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**USEFULNESS AS A TOOL FOR MEASURING  
THE IMPLEMENTATION OF THE STRATEGY  
OF SELECTED POMERANIAN CITIES IN TERMS  
OF INCREASING RESIDENTS' SATISFACTION WITH  
THE AVAILABILITY AND QUALITY  
OF PUBLIC SERVICES**

Abstract

Urban development strategies indicate the directions of activities of local authorities aimed at improving the quality of life of residents. The factors influencing the satisfaction of residents were presented using indicators in the aspect of three orders: social, economic and environmental. The study of the quality of life of residents, using measurable and verbal factors, allows to present a clear and legible developmental picture.

**Keywords:** sustainability, social security, public services, access to information

**Introduction**

Analysis and monitoring of developmental changes requires close links between many fields of science. The indicators indicated in the study have a direct impact on the increase or decrease in the sense of social security. Public services are determined primarily by their availability and quality. The total and partial utility tool used in the research allowed for a clear and legible presentation of indicators, enabling their

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analysis in a specific time horizon. Assumptions of the strategy of selected cities (Gdańsk, Gdynia, Słupsk) of the Pomeranian Voivodeship in terms of increasing the satisfaction of residents with the availability and quality of public services. In the correct planning and then carrying out the necessary investments, an extremely important role is played by the proper recognition of the existing resources of a local government unit, and then proper and rational planning of future investments.

The Development Strategy is a document that can play an extremely important role in proper planning and development, and at the same time is necessary when applying for EU subsidies. It is a document presenting the main goals, directions and conditions for the development of a local government unit in the next few years<sup>1</sup>. In order for the Strategy to turn out to be a necessary and helpful document, the dominant place in it should be taken by projects that local authorities can undertake on their own, i.e. those for which they can apply independently<sup>2</sup>.

Development strategies are the main tool for defining specific goals and actions to achieve sustainable development, but they also help in developing appropriate models<sup>3</sup>. The development of the city is a change, a process of directional changes, during which simpler and imperfect forms undergo changes towards better and more perfect forms. We deal with development when there is a qualitative change. In this sense, development is related to the concept of progress. The basic task of communes is to meet the collective needs of the local community. The district, in turn, performs the public tasks specified in statutes of an extra-municipal nature in the manner specified in art. 4 of the County Self-Government Act<sup>4</sup>.

Satisfying all social needs listed in statutes with limited financial resources is extremely difficult and must be based on rational management of these resources. Therefore, the management of a commune or a district cannot boil down to the allocation of resources only, but must be focused on local development. The answer to these needs is strategic management, which is "a future-oriented process of planning and select-

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<sup>1</sup> A. Kałaska, P. Przybyłowski, *Pomiar jakości życia w świetle wskaźników zrównoważonego rozwoju na przykładzie wybranych powiatów województwa pomorskiego*, Gdynia 2020.

<sup>2</sup> K. Bryja, *Strategia rozwoju gminy*, Biuletyn BDO, <http://www.biuletyn.bdo.pl> (20.11.2023).

<sup>3</sup> Raport GUS, *Wskaźniki zrównoważonego rozwoju Polski 2015*, Katowice 2015, p. 37.

<sup>4</sup> M. Jurgilewicz, *Rola terenowych organów administracji publicznej w zapewnianiu bezpieczeństwa i porządku publicznego w Polsce*, Warszawa 2023. Zob. Ustawa z dnia 8 marca 1990 r. o samorządzie gminnym (Dz.U. 2023, poz. 40 ze zm.) oraz Ustawa z dnia 5 czerwca 1998 r. o samorządzie powiatowym (Dz.U. 2022, poz. 1526 ze zm.).

ing goals for the development of the commune and implementation tasks, implementation of the adopted provisions, as well as control of the implementation of the adopted arrangements". Strategic management consists of the phases of strategic planning and implementation. Strategic planning, defined as "a conscious, systematic and future-oriented process of continuous preparation and decision making regarding the future level of development of a given local government unit and the degree of meeting the needs of the population, as well as the coordination and integration of implementation activities for the adopted planning arrangements, taking into account external and internal conditions as well as sustainable development"<sup>5</sup>. Strategic planning is therefore the process of formulating development strategies as well as plans and implementation programs. On the other hand, the implementation of the strategy consists in taking actions to implement the vision of development contained in the strategic document. The development and implementation of development strategies allow, on the one hand, to present to the public the goals that local authorities intend to achieve in the future, and to inform the public about the methods and possibilities of their implementation, and, on the other hand, to subject their behavior to social control. Such a procedure allows to avoid: randomness in making decisions, reducing the exercise of power to passive office and solving only the current problems of the commune. The development of the city depends on many factors and is a complex and multi-faceted process. City managers must approach the development process in a perspective and meet the needs of current and future residents. Development additionally depends on the cooperation of many participants, including: representatives of institutions, officials, entrepreneurs, investors, non-governmental organizations, activists and, of course, and perhaps above all, the inhabitants themselves. Contemporary cities strive for intelligent, sustainable development. What is hidden under this sublime issue. It is assumed to ensure a balance between the economic, ecological and social order. The development of cities is determined by improving the quality of life and constantly keeping up with the needs of its inhabitants. Cities want to be friendly places that guarantee a high quality of life.

