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Cluster of economic development due to production
and slaughtering chickens and pigs in Brazil

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Poultry and swine are important economic activities for Brazil because they are important generators of employment and income. Still, due to concentration of production that can be observed in recent decades doubts arise about the real potential for economic and social development resulting from these activities. To provide input to the debate using the HDI (Human Development Index), calculated by UNDP for Brazilian county in 2010 we did a study to determine the spatial dependency between the HDI and the existence of swine and chikens production activities in county and its neighboring county. There are few quantitative studies to determine this relationship between swine and poultry and regional development and none that have a national scope (SANTOS FILHO, 2008). Our working hypothesis is that because these activities are generating long chains of production there is a tendency of spatial dispersion (regional) HDI that this correlated with the spatial dispersion of production and slaughter of pigs and chickens. Scatter diagram of Moran were used to reveal the existence of local patterns of spatial association between employment in activities studied and the HDI and the indicator I-Moran Local to test the hypothesis of random distribution between the human development index 2010 and number of jobs in production and slaughtering chickens and pigs (ANSELIN, 1988). A neighborhood matrix (W) type Queen, in which each line contains information of all county (w) was constructed. The elements wij assume value 1 when j is neighboring municipality of municipality i in analysis, and zero otherwise. The index I- Moran for test spatial clustering due to the correlation between production and slaughter of pigs and chickens and HDI showed significant at 1 % probability. The results of spatial clusters, a 10 % probability, show that: a) 3,764 county had no significant results ,b) 563 county had high HDI and high employment, c) 807 county had low HDI and low employment, d) 70 county had low HDI and high employment, d) 31 county presented results from high HDI and low employment and e) 232 county do not have neighbors. These results confirm that the pigs and chickens economic business, as well as contributing to the macroeconomic indicators, are important activities to assist in regional development. Clusters of high-high type are more often present in areas of the Northeast, Northwest and Eastern Central of Rio Grande do Sul, West and South of Santa Catarina, the Southwest, West, Northwest and Central North of Paraná, in the region of Itapetininga Piracicaba, Campinas Metropolitan Paulista in São Paulo, South West, North Central and South West of Mato Grosso do Sul, in the Southwest and northern Mato Grosso, in the South, East and Central Goias, and the Triangle and metropolitan region of Minas Gerais. In some of these regions the activity of pigs and poultry share importance on the local economic development with other activities. However, in other regions it is the most important local activity which hence the motor of the development.

Keywords: swine, poultry, regional develpement, I-Moran Index