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A QUALITATIVE CONTENT ANALYSIS OF SUSTAINABLE QUALITY OF LIFE CONCEPT IN RESEARCH ARTICLES

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Abstract. Sustainable Quality of Life is a new concept that emerged in socioeconomically wealthy countries with high importance given to the concepts of Quality of Life and Sustainability. It is evident that many macroeconomic aspects such as inflation, unemployment, economic growth, etc. impact the sustainability of quality of life. The aim of the study is to analyse the evolution of the concept of sustainable quality of life and to define the primary macroeconomic factors that affect the sustainable quality of life. The study was conducted as a qualitative content analysis of research articles, grounding the research questions of (a) what is sustainability, (b) what is quality of life, (c) what is the sustainable quality of life, and (d) how to achieve a sustainable quality of life. Categories were developed for each research question and the frequency of usage of the category was used to answer each question. It is observed that many types of research have been carried out to study sustainability, quality of life, sustainable quality of life, different indicators of sustainability, indicators of quality of life, and measurement of quality of life with different approaches. Innovation, research, creativity health, education and training, social relations, safety, environment, and quality of services contribute vastly to the achievement of sustainable quality of life. Further, it is observed that there are only a few research articles that have focused on how to achieve a sustainable quality of life and it is a broad concept that requires more attention and in-depth study.

Keywords: *content analysis, sustainable quality of life, sustainability.*

JEL Classification: E60, O18

INTRODUCTION

In most socioeconomically wealthy countries, quality of life and sustainability have already become widely discussed concepts. In the emergence of these concepts, sustainable quality of life has been raised as a new concept that needs to be discussed in terms of how sustainable quality of life can be approached conceptually and empirically in these economies. In research articles, sustainable quality of life in a nation is usually defined as a quality of life of the population within the nation's borders that can be continued with the given natural and social resources available to the nation, and it is not at the expense of an acceptable quality of life for the current generation of inhabitants in other countries, future generations in the home nation and other nations.

It is, therefore, essential to define what constitutes sustainable quality of life and what aspects have an impact on sustainable quality of life in a nation's population. As per the definition of sustainable quality of life, it is identified that a nation's natural and social resources are key factors that contribute to and impact this concept. However, it is also necessary to discuss how and what macroeconomic processes will impact the sustainable quality of life.

Macroeconomics is the study of the behaviour of the economy as a whole. This differs from microeconomics, which concentrates more on individuals and how they make economic decisions. Macroeconomics is very complicated, with many factors that influence it. These factors are analysed with various economic indicators that tell us about the overall health of the economy, such as national output (GDP), unemployment, inflation, etc. The aim of the study is to analyse the evolution of the concept of sustainable quality of life to define the primary macroeconomic factors that affect it. The main objectives of the research are:

- to do a qualitative content analysis of the research articles to understand the concept of sustainability, quality of life, and sustainable quality of life;
- to identify the main macroeconomic factors that affect the sustainable quality of life;
- to develop an initial model defining the macroeconomic processes affecting the sustainable quality of life.

As previously mentioned, sustainability and quality of life have already become widely discussed concepts in most socioeconomically wealthy countries. A new concept that merges sustainability and quality of life has emerged, namely the sustainable quality of life. Even though there are different studies about sustainability and quality of life, there are few studies about sustainable quality of life. The authors of the article believe this concept needs to be discussed and the question of how can the sustainable quality of life be approached conceptually and empirically in developed and developing economies needs to be answered. In the midst of events like pandemics, it will be very wise to evaluate and study the impact of those events on the sustainable quality of life of those economies because macroeconomic factors like inflation, unemployment, and GDP are highly affected largely during such times globally. It is a very important and timely manner to study in the area of sustainable quality of life as the world is seeing so many changes in social and economic aspects.

The research methods used are analysis and synthesis, but the main research will be carried out as a qualitative content analysis of available research articles published on the themes of sustainability, quality of life, and sustainable quality of life itself. The authors of the article aim to add new aspects in the form of a model to the concept of sustainable quality of life.

