

Agglomeration Economies, Local Industrial Structure and Distribution of Economic Activities: Empirical Evidence from Indonesia

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The objectives of this dissertation are to examine empirically the effects of agglomeration economies on plant-level productivity and local productivity growth and to determine the trends and determinant factors of the spatial distribution of manufacturing industries. The first paper identifies the source of agglomeration economies and estimates their magnitude and spatial agglomeration externalities from neighboring districts or cities. The results suggest that economies of localization and urbanization do exist, but the former appears stronger than the latter. The types of agglomeration externalities are strongly associated with different sizes of plants and industrial sectors, and these factors provide clear-cut evidence of the nature of agglomeration economies. The analysis also shows that the sources of agglomeration changed over the economic cycles toward localization economies. Certain structural changes of industry are also identified in the post-economic crisis period; small-sized plants in the traditional and heavy industries drive these changes. This first paper also demonstrates strong evidence of the influence of agglomeration effects from neighboring districts.

The second paper examines the effects of dynamic agglomeration economies on the productivity growth of the industries in Indonesia's regions. The study introduces employment market potential into the city-industry growth estimation for controlling local size and preventing overestimation of the agglomeration effects.

The results suggest that both specialization and diversity are important for city-industry growth and that some externalities are stronger in different periods. A detailed analysis across industries reveals a strong relationship between local industrial structure and performance—productivity and employment growth—which is associated with industry maturity within its lifecycle stages.

The third paper analyzes the trends and determinant factors vis-à-vis spatial distribution in Indonesian manufacturing during the period of 1990–2010. There is a long-term increasing trend of regional specialization driven by core regions within Java and by affluent regions outside of Java. Among resource-based and labor-intensive industries, there is a smoothly declining trend of geographic concentration. An increasing trend in regional specialization and geographic concentration during the economic crisis is identified, which turns into a decreasing trend at the onset of setting up a decentralization policy. Finally, skills, export activities, and wage rates strongly determine the degree of agglomeration among Indonesian manufacturing industries.

The three papers contribute to a better understanding of the relation between agglomeration economies and productivity and the reasons for clustering of economic activities. The empirical findings suggest some policy implications to stimulate the agglomeration process and improve economic distribution across the country.