Well-being and Sustainable Development:
An Exploratory Approach from a Marketing Perspective

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Abstract

Since the publishing of the Brundtland Report (1987), which formally introduced, defined, and approached the concept of sustainable development creating the framework for its implementation, the concern for preserving what we have for future generations has steadily and significantly increased. Consumers, citizens, businesses, and public entities have acknowledged the need to ensure an appropriate economic, social, and environmental development capable of providing a sustainable common future. Strategies, plans, and programs have been drafted, projects and activities have been conducted, and a huge amount of practical experience, as well as a rich dedicated scientific literature, has been accumulated.

The tremendous effort that has led to the SDGs, Net Zero, and Green Deal has been designed and implemented from a societal perspective under a vision underlining the prevalence of the common or greater over the individual good, the last one being the consequence of the overall development of the society. What if the perspective changes by focusing on the individuals and individual good considering the greater or common good as an aggregate result achieved by the entire society by adding the state of well-being experienced by each and every individual? Viewing the subject from a marketing angle, the aggregated well-being of individuals should generate an overall sustainable development of society. The article presents and discusses the findings of exploratory research assessing the connections between individual well-being and sustainable development.

Keywords: well-being, sustainable development, marketing.

1. Introduction

Well-being, a complex concept, has received widespread interest in psychology, economics, sociology, and public policy. Its definitions and interpretations differ across cultures and academic fields. This overview presents a brief glimpse of various well-being definitions. According to one of the most comprehensive approaches (OECD, 2020), well-being is assessed across eleven dimensions including income, work, housing, health, skills, environment, work-life balance, social connections, civic engagement, safety, and subjective well-being. It also considers four resources for future well-being: natural, human, economic, and social capital.

Early research on well-being often distinguished between objective well-being (measurable life circumstances) and subjective well-being (individuals' evaluations of their lives). Weerakkody et al. (2021) have explored subjective well-being in terms of individuals' perceptions including the sense of happiness, satisfaction, and self-worth finding that marital/cohabiting status is the most powerful predictor, while long-term illness and age were other important predictors that influenced perceived well-being. Diener et al. (1999)

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proposed a prominent framework that includes life satisfaction, positive affect, and negative affect as components of subjective well-being. Cultural factors play a significant role in shaping perceptions of well-being generating variations in the importance of different life domains across cultures (Suh and Oishi, 2002).

Sustainable well-being acknowledges and emphasizes the importance of managing the occasional painful, yet normal emotions that may disrupt daily functioning and compromise psychological well-being defined as a combination of feeling good and functioning effectively (Huppert, 2009). As a sustainable condition that allows the individual or population to develop and thrive, the term subjective well-being is synonymous with positive mental health (Ruggeri et al., 2020). World Health Organisation (2001) has defined positive mental health as a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.

The United Nations (2015) asserted that global efforts must be reinforced to fully recognize the significance of mental health and well-being by (1) ensuring the inclusion of mental health in the post-2015 development agenda, as well as in other global priorities, and (2) integrating mental well-being as a vital indicator of sustainable development within United Nations initiatives, encompassing resolutions and collaborations among agencies (Hashimoto et al., 2015). Undeniably, when addressing the challenges to be faced, both as an integral part of the human civilization and the planet Earth, poverty, climate change, and environmental degradation, peace, justice, and health are critical dimensions. In particular, ensuring healthy lives and promoting the well-being of all at all ages is essential to sustainable development and represents the foundation of the United Nations's Sustainable Development Goals (Camanhoc et al., 2021).

Qiu et al. (2022) established an evaluation index system for assessing human well-being by mixing the sustainable development goals and the Millenium Ecosystem Assessment (2005) frameworks, including besides basic material, security, and health, data on income and expenditure, essential for material well-being, education and technology contributing to individual mental fulfillment, and employment and insurance (Wang et al., 2017). VanderWeele et al. (2020) conducted synthesizing research in the field of well-being suggesting the measurement of key constructs like life satisfaction, positive and negative affect (emotional well-being), and more comprehensive concepts such as eudemonic well-being and human flourishing. Martela and Ryan (2021) argued that there is a determining part missing. They proposed the measurement of human psychological needs, given that humans are biologically and psychologically constructed such that there are specific essential experiences that every individual needs to not only survive but also flourish and function optimally, an approach leaving from the idea that examining psychological needs provides insight into the underlying reasons for their well-being.