1. LITERATURE REVIEW

Sustainability is a commonly referred term in many studies specifically focusing on the economy, society, and environment. The University of California, Los Angeles (UCLA) sustainability committee demarcates sustainability as: "the integration of environmental health, social equity, and economic vitality in order to create thriving, healthy, diverse and resilient communities for this generation and generations to come". The practice of sustainability recognizes how these issues are interconnected and

requires a systems approach and an acknowledgment of complexity.” (University of California, Los Angeles, 2013).

In the report *Our Common Future*, sustainability is referred to as the requirement of current economic processes to ensure the needs of the present without compromising the needs of the future generations to meet the present-day needs (Brundtland, 1987). (Solow, 1992) stated that the next generation should have everything that is required to achieve a standard of living at least that is as good as the present generation and also ensure that the next generations to come will also have a similar standard of living.

Sustainability is defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987). Further, it is entwined around three pillars: environment, economy, and society. Simply sustainability can be referred to as meeting the needs of the present without compromising the ability of future generations (McGill University, 2020). In elaborating on the notion of sustainability, the term is explained to be preserving, protecting, or managing something, and development is referred to progress or improvement (Bojović, 2011). Thus, academics had interpreted sustainability from a different point of view and had introduced abundant definitions for the term. Conclusively, sustainability can be referred to as the ability to continue growth and development for a longer period of time with minimal damage to the environment and without compromising the future for the present.

Sustainability is often explained together with **sustainable development**. Sustainable development combines economic and social development, protecting and nurturing the natural environment and social equality (Dunphy, Benveniste, Griffiths, & Sutton, 2000), from which it is evident that sustainable development should be regarded as a process of continuous improvement and flexibility (Petrov, Trivić, & Ćelić, 2018). The principle that shapes the principle of sustainability (James, Magee, Scerri, & Steger, 2015; Porter & Kramer, 2011) is sustainable development, which comprises of four interconnected fields, i.e. ecology, economics, politics, and culture (Patten & Shin, 2019; Mella, 2012; Camagni, 1996).

Economies have given special attention to the quality of life while stressing the importance of sustainable development. Millennium Development Goals (MDG) of the United Nations focusing specifically on sustainable development mainly includes goals such as eradicating extreme poverty and hunger, achieving universal primary education, promoting gender equality, empowering women, reducing child mortality rate, combating HIV/AIDS, malaria, and other diseases, ensure environmental sustainability and work out a global partnership for development are all focused in improving quality of life (Torres, Asmus, & Seixas, 2019). Thus, achieving a good quality of life is part and partial of achieving sustainable development.

In defining **quality of life** is defined as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns (World Health Organization, 2022). In economic development, the concept of quality of life comprises a complex equilibrium of indicators including occupations, education, healthcare, housing, arts and culture and infrastructure, etc. (Lombardi, 2017). The expression “Quality of Life” is a concept that entangles around satisfaction, well-being, and happiness. In certain instances, these terms are used in studies synonymously for quality of life (Robeyns & Veen, 2007). Quality of life is expressed to be focused on factors such as life expectancy and income and is often handled with self-reported happiness ratings (Spacey, 2016).

If viewed at a glance by arranging the two concepts of quality of life and sustainability on side by side, it should be noted that the two concepts do not necessarily coincide with each other. For example, one may choose to lead the best life today at the expense of the future having a good quality of life, by using all of the irreversible natural resources and polluting the environment. Furthermore, excessive growth in population may also adversely impact the sustainability of the quality of life experienced by people as limited resources have to be shared among a greater volume of people in the future than today (Robeyns & Veen, 2007). Furthermore, the distribution of natural resources across the world, the time span, and the manner in which these resources are used, for example, the consumption of energy, creates unequal opportunities for people around the world and hence affects the quality of life.

After being familiar with the concepts of sustainability and quality of life, the **sustainable quality of life** can be summed up with the definition issued by Robeyns and Van der Veen (2007) in the *Netherlands Environmental Assessment Agency (MNP) Report for Sustainable quality of life*: “Sustainable quality of life in a national setting is the quality of life enjoyed by the population within the national territory, the level of which is:

- 1) viably reproducible for the current generation, given the natural and social resources commanded by the nation;
- 2) gained neither at the expense of an acceptable quality of life for:
 - members of the present generation outside the nation,
 - members of the next generations at home,
 - the next generations elsewhere.”