Therefore, they must develop in all areas. They must provide easy and quick access to services, energy, housing, transport, education and health care. They must constantly expand and make more attractive opportunities for spending free time, including the cultural and sports offer.

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<sup>5</sup> M. Ziółkowski, *Zarządzanie strategiczne w polskim samorządzie terytorialnym*, [in:] *Nowe zarządzanie publiczne w polskim samorządzie terytorialnym*, red. A. Zalewski, Warszawa 2007, p. 110.

In addition, to achieve the above, they must attract new residents and investors - and this in turn requires creating an appropriate situation on the labor market, it is associated with the resources of qualified staff, access to knowledge and technology. The determinant of the above-mentioned goals is often friendly administration, but also the coexistence of other companies on the market, the presence of which guarantees an atmosphere appropriate for business development. Each city has its own strengths, aspirations, potentials and opportunities. Each of them strives for development, including sustainable development at present. Of course, on the other hand, it has to face numerous challenges. The challenges faced by metropolises around the world include, for example, climate change, air pollution, exploitation of natural resources, economic crises, unemployment, and in recent years: the coronavirus pandemic. In addition, the development of cities is constantly influenced by various types of problems and limitations, e.g. limited budget, politics or time. Local development is perceived as "a long-term process of socio-economic development, steered and modified by commune or district self-government authorities, using local development factors for the implementation of specific interests"<sup>6</sup>. R. Brol defines local development as: "harmonized and systematic action of the local community, local authority and other entities operating in the commune, aimed at creating new and improving the existing utility values of the commune, creating favorable conditions for the local economy and ensuring spatial and ecological order"<sup>7</sup>. Summing up, it can be said that local development is not and cannot be perceived solely in terms of economic development, because local development concerns all aspects of the life of the local community. Local development is a process influenced by deliberate actions taken by local authorities, which should be included in the strategy. The starting point for measuring the quality of public services is their correct definition. The basic level of public administration involved in the provision of public services is the municipal government, whose task is to meet the collective needs of the community, in particular in the field of social assistance, education, health protection, culture, physical culture, municipal roads, streets, bridges, squares, municipal housing construction. and organization of road traffic, local public transport, electricity, heat and gas supply, communal greenery and trees, land management, water supply and sewage, municipal sewage disposal and treatment, maintenance of cleanliness and order as well as sanitary facilities, landfills and

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<sup>6</sup> J. Parysek, *Podstawy gospodarki lokalnej*, Poznań 2001, p. 47.

<sup>7</sup> R. Brol, *Rozwój lokalny: nowa logika rozwoju gospodarczego* [in:] *Gospodarka lokalna w teorii i w praktyce*, red. R. Brol, Wrocław 1998, p. 11.

disposal of municipal waste, municipal cemeteries, environmental protection, public order and fire protection. A similar, although slightly smaller, and with the proviso that it concerns tasks of a cross-municipal nature, the scope of activities is carried out by the district self-government, whose tasks include, in particular, matters of public education, social assistance, culture and protection of cultural goods, physical culture and tourism, transport and public roads, water management, environmental and nature protection, agriculture, forestry and inland fishing, public order and safety of citizens, flood protection, fire protection and prevention of other extraordinary threats to human life and health and the environment, architectural and construction administration, geodesy, cartography and cadastre, and tasks related to the scope of district services, inspections and guards. The classification adopted under the Institutional Development Program is objective in nature - the services were classified into three groups and over a dozen categories. Taking into account the diversity of tasks performed by various local government units (communes, districts and voivodships), different categories of services were distinguished in the same groups of services. We include public services provided in districts<sup>8</sup>:

- administrative services;
- public services of a social nature;
- technical public services: transport.