Initially defined as meeting current needs without jeopardizing future generations, the concept of sustainable development was introduced in 1987 by the United Nations World Commission on Environment and Development and can be seen in the present as how we must live today if we want a better tomorrow, by meeting present needs without compromising the chances of future generations to meet their needs (United Nations, 2023). In 2015, the United Nations General Assembly established seventeen Sustainable Development Goals (SDGs) with 169 targets to guide global sustainability efforts until

2030, fostering harmony in social, economic, and environmental development (Zhang et al, 2022; United Nations, 2015).

Cook and Davíðsdottir (2021) highlighted the areas of overlap between the calculation method and at least one of the targets linked to the goals of the respective sustainable development goals finding the Genuine Progress Indicator (GPI) as the most comprehensive in coverage linking directly to 14 of the 17 SDGs. Employed extensively to measure, express, and characterize the development of an economy or even of the entire society, the Gross Domestic Product remains an inadequate measure of the quality of life as acknowledged by the 2012 Rio+20 United Nations Conference on Sustainable Development (United Nations, 2012). There is a strong need, yet still searching for broader support from the part of stakeholders, to replace GDP with a new set of metrics integrating ecology, economics, psychology, and sociology to measure sustainable well-being.

Alternative progress measures fall into three categories (Costanza et al., 2014): (1) Adjusting economic measures to account for social and environmental factors; (2) Using subjective well-being measures from surveys; and (3) Using composite well-being indicators, which include factors like housing, life expectancy, leisure time, and democratic engagement with weighted values. A more important place should be attributed in the assessment process to the natural environment providing ecosystem services for human beings (Millenium Ecosystem Assessment, 2005). Considered a bridge between the natural environment and human well-being (Tang et al., 2023; Costanza et al., 2014), the ecosystem services interactions with society, economy, and population contribute to human well-being.

However, it is difficult to use an existing single index or measure to objectively and comprehensively address sustainable development issues. As we are possibly in the new era of the Anthropocene, where humans significantly affect the planet, achieving sustainability and development must enhance human potential while reducing ecological impact within ecological limits by expanding human development potential while easing planetary pressures – an ultimate goal of sustainable development (UNDP, 2020).

This means maximizing well-being with minimal ecological consumption and ensuring sustainable development for both humans and nature involving improving human well-being and ecological efficiency by managing population growth, expanding the development base, and reducing ecological consumption through actions like energy conservation and a circular economy (Zhang et al, 2022).

In the context of debating ecological aspects in connection to sustainable development, eco-efficiency emerged as a valuable tool for measuring the level of sustainable development, as it is directly connected with economic, resource, and environmental impacts. (United Nations, 2009). It's crucial to ensure the efficient conversion of resources and inputs into technology innovation and human well-being worldwide.

Eco-technology innovation and eco-well-being performance aim to boost technology and well-being while reducing resource consumption and negative environmental impacts (Zhang et al., 2021).