The Bes report on equitable and sustainable well-being in Italy (2019) put forward information relating to sustainable well-being and analysis of the evolution of equitable and sustainable well-being indicators. It refers to twelve indicators of sustainable well-being. (Wiesli, Liebe, Hammer & Bär, 2021) noted that “In most socioeconomically wealthy countries, a high quality of life is associated with high consumption of natural resources. It is, therefore, essential to define what constitutes sustainable quality of life—that is, quality of life that is simultaneously high as well as ecologically and socially sustainable.” After researching the sustainable quality of life in Swiss rural regions researchers concluded that a concept of sustainable quality of life is consisting of nine components with specific targets and justifications. Sustainable quality of life components from the above-mentioned studies are summarized in Table 1.

In Table 1 it is possible to see that in both studies the main components of the sustainable quality of life are almost the same and they are related to the well-being of the population and protecting the environment, nature and landscape, using resources more efficiently.

Mella & Gazzola (2015) after their research on sustainability and quality of life concluded that “the good quality of the life can only be maintained in the long run when social and cultural environment are respected. That is, how people feel about their lives is directly affected by the state and future direction of their wider community. Consequently, quality of life is inextricably linked to the concept of sustainability.”

Table 1. Components of sustainable quality of life

The report on equitable and sustainable well-being (National Statistical Institution of Italy, 2020)	Sustainable Quality of Life: A Conceptualization That Integrates the Views of Inhabitants of Swiss Rural Regions (Wiesli, Liebe, Hammer & Bär, 2021)
1. Subjective well-being	1. Social relations and equality
2. Safety	2. Nature and landscape
3. Politics and institutions	3. Education and knowledge
4. Education and training	4. Living
5. Innovation	5. Mobility
6. Research and creativity	6. Health and safety
7. Quality of services	7. Leisure and recreation
8. Health	8. Income and employment
9. Environment, landscape and cultural heritage	9. Participation, identification, and collective emotions
10. Economic well-being	
11. Social relationships	
12. Work-life balance	

Thus, we observe that many kinds of research have been carried out to study sustainability, quality of life, sustainable quality of life, different indicators of sustainability, indicators of quality of life and measurement of quality of life. However, it is noteworthy that researchers studying the problem of sustainable quality of life in relation to macroeconomic variables and perspectives are scarce. Hence, this study specifically focuses on and will be contributing to the research knowledge by assessing the sustainable quality of life in the context of macroeconomic processes.

2. QUALITATIVE CONTENT ANALYSIS OF RESEARCH ARTICLES

Because the literature on the sustainable quality of life concept is very limited, the study attempts to answer at first the questions about sustainability and quality of life. The following questions were developed for the content analysis:

1. What are the main categories of sustainability?
2. What are the main categories and approaches to defining the quality of life?
3. What is the sustainable quality of life?
4. How to achieve a sustainable quality of life?

This study was carried out in the form of a qualitative content analysis of available research articles written on the theme of sustainability, quality of life and sustainable quality of life. About 50 articles from scientific journals related to those topics were selected for the analysis. The period, when articles were written, was from 1979 to 2021. The interest of the authors of the article was to analyse how the concepts of

sustainability, quality of life, and standard of living were defined and to see changes in the definitions of those concepts that could help the selection of main macroeconomic indicators that affect the sustainable quality of life nowadays.

2.1. Sustainable quality of life concept in research articles

The first research question attempted to resolve was *What are the main categories of sustainability?* There were eight categories of sustainability described in the analysed research articles (see Figure 1).

As per the frequency analysis carried out the main categories of defining sustainability are environment (which was mentioned as one of the sustainability categories in 28% of the articles) and economy (also in 28% of the articles), and society (in 24% of the articles).