The authors considered the above issues to be extremely important for the development of cities, as Polish public administration will have to change rapidly. The necessity of changes is forced by offices both by the pressure of examples of efficient operation of public administration in other European Union countries, as well as the necessity to radically improve the effectiveness of the entire public finance sector, which is necessary in the face of the current financial situation of the country. The implementation of improvements and optimization may be one of the most important undertakings which, by improving the image of public administration in the eyes of citizens, will also allow to meet the challenges posed by local communities. The authors undertook an analysis of the strategies of three selected cities of the Pomeranian Voivodeship in order to indicate the directions of local authorities' activities aimed at improving the quality of life of the inhabitants, paying particular attention to the planned activities aimed at increasing the satisfaction of inhabitants with the availability and quality of public services. Sustainable

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<sup>8</sup> W. Wańkowicz, *Wskaźniki realizacji usług publicznych. Program Rozwoju Regionalnego Program Rozwoju Regionalnego wybranych powiatów województwa pomorskiego*, Gdynia 2020.

development indicators have been selected in such a way as to relate to the strategic goals included in the Development Strategies of the analysed counties. In the strategy of the city of Gdynia 2030<sup>9</sup>, who, who refer to the situations they know, know who to address until 2030 and the action aimed at address data and city authorities, that the second number When it refers to the data that they enter, and how and when they know in the given living conditions, the data of the billing widths in the whole city, measures and heights, provided that due to the sovereignty of local authorities and other Member States. The 'Declining Objective' objective deals with activities related to the districts that are to enter into force, namely in the light of the observed demographic and migration trends (population growth in districts and districts) in its place). The strategy may also counteract threats in the area of Gdynia's community and supplement itself with the number of necessary changes in the assessment and medical care. Subsequently, in the 2030 Plus development strategy, there will be five area of development with achievements that are to be achieved as the aspirations of the residents aiming at increasing the attractiveness of Gdańsk<sup>10</sup>.

- Education and social capital
- Economy and transport
- Public space
- Culture
- Health

The first strategic goal was indicated in the Słupsk<sup>11</sup> City Development Strategy, focused on improving the broadly understood sphere of public services, which are provided by local governments associated with the Słupsk-Ustka MOF. Raising the standard of living is inextricably linked with active social policy. Creating an area as an attractive place to live is strongly related to the quality of individual services. They strongly influence the assessment and perception of the entire Słupsk-Ustka MOF. The strategy assumes achieving a high standard of the quality of public services throughout the MOF is a serious institutional and economic challenge. The importance of achieving the strategic goal in the social dimension is the basic activity.

Above, the authors presented the city development strategy, pointing to the directions of local government authorities' activities aimed at improving the quality of life of the inhabitants. Below, they

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<sup>9</sup> *Strategia rozwoju miasta Gdyni 2030*, Gdynia 2017.

<sup>10</sup> *Gdańsk 2030 Plus. Strategia rozwoju miasta*, Gdańsk 2014.

<sup>11</sup> *Strategia Rozwoju Miejskiego Obszaru Funkcjonalnego Słupsk - Ustka na lata 2022-2030*, Urząd Miasta Słupska, <https://www.slupsk.pl> (20.11.2023).

will present an analysis of the currently available data to illustrate the quality of life of residents, using measurable and verbal factors that will allow to present a clear and legible picture of the development of cities. Factors influencing the satisfaction of residents were presented using indicators in the aspect of three orders: social, economic and environmental.

### **Selected indicators in the field of accessibility of public services**

There is no commonly accepted definition of an indicator in the available literature, the notions of an indicator and a measure are used interchangeably. The most important feature of each indicator is the comparability of its value, which enables the positioning of a given object against other, for example, Local Government Units. The indicator expressed as an absolute or relative number (presented as a percentage ratio of the quantities considered to the adopted basis), expressing the level of a given phenomenon, is the most readable form of statistical description, because it is simplified information relating to the description of a complex phenomenon<sup>12</sup>. Sustainable development indicators are broadly grouped into three headings: social, economic and environmental. In this article, the selection of indicators was made in terms of measuring the implementation of the strategy in terms of increasing the satisfaction of residents with the availability and quality of public services and the assessment of development changes based on the description of indicators, as well as an empirical analysis of these indicators<sup>13</sup>. The selection of the number of variables also depended on the availability of data for the examined cities. In order to ensure the correctness and credibility of the research, the values of the indicators came from one source - the Local Data Bank, the Central Statistical Office. The first table shows a set of seven indicators for selected cities: Gdańsk, Gdynia and Słupsk. The indicators presented in the study are an example of the possibility of wider research in the field of strategy monitoring.