2. Methodology

The purpose of this exploratory research approach was to measure and assess the relationships between well-being and sustainable development. A set of research objectives has been formulated for determining association between each of the eleven characteristics of well-being considered – Income & wealth reflected by mean equivalized net income expressed in euro (MENI); Work reflected in the employment rate expressed as percentage of employed population of 20 to 64 years (EMPR); Urbanization expressed as percentage of population living in cities, towns and suburbs (URBA); Self-perceived health expressed as the percentage of population aged 16 and above that rate their health status "good" or "very good" (SPHE); Knowledge reflected by educational attainment expressed as percentage of population of 15 to 64 years having upper secondary or higher education (EDAT); Environmental quality reflected by exposure to air pollution (EXAP); Subjective well-being reflected by overall life satisfaction defined as average rating of overall life satisfaction by the population of 16 years and over on a scale from 1 to 10, at the level of the year 2018 (OVLS); Safety reflected by perception of crime, violence or vandalism in the area expressed as a percentage of population experiencing such situations in their living areas (CVVA); Work-life balance expressed by weekly average hours of work (WHWK); Social connections reflected by the satisfaction regarding personal relations expressed by the average rating of satisfaction regarding personal relations by the population of 16 years and over on a scale from 1 to 10 (ASPR); and Civic engagement reflected by participation in voluntary activities expressed as a percentage (ACTV), and, respectively, the three dimensions of sustainable development defined through two sub-variables for each dimension – Gross Domestic Product per capita (GDPc) and Mean income per capita (INC), both expressed in euro, for the economic dimension, Social exclusion (SocEX) expressed as percentage of persons at risk of poverty or social exclusion and Unemployment rate (Unemp%) expressed as percentage of unemployed persons, for social dimension, and Greenhouse gas emissions (GGE), expressed in million tons and Land surface covered by forests (FORR), expressed in square kilometres. This correspondingly led to sixty-six secondary research objectives, one for each of the eleven characteristics of well-being correlated to each of the six sub-variables of sustainable development.

Secondary data from the Eurostat categories Quality of life, Economy and Finance, Population and social conditions, and Environment and Energy (Eurostat, 2023) from 2019 and for the European Union members at that time were used to mitigate the impact of the coronavirus pandemic and the war in Ukraine on the research findings. Selection of the research variables employed within the present exploratory approach has left from the already available methodologies employed by the European Commission to measure specific levels of well-being, seen as a part of the overall concept of quality of life, respectively the sustainable development. The current research approach has considered, for exploratory purposes, the variables providing the closest expressions of well-being characteristics and sustainable development dimensions. Pearson correlation coefficients have been computed and analyzed using JASP, an open-source project backed by the University of Amsterdam, to measure and evaluate the connections between the variables

describing well-being and sustainable development producing a general image surprising these relationships at the level of a single year – 2019.

3. Main results

There has been a lot of research and attention given to the topic of well-being in the last decades when researchers from different fields have tried to define and measure this as accurately as they could and there is still no consensus in the scientific world about a set of variables for this. Considering the set of eleven characteristics and based on the related secondary data, an overall image of the well-being at the level of the European Union in 2019 may be pictured opening the door for more in-depth, more focused further research.

Thus, in terms of self-perceived health (SPHE), Ireland is at the top of the list with 83.9 % of the people rating their own health as "good" or "very good", followed by Greece (79.1 %), Cyprus (77.7 %), Sweden (76 %), Spain (75.2 %) and UK (73.2 %), with an average of 69.2 % at the level of the European Union, and the lowest score registered by Lithuania (46.1 %). In terms of educational attainment, the percentage of population that attended upper secondary or higher education is highest in Lithuania (88.9 %), Czechia (87.7 %), and Poland (86.7%), followed by Slovakia (85.5 %) and Latvia (85.1 %), the European Union average being of 76.8 % while the lowest score was registered by Portugal (52.4 %). In terms of subjective well-being, Ireland and Finland are leading the hierarchy with an average score of overall life satisfaction of 8.1 followed by Austria (8.0), the average score at the level of the European Union being 7.2, the lowest score being registered in Bulgaria (5.4). In terms of social connections, the satisfaction regarding personal relations, reflected in the average rating by the population of 16 years and over on a scale from 1 to 10, reached the highest levels in Ireland and Slovenia (both with average scores of 8.6), followed by Sweden (8.5), United Kingdom, Finland and Austria (8.4), the average at the level of European Union being 7.9, the lowest score (6.4) being registered by Bulgaria.