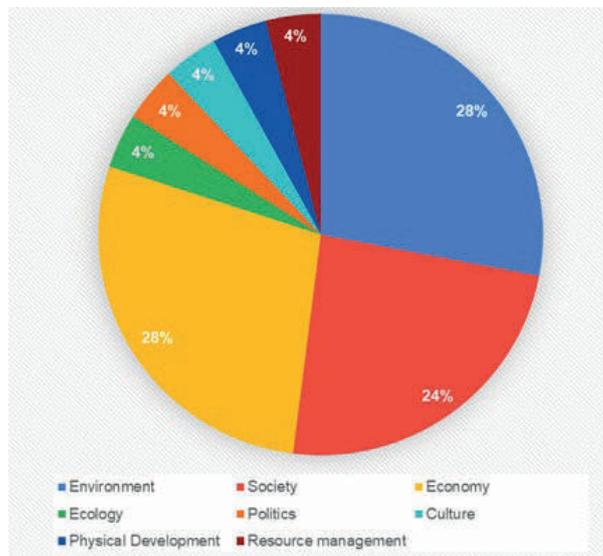


Fig. 1. Main categories of sustainability (created by the authors).

The next research question in focus was *What are the main categories and approaches to defining quality of life?* and the review of research articles suggested several categories answering this research question (see Figure 2).

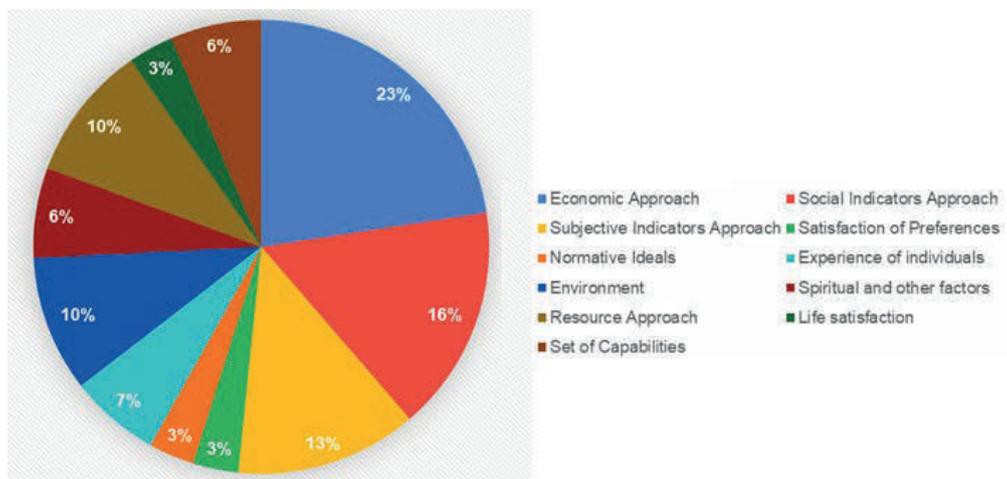


Fig. 2. Main categories and approaches to defining the quality of life (created by the authors).

The analysis depicted in Figure 2 concluded that quality of life is better defined in the economic approach, social indicators approach and subjective indicators approach. economic approach can be described as the economic conception of quality of life that rely on welfarist criteria of utility and income. Social indicators include economic resources and consumer conditions, employment and working conditions, health and access to healthcare etc. which can be used to analyse the social system. Subjective indicators describe quality of life addressing the experience of individuals in terms of life satisfaction, pleasure, achievement. The economic approach in defining quality of life is seen in 23% of the articles, the social aspect is mentioned in 16% of the articles, and subjective indicators as part of the quality of life are described in 13% of the articles. Then comes the environment and resources approach. They were mentioned in 10% of the articles.

The next research question attempted to be resolved through the academic study and analysis is *What is Sustainable Quality of Life?* This research question is analysed as illustrated in Figure 3.

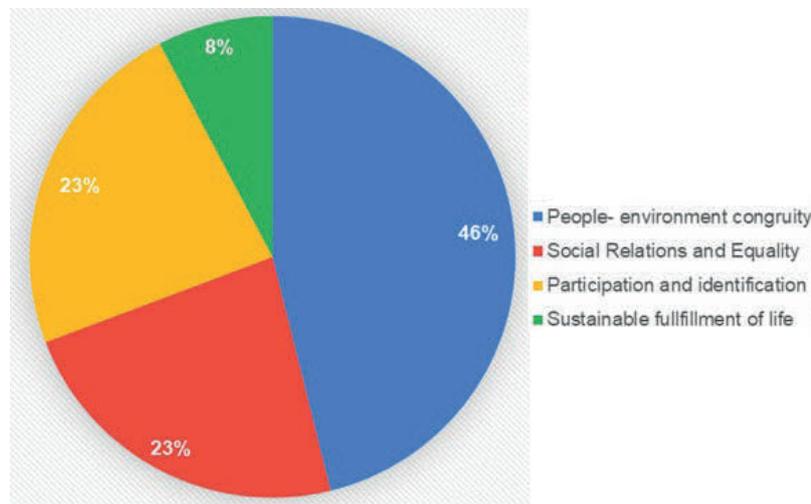


Fig. 3. What is the sustainable quality of life? (created by the authors).