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<sup>12</sup> M. Kusterka, *Struktury przyczynowo-skutkowe jako podstawa opracowania systemów wskaźników zrównoważonego rozwoju*, Wrocław 2005, p. 2.

<sup>13</sup> S. Bach, J. Kloas, H. Kuhfeld, *Wem nutzt die Entfernungspauschale?*, "Informationen zur Raumentwicklung", 2007, No. 2/3, pp. 201-209.

**Table 1. Indicators of the cities studied in 2017-2021**

City/ Indicators	2017	2018	2019	2020	2021
<b>Gdańsk</b>					
Outpatient entities, outpatient clinics in total [ob.]	231	264	264	268	284
Beneficiaries of environmental social welfare per 10 thousand population	263	240	218	211	222
Unemployment rate [%]	4.5	4.1	3.7	5.3	4.7
Population using sewage treatment plants in% of the total population [%]	93.3	93.3	9.2	92.3	91.9
Mixed waste collected during the year, total per 1 inhabitant [kg]	295.2	279.0	268.7	162.7	237.3
Gross enrolment rate; primary schools [%]	100.58	98.92	97.35	98.30	98.9
Expenditure on public expenditure in page expenditure [%]	6.2	6.1	6.0	5.4	4.9
<b>Gdynia</b>					
Outpatient entities, outpatient clinics in total [ob.]	99	125	130	129	134
Beneficiaries of environmental social welfare per 10 thousand population	225	234	227	219	228
Unemployment rate[%]	2.8	2.5	2.1	3.5	2.4
Population using sewage treatment plants in% of the total population [%]	94.1	94.2	94.2	94.6	95.0
Mixed waste collected during the year, total per 1 inhabitant [kg]	288.0	278.6	304.0	206.1	205.5
Gross enrolment rate; primary schools [%]	94.56	94.50	92.80	94.24	94.20
Expenditure on public expenditure in page expenditure [%]	4.8	5.1	4.7	4.7	5.s6
<b>Ślupsk</b>					
Outpatient entities, outpatient clinics in total [ob.]	48	49	46	45	51
Beneficiaries of environmental social welfare per 10 thousand population	235	196	193	223	228
Unemployment rate [%]	4.2	3.5	3.2	5.7	5.4
Population using sewage treatment plants in% of the total population [%]	95.5	95.0	95.4	96.4	93.0
Mixed waste collected during the year, total per 1 inhabitant [kg]	327.0	338.2	324.9	262.5	295.4
Gross enrolment rate; primary schools [%]	99.79	100.48	99.89	101.48	100.22
Expenditure on public expenditure in page expenditure [%]	3.7	5.5	6.3	5.4	5.1

Source: own study based on GUS data

The years for which the most complete statistical data were available were selected for the analysis. The selected indicators are an example of data illustrating the degree of achievement of the objectives included in the strategies adopted by the cities. The first indicator concerns broadly understood healthcare, which is of critical importance in terms of assessing the quality of life in Local Government Units. In monitoring the implementation of the strategy objectives, aspects should be assessed, in particular, about the condition and operation of institutions conducting medical activity and medical practices, about medical staff, entities conducting medical activity in the field of inpatient and outpatient health care, about pharmacies and pharmacy outlets, about blood donation, on emergency aid and medical rescue, as well as on the occupational medicine service. The indicator indicated in the study is an example of one of the areas that should be extended in further research. Another indicator is related to social assistance as one of the elements of the strategy. Social Welfare Centres offer many types of services to individuals and families who need permanent or one-time assistance. Social assistance is aimed at making it possible to overcome difficult life situations, which these centres are not able to overcome with support, using their own rights, resources and possibilities. The environmental aid indicator shows the material condition of the population. The unemployment rate is an indicator helpful in the analysis of the implementation of the goals included in the development strategies, it is defined as the share of registered unemployed in the economically active civil population, i.e. without employees of budgetary units operating in the field of national defence and public safety. The indicators concerning the broadly understood state of the natural environment are indicated in the study: Population using sewage treatment plants in % of the total population and the amount of mixed waste collected per year per capita. The first of the indicated indicators determines the estimated population of towns and villages using the sewage network, from which the sewage is subjected to treatment processes in sewage treatment plants operating on this network. The second indicator shows the amount of waste generated in households, excluding end-of-life vehicles, as well as non-hazardous waste from other waste producers, which due to its nature or composition is similar to household waste. The enrolment indicator relates you directly to strategic goals in terms of education and represents the percentage of learners calculated in relation to the population in a given age group, broken down by appropriate stages of education. The last indicator concerns the expenditure on public roads in the city's total expenditure. From the point of view of the districts, the construction and maintenance/improvement of transport conditions is of critical importance.

