

Abstract

With respect to the effects of drought and make targeting subsidies policy, it is necessary to investigate consequences of these shocks on Iran agricultural sector. The aim of present research was construction and application of a multi regional computable general equilibrium (MRCGE) model, namely Iran ORANI-G, and application of it in simulation and analysis of economic shocks and policy scenarios. For this purpose, the database of model was made in TABLO language in GEMPACK software. The model was affected by three shocks in short run as: the 1386-87 drought in agriculture sector, a 100 percent increase in water price and in total input costs in agricultural sector (farming subsector) because of make targeting subsidies policy, and a 10 percent tariff reduction of import in agricultural sector. The impacts of these three scenarios were simulated in four aspects as: macroeconomics, regional, sectoral and aggregated sector levels. Regarding simulation of drought, the results showed that GDP, GRP in all provinces, regional employment in most of provinces, aggregate employment and export were decreased, while, import and Consumer Price Index (CPI) were increased. At aggregated sector level, the results were implied on lessening of value added variable in all of aggregated sectors and expansion of employment in agricultural sector. Due to the drought shock, export had a negative rate of growth in all of aggregated sectors, while import had a positive rate of growth in most of sectors, say, agricultural sector. Regarding the second scenario, the findings exhibited that GDP, GRP in all provinces except Tehran province, aggregate employment, regional employment in all provinces and export were reduced, while, import and CPI were increased. At aggregated sector level, the results indicated that value added, employment and export were decreased in all of sectors, while import was increased in most of sectors. Regarding the third scenario, the results showed that GDP was lessened, while, aggregate employment, export, import, CPI, GRP and regional employment in most of provinces were enlarged. Regarding the aggregated sectors, the results indicated that value added and regional employment variables were reduced in most of sectors. Export was enlarged in agricultural sector and food processing sector, while it was reduced in rest of sectors. Because the most obvious effect of a tariff reduction is on amount of import, the results showed that it was increased in most of aggregated sectors.

Keywords: General Equilibrium, Simulation, Iran ORANI-G, Drought, tariff



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