Among the categories developed through the literature review main suggestion for the explanation of the sustainable quality of life was people-environment congruity (in 46% of the articles). In 23% of the articles social relations and equality, and participation and identification were mentioned as part of the sustainable quality of life. Accordingly, the following model was developed to define the sustainable quality of life (SQoL) with the combination of definitions built for sustainability and quality of life (QoL).

In the developed model (see Fig. 4), the left circle describes the main categories identified in defining sustainability. The right circle presents the main categories identified in defining Quality of life. The combination of the categories of sustainability and quality of life are represented in the middle section of the model forming the newly developed categories that defines Sustainable Quality of Life.

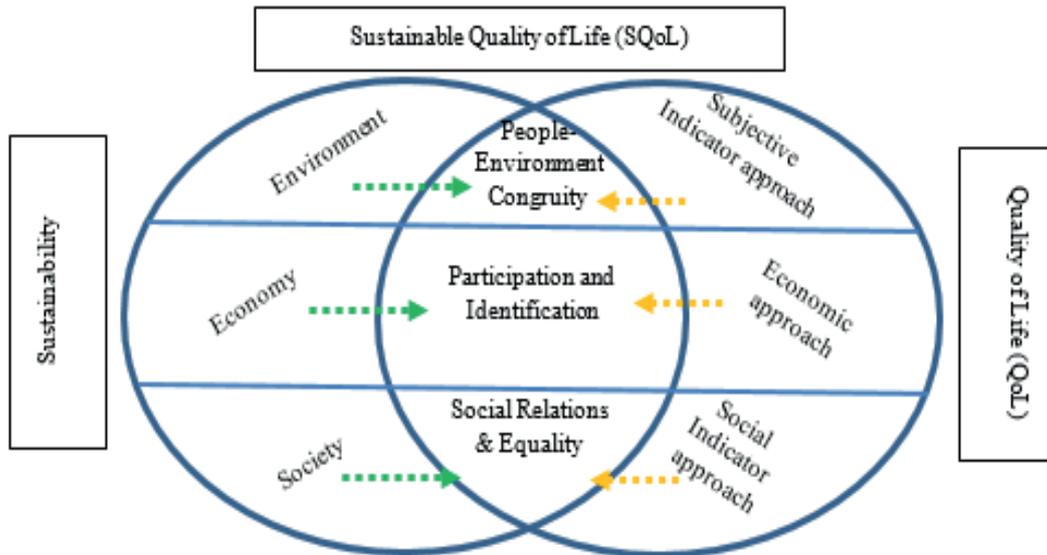


Fig. 4. Model of sustainable quality of life concept (created by the authors).

2.2. Macroeconomic factors of sustainable quality of life

The final question for the qualitative content analysis of the research articles was *How to achieve Sustainable Quality of Life?* The aim of this question was to get answers – what are the main factors, components, categories, or indicators used to characterise and evaluate the sustainable quality of life? This question was analysed as portrayed in Figure 5.