## Total and partial utility of selected indicators

The article uses the data collected in the Central Statistical Office database, and the use of the total and partial utility methods enables the presentation of research results in an accessible manner. The essence of the conversion of sustainable development indicators to the utility indicator is that the mathematical equation used allows to reduce the units characterizing individual indicators and transform them into real numbers in the range of 0-1 as partial utility values. Then the obtained values of real numbers for various indicators can be summarized and presented as a total utility value in a transparent way for individual cities<sup>14</sup>.

However, it is crucial to determine the function that a given indicator performs, i.e. whether it is a stimulant (S; an increase in its value is favourable), a destimulant (D; an increase in its value is unfavourable) or a nominant (the most favourable values are intermediate values). In this study, the indicators were classified as stimulants or destimulants. The partial utility is the relative value of the sustainable development index for the analysed city compared to the values of other cities and is calculated according to the following formula

$$U_{ij} = \frac{C_{ij} - C_j^0}{C_j^1 - C_j^0}$$

where:

$U_{ij}$ —partial utility for city  $i$  relative to indicator  $j$ ,

$C_{ij}$ —value of sustainable development indicator  $j$  for city  $i$ ,

$C_j^0$ —the lowest (for the sustainable development stimulant) or the highest (for the sustainable development destimulant) value of the sustainable development indicator  $j$  among the analysed cities,

$C_j^1$ —the highest (for the sustainable development stimulant) or the lowest (for the sustainable development destimulant) value of the sustainable development indicator  $j$  among the analysed cities<sup>15</sup>.

The value of partial utility falls within the range of real numbers 0–1, when the value is equal to 0, it proves that a given city has reached the worst result among the analyzed cities, whereas when the value of partial

<sup>14</sup> A. Przybyłowski, A. Kałaska, P. Przybyłowski, *Użyteczność jako narzędzie pomiaru jakości życia w wybranych jednostkach samorządu terytorialnego województwa pomorskiego*, Gdynia 2022.

<sup>15</sup> C. Alpopi, C. Manole, S.E. Colesca, *Assessment of the Sustainable Urban Development Level through the Use of Indicators of Sustainability*, “Theoretical and Empirical Researches In Urban Management”, 2011, Vol. 6, Issue 2.

utility equals 1, it means that the city is a leader regarding a given indicator. The total utility is calculated as per the following formula:

$$UG_i = \sum_{j=1}^n U_{ij}$$

The total utility value for a given city depends not only on the value of the partial utility, but also on the number of analysed indicators. With a maximum partial utility value of 1, the total utility value is equal to the sum of the indices included in the given analysis<sup>16</sup>.

**Table 2. The value of total and partial utility for the examined cities**

City/ Indicators	2017	2018	2019	2020	2021
1	2	3	4	5	6
<b>Gdańsk</b>					
Outpatient entities, outpatient clinics in total [S]	0	0.62	0.62	0.70	1
Beneficiaries of environmental social welfare per 10 thousand Population [D]	0	0.44	0.13	1	0.79
Unemployment rate [D]	0.5	0.75	1	0	0.38
Population using sewage treatment plants in% of the total population [S]	1	1	0.92	0.28	0
Mixed waste collected during the year, total per capita [D]	0	0.12	0.20	1	0.43
Gross enrolment rate; primary schools [S]	1	0.49	0	0.29	0.48
Share of expenditure on public roads in total expenditure [S]	1	0.92	0.85	0.38	0
<b>Total utility</b>	<b>3.5</b>	<b>4.34</b>	<b>3.72</b>	<b>3.65</b>	<b>3.08</b>
<b>Gdynia</b>					
Outpatient entities, outpatient clinics in total [S]	0	0.74	0.88	0.86	1
Beneficiaries of environmental social welfare per 10 thousand Population [D]	0.60	0	0.47	1	0.40
Unemployment rate [D]	0.50	0.71	1	0	0.78
Population using sewage treatment plants in% of the total population [S]	0	0.11	0.11	0.55	1
Mixed waste collected during the year, total per capita [D]	0.16	0.26	0	0.99	1
Gross enrollment rate; primary schools [S] [S]	1	0.96	0	0.82	0.79
Share of expenditure on public roads in total expenditure [S]	0.11	0.44	0	0	1

