

Input Output Linkages and Agglomeration: Evidence from Turkey with Panel Data Analysis

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The inter-dependencies among sectors through input-output linkages drive co-agglomeration of related sectors in the same locations and accelerate agglomeration of economic activities in some areas. Although there are numerous studies to investigate the factors affecting the agglomeration, very few studies have examined the relationship between agglomeration and input output linkages in the regional development literature.

Glaeser and Kerr (2007) researched importance of both forward and backward linkages on location decision of firms. Sohn (2004) examined spatial distribution pattern of manufacturing activities associated with intra-industrial advantage (localization economies) and inter-industrial benefit (urbanization economies). Stressing the importance of intermediate input intensity, Rosenthal and Strange (2001) draws attention to the backward linkages for agglomeration. Ellison, Porter (1990, 1998) also asserts that the input-output linkages between industries encourage interrelated industries to co-locate in some regions and promote industry agglomeration. Smith and Florida (1994) examined the co-location of backward and forward linked manufacturing enterprises in automotive-related industries in the process of industrial location.

In this study, we investigate whether input-output linkages drive agglomeration. We used Localization Quotation (LQ) coefficient (as indicator of agglomeration), forward, backward and inward (we used this term to imply intra industry) linkages as main variables of study. Transportation costs, taxes and subsidies which accepted factors to encourage agglomeration also included in the model. We try to apply as new econometric methods as we can. We considered all applications to test if there is cross-section dependency between panels and heterogeneous slope coefficients across group members. We use a balanced panel data set that covers 20 aggregated industry groups in Turkey for the period of 1995-2011. Turkey Input Output Tables and some socio economic accounts which are required to achieve goal of this paper were obtained from WIOD database.

Key Words: Agglomeration, Input Output Linkages, Panel Data Analysis.