Les Cahiers du CEDIMES
2026, Volume 21, numéro 3, https://doi.org/10.69611/cahiers21-3-11
ISSN 2110-6045

Economic complexity and subjective well-being: effects and transmission channels

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Abstract: Over the last few decades, the literature on the determinants of individual well-being has undergone a significant evolution, shifting from a traditional focus on income and consumption toward a broader, multidimensional perspective. This transformation has been largely driven by a growing body of literature emphasizing the importance of economic factors in explaining individuals' subjective well-being. In this context, the present study seeks to investigate the influence of structural transformation, particularly in its economic dimension, on subjective well-being. From an empirical point of view, the study uses several estimation techniques, including ordinary least squares, generalized least squares, and quantile regression, to assess the influence of economic complexity on subjective well-being using panel data covering 77 countries. Two indicators of economic complexity are considered: the economic complexity index (ECI) and the economic complexity index plus (ECI^{+}). The findings indicate that, regardless of the chosen indicator or estimation method, economic complexity tends to decrease life satisfaction, indicating that, on average, it exerts a negative and statistically significant effect on subjective well-being in developing countries. Moreover, mediation analysis highlights that institutional quality, particularly trust in public institutions, serves as one of the key channels through which economic complexity influences subjective well-being.

Keywords: Economic complexity, subjective well-being, developing countries.

Résumé : Au cours des dernières décennies, la littérature consacrée aux déterminants du bien-être individuel a connu une évolution significative, passant d'une approche traditionnelle axée sur le revenu et la consommation à une perspective plus large et multidimensionnelle. Cette transformation a été largement motivée par un corpus croissant de travaux soulignant l'importance des facteurs économiques pour expliquer le bien-être subjectif des individus. Dans ce contexte, la présente étude vise à examiner l'influence de la transformation structurelle, en particulier dans sa dimension économique, sur le bien-être subjectif. D'un point de vue empirique, l'étude utilise plusieurs techniques d'estimation, notamment les moindres carrés ordinaires, les moindres carrés généralisés et la régression quantile, pour évaluer l'influence de la complexité économique sur le bien-être subjectif à l'aide de données de panel couvrant 77 pays. Deux indicateurs de complexité économique sont pris en compte : l'indice de complexité économique (ECI) et l'indice de complexité économique plus (ECI^{+}). Les résultats indiquent que, quel que soit l'indicateur ou la méthode d'estimation choisis, la complexité économique tend à réduire la satisfaction à l'égard de la vie, ce qui montre qu'en moyenne, elle exerce un effet négatif et statistiquement significatif sur le bien-être subjectif dans les pays en développement. De plus, l'analyse de médiation met en évidence que la qualité des institutions, en particulier la confiance dans les institutions publiques, constitue l'un des principaux canaux par lesquels la complexité économique influence le bien-être subjectif.

Mots-clés : Complexité économique, bien-être subjectif, pays en développement.

Classification JEL : O14, I31, O50.

1. Introduction

Since the 1990s, there has been an increasing focus on researching subjective well-being, within academic circles and in international organizations. A substantial amount of research has been conducted to determine the key considerations for policymakers to promote citizens' well-being. It is widely recognized that people with higher incomes generally experience greater life satisfaction compared to people with lower incomes (Easterlin, 2001; Frey & Stutzer, 2002; Frey & Stutzer, 2018). Other research has also shown that happiness seems to be associated with minimal inflation rates and unemployment (Di Tella et al., 2001; Frey & Stutzer, 2002; Avom et al., 2024); and to socio-cultural factors like education, marital status, and religion (Frey & Stutzer, 2006; Nikolaev & Rusakov, 2016; Kislev, 2018; Lawrence et al., 2019; Minkov & Schachner, 2020). In addition, institutional determinants such as governance, duration in power, decentralization, and systems of governance have been identified as factors affecting subjective well-being (Helliwell, 2003; Ott, 2011; Njangang, 2019; Algan et al., 2019; Kuété et al., 2022, Avom et al., 2024). However, the economic complexity's impact on citizens' well-being remains little explored.

This article seeks to address this gap by empirically examining the influence of economic complexity on subjective well-being. Economic complexity can be understood as the volume of productive knowledge that a society is able to mobilize (Hidalgo & Hausmann, 2009). It embodies both the stock of knowledge accumulated and the capacity to apply it within the productive structure of an economy, an element that proves essential for fostering innovation, strengthening human capital, enhancing productivity, and improving overall economic competitiveness. In addition, Hausman et al. (2017), Hartmann et al. (2017) and Sbardella et al. (2017) provide evidence that nations specializing in complex product exports are generally more inclusive and experience lower income inequality than those relying on simpler goods. Similarly, Lapatinas (2016) and Vu (2020) emphasize the positive contribution of economic complexity to human development. The associated part of their findings with industrialization, which has been instrumental in the rise of a new middle class by generating opportunities and expanding access to training and education, thereby contributing to citizens' well-being. Therefore, what is the effect of structural transformation, in terms of its economic dimension on subjective well-being? In other words, what is the effect of economic complexity on subjective well-being? The main hypothesis is that economic complexity increases subjective well-being because countries that produce (export) complex products enjoy strong economic growth, are relatively wealthier and therefore households feel happier (Hausmann et al., 2007). This hypothesis is based on solid theoretical foundations, associating economic complexity with a greater diversity of citizens 'preferences, enhanced efficiency within the production system, and an empowerment of minority groups (Hidalgo et al., 2007; Hausmann et al., 2007; Felipe et al., 2012).

This hypothesis is tested in this study using a sample of developing countries, relying on the economic complexity index (ECI) as a proxy for economic complexity. The ECI captures both the diversity and ubiquity of a nation's exports, drawing on detailed international trade statistics for each country (Hidalgo & Hausman, 2009). Similarly, in this study, we use the scale of life index or happiness score to measure subjective well-being in line with the literature (Ram, 2017; Mignamissi & Kuété, 2020; Kuété et al., 2022; Fambeu, 2023). Theoretically, the link between economic complexity and well-being is generally analyzed through several channels that depend on the dimensions of well-being. Following Frey & Stutzer (2000), Diaz-Serranito & Rodriguez-Pose (2012) show that individual well-being depends on personal attributes and demographic variables, as well as microeconomic, macroeconomic, and institutional variables. Economic complexity affects a number of economic and institutional variables that can improve well-being, namely access to education and healthcare, macroeconomic stability through better resource reallocation and tax efficiency, social mobility, reduced income inequality, and economic vulnerability (Bird et al., 1995; Vu, 2020; Beyala & Ndjokou, 2025).

Drawing on these considerations, this article aims to enrich the existing literature in three main ways. First, it provides a direct investigation of the nexus between economic complexity and subjective well-being, representing, to our knowledge, the first study of its kind. More precisely, we exploit temporal variations in economic complexity to account for differences in perceived life satisfaction, with a particular emphasis on subjective well-being as a reliable proxy for overall life satisfaction. Second, according to the literature, we explore and discuss the potential channels through which economic complexity can affect subjective well-being; these include economic development, institutional quality (trust in institutions), and human capital. Third, this study also brings a methodological contribution. Unlike previous studies that are limited to estimating the mean value for the entire sample (Appel et al. 2015; Chae, 2018), our study uses a quantile regression estimation approach introduced by Koenker & Bassett (1978). The strength of this approach lies in its ability to explore the link between economic complexity and subjective well-being along the conditional well-being distribution.

After this introduction, the remainder of the paper is structured as follows. Section two examines the transmission channels. The third presents the methodology adopted in this study. Section four reports and discusses the principal results. The fifth section analyses the robustness of the main findings. Finally, section six provides the conclusion.

2. Potential transmission channels

This section examines the potential transmission channels through which economic complexity influences subjective well-being. Without pretending to be comprehensive, our attention is directed toward three transmission channels: economic development, the quality of institutions and human capital.