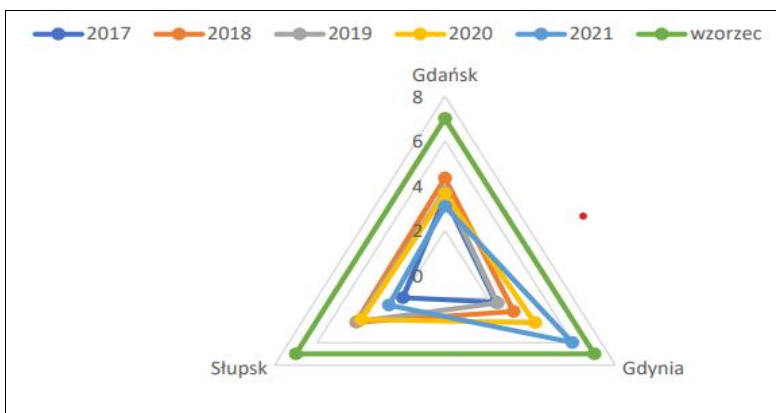
<sup>16</sup> A. Przybyłowski, A. Kałaska, *Quest for a Tool Measuring Urban Quality of Life: ISO 37120 Standard Sustainable Development Indicator*, "Energies", 2022, no. 15.

1	2	3	4	5	6
<b>Total utility</b>	<b>2.37</b>	<b>3.22</b>	<b>2.46</b>	<b>4.22</b>	<b>5.97</b>
<b>Slupsk</b>					
Outpatient entities, outpatient clinics in total [S]	0.5	0.67	0.16	0	1
Beneficiaries of environmental social welfare per 10 thousand Population [D]	0	0.93	1	0.28	0.17
Unemployment rate [D]	0.6	0.88	1	0	0.12
Population using sewage treatment plants in% of the total population [S]	0.73	0.59	0.7	1	0
Mixed waste collected during the year, total per capita [D]	0.15	0	0.18	1	0.56
Gross enrollment rate; primary schools [S]	0	0.41	0.06	1	0.25
Share of expenditure on public roads in total expenditure [S]	0	0.69	1	0.65	0.54
<b>Total utility</b>	<b>1.98</b>	<b>4.17</b>	<b>4.1</b>	<b>3.93</b>	<b>2.64</b>

Source: own study

The research took into account 7 indicators, so the hypothetical highest value of total utility is 7. The obtained results indicate that no of the examined cities did not reach the maximum value. There are large differences between the analysed cities (1.98-5.97).

It is worth comparing the value of the total utility to the value of the pattern vector, i.e. the highest value that the city could achieve (the pattern vector is equal to the number of the examined indicators). The chart below (1.) shows the values of total utility of the examined cities and their distance from the standard value.



**Diagram 1. The ratio of the total utility value to the standard vector**

The analysis of the research in this article shows that the highest values of total utility are found in the city of Gdynia and oscillate between 2.37-5.97.

## **Assessment of the factors determining the increase in satisfaction**

The analysis of sustainable development indicators is often associated with a number of limitations, therefore the use of total and partial utility allows to visualize these changes in a transparent and easy-to-interpret manner. This gives the possibility of using the above-mentioned tool by local authorities to implement corrective actions aimed at improving the quality of life of the inhabitants.

Among the examined cities, it is worth noting the dependencies affecting the values of total utility. When analysing the city of Gdańsk, the highest values were recorded in 2018, where the value close to utility 1 was achieved by the following indicators:

- Population using sewage treatment plants as % of the total population [S]
- Share of expenditure on public roads in total expenditure [S]. The lowest values occurred in 2021 and related to the indicators:
- Population using sewage treatment plants as % of the total population [S] - Share of expenditure on public roads in total expenditure [S]
- Unemployment rate [D].

The analysis concerning the city of Gdynia indicated that the highest utility values occurred in 2021 and concerned the following indicators:

- Outpatient entities, outpatient clinics in total [S],
- Population using sewage treatment plants as% of the total population [S],
- Mixed waste collected during the year, total per capita [D],
- Share of expenditure on public roads in total expenditure [S].

The lowest total utility values were for 2017 and the following indicators had a direct impact on this result:

- outpatient entities, outpatient clinics in total [S],
- population using sewage treatment plants as% of the total population [S],
- mixed waste collected during the year, total per capita [D],
- share of expenditure on public roads in total expenditure [S].

The analysis concerning the city of Słupsk indicated that the highest total utility value was recorded in 2018 and concerned:

- Population using sewage treatment plants in% of the total population [S],
- Unemployment rate [D], however, none of these indicators reached the value of 1. The lowest utility values in Słupsk occurred in 2017, where the following indicators had a direct impact on this:
- beneficiaries of environmental social welfare per 10 thousand population [D],

- mixed waste collected during the year, total per capita [D],
- gross enrolment rate; primary schools [S],
- share of expenditure on public roads in total expenditure [S].