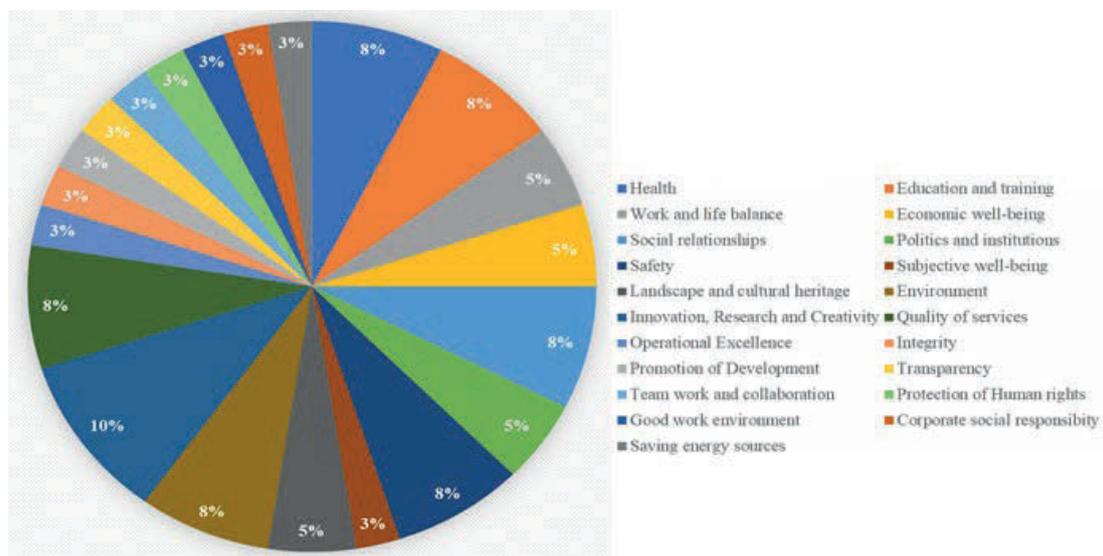


Fig. 5. How to achieve sustainable quality of life? (created by the authors).

The categories developed through the extensive study of available literature suggested the following macroeconomic processes as factors influencing the sustainable quality of life:

- innovation, research and creativity (10 % of the articles);
- health (8 %);

- education and training (8 %);
- social relationships (8 %);
- safety (8 %);
- environment (8 %);
- quality of services (8 %).

Based on the qualitative content analysis of the research articles about macroeconomic aspects of the sustainable quality of life the following model is developed (see Figure 6). The model identifies the macroeconomic processes impacting sustainable quality of life.

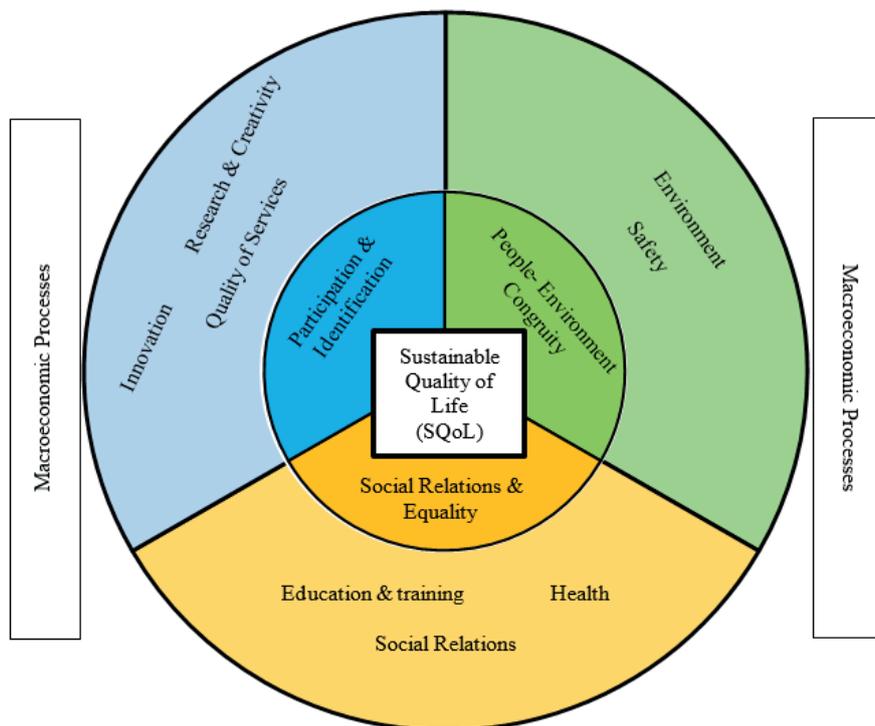


Fig. 6. Model of achieving sustainable quality of life (created by the authors).

The outer circle of the above developed model presents the major macroeconomic processes that highly impacts sustainable quality of life. According to the impact made by these macroeconomic processes they are divided to the three main categories that defines sustainable quality of life and these categories are presented in the inner circle of the model. Thus, the model explains in which aspects the macroeconomic processes impact in achieving the core of the model, i.e., sustainable quality of life.

