the respondents provide reliable answers and are substantively prepared to complete the survey. The most important disadvantages and limitations of surveys conducted with the use of survey techniques include (1) possible lack of representativeness of the sample, which is the most common cause, (2) unreliability of the answers given by respondents, (3) manipulating the evaluation of the obtained results, (4) incorrect implementation of the results themselves or (5) attaching too much importance to the obtained results, treated as a true reflection of the actual situation.

The analysis of the survey research carried out in seven communes allowed to organize (which is an additional value) the main mistakes made into the following three groups (Table 1):

- external substantive errors, which can be called errors of the first type and they are independent of the researcher;
- methodical internal errors that depend on the person conducting the research; they can be named as errors of the second type, and
- internal errors of a substantive nature, dependent, usually in a conscious manner, on the person conducting the research, having a similar name for errors of the third type.

Table 1. *Basic types of mistakes made during surveys on prosperity and well-being at the level of local communities in Poland*

Groups of errors	Examples of types of errors
the first type of errors (external, content-related)	- unreliable answers of respondents; - lack of substantive competencies of the respondents;
the second type of errors (internal, methodological)	- lack of representativeness of the sample; - no additional verification of the obtained results; - incorrectly prepared questionnaire (questions-variants of answers); - incorrect performance of the test; - lack of model definitions of welfare and well-being
the third type of errors (internal, content)	- manipulating the interpretation of the obtained results; - attaching too much importance to the results obtained, treated as an actual, full reflection of the real situation

Source: *Own study based on the research carried out.*

External errors are a severe challenge for the persons conducting questionnaire research because they have a slight possibility of reducing (elimination). In this type of research (questionnaires, interviews), it is assumed, for example, that the respondents respond reliably, following their views, and the percentage of deliberately false answers does not exceed, according to the normal distribution, the so-called statistical error. However, it should be remembered that the respondents' political or religious views and self-assessment may significantly change the formulated responses. Avoiding such questions reduces the risk of unreliability, but this is not always possible. The research carried out in seven communes of Lower Silesia shows political views on the formulated responses. For example, the percentage of negative opinions is similar to the rate of voters opposing the elected government.

The second external error is the lack of substantive competencies of the respondents. Such competencies can be checked in certain situations with the help of control questions, but in some studies, such as those on welfare (well-being) at the local level, no respondent can be eliminated. Also, such an exclusion cannot be made if we adhere to the random selection of the sample.

Methodical errors made by the researcher conducting the research are among the most common that can be identified. The first is the lack of representativeness of the sample. In the case of seven Lower Silesian communes, the following demographic and social characteristics of the respondents were distinguished: (1) gender, (2) age, (3) level of education, and (4) professional situation. They set the framework for sample representativeness in research on local welfare (well-being). As data on these characteristics were available in the entire population of the analyzed communes, it was possible to compare them with the respondents' samples' characteristics. For all four characteristics, it was not possible to maintain an appropriate level of similarity, i.e., representativeness. The discrepancies reached even 1/3 of the value of the structural distributions. Lack of representativeness is the most common mistake made by the surveyors.

Another methodological error is the lack of additional verification of the obtained results using other data sources (information). In the case of surveys carried out in seven communes of Lower Silesia, such opportunities existed and concerned information (data) collected in the Local Data Bank, documents held by municipal offices, from observations and interviews (as well as denunciations) with residents and other studies or scientific publications. However, no such verification was made. The error of incorrect preparation of the survey is widely discussed in the literature (Siuda, 2020), where there are numerous examples of how to avoid inappropriate questions (sensitive, biased, etc.) and formulating incorrect answer variants. When preparing specific questionnaire surveys, one should always pay attention to two issues: (1) what are the goals (purpose) of the research, what determines the questions being formulated, and (2) what questions may distort (falsify) the obtained results. This condition is also not always met in the evaluated municipal surveys.

Incorrect performance of the research itself may be specially manifested in poorly trained interviewers (if this is how analysis is carried out) or in online surveys (where the respondent is not followed in any way). Such errors are difficult to avoid, but their consequences for the results obtained do not have to be significant. Moreover, the persons performing the research usually try to ensure that they are carried out correctly. A situation of willful misconduct is not assumed as it would amount to a priori deception. Manipulation or surveys of "presumed" results may be an exception. Surveys usually have a clearly defined purpose, subject, and analyzed population. Thus, it is assumed that representatives of this population are oriented toward the subject and are aware of the goal. The surveys in local welfare (well-being) in seven Lower Silesian communes do not confirm this. The questionnaires did not explain the concept of local welfare (well-being), and the content of individual questions does not have to suggest such research topics. The situation of incomplete information may affect the credibility of the formulated responses in the respondents.

Among the mistakes made in the course of questionnaire surveys, there are also other shortcomings of the substantive nature of the entities carrying out these studies. The first of these are related to the manipulation of the interpretation of the obtained results. You can meet several situations here, namely:

- deliberate manipulation of the results, which discredits the entirety of the analyzes performed;
- inadvertent interpretation errors resulting from insufficient knowledge of researchers;
- making a mistake of overinterpretation of the obtained results, i.e., drawing conclusions that exceed the cognitive capabilities of the conducted research;
- committing a waste error, i.e., not using all the values of the achieved results.

In the case of research carried out for seven Lower Silesian communes, there is no deliberate manipulation, but the forms mentioned above of errors are noticeable. Another factual error made by the researchers carrying out the questionnaire research is paying too much attention to the obtained results, which are treated as an actual, complete reflection of the real situation. For this to happen, several conditions must be met, in particular:

- excellent knowledge of the respondents and researchers about a part of the analyzed reality;
- completeness of the survey and full credibility and truthfulness of the answers provided;
- complete collection and proper processing of the data and information received.