2.1. The economic development channel

The economic complexity-economic development nexus has been the subject of considerable research, which has indicated that persistent differences in per capita income between countries can be attributed by different levels of country complexity. This complexity is evidenced as reflected diversity of a nation's export capacities and products. Economies that are more complex tend to have more sophisticated export baskets and achieve stronger medium- and long-term performance. Empirical evidence from studies such as Hidalgo et al. (2007) suggests that the integration of more complex products into a country's export portfolio is associated with faster growth in GDP per capita, labor productivity, employment and value added. Additionally, the degree of complexity in a country’s specialization is a crucial predictor of its prospective economic performance, as highlighted by the findings of Felipe et al. (2012) and Coniglio et al. (201 6).

Moreover, the theoretical literature on the effect of economic development on subjective well-being indicates to a positive correlation with the Easterlin hypothesis (Easterlin, 1974). The hypothesis posits that economic development enhances subjective well-being up to a threshold level of development, whereupon well-being stabilizes (Layard, 1980). Similarly, countries that export complex products with increasing returns have been observed to achieve greater income over the long term (Hausmann et al., 2007; Hidalgo et al., 2007; Reinert, 2008; Hidalgo & Hausmann, 2009). It is generally established in the literature that higher per capita income is positively linked to subjective well-being (Easterlin, 1973; Layard, 2005; Sacks et al., 2010; Clark et al., 2016). Consequently, a rise in income levels, partly driven by increasing economic complexity, can enhance population well-being by providing a wide variety of sophisticated and diversified goods and services and reducing unemployment (Hidalgo et al., 2007; Adam et al., 2023; Beyala & Ndjokou, 2025).

2.2. The quality of institutions channel

In examining the influence of institutional quality on the economic complexity-subjective well-being nexus, numerous researchers have underscored the interconnection between product diversity and institutional quality, as well as the allocation of resources within a nation. The strategy used to construct the economic complexity index indicates that complex products are usually produced in economies characterized by solid institutions and robust employee qualifications (Fukuyama, 1996; Hidalgo, 2015; Hidalgo & Hausmann, 2009). According to Khan (2013), countries that specialize on a narrow set of basic products often lack competitiveness. Moreover, prior research suggests that post-colonial countries relying on low-value agricultural or extractive industries are likely to experience weaknesses in quality of institutions, limited human capital development, and lower income levels (Acemoglu & Robinson, 2013). Hartmann et al. (2017) further argue that institutional transformation can directly affect economic complexity, since the survival of firms depends on their ability to establish effective institutional frameworks within their industries. Consequently, stronger institutions are positively with higher level of economic complexity.

In addition, some studies in the literature indicate that economies exporting more complex goods generally experience lower income inequality (Hartmann et al., 2017; Lee & Vu, 2020; Hartmann, 2018). Hartmann et al. (2017) contend that highly complex economies provide broader employment and knowledge acquisition, thereby enhancing their bargaining power. Conversely, economies that are less complex, with a narrow range of core sectors, are more likely to exhibit vertical hierarchies, which can result in an unequal distribution of income and power. In contrast, complex economies, which encompass a variety of industries, are correlated with a more equitable distribution of wealth and power between different groups (Lee & Vu, 2020). The literature on subjective well-being also widely recognizes that the quality of institutions influences a nation's capacity to allocate tax-raising resources in a fair manner, thereby contributing to improvements in people's well-being (Frey & Stutzer, 2002; Stutzer & Frey, 2006; Ott, 2010; Beyala & Ndjokou, 2025). The quality of institutions, as reflected in effective governance and the ability to control corruption, is an important factor in the public provision of basic services (Helliwell, 2003). Furthermore, there is a widely accepted view that income inequality adversely affects life satisfaction outcomes (Howarth & Kennedy, 2016; Boreham et al., 2016). In summary, the quality of institutions acts as a catalyst in the relation between economic complexity and subjective well-being. Strong institutions can facilitate a positive interaction between these two variables, thereby enabling individuals to take advantage of a complex economy to improve their quality of life. Conversely, weak institutions can hinder these interactions, limiting the potential benefits of a complex economy on subjective well-being.

2.3. The human capital channel

The economic intuition that economic complexity has an effect on subjective well-being is supported by the findings of Hausmann et al. (2014), who confirm that complex economies promote knowledge creation through network of individuals, thereby generating a wider variety of knowledge-intensive products. These insights align with the contributions of Agosin (2009) and Felipe et al. (2012), who argue that complex economic structures indirectly foster the development of skilled labor, sine the production of sophisticated goods necessitates higher skills. Furthermore, the emergence of new goods increases the likelihood of developing new industries and identifying innovative production processes. Consequently, augmenting economic complexity stimulates the investment in human capabilities through enhancing skills, stimulating learning and elevating the demand for skilled labor.

Incomes tend to increase in line with an individual's level of education and skills, thereby broadening their opportunities and exposure to new products. This result in an increased demand for products and services driven by diverse consumption patterns and lifestyle preferences.

Consequently, satisfaction, which is associated with the diversity and quality of products, also rises in conjunction with rising incomes and purchasing power. Furthermore, it can be posited that elevated levels of education can enhance life satisfaction, given the established correlation between such levels and economic well-being. It is essential to highlight, however, that the accumulation of human capital provides access to higher levels of income through structural transformation that enable the production of a more diverse array of complex goods. Furthermore, numerous empirical studies have recorded the beneficial interaction effects of economic complexity and the quality of human capital on economic development (Hausmann et al., 2014; Zhu & Li, 2017; Lee & Vu, 2020). Furthermore, Cockx & Francken (2016) and Wigley (2017) illustrate that economies whose economic development is contingent upon human capital accumulation tend to diversify their export portfolio, which can result in enhanced life satisfaction.

3. Methodology and data

3.1. Methodology

To assess the influence of economic complexity on subjective well-being in developing countries, the empirical model draws on the work of Nikolova & Graham (2015). The equation to be estimated in panel data is therefore as follows:

$$Subjective\ well-being_{it} = \beta ECI_{it} + \delta X_{it} + \varepsilon_{it} \qquad (1)$$

Where $Subjective\ well-being_{it}$ represents the perceived endogenous variable, defined as the mean level of subjective well-being among the population of nations i in year t. ECI_{it} is the independent variable of interest, measuring the degree of diversity and ubiquity in a country's economic structures. X_{it} represents the matrix of control variables, comprising the other determinants of subjective well-being.

The above equation is estimated on the basis of longitudinal data analyzed with the ordinary least squares (OLS) and generalized least squares (GLS). This choice is based on three main considerations. The first, the countries in the sample exhibit relative homogeneity. The second is specific to the nature of the data. The third reason, the sample size is sufficiently large to avoid significant estimations issues. These econometric methods present several advantages (Davidson, 2000). They allow for the derivation of unbiased, consistent and efficient estimators in the presence of lagged variables. They also account for unobserved heterogeneity affecting factors such as country attractiveness, economic growth and trade openness (Rodrik, 20002). In addition, they help address simultaneity bias between explanatory and control variables (Wooldridge, 2013). However, it remains crucial to verify that the residuals are free from autocorrelation to ensure the validity of the estimators. In the same vein, we deepen our analysis via executing a mediation analysis. As noted earlier, we examine the three potential transmission channels namely economic development (GDP), human capital (education), quality of institutions (trust in institutions). The approach used in this study draws on the work of Ang (2013). This method is based on the assessment of two estimation models:

$$\text{Model 1}: Med_{it} = a_1 + b_1 ECI_{it} + c'_1 X_{it} + \mu_{it}$$

$$\text{Model 2}: Subjective\ well-being_{it} = a_2 + b_2 ECI_{it} + b_3 Méd_{it} + c'_2 X_{it} + \varepsilon_{it}$$

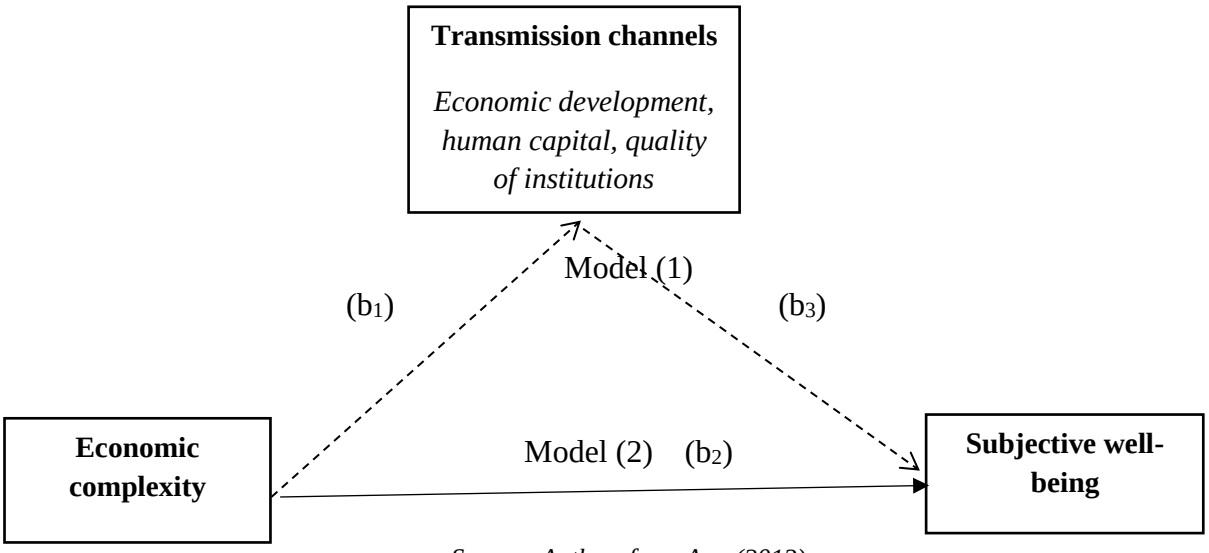
In these models, Med_{it} refers to the mediating variables or transmission channels (economic development, human capital, quality of institutions). The effects are deduced from the models according to the following relationships:

- Indirect effect: $b_1 \times b_3$
- Direct effect direct: b_2
- Total effect: $(b_1 \times b_3) + b_2$

The mediated effect is calculated as the multiplication of b_1 and b_3, which b_3 represents the influence of transmission channels on subjective well-being in model (2). This term also expresses the intensity of mediation, which relies on both the influence of economic complexity on channels

(b_1) and the effect of those channels on subjective well-being (b_3). The outputs of this analysis are presented in detail in Table 3.

Figure 1. Formalization the mediation effect



Source: Author, from Ang (2013)

3.2. Data and description of variables

3.2.1. Subjective well-being: The dependent variable

The variable of interest examined in this work is subjective well-being, assessed primarily through measures of happiness or the life ladder index (Ram, 2017; Hojman & Miranda, 2018; Mignamissi & Malah, 2020, 2021; Kuété et al., 2022; Avom et al., 2024). The life ladder is 0-10 scale, where a score of 10 reflects high life satisfaction and a good quality of life, while a score of 0 reflects very low life satisfaction. The index is derived from the World Happiness Database (WHD), which evaluates people's perception of happiness globally. The data utilized in this study are longitudinal time series that cover multiple countries worldwide. The focus is on developing countries in general, and specifically the study sample of 77 developing countries, selected based on data availability.

3.2.2. Economic complexity: The independent variable

The ECI is a national-level indicator used to measure economic complexity (Avom & Ndoya, 2024; Beyala & Ndjokou, 2025). It calculates an economy's capacity to manufacture goods and services with significant value-added by assessing the diversity and scarcity of products exported. Countries that export a varied range of uncommon products, indicating complex production processes, are acknowledged as having significant economic complexity. Conversely, countries that export diverse but common products have a low degree of economic sophistication. The economic complexity index adjusts export diversification based on the frequency of product appearance on the international market. The calculation is based on the matrix M_{cp}, which represents the country (c) and product (p). The ECI offers perspectives nation's skill variety and its capacity to participate in sophisticated global economic activities.

$$M_{cp} = \begin{cases} 1 \; if \; RCA_{cp} \geq 1 \\ 0 \; or \end{cases}$$

Where RCA_{cp} represents the specialization advantage of a nation on a given product and which is specified by Balassa like this:

$$RCA_{cp} = \frac{\frac{X_{cp}}{\sum_c X_{cp}}}{\frac{\sum_p X_{cp}}{\sum_{c,p} X_{cp}}}$$

From the M_{cp} matrix, Hausmann et al. (2014) define a recurrence to calculate the ECI:

$$k_{c,N} = \frac{1}{k_{c,o}} \sum_p M_{cp} \,.\, k_{p,N-1} \qquad k_{p,N} = \frac{1}{k_{p,o}} \sum_c M_{cp} \,.\, k_{c,N-1}$$

Recursion begins by calculating two indicators:

Diversity $= k_{c,o} = \sum_p M_{cp}$ $\qquad Ubiquity = k_{p,o} = \sum_c M_{cp}$

Naturally, the ECI is an assessment highlighting the mutual reliance between economic diversification and the ubiquitousness of goods.

Posing: $\widetilde{M}_{cc'} = \sum_p \frac{M_{cp} M_{c'p}}{K_{co} k_{po}}$

The recurrence amounts to fulfilling the equation, $K_{c,N} = \sum_{c'} \widetilde{M}_{cc'} k_{c',N-2}$, which is satisfied by $k_{c,N} = k_{c,N-2} = 1$. The solution aligns with the eigenvector $\widetilde{M}_{cc'}$ correlated with the principal eigenvalue. Since this vector consists of ones, the ECI is computed using eigenvector$(\vec{K})$ linked to the second eigenvector, and is subsequently standardized (centered and scaled):

$$ECI = \frac{\vec{K} - < \vec{K} >}{stdev(\vec{K})}$$

3.2.3. The control variables

In this study, the control variables include economic development, health, education, social support, trust in institutions, generosity, freedom to make life choices, unemployment and inflation. According to Easterlin (1974), economic development can explain fluctuations in national happiness. Thus, the pace of growth has a greater or lesser effect on individuals' subjective well-being within a nation. Similarly, it is widely accepted in economic theory that health is a fundamental determinant of subjective well-being (Keyes, 1995; Ryff & Singer, 2008). Indeed, economic theory is most often based on the concept of utility, which measures the level of satisfaction or well-being that an individual derives from satisfying his or her choices or experiences. Health is a fundamental factor in determining this utility. In general, better health is correlated with enhanced capacity to perform activities and reduce pain and discomfort, which contributes overall to an enhancement of quality of life. In this study, we measure economic development and health respectively by gross domestic product (GDP) per capita and life expectancy at birth.

Similarly, following capability theory; education, the freedom to make the life choices a person wants represent fundamental determinants of subjective well-being. Education plays an essential role in broadening an individual's capabilities. By providing quality education, individuals are offered the opportunity to acquire skills, knowledge and practical competences that increase well-being (Mincer, 1981; Mankiw et al., 1992; Yokoyama & Alemu, 2009). Similarly, freedom of choice is a fundamental concept in capability theory. It describes individuals' ability to make meaningful choices based on their personal preferences. Having the freedom to choose implies that individuals can shape their own lives according to their values and aspirations. When people have greater control over their decisions and actions, they are more likely to feel empowered, fulfilled and satisfied with their lives. Freedom of choice also allows individuals to adapt their decisions to their changing circumstances, enhancing their ability to cope with life's challenges (Sen, 2010; Castellacci & Tveito, 2018).

We also introduce the quality of institutions measured by trust in institutions. Trust in institutions reflects the perception of the effectiveness of government, the quality of regulation, stability of county and the non-violence, judicial integrity, voice and accountability. Generally

speaking, according to Helliwell et al. (2023), quality of institutions is linked to higher subjective well-being. Indeed, Castelleci & Tveito (2018) point out that social support has a decisive role in improving well-being by providing a network of positive relationships that provide mental and emotional support, boost self-esteem, reduce isolation, help cope with challenges and encourage positive emotions. Similarly, generosity is an element of social capital that expresses a person's charity towards others and can influence their subjective well-being. Finally, we also control for the effect of economic complexity on subjective well-being through inflation and unemployment. Unemployment is an indicator that captures the percentage of the working population (people of working age and available for work) who don't have an employment but currently job hunting. In other words, unemployment reflects the sub-optimal use of human resources and can influence many aspects of economic and social life. For example, unemployment can have adverse psychological and social effects, such as reduced self-confidence, social isolation and depression, leading to a decline in individual well-being. Inflation expresses the general and sustained growth in the prices of goods and services over time. Inflation can impact subjective well-being by reducing purchasing power, increasing financial uncertainty, exacerbating inequality and generating feelings of stress and insecurity.

This study uses annual data for 77 developing countries between 2006 and 2022. There are at least two main reasons for selecting this period. The first concerns the discussion on structural transformation, which has resurfaced following the shortcomings of structural adjustment policies in the 1980s. The second justification concerns the availability of data, in particular on subjective well-being, for which data start in 2006.

The analysis of descriptive statistics for seventy-seven (77) developing countries during 2006-2021 is presented in Table 1 below. It highlights the mean, standard deviation, minimum, and maximum values for each variable in the study. The table reveals that, on average, the subjective well-being index in developing countries over the defined study period is 5.181, which implies that life satisfaction is acceptable, since subjective well-being is assessed on a life scale of 0 to 10. Moreover, this average threshold also masks significant heterogeneity between countries, as subjective well-being varies from 1.576 (low subjective well-being) to 7.776 (high subjective well-being). Considerable efforts still need to be made to ensure that everyone enjoys a high level of life satisfaction. Developing countries continue to lag behind in economic complexity, with an average score of -0.273. However, this low level of economic complexity reflects observable divergences between countries, since the standard deviation is 0.727. Regarding the control variables, three principal tendencies are observed: variables with very high dispersion (inflation), variables with moderate dispersion (unemployment) and variables with low dispersion (GDP, social support, health, freedom, generosity, trust and education).

Table1. Descriptive Statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
Subjective well-being	1231	5.181	.95	1.576	7.776
ECI	1231	-.273	.727	-2.696	1.394
GPD	1231	9.011	.916	4.71	11.31
Social support	1231	.794	.115	.291	1.621
Health	1231	61.791	5.724	40.4	70.3
Freedom	1231	.735	.137	.19	1.219
Generosity	1231	-.015	.162	-.384	.706
Trust	1183	.525	.237	.069	2.081
Inflation	1215	9.837	47.844	-11.941	921.001
Education	1167	77.187	25.676	15.041	142.671
Unemployment	1231	6.959	5.037	.14	31.11

Source: Author using WHD, OEC and WDI data.

4. Main findings and discussion

The principal outcomes of our analysis are summarized in Table 2 below. Columns 1 and 2 represent ordinary least squares estimates while columns 3 and 4 represent generalized least squares estimates. The coefficient linked to the economic complexity index in columns 2 and 4 is negative and statistically significant at the 1% threshold. This suggests that, on average, economic complexity reduces subjective well-being. There are at least three plausible explanations for these results. Firstly, developing countries are generally those that have not really begun their process of economic transformation. Based on statistics from the observatory of economic complexity (OEC), developing economies are lagging behind in terms of the economic transformation that is limiting household well-being. For example, data for the year 2023 from the OEC reveals that the productive structure of most developing economies is intrinsically characterized by less complex economic framework. This is the situation for the economies of Cameroon, Congo, Venezuela and many others. Secondly, economic complexity requires a better trained and educated workforce (Hausmann et al., 2014; Beyala & Ndjokou, 2025). In developing countries, where access to quality education is limited, this creates a gap between those who can adapt to the new demands of the market and those who cannot, increasing the sense of exclusion that reduces subjective well-being. In addition, increased economic complexity also leads to increased pressure on workers to adapt quickly to change, which generates stress and affects subjective well-being (Strully, 2009; Adam et al., 2023).

Examining the influence of the control variables on subjective well-being, we observe that overall, they have the expected signs. By way of illustration, the positive signs for freedom of choices and social support confirm the important role of charity and freedom of expression in improving quality of life. Conversely, the negative sign for institutional quality variable (trust in institutions) shows that institutions overall reduce subjective well-being in developing countries, which are most often characterized by poor institutions.

In line with our expectations, freedom of choices improves subjective well-being. In fact, the results below show that the freedom to make life choices improves the subjective well-being of people in developing economies. This translates into the fact that any increase in the freedom of choices leads, ceteris paribus, to an increase in subjective well-being. Indeed, following Helliwell et al. (2022) and Sen (2010), the freedom to make life choices enables individuals to pursue activities that are in line with their passions and personal interests. This leads to a sense of satisfaction and personal fulfilment, which support psychological health. Furthermore, the freedom of choices gives individuals the opportunity to define their own goals and work towards achieving them. This autonomy and ability to pursue personal aspirations influence over personal outcomes, which is an important factor in subjective well-being.

The baseline results also indicate that health and social support improve life satisfaction in developing economies. Deteriorating health tends to foster a more pessimistic perception of life, as it is accompanied by increased activity restrictions. Conversely, optimal health enriches overall contentment in everyday activities (Fambeu, 2023). Similarly, in developing countries, where public social protection systems are often inadequate, social support (family, community, local associations) plays a crucial role in providing financial and material assistance in times of need. This form of solidarity reduces people's vulnerability to economic shocks (illness, unemployment, natural disasters), which in turn promotes subjective well-being. These findings reflect the conclusions drawn by Avom et al. (2024). However, contrary to the evidence, generosity reduces subjective well-being and this is consistent with the results of Fambeu (2023) where he finds generosity negatively affects happiness but not significantly.

Contrary to theory, inflation improves subjective well-being. Indeed, the coefficient for the inflation variable is positive and statically significant at 10%. In this context, any increase in the level of inflation leads to an increase in subjective well-being, ceteris paribus. In theory, inflation is often perceived negatively because of its effects on purchasing power and economic stability (Frey & Stutzer, 2002). On the other hand, moderate inflation can stimulate economic growth by encouraging

companies to invest and innovate. When prices rise gradually, companies have more room to increase their selling prices, which can boost their profits and encourage them to invest in new projects. This growth dynamic can create job opportunities, increase household incomes and raise overall living standards, which can contribute to people's happiness.

The findings indicate that unemployment exerts a negative influence on subjective well-being in developing economies. Indeed, according to theory, rising unemployment rates lower life satisfaction (Fambeu, 2023; Frey & Stutzer, 2002). This is because unemployment reduces purchasing power, which can lead to financial difficulties, delays in paying bills and problems in meeting basic needs. This loss of income can be stressful and can reduce subjective well-being. In this case, growth in unemployment rates leads to reduce subjective well-being, ceteris paribus. These conclusions corroborate with the study of Helliwell et al. (2022). With regard to the institutional variable (trust in institutions), the findings below indicate that this variable adversely influences subjective well-being in developing world. Indeed, following to theory, the poor institutional quality reduces life satisfaction. This is because, for example, when individuals perceive corruption to be endemic in their society, this can erode their trust in public institutions, also in the functioning of the economy as a whole. This loss of confidence in public institutions can lead to a deterioration in subjective well-being. These findings are harmonious with the work of Helliwell et al. (2023).

Table 2: Baseline results

	OLS		GLS	
	1	2	3	4
VARIABLES	Subjective well-being	Subjective well-being	Subjective well-being	Subjective well-being
GDP	-0.0576	-0.0205	-0.0576	-0.0205
	(0.0501)	(0.0520)	(0.0499)	(0.0517)
Socialsupport	0.562**	0.567**	0.562**	0.567**
	(0.249)	(0.248)	(0.248)	(0.247)
Health	0.0469***	0.0481***	0.0469***	0.0481***
	(0.00705)	(0.00705)	(0.00702)	(0.00702)
Freedom	1.322***	1.342***	1.322***	1.342***
	(0.221)	(0.220)	(0.220)	(0.219)
Generosity	-0.842***	-0.836***	-0.842***	-0.836***
	(0.180)	(0.179)	(0.179)	(0.178)
Inflation	0.00100*	0.000992*	0.00100*	0.000992*
	(0.000568)	(0.000566)	(0.000565)	(0.000563)
Education	0.00160	0.00166	0.00160	0.00166
	(0.00144)	(0.00143)	(0.00143)	(0.00143)
Unemployment	-0.0419***	-0.0419***	-0.0419***	-0.0419***
	(0.00624)	(0.00622)	(0.00621)	(0.00619)
Trust	-0.317***	-0.367***	-0.317***	-0.367***
	(0.116)	(0.118)	(0.116)	(0.117)
ECI		-0.109***		-0.109***
		(0.0420)		(0.0418)
Constant	1.712***	1.274***	1.712***	1.274***
	(0.360)	(0.397)	(0.358)	(0.395)
Observations	1103	1103	1103	1103
R-squared	0.201	0.206		
Wald chi2			277.7	286.1
Prob>chi2			0.000	0.000

Note: Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Author's estimates.

Similarly, the results of the mediation analysis are presented in table 3. And indeed, table 3 shows the results of model (1), where economic development, human capital, and trust in institutions are considered as transmission channels (1a, 2a, 3a). The estimates for model (2), which incorporates the transmission channels as controls, are presented in columns b (1b, 2b, 3b). Overall, the findings reveal that economic complexity significantly influences all transmission channels, with results statistically significant at the 1% level (1a, 2a, 3a) and each of the three transmission channels exerts a distinct significant influence on subjective well-being (1b, 2b, 3b). Overall, the findings indicate the existence of a mediation analysis, whereby part of the effects of economic complexity on subjective well-being operates through the economic development, human capital, and trust in institutions.

Table 3 also provides a formal assessment of the role of these transmission channels using various statistical techniques. Different mediation tests are conducted to determine whether the indirect impact of economic complexity on subjective well-being via economic development, human capital, and trust in institutions is statistically distinguishable from zero. For instance, considering institutional quality as a channel, the Sobel test yields an estimated statistic of 0.026, with P value below 5%, implying that the null hypothesis of no mediation is rejected. Similarly, the results are obtained when applying alternative mediation tests, such as the Delta and Monte Carlo tests. Furthermore, using bootstrap confidence intervals does not modify the outcomes. Specifically, the results indicate that the mediating role of the quality of institutions statically significant, accounting for approximately 34% of the total effect of economic complexity in subjective well-being. However, referring to the Monte Carlo test, the statistic is estimated at 0.061 and statistically significant at the 10% threshold for the economic development transmission channel. This indicates that the effect of economic development as a transmission channel is significant, and estimated at 45% of the overall effect of economic complexity in subjective well-being.

5. Robustness analysis

To check the robustness of our main results, we conduct a series of robustness tests using, on the one hand, an alternative related to economic complexity; and on the other hand, a change in estimation techniques.

5.1. Robustness test using an alternative measure of the economic complexity index

As a robustness check, we employ an alternative measure of the economic complexity index plus (ECI^{+}) proposed by Hidalgo & Hausman (2009). While this index relies on methods that endogenously determine the knowledge intensity of economies and activities from data, it has certain limitations. One key drawback is the need to identify the products exported by countries, which is challenging in a global context where product markets and economic sizes differ considerably. Hidalgo & Hausmann (2009) address this by considering as exports only products for which a country holds a well-established comparative advantage. They compute the average ubiquity of these products and the average diversity of countries producing them. However, the complexity of a product cannot simply be defined by the average capabilities of its exporters (Beyala & Ndjokou, 2025). In fact, the definition of product complexity should incorporate the idea that if a country with low diversification can export a particular product, it likely requires a relatively low level of expertise. To address these limitations, we adopt an alternative economic complexity measure (ICE^{+}) introduced Tacchella et al. (2013), which weights the complexity of a product by the inverse of the capabilities of the countries exporting it. The findings obtained from this new index are presented in Table 4. Overall, these results reinforce our initial conclusions, confirming that economic complexity (ECI^{+}) significantly and statistically reduces subjective well-being at the 1% significance level in developing economies.

Table 3. Transmission channels test

	Transmission channel: economic development (GDP)			Transmission channel: human capital (education)			Transmission channel: quality of institutions (trust in institutions)			
VARIABLES	GDP	Subjective well-being		Education	Subjective well-being			Trust	Subjective well-being	
	(1a)	(1b)		(2a)	(2b)			(3a)	(3b)	
ECI	0.6600***	-0.0739**		13.5136***	-0.1046***			-0.0809***	-0.1031***	
	(0.036)	(0.036)		(1.000)	(0.038)			(0.010)	(0.038)	
GDP		-0.0909								
		(0.057)								
Education					0.0010					
					(0.002)					
Trust									-0.3261**	
									(0.145)	
Constant	9.1783***	1.0061***		80.8077***	0.9980**			0.5024***	0.9141**	
	(0.019)	(0.356)		(0.700)	(0.431)			(0.007)	(0.385)	
Control variables	Yes	Yes		Yes	Yes			Yes	Yes	
Observations	1215	1215		1151	1151			1167	1167	
Bootstrap replication	500	500		500	500			500	500	
Mediation analysis										
	Transmission channel: GDP			Transmission channel: Education				Transmission channel: Trust in institutions		
	Coeff	Std.Err	P value	Coeff	Std.Err	P value		Coeff	Std.Err	P value
Delta	-0.060	0.038	0.113	0.014	0.021	0.515		0.026	0.011	0.021
Sobel	-0.060	0.038	0.113	0.014	0.021	0.515		0.026	0.012	0.030
Monte Carlo	-0.061	0.037	0.096	0.013	0.021	0.522		0.027	0.012	0.024
Composition of the effect										
Indirect Effect	0.061			0.014				0.026		
Direct Effect	0.073			0.077				0.051		
Total Effect	0.134			0.091				0.077		
% of the total effect mediated	45%			/				34%		
Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1										

Source: Author's estimates.

Table 4. Robustness test using ECI^{+}

	(1)	(2)
VARIABLES	Subjective well-being	Subjective well-being
GDP	-0.0576	-0.00343
	(0.0499)	(0.0508)
Social support	0.562**	0.515**
	(0.248)	(0.246)
health	0.0469***	0.0460***
	(0.00702)	(0.00696)
Freedom	1.322***	1.226***
	(0.220)	(0.218)
Generosity	-0.842***	-0.708***
	(0.179)	(0.180)
Inflation	0.00100*	0.000932*
	(0.000565)	(0.000560)
Education	0.00160	0.00199
	(0.00143)	(0.00142)
Unemployment	-0.0419***	-0.0394***
	(0.00621)	(0.00617)
Trust	-0.317***	-0.368***
	(0.116)	(0.115)
ECI^{+}		-0.131***
		(0.0283)
Constant	1.712***	1.368***
	(0.358)	(0.362)
Observations	1,103	1,103
Wald chi2	277.7	304.5
chi2	277.7	304.5
Standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

Source: Author's estimates.

5.2. Robustness test using an alternative estimation technique

To further assess the robustness of our baseline results, we modify the estimation approach and employ quantile regression. This method is based on evaluating the effects of explanatory variables at different points along the distribution of the dependent variable, namely subjective well-being. Traditional linear regression techniques, such as ordinary least squares, generalized least squares or generalized method of moments, primarily focus on estimating the conditional mean of the dependent variable on the independent variables. However, this focus on the mean can limit their suitability in certain contexts, as it overlooks potential heterogeneity across the distribution. Quantile regression addresses this limitation by allowing us to examine the relationship between variables at various points of the conditional distribution of subjective well-being. Moreover, unlike standard estimation techniques, quantile regression is more robust to outliers in the dependent variable. The quantile regression estimator is derived by optimizing the following objective function:

$$min_{\beta}\left\{\sum_{i=Y_i \geq X'_i\beta} \theta|Y_i - X'_i\beta| \quad + \sum_{i=Y_i \geq X'_i\beta} (1-\theta)|Y_i - X'_i\beta|\right\}$$

Where i is the country, Y_i is the subjective well-being, β refers to the vector of parameters must be estimated and X_i represents the vector of independent variables. In this study, as shown in Table 5, we analyze five quantiles: 0.1, 0.25, 0.50, 0.75 and 0.9. The findings from the quantile analysis confirm our main finding that there is an adverse association between economic complexity and subjective well-being. Therefore, the observed relationship between economic complexity and subjective well-being is strongly significant in all quantiles of this distribution.

Table 5. Robustness test using quantile regression

	(1)	(2)	(3)	(4)	(5)
	0.10	0.25	0.50	0.75	0.90
Variables	Subjective well-being	Subjective well-being	Subjective well-being	Subjective well-being	Subjective well-being
GDP	0.217***	0.0810	-0.0517	-0.356***	0.145
	(0.0677)	(0.0558)	(0.0666)	(0.127)	(0.0924)
Socialsupport	0.680**	1.761***	1.633***	0.784	0.263
	(0.323)	(0.267)	(0.318)	(0.609)	(0.441)
Health	0.0354***	0.0452***	0.0580***	0.0961***	0.0333***
	(0.00917)	(0.00756)	(0.00903)	(0.0173)	(0.0125)
Freedom	1.344***	1.429***	1.473***	1.098**	0.961**
	(0.286)	(0.236)	(0.282)	(0.539)	(0.391)
Generosity	-0.538**	-0.675***	-0.431*	-0.779*	-0.520
	(0.233)	(0.192)	(0.230)	(0.439)	(0.319)
Inflation	0.00244***	0.00172***	0.00161**	-0.000469	0.000496
	(0.000737)	(0.000607)	(0.000725)	(0.00139)	(0.00101)
Education	0.000309	-0.00299*	-0.00285	-0.00333	0.00754***
	(0.00187)	(0.00154)	(0.00184)	(0.00351)	(0.00255)
Unemployment	-0.0536***	-0.0417***	-0.0213***	-0.0194	-0.0515***
	(0.00809)	(0.00667)	(0.00796)	(0.0152)	(0.0111)
Trust	-0.414***	-0.237*	-0.107	-0.345	-0.670***
	(0.153)	(0.126)	(0.151)	(0.288)	(0.209)
ECI	-0.160***	-0.0521	0.0117	0.132	-0.485***
	(0.0546)	(0.0450)	(0.0537)	(0.103)	(0.0746)
Constant	-0.485	-0.188	0.565	2.688***	-0.134
	(0.516)	(0.426)	(0.508)	(0.972)	(0.705)
Observations	1103	1103	1103	1103	1103
R^2	0.147	0.167	0.160	0.117	0.137
Standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

Source: Author's estimates

6. Conclusion

The objective of this study is to examine the influence of economic complexity, as captured by the economic complexity index, on subjective well-being across a panel of 77 developing countries. To achieve this, we employ a range a methodological approach, including ordinary least squares, generalized least squares, quantile regression, structural equation model to estimate and investigate the underlying transmission mechanisms. All the estimation techniques used yield consistent results, leading to the same overall conclusion. Findings reveal that the impact of economic complexity on subjective well-being is generally negative and statistically significant in most cases. In other words, economic complexity tends to reduce individuals' happiness in developing countries. However, mediation analysis conducted to explore the main transmission channels indicates that institutional quality, measured by trust in public institutions, constitutes the primary pathway through which economic complexity affects well-being. These findings enrich the existing literature on economic complexity by offering insights into its implication on individuals' subjective well-being. These results lead to two recommendations in terms of economic policy. The first is to introduce incentives for product sophistication, particularly in developing countries. This sophistication would enable countries to develop and specialize in products with low ubiquity, thereby strengthening their comparative advantage. The second is to implement product diversification policies based on innovative industries that require a similar set of capabilities.

Despite the results obtained and the various robustness tests conducted, this study has certain limitations that open up avenues for future research. First, the use of the ECI and ECI^{+} as measures of economic complexity, although widely recognized in the literature, does not capture all dimensions of structural transformation, particularly changes in the sectoral structure of production, employment, productivity, and technological sophistication. Second, subjective well-being is measured primarily through life satisfaction, whereas it is a multidimensional phenomenon that may also include emotions, mental health, social relationships, and a sense of accomplishment. Third, despite the use of several estimation techniques, including OLS, GLS, and quantile regression, the possibility of endogeneity, reverse causality, or omitted variables cannot be entirely ruled out. More advanced causal identification strategies could therefore be employed in future research. Fourth, the sample of 77 developing countries remains characterized by significant economic, institutional, and social heterogeneity, meaning that the estimated average effects may mask important differences among countries and groups of countries. Finally, although the mediation analysis highlights the role of trust in public institutions, other institutional and socioeconomic mechanisms could also explain the relationship between economic complexity and subjective well-being. Future research could therefore draw on individual or multilevel data, incorporate more dimensions of structural transformation and well-being, and examine the heterogeneous and dynamic effects of economic complexity on well-being.

References

1. Acemoglu, D., & Robinson, J. A. (2013). *Why nations fail : The origins of power, prosperity, and poverty. Crown Currency.*
2. Adam, A., Garas, A., Katsaiti, M.-S., & Lapatinas, A. (2023). Economic complexity and jobs: An empirical analysis. *Economics of Innovation and New Technology*, 32(1), 25-52. https://doi.org/10.1080/10438599.2020.1859751
3. Agosin, M. R. (2009). Export diversification and growth in emerging economies. *CEPAL Review*, 2009(97), 115-131. https://doi.org/10.18356/27e5d46c-en
4. Algan, Y., Malgouyres, C., & Senik, C. (2020). Territoires, bien-être et politiques publiques. *Notes du conseil d'analyse économique*, 55(1), 1-12. https://doi.org/10.3917/ncae.055.0001
5. Ang, J. B. (2013). Are modern financial systems shaped by state antiquity? *Journal of Banking & Finance*,

37(11), 4038-4058. https://doi.org/10.1016/j.jbankfin.2013.07.023
6. Appel, H., Crusius, J., & Gerlach, A. L. (2015). Social Comparison, Envy, and Depression on Facebook : A Study Looking at the Effects of High Comparison Standards on Depressed Individuals. *Journal of Social and Clinical Psychology*, 34(4), 277-289. https://doi.org/10.1521/jscp.2015.34.4.277
7. Avom, D., Mondjeli Mwa Ndjokou, I. M., Tsopmo, P. C., Abdramane, C., & Asongu, S. A. (2024). Duration in power and happiness in the world. *Politics & Policy*, 52(6), 1331-1352. https://doi.org/10.1111/polp.12631
8. Avom, D., & Ndoya, H. (2024). Does country stability spur economic complexity? Evidence from panel data. *Applied Economics Letters*, 31(4), 323-329. https://doi.org/10.1080/13504851.2022.2133890
9. Beyala, B. C. N., & Ndjokou, I. M. M. M. (2025). Does Economic Complexity foster Tax Revenues Mobilisation? *Revue d'économie Politique*, 135(2), 299-342. https://doi.org/10.3917/redp.352.0299
10. Bird, R. M., Ebel, R. D., & Wallich, C. (1995). *Decentralization of the Socialist State : Intergovernmental Finance in Transition Economies*. World Bank Publications.
11. Boreham, P., Povey, J., & Tomaszewski, W. (2016). Work and social well-being : The impact of employment conditions on quality of life. *The International Journal of Human Resource Management*, 27(6), 593-611. https://doi.org/10.1080/09585192.2015.1027250
12. Borghesi, S. & Vercelli, A. (2012). *Happiness and health : Two paradoxes. Journal of Economic Surveys, 26(2), 203-233.*
13. Castellacci, F., & Tveito, V. (2018). Internet use and well-being : A survey and a theoretical framework. *Research Policy*, 47(1), 308-325. https://doi.org/10.1016/j.respol.2017.11.007
14. Chae, J. (2018). Reexamining the relationship between social media and happiness : The effects of various social media platforms on reconceptualized happiness. *Telematics and Informatics*, 35(6), 1656-1664. https://doi.org/10.1016/j.tele.2018.04.011
15. Clark, A. E., Flèche, S., & Senik, C. (2016). Economic Growth Evens Out Happiness : Evidence from Six Surveys. *Review of Income and Wealth*, 62(3), 405-419. https://doi.org/10.1111/roiw.12190
16. Cockx, L., & Francken, N. (2014). Extending the concept of the resource curse : Natural resources and public spending on health. *Ecological Economics*, 108, 136-149. https://doi.org/10.1016/j.ecolecon.2014.10.013
17. Cockx, L., & Francken, N. (2016). Natural resources : A curse on education spending? *Energy Policy*, 92, 394-408. https://doi.org/10.1016/j.enpol.2016.02.027
18. Coniglio, N. D., Lagravinese, R., & Vurchio, D. (2016). *Production sophisticatedness and growth : Evidence from Italian provinces before and during the crisis, 1997–2013. Cambridge Journal of Regions, Economy and Society, 9(2), 423-442.*
19. Davidson, J. (2000). *Econometrics theory (301 pp.). Blackwell.*
20. Di Tella, R., MacCulloch, R. J., & Oswald, A. J. (2001). Preferences over Inflation and Unemployment : Evidence from Surveys of Happiness. *American Economic Review*, 91(1), 335-341. https://doi.org/10.1257/aer.91.1.335
21. Diaz-Serrano, L., & Rodríguez-Pose, A. (2012). Decentralization, Subjective Well-Being, and the Perception of Institutions. *Kyklos*, 65(2), 179-193. https://doi.org/10.1111/j.1467-6435.2012.00533.x
22. *Does Money Buy Happiness? - ProQuest*. (s. d.). Consulté le 4 juillet 2025, à l'adresse: https://www.proquest.com/openview/6ce2d5a919778d8fada2059d39b7ff89/1?pq-origsite=gscholar&cbl=1817076
23. Easterlin, R. A. (1974). Does Economic Growth Improve the Human Lot? Some Empirical Evidence. In P. A. David & M. W. Reder (Éds.), *Nations and Households in Economic Growth* (pp. 89-125). Academic Press. https://doi.org/10.1016/B978-0-12-205050-3.50008-7
24. Easterlin, R. A. (2001). Income and Happiness : Towards a Unified Theory. *The Economic Journal*, 111(473), 465-484. https://doi.org/10.1111/1468-0297.00646
25. Fukuyama, F. (1996). *Trust : Human nature and the reconstitution of social order*. https://cir.nii.ac.jp/crid/1370848662494257672
26. Fambeu, A. H. (2023). Do information and communication technologies (ICTs) make Africans happy? *Canadian Journal of Development Studies / Revue canadienne d'études du développement*, 44(4), 629-644. https://doi.org/10.1080/02255189.2023.2182765
27. Felipe, J., Kumar, U., Abdon, A., & Bacate, M. (2012). Product complexity and economic development. *Structural Change and Economic Dynamics*, 23(1), 36-68. https://doi.org/10.1016/j.strueco.2011.08.003
28. Frey, B. S., & Stutzer, A. (2000). Happiness, Economy and Institutions. *The Economic Journal*, 110(466), 918-938. https://doi.org/10.1111/1468-0297.00570

29. Frey, B. S., & Stutzer, A. (2002). What Can Economists Learn from Happiness Research? *Journal of Economic Literature*, 40(2), 402-435. https://doi.org/10.1257/002205102320161320
30. Frey, B. S. & Stutzer, A. (2006). *Should we maximize national happiness?. Inst. For Empirical Research in Economics.*
31. FREY B. S. & STUTZER A. (2018). *Economics of happiness. New York : Springer International Publishing.*
32. Hartmann, D. (2018). *Economic complexity and human development : How economic diversification and social networks affect human agency and welfare (p. 242). Taylor & Francis.*
33. Hartmann, D., Guevara, M. R., Jara-Figueroa, C., Aristarán, M., & Hidalgo, C. A. (2017a). Linking Economic Complexity, Institutions, and Income Inequality. *World Development*, 93, 75-93. https://doi.org/10.1016/j.worlddev.2016.12.020
34. Hartmann, D., Guevara, M. R., Jara-Figueroa, C., Aristarán, M., & Hidalgo, C. A. (2017b). Linking Economic Complexity, Institutions, and Income Inequality. *World Development*, 93, 75-93. https://doi.org/10.1016/j.worlddev.2016.12.020
35. Hausman, D., McPherson, M., & Satz, D. (2017). *Economic Analysis, Moral Philosophy, and Public Policy*. Cambridge University Press.
36. Hausmann, R., Hidalgo, C. A., Bustos, S., Coscia, M., & Simoes, A. (2014). *The atlas of economic complexity : Mapping paths to prosperity.* Mit Press.
37. Hausmann, R., Hwang, J., & Rodrik, D. (2007). What you export matters. *Journal of Economic Growth*, 12(1), 1-25. https://doi.org/10.1007/s10887-006-9009-4
38. Helliwell, J. F. (2003). How's life? Combining individual and national variables to explain subjective well-being. *Economic Modelling*, 20(2), 331-360. https://doi.org/10.1016/S0264-9993(02)00057-3
39. Helliwell, J. F., Aknin, L. B., Barrington-Leigh, C., Hall, J., Huang, H., Norton, M. B., Shiplett, H., & Wang, S. (2022). *Policies to support happiness during and after COVID-19 : A Synthesis*.
40. Helliwell, J. F., Huang, H., Grover, S., & Wang, S. (2018). Empirical linkages between good governance and national well-being. *Journal of Comparative Economics*, 46(4), 1332-1346. https://doi.org/10.1016/j.jce.2018.01.004
41. Helliwell, J. F., Huang, H., Norton, Goff, L., & Wang, S. (2023). *World Happiness, Trust and Social Connections in Times of Crisis*. https://worldhappiness.report/ed/2023/world-happiness-trust-and-social-connections-in-times-of-crisis/
42. Hidalgo, C. (2015). *Why information grows : The evolution of order, from atoms to economies. Basic Books.*
43. Hidalgo, C. A., & Hausmann, R. (2009a). The building blocks of economic complexity. *Proceedings of the National Academy of Sciences*, 106(26), 10570-10575. https://doi.org/10.1073/pnas.0900943106
44. Hidalgo, C. A., & Hausmann, R. (2009b). The building blocks of economic complexity. *Proceedings of the National Academy of Sciences*, 106(26), 10570-10575. https://doi.org/10.1073/pnas.0900943106
45. Hidalgo, C. A., Klinger, B., Barabási, A.-L., & Hausmann, R. (2007). The Product Space Conditions the Development of Nations. *Science*, 317(5837), 482-487. https://doi.org/10.1126/science.1144581
46. Hojman, D. A., & Miranda, Á. (2018). Agency, Human Dignity, and Subjective Well-being. *World Development*, 101, 1-15. https://doi.org/10.1016/j.worlddev.2017.07.029
47. Howarth, R. B., & Kennedy, K. (2016). Economic growth, inequality, and well-being. *Ecological Economics*, 121, 231-236. https://doi.org/10.1016/j.ecolecon.2015.10.005
48. Keyes, J. W. (1995). *SUV: standard uptake or silly useless value?. Journal of Nuclear Medicine,* 36*(10), 1836-1839.*
49. Khan, M. (2010). *Political settlements and the governance of growth-enhancing institutions.*
50. Khan, M. H. (2013). Political Settlements and the Design of Technology Policy. In J. E. Stiglitz, J. L. Yifu, & E. Patel (Éds.), *The Industrial Policy Revolution II: Africa in the 21st Century* (p. 243-280). Palgrave Macmillan UK. https://doi.org/10.1057/9781137335234_10
51. Kislev, E. (2018). Happiness, Post-materialist Values, and the Unmarried. *Journal of Happiness Studies*, 19(8), 2243-2265. https://doi.org/10.1007/s10902-017-9921-7
52. Koenker, R., & Bassett, G. (1978). Regression Quantiles. *Econometrica*, 46(1), 33-50. https://doi.org/10.2307/1913643
53. Kuété, F. Y. M., Mignamissi, D., & Kuete, B. N. (2022). Political Decentralization and Subjective Well-Being : Evidence from Propensity Score Matching Estimates. *Revue d'économie Politique*, 132(4), 583-613. https://doi.org/10.3917/redp.324.0583
54. Lapatinas, A. (2016). Economic complexity and human development : A note. *Economics Bulletin,* 36(3),

