

Editorial

Regions and Economic Resilience: New Perspectives

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Abstract: The term “resilience” originated in environmental studies and describes the biological capacity to adapt and thrive under adverse environmental conditions. Regional economic resilience is defined as the capacity of a territory’s economy to resist and/or recover quickly from external shocks, even improving its situation from the pre-shock status. This editorial introduction provides a summary of the eleven contributions included in the special issue on regions and economic resilience. These eleven articles focus on different channels related to processes of mitigation (resistance-recovery) and adaptive resilience (reorientation-renewal) in a wide variety of geographical settings and scales. They include methodological advances and also relevant results from a policy perspective. The editorial concludes by providing some directions for future research.

Keywords: resilience; regional sustainable development; human capital; labour force; college graduates; regional embeddedness; agglomeration economies; urbanization; innovation; technology absorption; financial development; energy; water pollution; agriculture and forestry

1. Background and Motivation

The interest of scientists and policy makers has moved to analyze the factors that have allowed some regions and cities to resist and/or to recover from the Great Recession. The notion of regional and local economic “resilience” has found currency among those interested in economic geography. The term “resilience” originated in environmental studies and describes the biological capacity to adapt and thrive under adverse environmental conditions. In economics, resilience has been defined as the return to a status of equilibrium [1]. The idea of regional resilience is quite close to the evolutionary perspective within economic geography [2], and the recognition that major shocks may exert a formative influence over how the economic landscape changes over time. In particular, a resilient region is one that retains the capacity to recover quickly from external shocks, even improving its situation from the pre-shock status. The author of [3] identified four dimensions of regional economic resilience to a recessionary shock:

1. Resistance: the degree of sensitivity or depth of reaction of regional economy to a recessionary shock,
2. Recovery: the speed and degree of recovery of regional economy from a recessionary shock,
3. Reorientation: the extent of adaptation of regional economy in response to recessionary shock, and
4. Renewal: the extent to which the regional economy renews its growth path: resumption of pre-recession path or shift to new growth trend.

According to recent literature [4,5], the sort of factors that appear to have been helpful in the past to explain these capacities would include a modern productive infrastructure; a skilled,

innovative and entrepreneurial workforce; a supportive financial system; or a diversified economic base, not over-reliant on a single industry. These factors may be endogenous or, given a lack of resources at the local level, may need external support that would justify government intervention, mainly through public funding. Every single element in this list can be studied in each dimension of resilience, making the list of potential empirical analysis too vast. In this special issue, we tried to gather relevant pieces of research related to the two main dimensions of resilience from our point of view, what we have labelled as factors helping to mitigate the effect of shocks and those that allow a quick adaptation to the new context after the shock. Thus, contributions in this special issue are related to processes of mitigation (resistance-recovery): What are the mechanisms by which the region's firms, workers and institutions respond and adjust to shocks? and to adaptive resilience (reorientation-renewal): Why are some regional economies more successful than others are after a shock? Which factors shape regional economic and social success? The next section provides a brief description of these contributions in order to help the reader achieve a better understanding of the joint implications of their results, but also a broader view of the interrelationships between them.

2. A Wide Spectrum of Topics Are Covered in the Special Issue

As mentioned in the previous section, the special issue includes eleven contributions about regional economic resilience where mitigation and/or adaptive resilience are considered using different data sets and different methodologies and statistical/econometric tools.

There is a first group of articles where the process of mitigation is the common denominator. The authors of [6] study the relationship between embeddedness and resilience for the NUTS-2 regions in UK, considering its effect on employment generation. They found that the relationship between embeddedness and resilience is positive up to a certain point, i.e., this is an inverted U-shaped relationship. Consequently, the level of regional embeddedness may constitute one of the most relevant channels for the mitigation process. Article [7] analyzes the effect of agglomeration economies on employment evolution at the local level in Aragon (Spain). In this research, they introduce a different perspective considering the existence of small cities and small businesses, which characterize this Autonomous Community in Spain. The obtained results pointed out that local specialization in industry, construction and services have a negative effect on local employment growth, whereas diversity had a non-significant effect on employment growth. Only a positive effect of diversity in services is found in municipalities with more than 3000 inhabitants. This result shows the performance of the municipalities from 2000 to 2015, so agglomeration economies (specialization and diversification) cannot be identified as a mitigation channel in terms of the employment evolution. The contribution by [8] focuses on a critical issue in the analysis of regional economic resilience: technology and its regional absorption. They highlight that technology is one of the important driving forces for regional resilience and sustainable development, but their results are different from previous approaches. Their empirical results for 30 provinces in China show that, in technology input areas, technology absorption can promote regional economic growth, but in technology output areas, the effect of technological absorption on economic growth cannot be determined. Finally, we include in this group the article by [9] about the effect of the financial and economic regional differences on the capital structure decisions of small and medium-sized enterprises (SMEs). In fact, there is a vast literature about the impact of institutional factors on SMEs but this article offers a regional perspective. The performance of the regional financial sector may mitigate the economic effects of crisis, helping SMEs to access credit markets. The estimation results point out that more developed financial systems favor the use of debt as a financial source, and that bank concentration reduces the use of debt by SMEs.