It is worth noting, however, that the lowest total utility values for the city of Słupsk (1.97) were the lowest among the examined cities in 2017-2021.

### **The impact of the increase in residents' satisfaction with the availability and quality of public services on the sense of social security**

Man is a demanding creature and rarely, except for a short while, achieves a state of full satisfaction. If one desire is satisfied, another one takes its place. When this in turn is satisfied, still others come to the fore, and so on. It is characteristic of human beings that they almost always want something throughout their lives<sup>17</sup>. Two conclusions can be drawn from this statement, which are of particular importance for social security. First, human nature always wants to satisfy more and more sophisticated and often redundant needs. Second, the satisfaction of any subsequent need requires the prior satisfaction of man's actual desires.

It is also worth noting that for centuries social security has been equated with social security. It means certainty in ensuring the right existence and development of man. Therefore, it is important to: eliminate social inequalities, fight unemployment, develop educational and cultural institutions, guarantee pensions and other social benefits, healthcare<sup>18</sup>. A necessary condition for ensuring social security is an increase in budget funds allocated for social purposes. Social security is considered in two areas: the first is the cultural area, the second is the social aspect. The main issue in this area is the appropriate policy of the authorities, aimed at the development and support of the society. The elements mentioned above, such as the fight against unemployment, are particularly important. It is equally important to minimize the phenomenon of marginalization, exclusion or social stigma. The effect of these activities will be to ensure social security. Security as a lexical term and, at the same time, a basic existential and behavioural need, as well as a philosophical ontological and epistemological category, has accompanied mankind since the dawn of history. The etymology of the word "security" derives from the Latin term *Securitas*, which comes from *Sine Cura*, meaning

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<sup>17</sup> A. Maslow, *Motywacja i osobowość*, Warszawa 2017, p. 52.

<sup>18</sup> M. Brzeziński, *Bezpieczeństwo społeczne z perspektywy bezpieczeństwa wewnętrzznego*, „Zeszyty Naukowe WSOWL”, 2013, no. 3, pp 6-7.

"without care", "without care". In this sense, it emphasizes the primacy of threats in relation to the feeling of certainty, i.e. security. Today, the term "security" corresponds to the English term Security and Latin *Securitas*. In Anglo-Saxon culture, safety is synonymous with certainty (Safety) and an antonym for threats (Danger). Currently, there are two words in English for safety, Safety and Security. The term Safety is commonly used to refer to the safety of people and the protection of their basic life needs. The term Security concerns mainly the security of resources (in particular economic, material, managerial and technical resources, including IT), primarily in terms of potential threats caused by intentional human activity<sup>19</sup>.

In the common sense, quality of life is a category that is intuitively and easily understood. From a scientific point of view, it is a term that does not have a universally recognized definition, which creates major methodological problems. It belongs to general concepts, with difficulty being defined, as well as other concepts with an existential tinge: "the meaning of life", "happiness", which for millennia have been and are the subject of philosophical deliberations<sup>20</sup>.

Therefore, it is not surprising that the common belief that the quality of life is a multi-dimensional, emotionally loaded concept and phenomenon, often of an ideological nature, an evaluative concept, impossible to be clearly understood, entangled in political and cultural contexts. Over the past few years, there has been a tendency to broaden the perspective within which this issue is considered<sup>21</sup>. Nowadays, this concept has become a permanent part of the terminology of such sciences as: sociology, medicine, economics, psychology, and pedagogy. A review of the literature on research on quality of life reveals many ambiguities, both in terms of understanding and defining this concept. Controversies around this issue not only arise within various social sciences, but also concern representatives of the same fields of knowledge. This situation is mainly due to the researchers' focus on various aspects of quality of life and the interdisciplinary nature of this concept. The social sciences agree that when describing the scope of the concept of quality of life, it is important to analyse both objective and subjective determinants<sup>22</sup>. This thesis is confirmed by the analysis of the literature on the subject, in

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<sup>19</sup> W. Kałamucka, *Jakość życia i zabezpieczenie egzystencji z perspektywy geograficznej*, Lublin 2017, p. 42.

<sup>20</sup> M. Mularska-Kucharek, *Social Capital and Quality of Life in Urban Communities*, Łódź 2013, p. 41.

<sup>21</sup> A. Sompolska-Rzechuła, *Quality of Life as an Economic Category*, "Folia Pomoranensis Universitatis Technologiae Stetinensis. Oeconomica", 2013, no. 71, p. 127.

