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# the Effect of Structural Changes on Regional Economic Growth: Spatial Panel Approach

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# **INTRODUCTION**

One of the factors affecting economic growth along with traditional factors of production such as labor force and capital is structural changes in the economy. Structural change is a broad economic process that involves changes in the structure of production and employment within and across sectors of the economy. The emergence of new activities and sectors in the economy and the disappearance of old activities and sectors are also indicators of structural changes in the economy (Gabardo et al., 2017, p. 5). From the perspective of a well-structured economy the countries and regions that have a production structure commensurate with regional and national potentials can experience faster economic growth, and countries that depart from this well-structured position, will have a less economic growth (Eigner, 2001, p. 3). Therefore, investigating the effect of structural changes on macroeconomic variables and then identifying the factors influencing structural changes can provide a good basis for policymakers to remove the barriers of structural change and thereby achieve greater growth and development in the regions and also in the country. Economic growth and development in an area can be influenced both by specific characteristics within the region (direct and intra-regional effects) and by the characteristics of the surrounding area (spillovers and inter-regional effects) (Sharify and Hosseinzadeh, 2016, p. 2). Disregarding the interconnections and spillover effects between the variables can cause the model results to be biased. One of the models that is able to consider inter-regional correlations and consider the spillover and indirect effects of variables is the spatial econometric model.

## METHODOLOGY

The main purpose of this study is to investigate the direct and spillover effects of structural changes on economic growth in 28 provinces of Iran during 2004-2015 using spatial econometric model. An important feature of this study compared to previous studies in the field of structural change impact is the use of spatial econometric model to study the direct and spillover effects of this variable on economic growth in different provinces of the country. The production data of different economic sectors were used as the statistical bases for calculating the structural change and Gross domestic production index in 28 provinces of the country. Also, government expenditure and provincial active population variables were used as control variables. Finally, the Spatial Durbin Model (SDM) and the Stata 14 software were used to estimate the model.

#### FINDINGS

The results of the model estimation showed that structural changes directly and indirectly had a significant and negative impact on the production of regions. This indicates that structural changes have not been consistent with the regional growth pattern. Also, government spending variables in the region and the active population of the region had a positive and significant direct effect on regional economic growth.

#### CONCLUSION

Based on the results of the research, it can be concluded that the economic structure in different provinces of the country should be changed in accordance with the regional advantages. Government spending should also increase in line with regional potential.

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