This resembles the quite idealistic hypothesis (concept) of rational expectations and the assumptions of the homo oeconomicus model known from economic theory (Czaja *et al.*, 2012). None of the above conditions was met in the survey conducted for the seven communes of interest.

5. Conclusions and Recommendations

Research on the questionnaire research carried out in seven Lower Silesian communes highlights several issues and formulate appropriate conclusions and recommendations:

- If we want to understand better the essence and practical consequences of the concept of welfare (well-being), not only should the theoretical aspects of these categories be developed, but also bring them closer to the micro (local communities or households) and micro-micro levels (individual projects or socio-economic phenomena).

- Social and economic well-being are desirable states of reality at various levels. Taking into account the real needs of people, the practical dimension of these categories is crucial.
- The actual implementation of welfare (well-being) takes place, following the principle of subsidiarity, at the lowest level, directly at the location of the life of individual people and local communities.
- This level of implementation and the occurrence of welfare (well-being) requires closer understanding and design. Getting to know it requires examining the needs and expectations of people living in a given space, and this forces the creation of an appropriate research methodology. Potential advantages, especially ease of implementation and low cost of questionnaire surveys and poorly visible disadvantages, make it tempting to use them in this methodology.
- Questionnaire research has several potential advantages that allow for efficiently obtaining exciting and reliable information under certain conditions, dependent on the investigating researcher and beyond his influence.
- It should be remembered that several basic mistakes can be made in the course of questionnaire research that reduces the cognitive and implementation value of the results obtained, discrediting them in extreme form.
- Knowing the potential advantages and disadvantages of questionnaire surveys may protect against the deterioration of their values, which are very useful for implementing welfare (well-being) at the level of local communities.

References:

Becla, A. 2010. Wady i zalety metody KAM (Knowledge Assessment Methodology) służącej do identyfikacji poziomu zaawansowania gospodarki opartej na wiedzy. Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, 139, 56-70.

Becla, A., Czaja, S., Zielińska, A. 2010. Ecological information management in the context of sustainable development. Chosen issues, Wydawnictwo I-BIS, Wrocław-Jelenia Góra.

Becla, A. 2018. Pozyskiwanie, wykorzystanie i ochrona informacji w warunkach gospodarki opartej na wiedzy i społeczeństwa informacyjnego, Prolegomena do zagadnień gospodarowania informacją. Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu, Wrocław.

Beckerman, W., Bacon, R. 1966. International Comparison of Income Levels: A Suggested New Measure. Economic Journal, 76, 524-536

Borys, T. (Ed.). 1999. Wskaźniki ekorozwoju. Wydawnictwo Ekonomia i Środowisko, Białystok.

Borys, T. (Ed.). 2005. Wskaźniki zrównoważonego rozwoju. Wydawnictwo Ekonomia i Środowisko, Białystok .

Coyle, D. 2018. PKB krótka, lecz emocjonująca historia. Wydawnictwo Naukowe PWN, Warszawa.

Czaja, S., Becla, A., Poskrobko, T., Włodarczyk, J. 2012. Wyzwania współczesnej ekonomii. Wybrane problemy, Wydawnictwo DIFIN, Warszawa.

Daly, H., Cobb, J. 1989. For the Common Good: Redirecting the Economy toward Community, the Environment, and a Sustainable Future. Beacon Press, Boston.

Drewnowski, J., Scott, W. 1966. The Level of Living Index, Report 4. UNRISD, Geneva.

Kuznets, S. 1976. Wzrost gospodarczy narodów: produkt i struktura produkcji. PWE, Warszawa.

Mitra-Kahn, B.H. 2011. Redefining the Economy: How the 'Economy' Was Invented, 1620, rozprawa doktorska, City University London. Retrieved from: http://openacces.city.ac.uk/1276.

NNW Report on the NNW Measurement Committee. 1979. Bureau of National Statistics. Tokyo.

Nordhaus, W.D., Tobin, J. 1972. Is Growth Obsolete. In: Economic Research: Retrospect and Prospect, Nordhaus, W.D., Tobin, J. (Eds.). National Biureau of Economic Research, New York.

Sen, A. 2002. Rozwój i wolność. Wydawnictwo Zysk i S-ka, Poznań.

Siuda, P. 2020. Ankieta internetowa: zalety i wady – rekapitulacja. Retrieved from: https://www.researchgate.net/publication/308556918_Ankieta_internetowa_zalety_i_wady_-_rekapitulacja.

Steczkowski, J. 1995. Metoda reprezentacyjna w badaniach zjawisk ekonomiczno-społecznych. Wydawnictwo Naukowe PWN, Warszawa-Kraków.

Stiglitz, J., Sen, A., Fitoussi, J.P. 2010. Mismeasuring Our Lives: Why GDP Doesn't Add Up. The New Press, Paris, New York.

Stiglitz, J., Fitoussi, J.P., Durand, M. 2018. Beyond GDP: Measuring What Counts for Economic and Social Performance. OECD Publishing, Paris.

Stiglitz, J. 2019. People, Power, and Profits: Progressive Capitalism for an Age of Discontent. W.W.NortonandCompany, New York.

Stiglitz, J. 2020. Jak zmierzyć to, co jest ważne? Świat Nauki, 9, 22-29.

Stone, R. 1951. The Role of Measurement in Economics. Cambridge University Press, Cambridge.

Zasępa, R. 1972. Metoda reprezentacyjna. PWE, Warszawa.