Table 1. Associations between the well-being characteristics and sustainable development dimensions at the level of
the European Union countries (2019)

Pearson's Correlations ▼

Variable		MENI	EMPR	URBA	SPHE	EDAT	EXAP	OVLS	CVVA	WHWK	ASPR	ACTV	GDPc	INC	SocEX	Unemp%	GGE	FORR
1. MENI	Pearson's r	—																
	p-value	—																
2. EMPR	Pearson's r	0.299	—															
	p-value	0.122	—															
3. URBA	Pearson's r	0.311	0.081	—														
	p-value	0.107	0.683	—														
4. SPHE	Pearson's r	0.503**	0.086	0.435*	—													
	p-value	0.006	0.662	0.021	—													
5. EDAT	Pearson's r	-0.145	0.066	-0.564**	-0.293	—												
	p-value	0.462	0.738	0.002	0.130	—												
6. EXAP	Pearson's r	-0.582**	-0.281	-0.296	-0.065	0.075	—											
	p-value	0.001	0.156	0.134	0.746	0.712	—											
7. OVLS	Pearson's r	0.694***	0.321	0.206	0.457*	0.024	-0.470*	—										
	p-value	<.001	0.095	0.293	0.015	0.905	0.013	—										
8. CVVA	Pearson's r	0.280	0.184	0.593***	0.571**	-0.246	-0.024	-0.009	—									
	p-value	0.149	0.349	<.001	0.002	0.208	0.904	0.962	—									
9. WHWK	Pearson's r	-0.721***	-0.255	-0.358	-0.303	0.076	0.505**	-0.547**	-0.214	—								
	p-value	<.001	0.191	0.061	0.117	0.699	0.007	0.003	0.275	—								
10. ASPR	Pearson's r	0.463*	0.364	0.156	0.217	-0.010	-0.497**	0.798***	-0.145	-0.295	—							
	p-value	0.013	0.057	0.427	0.266	0.961	0.008	<.001	0.462	0.127	—							
11. ACTV	Pearson's r	0.420*	0.295	0.006	0.104	0.280	-0.427*	0.531**	-0.090	-0.536**	0.403*	—						
	p-value	0.026	0.128	0.975	0.597	0.149	0.026	0.004	0.650	0.003	0.033	—						
12. GDPc	Pearson's r	0.946***	0.215	0.176	0.511**	-0.129	-0.519**	0.642***	0.199	-0.611***	0.398*	0.402*	—					
	p-value	<.001	0.272	0.371	0.005	0.514	0.006	<.001	0.309	<.001	0.036	0.034	—					
13. INC	Pearson's r	0.997***	0.301	0.322	0.508**	-0.135	-0.588**	0.713***	0.265	-0.736***	0.474*	0.444*	0.937***	—				
	p-value	<.001	0.120	0.095	0.006	0.494	0.001	<.001	0.173	<.001	0.011	0.018	<.001	—				
14. SocEX	Pearson's r	0.422*	-0.119	-0.078	-0.032	-0.239	0.280	-0.555**	0.256	0.312	-0.654***	-0.478*	-0.360	-0.449*	—			
	p-value	0.025	0.545	0.692	0.870	0.221	0.157	0.002	0.188	0.106	<.001	0.010	0.060	0.016	—			
15. Unemp%	Pearson's r	-0.073	-0.105	0.022	0.274	-0.397*	-0.013	-0.248	0.168	0.167	-0.251	-0.135	-0.055	-0.082	0.389*	—		
	p-value	0.712	0.595	0.912	0.159	0.036	0.950	0.204	0.394	0.397	0.198	0.493	0.780	0.680	0.041	—		
16. GGE	Pearson's r	0.171	0.056	0.242	0.109	-0.074	0.077	0.190	0.333	-0.300	-0.008	-0.101	0.059	0.169	-0.049	0.010	—	
	p-value	0.383	0.776	0.215	0.581	0.707	0.703	0.333	0.084	0.121	0.967	0.608	0.765	0.389	0.803	0.961	—	
17. FORR	Pearson's r	0.105	0.110	0.038	0.080	0.034	-0.295	0.251	0.022	-0.086	0.142	0.368	0.040	0.121	-0.026	0.238	0.334	—
	p-value	0.594	0.579	0.849	0.686	0.864	0.135	0.198	0.910	0.663	0.472	0.054	0.840	0.539	0.895	0.222	0.082	—

$* p < .05, ** p < .01, *** p < .001$

Data source: Eurostat.

