

Regional Resilience during the Past Economic Crisis

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Abstract

This paper analyzes the different dimensions of resilience as defined by Martin (2012) in the context of the past economic crisis. Using a panel data set of 273 European metropolitan areas, we find that in particular innovative regions are less affected by the crisis and show higher post-crisis labor growth rates respectively. This indicates that innovative regions catch up faster and are, hence, more adaptive to the crisis. This can be due to the fact that the regions reform their economic structure to become more resilience.

Keywords: economic crisis, regional resilience, innovation, labor growth

JEL Classification: O31-O33-R11

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The recent economic crisis of 2008/2009 severely impacted European countries (OECD 2012a). There is however substantial heterogeneity with regards to the extent by which different European countries were affected and able to recover, this heterogeneity becomes even more pronounced when focusing on different regions within the same country (Fingleton et al., 2012). Our paper analyzes the factors behind different responses of regions to the crisis along the concept of regional resilience. While commonly employed in the context of regional studies the concept of regional resilience often remains fuzzy. This is due to the fact that regional resilience is impacted by various different factors (Pendall et al., 2010). Previous literature suggests different workable definitions such as the ecological and engineering definition of resilience or the interpretation of regional resilience as regional adaptability (eg., Fingleton et al., 2012; Zolli and Healy, 2012; Pendall et al., 2010). The engineering concept of resilience describes the ability of the regional economy to come back to a pre-shock stable equilibrium (e.g. Fingleton et al., 2012). The ecological concept is based on multiple equilibria which means that the regional economy might change and take a new path after the crisis, so that, the economy may experience either lower or higher growth rate compare to the pre-shock path, and this exogenous disturbance may causes a permanent change to economy`s level measured by employment or output (eg., Zolli and Healy 2012; Martin, 2012). Regional adaptability, in contrast, refers to the local economy`s ability to survive the crisis by changing its economic structure or because of its path legacy (Martin, 2012; Martin and Simmie 2010, Boschma, 2015). The concept proposed by Martin (2012) is most comprehensive. Regional resilience is defined by four different dimensions, (1) resistance as regional economy sensitivity to disturbances, (2) the speed and extent of recovery, (3) structural re-orientation, and (4) the renewal of growth path.

We use a panel data set of (273) European metropolitan areas, from the year 1980 to 2011. Our dataset is constructed mainly from European Regional Database (ERD), Eurostat, and REGPAT. One of the advantages of metropolitan regions is the fact that these regions are defined based on NUTS level 3 as an approximation of the functional urban areas (city and commuting zone) of 250,000 inhabitants, so we are focusing on the core regions as a unit of the study.

We contribute to the recent literature (Boschma, 2015; Fingleton et al., 2012; Martin, 2012) by providing a comprehensive multivariate analysis. Our study is more comprehensive as compared to prior studies in two ways. First, we cover the four different dimensions of resilience proposed by Martin (2012). Our results uncover factors supporting regional resistance to economic downturns (Martin`s dimension 1). We show whether these factors also facilitate recovery (Martin`s dimension 2). By focusing on the change of technological orientation, we uncover the contribution of structural renewal on recovery (Martin`s dimension 3). Descriptively, we show whether regions change growth path after a recession. Second, our analysis is based on all metropolitan areas in Europe.

Results from multivariate regression analysis show that in particular innovative regions are less affected by the crisis and show higher post-crisis labor growth rates respectively, which means that these regions are more adaptable to the crisis effects. This can be partly explained by structural renewal in the sense that the regional technology mix changes after the crisis.

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