A second group of articles study mitigation and adaptive resilience processes at the same time. Article [10] analyzes the economic resilience of the regions of seven Eastern European countries (Bulgaria, Hungary, Croatia, Czech Republic, Romania, Slovakia and Slovenia) by, first, constructing resistance and recovery indexes, and, second, looking at their determinants. Their results show the relevance of sectoral specialization and diversity not only as relevant factors in terms of mitigation,

but also to drive recovery, although their results should be taken with caution due to the reduced sample size. Focusing on a different geographical scale and a different group of factors, [11] studies the relationship between the female labor force participation and economic development in the EU (28 countries) during the period 1990–2016. They test the hypothesis that this long-term relationship follows a U-shape. The empirical result supports this hypothesis when the 28 European countries are considered. However, when “old” and “new” state members are separately analyzed, the U-shaped relationship is not verified for the EU-15. Their analysis is clearly relevant as a higher participation of women in the labor market can clearly contribute to economic growth and to a more equal and sustainable society. The authors of [12] analyze the decisions of young college graduates to remain or not in lagged regions looking for a suitable job in Korea. In this study, individual characteristics and regional indicators are considered together with non-economic factors such as family or friend ties and affection toward student colleges. The explicit inclusion of these factors constitutes the main contribution of this research. They found that the effect of living cost on the graduates’ decisions is greater than that of wages or job security. Also, they highlighted that once a high-school graduate decides to remain at the local university, the probability of remaining there for a long time is higher. A third article where both processes (mitigation and adaptive resilience) are studied is [13]. They present a structural analysis of economic resilience and examine different roles played by major economic sectors in shaping national economic resilience. However, the article does not offer a more classical view based on the identification of strong/weak sectors. The authors emphasize the critical role of the different sectors’ relationships and how internal interactions generate resilient outcomes.

The last three articles are more focused in the adaptive resilience channels. The authors of [14] analyze the energy performance of Chinese provinces and their regional evolution in terms of sustainability. In particular, this research shows that investing in low-carbon energy infrastructure has a positive effect on long-term regional economic performance. Therefore, policy makers should be evaluated not only on the direct effect of this measure (the reduction of CO₂ emissions), but also the indirect effect on the regional economy. Article [15] offers an interesting analysis about how territories react, in economic terms, after forest fires. Their main conclusion is that the impact of the forest fires on the agroforestry activity is moderate. Moreover, their estimation of the forest fires’ effect on agricultural employment is positive, whereas the effect on forestry employment is slightly negative, as was expected. The impact of the 11th Five-year Plan’s environmental policies amendment on Northeast China is analyzed using a difference-in-differences approach by [16]. There are two different strategies operating at the same time. Local authorities are interested in reaching the pollution objectives as a way to be promoted. However, prefecture-level municipal governments are interested in attracting industrial activities (more pollutants). The authors conclude that moving these activities to the border of neighboring regions guarantees the fulfilment of the local authorities’ objectives: the maintenance of economic activity and, at the same time, reaching the reduction requirements.

3. More Focused Interdisciplinary Research Is Required

The wide spectrum of topics and analyses among the contributions in this special issue extend the current framework to analyze regional economic resilience from the intersection of several disciplines involving geographers, economists, demographers, but also environmental scientists. The complex links between demographic, economic, social and environmental characteristics of territories are not yet fully understood. Further cooperation between these different fields is needed in order to provide a better identification of the factors that can help to improve regional conditions and citizen’s quality of life. Combining different quantitative and qualitative methods as suggested by [17] would also be a positive direction for future research. Lastly, from the analyses in this special issue, it seems clear that the case for policy intervention is clearly justified under some circumstances. However, the way in which policies interact along several dimensions provides the perfect framework to consider the possibility of adopting comprehensive policy packages instead of isolated interventions.

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