Based on Pearson's correlation coefficients calculated and shown in Table 1 it can be observed that variables chosen to describe characteristics of well-being are associated mostly with the sub-variables related to the economic dimension of sustainable development – Gross Domestic Product per capita (seven significant correlations) and Income (six significant correlations), with of block of six variables – MENI, SPHE, EXAP, OVLS, WHWK, and ACTV – correlating both to the GDPc and INC, plus a supplementary correlation between GDPc and ASPR, suggesting the existence of a closer relationship between well-being and this dimension of the sustainable development.

There is a very strong and direct correlation between MENI and GDPc, respectively INC, suggesting that a higher level of economic development determines a similarly higher level of individual income, respectively the economic prosperity of the consumers and/or citizens. The overall life satisfaction correlates strongly and directly to the level of economic development reflected by the GDPc and INC suggesting that life tends to be more satisfactory where and when the macro and micro-economic conditions tend to be better. Going further, the improved economic conditions are generated in the more productive economies as the strong, reverse, and statistically significant correlations between the average number of weekly working hours and GDPc and INC reveal. And, to close the loop, a lower average number of weekly working hours means not only increased productivity and economic development but also higher overall life satisfaction, as the strong, reverse, and statistically significant correlation between the WHWK and OVLS shows.

Statistically significant associations of moderate intensity are those between the self-perceived health condition, respectively the exposure to air pollution and the economic dimension of sustainable development. An improved level of economic development

tends to facilitate the existence of good or very good providers of health services allowing the individuals to correspondingly self-assess their health condition as good or very good. Also, economic development creates the background for the employment of modern and efficient technologies with a lower environmental impact even in terms of air pollution.

Last but not least, the economic dimension of sustainable development associates directly and relatively moderately with civic engagement suggesting that participation in voluntary activities tends to be more active in the well-developed economies in terms of GDPc and INC. Once again, economic development appears to provide the facilitating environment for conducting voluntary activities in different areas and to support civic activism at a societal level. The direct and statistically significant association of relatively moderate intensity between the GDPc and ASPR enhances the essential role of the economic dimension of sustainable development and the social connection as a characteristic of well-being defined through the individuals' satisfaction in terms of personal relationships.

Direct and not statistically significant associations of rather lower intensity were observed between the GDPc, respectively INC and EMPR, URBA, and CVVA suggesting that the employment rate of the population 20 to 64 years, percentage of the population living in cities, towns, and suburbs, and safety of individuals in terms of the self-perceived crime, violence or vandalism in their area do not connect in a relevant manner with the economic dimension of sustainable development. Somewhat surprisingly, the associations between the GDPc and INC, respectively EDAT were not only of a lower intensity and not statistically significant but also reverse suggesting that educational attainment tends to decrease with the increase of economic development or, generally that an improved level of knowledge is to be found where the overall economic development is rather lower. These results may also suggest that these well-being characteristics might be influenced by factors other than those considered under this exploratory approach.

While there are strong correlations between well-being characteristics and economic-related metrics such as Gross Domestic Product per capita and income (INC), the absence of correlation for some of the well-being aspects with the economic dimension indicates that these facets may be shaped by a broader range of factors beyond the economic ones. Having in mind the triad of sustainable development, the first thought leads to its social dimension represented under this approach by the sub-variables of Social exclusion (SocEX) and Unemployment rate (Unemp%). SocEX associates reversely, statistically significant, and relatively intensely with only four out of eleven well-being characteristics – ASPR, OVLS, ACTV, and MENI suggesting that the exposure to poverty and potential marginalization within the society tends to be higher for the individuals less satisfied by their personal relationships or overall life, less participating in the voluntary activities in their communities, and with a poorer economic background. In spite of the not statistically significant and of low or very low-intensity associations, the remaining seven characteristics of the well-being – EMPR, URBA, SPHE, EDAT, EXAP, CVVA, and WHWK – illustrate the way in which a modest well-being impacts and leads to the social exclusion: communities or even societies registering a higher average number of weekly working hours, increased exposure to the air pollution, a higher perception of unsafety in terms of crimes, violence, and vandalism, a decreased level of educational attainment, a lower employment rate, a lower degree of urbanization, and, last but not least, a poorer self-perception of the health status tend to be confronted with an increased risk of social

exclusion.

