SIMIN MOZAYENI
State University of New York at New Paltz, United States

FERAH KAYIM
State University of New York at New Paltz, United States

DETERMINANTS OF NET ENTRY AND EXIT IN AGRICULTURE SECTOR: A CASE STUDY OF US FOR 1990-2002

Abstract:

This empirical investigate focuses on determinants of Net Entry and Exit in US agriculture sector for 1990-2002. We find that net entry is positively related to Labor Factor Productivity in agriculture (LFP) and Aggregate Agricultural Output (AAO), and negatively related to GDP Per Capita (GDP). The latter supports the assertion that net entry is inversely related to GDP--a counter-cyclical activity. Variables' coefficients are: +3.24 (LFP), +4.48 (AAO) and -0.60 (GDP). Whereas, P value for LFP approximates "highly significant" level (0.0019), AAO's is less significant (0.0814) and GDP's is insignificant (0.0264). We also considered the effects of the cost of capital and cost of borrowing in the Net Entry model. We omitted them as they showed negligible and insignificant effects. Since determinants of net entry depend on combined factors that influence both entry and exit, it is plausible that they differ for exit. Thereby, we consider a separate model for Exit. The independent variables for this model encompass: Farm Household Income (FHY), number of large establishments with 1,000 or more employees (LARGE) and GDP per capita. We show that Exit rates in our data are negatively related to both Farm Household Income and GDP, with respective coefficient of - 0.07 and -1.12. Whereas LARGE has a coefficient of + 0.46; hence accounts for 46% of establishments' exits in our sample, with high statistical significance (P= 0.0019). The P value for FHY (0.266) shows statistical weakness. For GDP per capita, P=0.006, approximates the "significant" level. Accordingly, the establishment size is the most influential variable in the model. Overall our regressions capture most variations in their Dependent Variables. R2 for Net Entry estimation is 0.87 (F=16.03) and 0.78 (F=10.71) for the Exit Model. The residual values are quite low in both estimations. This research shows that presence of large firms within the agriculture sector in US leads to higher establishments' exit rates—an endogenous hinder to competition, ceteris paribus. As in any empirical exercise, our results could be affected by omitted variables and data aggregation biases. Repeated validation of this empirical exercise that would stand to alternative specifications would affirm the endogeneity of potential threat to competition in a sector that supports the model of Perfect Competition. CR4s for six major US agriculture sectors range 55%-93%, all above 45%, necessary for a competitive structure. With our investigative modeling and regression results, we question the stylized facts of the theory of Perfect Competition.

Keywords: