

Urbanization and Subjective Well-Being



Camilla Lenzi and Giovanni Perucca

Abstract This chapter proposes a review of the most recent works developed by the authors on the association between urbanization and subjective well-being. While most previous studies point out a strong dichotomy between urban and rural areas, the latter being characterized by higher levels of well-being than the former, the research program presented here aims at overcoming this perspective. Specifically, it focuses on three elements that are assumed to influence the role of urbanization on subjective well-being: the nature of externalities generated by cities of different kinds, the spatial accessibility to these externalities and the temporal dimension. Empirical results show that all these factors are important determinants of individuals' well-being, whose association with urbanization is more complex than generally assumed.

Keywords Subjective well-being · Urbanization · European regions

1 Introduction

The investigation of the determinants of human well-being has always been one of the main scopes of economic theory. The definition of well-being itself, however, evolved over time. Purely economic measures, mostly represented by income growth, have been progressively integrated by other indicators of quality of life which, taken together, contribute to the individual's self-perception and overall well-being (Stiglitz et al. 2009). While political interest in this issue is relatively recent (Veneri 2019), it is rooted in a scientific debate dating back at least to the seminal work of Easterlin (1973).

Easterlin's contribution was particularly influential because, for the first time, it pointed out a tension between objective (economic) and subjective well-being (SWB), where the latter is typically measured by survey studies asking respondents about their satisfaction with life. This result, labelled as the Easterlin paradox, was in

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strong contradiction with the mainstream assumption about a positive and straightforward association between income growth and well-being (Ferrara et al. 2019). More recently, this paradox has been transposed and reshaped into a spatial setting (Graham 2012) through the metaphor of the ‘happy peasant and the miserable millionaire’. A long stream of research demonstrated that, at least in developed countries, subjective well-being tends to be higher in less dense settings than in crowded environments, in spite of worse job opportunities and income conditions (Sørensen 2014).

While the empirical evidence of the urban/rural divide in subjective well-being is rather robust and exhaustive, less is known about its determinants. Why are large cities sources of dissatisfaction? The research program developed by the authors in recent years aims at answering this question, by addressing three issues left partially underexplored by the literature:

- *the effect of differently ranked urban functions on SWB*: cities of different size host different activities, providing different goods and services to the resident. Previous studies analysed the relationship between size (usually measured in terms of population density or categories) and SWB without a clear reference to the positioning of cities along the urban hierarchy (Christaller 1933) and, as a consequence, to the set of advantages they provide to the resident population.
- *the indirect effect of urbanization on SWB*: the dichotomy between urban and rural settings hides a deeper level of complexity, because it does not account for their spatial distribution and interconnections. For instance, rural areas may be more or less close to larger cities, and the effect of this relative distance on the well-being of the resident population has been almost entirely ignored in the literature.
- *the evolution of the association between urbanization and SWB over time*: the empirical analysis of the negative link between urbanization and SWB extensively covered the years from 2000 on, but without taking a temporal perspective, i.e. focusing on the change of this association over time. However, the social and economic structure of cities is constantly evolving, and it is therefore interesting to understand whether, in the long term, SWB also varied accordingly.

The next sections of the present chapter review the results of the studies focused on these three issues. Conclusions follow in the last section.

2 The Effect of Differently Ranked Urban Functions on SWB

While previous studies provided broad and robust evidence of an urban/rural divide in SWB, less is known about the determinants of this imbalance. The rich literature on agglomeration economies, on the other hand, has identified the many benefits deriving from urbanization in terms of productivity and wages, learning and knowledge exchanges, innovation and creativity, as well as public services and amenities that may influence life satisfaction positively. All these benefits are partially balanced

by negative externalities, such as land rent and cost of living, pollution and congestion, unregulated urban expansion. The effects of urbanization are significantly different for different kinds of cities, according to the place in the urban hierarchy they occupy (Christaller 1933). For instance, the set of externalities generated on the resident population by metropolitan areas is entirely different from those available in medium-size cities.

An innovative approach to the analysis of the association between urbanization and SWB should therefore conceptualize the measurement of city size, with a clear reference to the rank of cities and, as a consequence, with a clear interpretation in terms of agglomeration economies/diseconomies generated by each kind of urban environment.

As mentioned in the introduction, the common approach to the topic makes use of survey data where a sample of respondents is asked to define his/her level of overall life satisfaction, choosing among different options.¹ This empirical measurement of SWB is expected to be a function of some individual characteristics (such as age, gender, education, income) and regional features (per capita GDP, demographic structure, etc.), among which the most interesting variable is represented by the degree of urbanization of the respondent's region of residence:

$$SWB_i = f(\text{individual characteristics}_i, \text{regional characteristics}_r, \text{urbanization}_r) \quad (1)$$

where i stands for the individual and r for his/her region of residence. While the measurement of urbanization is often represented by population density, in our approach it consists of a categorical variable capturing the positioning of each area along the urban hierarchy. This approach allows us to interpret the results not only in terms of city size but also with a reference to the set of urbanization economies and diseconomies that each group of cities is assumed to generate.

The first study applying this perspective is an analysis of SWB and urbanization in Romania (Lenzi and Perucca 2016a). Romania is a particularly interesting case study because its development path from 2000 onwards was dominated by the role of its capital (Bucharest) in fostering national economic growth. Moreover, the urban structure in Romania is highly differentiated, with several rural and urban areas other than the capital region.

Romanian NUTS2 regions were classified according to the size of their biggest city. Results show that, separating out the effect of the capital city from that of the other large cities, (i.e. cities with more than 200,000 inhabitants), people living in these areas are happier than those residing in less-populated regions, suggesting the existence of an urban–rural divide in life satisfaction favouring relatively larger cities. Nevertheless, living in the capital city is detrimental to life satisfaction. With the exception of Bucharest, therefore, Romanian people living in larger cities

¹The most common sources of data on SWB are, for European countries, Eurobarometer (<http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm>) and the European Values Survey studies (<https://europeanvaluesstudy.eu/>).

seem happier than others. Compared with the findings from previous studies, this evidence suggests that urbanization per se is not a source of dissatisfaction. Rather, agglomeration benefits seem to prevail over agglomeration costs, but only up to a certain threshold, when increased population size generates more disadvantages than advantages, as in the case of Bucharest.

In order to test the generality of these results, a similar approach was applied to a sample including all European countries (Lenzi and Perucca 2018, 2019a). As before, in each region, the number of people living in larger urban zones (LUZ) allowed us to define a ranking of areas, from the most (more than 1.5 mln people living in a LUZ) to the least (less than 300 k people living in a LUZ) urbanized.

Results show that, taking the least urbanized regions as reference, SWB is lower in the most urbanized ones (first rank) and the higher ones in second rank regions, i.e. those with a degree of urbanization immediately below the maximum. This finding, consistent with the one uncovered in Romania, suggests the perceived effect of the disadvantages arising in metropolitan areas, such as congestion, pollution and greater costs of living to prevail with respect to the perception of its advantages. On the other hand, the opposite mechanism remains in regions characterized by an intermediate urbanization level (i.e. second rank).

Taken together, the findings from the previous studies pointed out a positive effect of urbanization on SWB, at least until a certain threshold of agglomeration are reached. In order to fully understand the mechanisms associating urbanization and SWB, it is fundamentally important to analyse the characteristics of cities (i.e. advantages and disadvantages) and their effect on individuals' well-being.

Among these factors, a prominent role is played by innovation. Economic literature, whatever the level of analysis adopted (from individuals to firms, from cities to regions, from countries to continents), and the time span considered, pointed out that innovation is the key to competitiveness. The innovation process, however, is strictly related to urbanization. Cities play a primary role in the development of new ideas and the introduction of innovations into the market. Moreover, highly innovative places tend to attract creative and more educated individuals. Despite these premises, very little is known about the relationship between innovation, urbanization and SWB.

In our research, we explored this nexus and empirical findings indicate that different types of innovation play different roles in differently urbanized contexts: more technology-intensive innovations (i.e. patents) impact on SWB only in highly urbanized areas, whereas less technology-intensive innovations (i.e. trademarks) are associated with greater SWB in all settings. The interpretation of these results is linked to the different natures of the two types of innovation. In order to make technology-intensive innovation have an impact on SWB, a more sophisticated demand and, possibly, a certain scale to conduct research activities efficiently are needed. These conditions are typical for the most urbanized areas. On the other hand, less technology-intensive innovations, closer to the commercialization stage, are, on average, more easily appreciated by market demand, less radical and often do not require a substantial scale for their creation.

These results add to our previous findings (Lenzi and Perucca 2016a, 2018) and suggest that the opposite impact on SWB of innovation in settings of different ranks

does not depend solely on the *quantitative* net balance between the advantages and disadvantages of urbanization. Rather, these externalities are also *qualitatively* different in cities of different kinds, and this is a further channel through which they contribute to individuals' SWB.

3 The Indirect Effect of Urbanization on SWB

The association of low levels of urbanization with higher SWB was often interpreted in the literature as the demonstration that living in rural settings is always beneficial for individuals' well-being.

This assumption, however, does not consider the relative location of rural settings compared with more urbanized areas. Urbanization effects, in fact, are not constrained within the boundaries of the city producing them. Rather, they spread to the neighbouring environment, with an intensity and nature that is highly differentiated based on the rank of the city, as theoretically suggested by central place theory (Christaller 1933). Rural communities embedded in urbanized regions, for instance, are expected to benefit from the positive externalities, without suffering the disadvantages that are typical of urban settings.

The investigation of this hypothesis represented the second research line undertaken by the authors. A first study (Lenzi and Perucca 2016a) focused on the analysis of SWB in different kinds of rural communities and classified according to the urbanization level of the NUTS2 region they were pertaining to.

Results showed that people living in rural communities embedded in both first and second rank regions (i.e. highly urbanized) are, on average, more satisfied than those living in the urban settings of the same regions. On the other hand, living in a rural setting within third-rank regions, (i.e. those characterized by the lowest level of urbanization) is associated with lower SWB than the residents in the urban settings of the same regions. In short, rural inhabitants tend to be more satisfied than others, consistently with the literature, but only if they live in highly urbanized regions (i.e. first rank and second rank).

A more complex and detailed approach to this research question was applied in Lenzi and Perucca (2020). This study assumed that SWB depends not only on the urbanization level of the community of residence, among other things, but also on the distance, in terms of travel time, to the closest city of a higher rank. Empirical findings also pointed out, besides the *direct* effect of urbanization on the SWB of the resident population, an *indirect* effect which cities generate on the SWB of individuals living in other regions and in urban settings of a lower rank. While the direct effect, as largely demonstrated by previous studies and by the authors themselves, is generally negative for the largest cities, the indirect effect of urbanization on SWB is positive. This implies that keeping other things constant, the shorter the distance to a city of higher rank compared with that of one's place of residence, the higher one's own level of SWB will be.

The interpretation of this result is that living outside highly urbanized areas is beneficial to SWB only if the individuals have access to the services and goods provided by large cities. Rurality per se, on the contrary, does not necessarily lead to higher levels of well-being.

4 The Evolution of the Association Between Urbanization and SWB Over Time

A last issue rarely addressed by the literature on urbanization and SWB concerns its evolution over time. Most studies adopted a short-term perspective, using empirical evidence from 2000 onwards. However, the social and economic characteristics of cities deeply vary over time, and major changes occurred in the last thirty years in developed countries, corresponding to processes of industrial reconversion from manufacturing to service sectors. Therefore, the last question addressed in our research agenda refers to the role of time within the association between urbanization and SWB. The analysis of this issue focused on two quantitative case studies, both relative to countries that experienced deep institutional and economic changes.

The first case study is represented by Romanian regions between 1996 and 2010 (Lenzi and Perucca 2016b). In this period, following the fall of the Iron curtain and the collapse of the Soviet Union, the country experienced a process of institutional, social and economic reconversion from a planned economy to one which was market-based, culminating with access into the European Union (EU) in 2007. This process was matched by an increase in the polarization of income in favour of urban areas and, in particular, the capital city.

The empirical analysis shows that the economic transition period (1996–2004) was marked by a neutral role of urbanization on SWB, with the exception of Bucharest. While living in the capital city was already associated with lower SWB, no significant difference was found for residents in rural settings and medium-rank cities. On the road to EU accession (2004–2010), however, significant differences emerged, and individuals in medium-rank cities appeared to be more satisfied than those living in rural settings, while living in the capital was still associated with lower SWB. This period is marked by the increase in disparities in economic growth, favouring urban areas above others. Hence, the interpretation of our results is related to the fact that the benefits of urbanization (i.e. jobs, average income, etc.) increased, leading to higher SWB compared to rural areas. This happened only in medium-size cities, where these benefits were not counterbalanced by negative externalities (cost of living, crime, etc.) which are what occurred in the capital.

The second case study involves Italian regions between 1980 and 2010 (Lenzi and Perucca 2019b). In the thirty years considered in the analysis, Italy undertook a process of economic reconversion from manufacturing to service sectors. The outcome of this process was highly differentiated across regions and, in particular, between North and South. In the former case, this was more successful than in the

latter, resulting in a widening of the differences, in terms of average income and occupation, between the two macro-areas. The research hypothesis tested is whether the association between urbanization and SWB was constant over the time span considered and in the two parts of the countries.

Results showed that the urban/rural divide in SWB is not constant, which suggests once more that urbanization is not a source of dissatisfaction per se; rather, the combination of positive and negative externalities and their impact on perceived well-being do indeed vary over time. Moreover, our findings showed that the negative association of urbanization and SWB concerns only large cities in southern Italy from 1990 onwards, i.e. when their gap in economic growth compared to northern regions started to widen. This suggests, consistently with the implications about Romania discussed above, that the urban/rural divide arises when the most urbanized settings are less effective in providing the expected positive externalities (mainly job opportunities) to the resident population.

5 Conclusions

The research program on urbanization and SWB led to some relevant and innovative conclusions along the three research lines discussed in the previous section.

Summing up, the main finding from these studies is that urbanization is not, per se, a source of dissatisfaction, just as much as living in a rural area cannot be said to be beneficial for individuals' well-being. This conclusion is extremely relevant in a literature often marked by a simplistic, if not ideological, dichotomy between the city and the countryside.

A much higher degree of complexity characterizes the mechanisms associating with one's own place of residence and SWB. The research program identified three elements of complexity: the kind of externalities generated by cities, the spatial accessibility to these externalities and the temporal dimension.

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