The second research sub-variable considered to express the social dimension of sustainable development – the unemployment rate – has associated reversely, statistically significant, and relatively moderately intense with one of the well-being characteristics, EDAT, suggesting that a lower level of educational attainment will generate increased unemployment at the societal level. The relationships between unemployment and the other ten well-being characteristics are of low, very low, or even extremely low intensity picturing an overall image according to which an increased unemployment rate tends to be associated with an increased self-perception of the health status, but also to a lower satisfaction in terms of the personal relationships and of the overall life. Moreover, an increased unemployment rate tends to be associated with a higher perception of the unsafety of the community and a higher average number of weekly working hours, as well as with decreased civic engagement, just to refer to the most relevant aspects.

None of the well-being characteristics associated statistically significant with the two research sub-variables describing the environmental dimension of sustainable development. From an economic perspective, the absence of any correlation between GGE, FORR, and well-being indicators suggests that changes in environmental factors don't seem to be directly linked to changes in well-being within the investigated context. This underscores the complexity of achieving sustainable development, emphasizing that improving well-being may require multifaceted strategies that go beyond environmental considerations.

4. Conclusions, limits, and future directions of research

The analysis of the eleven well-being characteristics in relation to three dimensions of sustainable development reveals a notable observation: none of the well-being characteristics exhibit a concurrent association with all three sustainable development dimensions under consideration. This prompts two pertinent questions: (1) Has the variable selections for this exploratory research approach been optimal, or might there have been more suitable choices? (2) Do substantial linkages genuinely exist between well-being and sustainable development, surpassing this approach's predispositions and aspirations?

Nevertheless, amidst this absence of a universal alignment, there exist four well-being characteristics that establish meaningful associations with two of the three sustainable development dimensions, more specifically with the economic and social dimensions. These characteristics encompass the mean equivalized net income, overall life satisfaction, social connections, and civic engagement. This suggests, on one hand, that well-being in the context of sustainable development encompasses a life characterized by robust and stable economic support, social integration, civic participation, and overall contentment. On the other hand, it underscores that the economic and, to some extent, the social dimensions hold paramount significance in the realm of sustainable development concerning well-being. However, the environmental dimension raises intriguing questions. Further examination reveals that seven well-being characteristics correlate statistically significantly with both the macroeconomic (GDPc) and microeconomic (INC – it's noteworthy that only six variables demonstrate significant associations with INC) facets

of sustainable development. This reaffirms the salience of the economic dimension within sustainable development and its pivotal role in augmenting well-being. In essence, a commendable income, sound health, minimal exposure to pollution, heightened life satisfaction, a moderate workload, strong social bonds, and active civic engagement collectively contribute to a robust economic foundation for sustainable development, or alternatively, these aspects are concomitantly shaped by the favourable economic conditions. Of particular interest are the correlations observed for exposure to air pollution and the average number of weekly working hours which display a negative association: reduced levels correspond for both characteristics to enhanced well-being and markedly align with heightened sustainable development.

Moving forward, only four well-being characteristics substantively associated with sustainable development confirm the anticipated patterns according to which higher incomes, enhanced social interactions, greater civic involvement, and elevated life satisfaction manifest as factors mitigating social exclusion. A singular well-being characteristic significantly correlates with a sustainable development sub-variable revealing a negative association wherein higher educational attainment corresponds to diminished unemployment. The remaining well-being characteristics exhibit associations, although not statistically significant, with sustainable development suggesting the presence of peripheral connections.