1441-1452.
55. Lawrence, E. M., Rogers, R. G., Zajacova, A., & Wadsworth, T. (2019). Marital Happiness, Marital Status, Health, and Longevity. *Journal of Happiness Studies*, 20(5), 1539-1561. https://doi.org/10.1007/s10902-018-0009-9
56. Layard, R. (1980). Human Satisfactions and Public Policy. *The Economic Journal*, 90(360), 737-750. https://doi.org/10.2307/2231740
57. Lee, K.-K., & Vu, T. V. (2020). Economic complexity, human capital and income inequality : A cross-country analysis. *The Japanese Economic Review*, 71(4), 695-718. https://doi.org/10.1007/s42973-019-00026-7
58. Mankiw, N. G., Romer, D., & Weil, D. N. (1992). A Contribution to the Empirics of Economic Growth*. *The Quarterly Journal of Economics*, 107(2), 407-437. https://doi.org/10.2307/2118477
59. Mignamissi, D., & Kuete, Y. F. (2020, mars). *What Make African Happy* [MPRA Paper]. https://mpra.ub.uni-muenchen.de/99016/
60. Mignamissi, D., & Malah Kuete, Y. F. (2021). Resource rents and happiness on a global perspective : The resource curse revisited. *Resources Policy*, 71, 101994. https://doi.org/10.1016/j.resourpol.2021.101994
61. MIGNAMISSI D. & MALAH Y.F. (2020). What Makes Africans Happy ? *Economics Bulletin,* Volume 40, Issue 4, 2741-2754.
62. Mincer, J. (1981). *Human Capital and Economic Growth* (Working Paper 803). National Bureau of Economic Research. https://doi.org/10.3386/w0803
63. Minkov, M., Welzel, C., & Schachner, M. (2020). Cultural Evolution Shifts the Source of Happiness from Religion to Subjective Freedom. *Journal of Happiness Studies*, 21(8), 2873-2888. https://doi.org/10.1007/s10902-019-00203-w
64. Nikolaev, B., & Rusakov, P. (2016). Education and happiness : An alternative hypothesis. *Applied Economics Letters*, 23(12), 827-830. https://doi.org/10.1080/13504851.2015.1111982
65. Nikolova, M., & Graham, C. (2015). In transit : The well-being of migrants from transition and post-transition countries. *Journal of Economic Behavior & Organization*, 112, 164-186. https://doi.org/10.1016/j.jebo.2015.02.003
66. Njangang, H. (2019, juin 7). *Governance and Happiness in African countries* [MPRA Paper]. https://mpra.ub.uni-muenchen.de/94361/
67. Ott, J. C. (2011). Government and Happiness in 130 Nations : Good Governance Fosters Higher Level and More Equality of Happiness. *Social Indicators Research*, 102(1), 3-22. https://doi.org/10.1007/s11205-010-9719-z
68. Ram, R. (2017). Kuznets curve in happiness : A cross-country exploration. *Economic Modelling*, 66, 272-278. https://doi.org/10.1016/j.econmod.2017.06.006
69. Reinert, E. S. (2008). *Comment les pays riches sont devenus riches et pourquoi les pays pauvres restent pauvres.* New Delhi : Anthem Press.
70. Rodrik, D. (2002). *Institutions, integration, and geography : In search of the deep determinants of economic growth, analytic narratives on economic growth.* Harvard University.
71. Ryff, C. D., & Singer, B. H. (2008). Know Thyself and Become What You Are : A Eudaimonic Approach to Psychological Well-Being. *Journal of Happiness Studies*, 9(1), 13-39. https://doi.org/10.1007/s10902-006-9019-0
72. Sacks, D. W., Stevenson, B., & Wolfers, J. (2010). *Subjective Well-Being, Income, Economic Development and Growth* (w16441). National Bureau of Economic Research. https://doi.org/10.3386/w16441
73. Sbardella, A., Pugliese, E., & Pietronero, L. (2017). Economic development and wage inequality : A complex system analysis. *PLOS ONE*, 12(9), e0182774. https://doi.org/10.1371/journal.pone.0182774
74. Sen, A. (2010). *The mobile and the world. Information Technologies & International Development,* 6(SE), pp-1.
75. Strully, K. W. (2009). Job loss and health in the U.S. labor market. *Demography*, 46(2), 221-246. https://doi.org/10.1353/dem.0.0050
76. Tacchella, A., Cristelli, M., Caldarelli, G., Gabrielli, A., & Pietronero, L. (2013). Economic complexity : Conceptual grounding of a new metrics for global competitiveness. *Journal of Economic Dynamics and Control*, 37(8), 1683-1691. https://doi.org/10.1016/j.jedc.2013.04.006
77. Vu, T. V. (2020). Economic complexity and health outcomes : A global perspective. *Social Science & Medicine*, 265, 113480. https://doi.org/10.1016/j.socscimed.2020.113480
78. Wigley, S. (2017). The resource curse and child mortality, 1961–2011. *Social Science & Medicine*, 176,

142-148. https://doi.org/10.1016/j.socscimed.2017.01.038
79. Wooldridge, J.-M. (2013). *Introductory econometrics a modern approach (5th ed.).* South-Western Pub.
80. Yokoyama, K. & Alemu, M. A. (2009). The impacts of vertical and horizontal export diversification on growth : An empirical study on factors explaining the gap between Sub-Sahara Africa and East Asia's Performances. *Ritsumeikan International Affair,* 17(41), 2-37.
81. Zhu, S., & Li, R. (2017). Economic complexity, human capital and economic growth : Empirical research based on cross-country panel data. *Applied Economics*, 49(38), 3815-3828. https://doi.org/10.1080/00036846.2016.1270413

Appendices

Appendix 1. Definition of variables

Variables	Descriptions	Sources
Social support	Having someone to rely on during difficult times (or social support) is measured as the national average of binary responses (0 or 1) to the GWP survey question "If you were facing problems, do you have relatives or friends you can depend on for help whenever needed them, or not?"	GWP
Generosity	Generosity is defined as the residual obtained from regressing the national average response to the GWP question "Have you contributed money to a charitable organization in the past month?" on GDP per capita.	GWP
Economic complexity	Economic Complexity Index (ECI)	OEC
Subjective well-being	Subjective well- being is measured by asking survey participants to evaluate their life on a scale, where 0 represents the worst possible for them and 10 corresponds to the best possible life.	WHD
GPD per capita	Gross national income divided by total population, expressed in purchasing power parity and measured in constant 2011 international dollars.	WDI
Human capital (education)	Secondary school enrollment (% gross).	WDI
Unemployment rate	Unemployment rate, total (percentage of the overall labor force) based ILO modeled estimates.	WDI
Inflation	Consumer price index (annual%).	WDI
Health	Average life expectancy at birthday.	WDI
Freedom to make life choices	Freedom to make life choices is measured as the national average of responses to the GWP question "Are you satisfied or dissatisfied with your ability to decide how to live your life?"	GWP
Trust in institutions	The first principal component derived from the following five indicators: trust in the national government, trust in the judicial system and courts, trust in the fairness of elections, trust in the local police force, and perceived corruption in business.	GWP

Source: Author's construction.

Appendix 2. List of countries

Albania	Bulgaria	Ghana	Madagascar	Nigeria	South Africa	Venezuela
Algeria	Burkina Faso	Guatemala	Malawi	Pakistan	Sri Lanka	Vietnam
Argentina	Cambodia	Honduras	Malaysia	Panama	Tajikistan	Yemen
Armenia	Cameroon	India	Mali	Paraguay	Tanzania	Zambia
Azerbaijan	Chile	Indonesia	Mauritania	Peru	Thailand	Zimbabwe
Bahrain	China	Iran	Mexico	Philippines	Togo	
Bangladesh	Colombia	Jordan	Moldova	Poland	Tunisia	
Belarus	Costa Rica	Kenya	Mongolia	Romania	Turkey	
Bolivia	Dominican Republic	Kuwait	Morocco	Russia	Uganda	
Bosnia and Herzegovina	Ecuador	Kyrgyzstan	Mozambique	Saudi Arabia	Ukraine	
Botswana	Egypt	Laos	Myanmar	Senegal	Uruguay	
Brazil	Georgia	Lebanon	Nicaragua	Serbia	Uzbekistan	

Source: Author's construction.