<sup>22</sup> A. Michalska-Żyła, *Life Satisfaction and Social Trust of Post-Industrial Urban Residents*, "Acta Universitatis Lodziensis. Folia Sociologica", 2015, no. 52, p. 149.

which one can find many models of measuring the quality of life, referring to both objective and subjective determinants. Some of them are based on objective, some on subjective aspects of quality of life. Mixed models are also proposed that take into account both the objective and subjective dimension of the phenomenon<sup>23</sup>.

So far, no universal definition of quality of life has been developed in the social sciences. Rather, researchers try to conceptualize this concept, taking into account, first of all, the context of its use and the purpose of the research. Finding a compromise definition of quality of life is not easy. Liu in 1976 indicated that there are as many definitions of quality of life as there are people. These problems make it difficult to identify a single comprehensive definition of quality of life that would be fully useful for researchers representing various sciences. One of the most used and commonly cited definitions was formulated by the Quality of Life Group operating within the World Health Organization (WHO-QOL Group). The quality of life is defined as the individual's perception of his or her position in life in the context of culture and value systems accepted by the society in which he or she lives, and in relation to their life goals, expectations and interests. The analysis of sustainable development indicators is very often related to a number of limitations, therefore the use of total and partial utility allows to visualize these changes in a transparent and easy-to-interpret manner. This gives the possibility of using the above tool by local authorities to implement corrective actions aimed at improving the quality of life and the sense of security. As a result of applying the partial and total utility, the elements listed in the strategies that require implementation of corrective actions were indicated. This tool makes it possible to monitor the implementation of goals that self-government authorities assumed in their strategies. The residents' satisfaction with the quality and availability of services clearly increases or decreases the sense of security. High quality of life should be recognized as the overarching goal of development at local, regional, national and international levels. It is the final result of actions taken by appropriate power structures, including local authorities<sup>24</sup>.

The task of local government is to create conditions for the production of local public goods and services, which directly affects the sense of security of the inhabitants. Local government through investment activities develops the social and economic infrastructure, which directly

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<sup>23</sup> J. Trzebiatowski, *Quality of life in the perspective of social and medical sciences – classification of definitions*, "Hygeia Public Health", 2011, no. 46, p. 26. See S. Maranghi [et al.], *Integrating urban metabolism and life cycle assessment to analyse urban sustainability*, "Ecological Indicators", 2020, p. 112.

<sup>24</sup> *Ibidem*, pp. 277-288.

increases the availability of services. However, this requires the allocation of appropriate financial resources for this purpose. In Poland, the municipalities have the broadest range of tasks, and therefore have a significant impact on the quality of life of the inhabitants. Tasks that go beyond the scope of activities of communes are undertaken by poviats, and then by voivodships. The quality of life is also shaped by the sense of external and internal security<sup>25</sup>.

## Conclusions

The sense of security is closely related to the quality of life and the development of society, therefore the protection of public safety and order is one of the most important tasks of the state. The act of 5 June 1998 on poviats self-government obliges local governments to take actions supporting the fight against threats, obliging them to perform public tasks in the field of public order and citizens' safety. Local authorities should implement a monitoring system with the use of a utility indicator, which will be a very useful management tool, enabling effective planning, allocation of resources, periodic assessment and adjustment of actions taken resulting from socio-economic changes. Such analysis and diagnosis is possible thanks to the use of the total and partial utility index. The purpose of such monitoring of developmental changes should be to collect and process information on the progress in achieving goals included in the strategies, but first of all to indicate the processes influencing the formation of these changes.

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<sup>25</sup> S.E. Bibri, *The IoT for smart sustainable cities of the future: An analytical framework for sensor-based big data applications for environmental sustainability*, "Sustainable Cities and Society", 2018, no. 38, pp. 230–253.

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**Przydatność jako narzędzie pomiaru realizacji strategii wybranych miast pomorskich pod kątem zwiększania satysfakcji mieszkańców z dostępności i jakości usług publicznych**

Streszczenie

Strategie rozwoju miast wyznaczają kierunki działań władz lokalnych mające na celu poprawę jakości życia mieszkańców. Czynniki wpływające na satysfakcję mieszkańców przedstawiono za pomocą wskaźników w aspekcie trzech porządków: społecznego, ekonomicznego i środowiskowego. Badanie jakości życia mieszkańców, wykorzystując czynniki mierzalne i werbalne, pozwala na przedstawienie jasnego i czytelnego obrazu rozwoju.

**Słowa kluczowe:** zrównoważony rozwój, bezpieczeństwo społeczne, usługi publiczne, dostęp do informacji