However, it is noteworthy that none of the well-being characteristics evince statistically significant correlations with any specific environmental dimension variable. Nonetheless, there exist indications of underlying connections that warrant further exploration. The lack of correlation between GGE, FORR, and well-being characteristics implies that changes in environmental factors (such as emissions and forest coverage) are not closely tied to changes in well-being (e.g., income, education, health) within the investigated context. Economically, this suggests that improvements in well-being may not necessarily depend on, or be hindered by, specific environmental changes, at least within the observed dataset. Sustainable development involves achieving economic, social, and environmental goals simultaneously. The absence of correlation in this context highlights the complexity of achieving balance among these dimensions. It underscores that economic and social well-being can be influenced by various factors beyond just environmental ones, such as economic policies, social programs, and technological advancements.

Economic policymakers may need to consider a broader set of factors when formulating strategies for sustainable development. While environmental factors are crucial, this lack of correlation suggests that improving well-being may require a multifaceted approach. Diversifying policy efforts to address economic and social aspects independently of specific environmental measures may be necessary to promote overall sustainable development. It's important to note that the absence of correlation may vary by region and context. Economic and environmental conditions, as well as cultural and social factors, can influence these relationships differently in different places and local and regional variations should be considered when designing interventions aimed at sustainable development.

Economic analysis depends on accurate and reliable data. In cases where there is no observed correlation, it's essential to ensure that the data used for analysis is valid and comprehensive. Additionally, it may be worthwhile to explore other variables or factors

that could mediate or explain the relationship between environmental indicators and well-being. Sustainability is a long-term goal, and the absence of correlation between environmental and well-being variables may not imply that such relationships won't develop over time. Economic planning for sustainable development should take a forward-looking perspective and consider how environmental changes today might impact well-being in the future. In summary, the lack of correlation between environmental indicators and well-being variables in the analysed data highlights the multifaceted nature of sustainable development and the need for comprehensive and context-specific economic approaches to achieve economic, social, and environmental goals.

Several limitations have emerged while approaching the investigated subject, which warrant consideration to contextualize the scope and implications of the research.

An inherent limitation pertains to the *variable selection and conceptual clarity*, specifically to the selection of variables used to define well-being and their alignment with the multifaceted concept of sustainable development. A critical area for improvement lies in revisiting these variables, with a particular emphasis on identifying the most pertinent descriptors of well-being. It is essential to acknowledge that the nuanced distinctions between well-being and quality of life, as characterized by differing perspectives held by organizations such as the OECD and the EU, introduce complexities that require careful navigation.

Another limitation is represented by the *geographic coverage*. While the European Union has been a focal point of the present research approach, extending the scope to include other regions, particularly non-European Union OECD countries, would have bolstered the comprehensiveness of our global assessment. This limitation arises from the potential absence of data from these countries, which restricts the breadth of our findings and global applicability.

Temporal considerations have also limited the present research approach. Although the static assessment, at the level of 2019, serves as a valuable starting point for exploratory purposes, it may prove insufficient for providing a nuanced understanding of the dynamic and intricate connections between well-being and sustainable development. To delve deeper into the causal relationships and temporal dynamics, a longitudinal approach is desirable.

It is important to acknowledge the inherent limitations associated with *variable suitability and potential overemphasis*. While under the present approach have been chosen variables that capture essential aspects of well-being and sustainable development, there remains the possibility that other variables or dimensions may hold similar or more consistent significance. This intrinsic limitation underscores the need for careful consideration in variable selection. Moreover, a potential limitation involves the emphasis placed on the environmental dimension of sustainable development: while undoubtedly important, an unintended bias toward this dimension may divert attention from other equally critical dimensions.

These limitations are integral to the nature of the present exploratory research approach, highlighting the complexities associated with studying the interrelationship between well-being and sustainable development. Acknowledging these constraints is pivotal for interpreting the findings accurately and for guiding future research efforts of assessing the connections between the well-being and global sustainable development goals from a perspective focusing on the individuals and individual good, considering the greater or

common good as an aggregate result of the entire society based on the state of well experienced by each and every individual.

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