CONCLUSION

From the qualitative content analysis carried out, it can be identified that the developed research questions were answered by many authors from different perspectives. Thus, it is observed that many researchers have been focusing on sustainability, quality of life, sustainable quality of life, different indicators of

sustainability, indicators of quality of life, and measurement of quality of life with different approaches suggesting similar components within each.

The content analysis of articles over a period from 1979 to 2021 suggested that the concepts of sustainability and quality of life is defined in similar manner with analogous categories. However, the definitions have become richer with content and focus over the period with more specific elaborations. Furthermore, the analysis brought into light the relationship of categories that defines sustainability and quality of life and how they are combined to form new categories developing the definition for sustainable quality of life. Moreover, the content analysis assisted in developing a model of sustainable quality of life in the macroeconomic context.

Additionally, the authors have identified that sustainable quality of life has been quite often discussed with sustainable development in many studies. It is important to note that these two concepts have different ideologies and it is not ideally the same.

It is noteworthy that researchers studying into the problem of sustainable quality of life in relation to macroeconomic variables and perspectives are scarce and there is a lack of discussion in the study field of sustainable quality of life. Hence, this study specifically focuses on and contributes to the research knowledge by assessing the sustainable quality of life in the context of macroeconomic processes.

REFERENCES

- Bojović, V. (2011). Sustainable Development – Multiple meanings yet unambiguous necessity. *Economic Themes*, 2, 175–192.
- Braybrooke, D. (1990). Review of the book *The Standard of Living*, Amartya Sen et al. Cambridge: Cambridge University Press, 1987, 125 p. *Economics and Philosophy*, 6(2), 339–350. <https://doi.org/10.1017/S0266267100001334>
- Brock, D. (1993). Quality of Life Measures in Health Care and Medical Ethics. In Sen, A., Nussbaum, M. *The Quality of Life* (95–132). Oxford: Oxford Publisher.
- Brundtland, G. H. (1987). Report of the World Commission on Environment and Development: Our Common Future. United Nations: Oxford University Press.
- Camagni, R. (1996). *Economia e pianificazione della città sostenibile*. Milano: Il Mulino.
- Costanza, R., Fisher, B., Ali, S., Beer, C., Bond, L., & Boumans, R. (2008). An integrative approach to quality of life measurement, research and policy. *Surveys and Perspectives Integrating Environment and Society*, 1(1), 11–15. Retrieved from: <https://journals.openedition.org/sapiens/169>
- Dasgupta, P. (1999). *Valuation and Evaluation: Measuring the Quality of Life and Evaluation Policy*. London: University of Cambridge and Beijer International Institute for Ecological Economics, Stockholm.
- DETER. (1999). *A better quality of life, a strategy of sustainable development in the UK*. London: Department of the Environment Transport and Regions.
- Diener, E. & Suh, E. M. (1998). Subjective Well-being and Age: An International analysis: 17. Focus on emotion and adult development. *Annual Review of Gerontology and Geriatrics*, 304–324.
- Dunphy, D., Benveniste, J., Griffiths, A., & Sutton, P. (2000). *Sustainability: The Corporate Challenge of the 21st Century*. Crows Nest, Sydney, Australia: Allen & Unwin.
- Environment.Agency. (2001). *A Framework for Change- A better quality of life*. Almondsbury: Environment Agency.
- Erikson, R. (1993). Description of inequality: the Swedish approach to welfare research. In Nussbaum, M., Sen, A. *The Quality of Life*, 67–83. Oxford: Oxford Press. <https://doi.org/10.1093/0198287976.003.0006>
- Fontinelle, A. (2022, March 27). Standard of Living vs. Quality of Life: What's the Difference? Retrieved from: <https://www.investopedia.com/articles/financial-theory/08/standard-of-living-quality-of-life.asp#:~:text=Quality%20of%20Life%3A%20An%20Overview,term%20that%20can%20measure%20happiness.>

- Grasso, M. & Canova, L. (2007). An assessment of the quality of life in the European Union based on the social indicators approach. *Social indicators Research*, 87(1), 1–25. <https://doi.org/10.1007/s11205-007-9158-7>
- Higgins, P. & Campanera, J. M. (2011, February 26). (Sustainable) Quality of Life in English city locations. *Cities* 28(4), 290–299. <https://doi.org/10.1016/j.cities.2011.02.005>
- ISTAT (2019). Bes 2019: Equitable and sustainable well-being in Italy. Retrieved from: <https://www.istat.it/en/archivio/237012>
- ISTAT (2020). Bes 2020: Equitable and sustainable well-being in Italy. Retrieved from: <https://www.istat.it/en/archivio/261995>
- James, P., Magee, L., Scerri, A., & Steger, M. B. (2015). *Urban Sustainability in Theory and Practice*. London: Routledge.
- Levett, R. (1998). Sustainability Indicators - integrating quality of life and environmental protection. *Journal of the Royal Statistical Society*, 161(3), 291–302. Retrieved from: <https://www.jstor.org/stable/2983203>
- Lombardi, L. (2017, June 23). Economic Development: What Quality of Life (Really) Means and How to Design It. Retrieved from: <https://www.thinkcurrituck.com/blog/economic-development-and-quality-of-life>
- McGill University. (2020, December). What is Sustainability. Retrieved from: <https://www.mcgill.ca/sustainability/files/sustainability/what-is-sustainability.pdf>
- Mella, P. (2012). *Systems Thinking: Intelligence in action*. New York: Springer International Publishing. <https://doi.org/10.1007/978-88-470-2565-3>
- Mella, P., Gazzola, P. (2015). Sustainability and quality of life: the development model. *Proceedings of the 18 Annual International Conference "Enterprise and Competitive Environment"*, Mendel University in Brno, March 5-6, 2015, 542–551. Retrieved from: https://www.researchgate.net/publication/282671925_Sustainability_and_quality_of_life_the_development_model
- Patten, D. M. & Shin, H. (2019). Sustainability accounting, management and policy journal's contributions to corporate social responsibility disclosure research: a review and assessment. *Sustainability Accounting, Management and Policy Journal*, 10(1), 26–40. <https://doi.org/10.1108/SAMPJ-01-2018-0017>
- Petrov, V., Trivić, N., & Čelić, Đ. (2018). Assessing Sustainability of the Southeast European Economies. *Economics of Agriculture*, 65(2), 519–529. <https://doi.org/10.5937/ekoPolj1802519P>
- Porter, M. E. & Kramer, M. R. (2011). Creating shared value. *Harvard business review* 89, 62–77.
- Robeyns, I. & Veen, R.J. van der. (2007). *Sustainable quality of life: Conceptual analysis for policy-relevant empirical specification*. Bilthoven: Netherlands Environmental Assessment Agency.
- Sen, A. (1979). Utilitarianism and Welfarism. *The Journal of Philosophy*, 76(9), 463–489. <https://doi.org/10.2307/2025934>
- Sen, A. (1987). The Standard of Living. *Economics and Philosophy*.???
- Solow, R. (1992). *An almost practical step towards sustainability*. New York: RFF Press. <https://doi.org/10.4324/9781315060736>
- Spacey, J. (2016, November 11). Standard of living vs Quality of life. Retrieved from: <https://simplicable.com/new/standard-of-living-vs-quality-of-life>
- Torres, L. D., Asmus, G. F., & Seixas, S. R. (2019). Quality of Life and Sustainable Development. In: Leal Filho, W. (eds) *Encyclopedia of Sustainability in Higher Education*. Springer, Cham. https://doi.org/10.1007/978-3-030-11352-0_26
- University of California (2013, September 11). Mission. The Green Initiative Fund. Retrieved from: <https://tgif.ucla.edu/about/mission/>
- Wiesli, T.X., Liebe, U., Hammer, T. & Bär, R. (2021). Sustainable Quality of Life: A Conceptualization That Integrates the Views of Inhabitants of Swiss Rural Regions. *Sustainability* 13(16), No.9187. <https://doi.org/10.3390/su13169187>
- World Health Organization. (2022). *WHOQOL: Measuring Quality of Life*. Retrieved from: <https://www.who.int/tools/whoqol/whoqol-bref#:~:text=WHO%20defines%20Quality%20of%20Life,%2C%20expectations%2C%20standards%20and%20concerns.>

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