

## Chapter 13

# Harnessing Externalities to Enhance Competitiveness in an Industrial Cluster: Experiences in a South African Cluster

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### ABSTRACT

*This chapter investigates the effects networks have on the acquisition of external economies. The objectives of this chapter include determining if businesses located in clusters are benefitting from external economies and identifying the extent to which these firms are using their networks in accessing these external economies. Six SME business owners were interviewed. They form part of an automotive manufacturing network based in Port Elizabeth in South Africa. The researchers used content analysis and pattern matching to analyse the data. The findings indicate that the entrepreneurs interviewed were all using their networks to gain external economies. They used networks to gain technology spillovers in the form of information on new trends and processes in the industry and highlighted the fact that the network contacts provided opportunistic information. The study also found that some of the entrepreneurs used their network to source skilled employees from the pooled labour market and obtain specialized services and input.*

### INTRODUCTION

Industrial clusters are a group of companies and institutions geographically close, and related to a particular field, linked by common and comple-

mentary features. It is a compact network of relationships developed between actors within a specific geographical area (Vidal-Sune & Fonts-Ribas, 2012). There has been considerable interest in this as a research area. Governments seek

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the formula to become world powers in high-technology industries. Multinational corporations look for the right clusters to locate their factories, laboratories and headquarters. Scholars question whether competitive advantage is sustainable for a group of firms and wonder what mechanisms might drive cluster success. Economic geographers provide convincing evidence for the existence of clusters in a wide variety of industries (information technology, biotechnology, motion pictures, high-fidelity equipment, racing car production, winemaking among others) and propose that firms within these clusters are often inordinately successful as a group. One of the explanations for this success is that clusters create economic externalities that benefit its members.

Externalities are becoming increasingly important for firms that wish to remain competitive in today's hostile and rapidly changing business environment. This point is highlighted by Gordon and McCann (2000, 514), "A more general explanation is that substantial changes in the economic environment over the past 25 years or so (involving internationalisation, greater instability in product markets and more intense competition with a greater emphasis on quality/variety, at least for first world producers) have increased the importance of flexibility, encouraging greater reliance on external than internal economies of scale." Fujita and Thisse (2002) suggest that these economies provide the explanation for clustering. There are two types of economies.

Internal economies arise when firms increase their scale of production. Hence, they incur lower average costs of production, either through specialization or other factors. When average costs fall, giving the price of the good to be constant, profit margins of these firms will be increased. Thus, the individual firm benefits from internal economies. External economies when all firms in an industry experience decreasing average costs of production, which can be due to economies of concentration, information and disintegration.

Internal and external economies depend on several factors. Internal economies arise due to technical economies, which are when a firm increases its scale of production; it is able to delegate specific jobs to its workers. Hence, through specialization in a single job, the workers are able to improve their productivity through attaining higher levels of dexterity and skill through repetition. Thus when productivity per worker rises, the firm is actually producing a greater amount of goods and hence, the average cost of the good falls. Of course, internal economies also depend on other factors, such as marketing economies, which basically states that a firm making bulk purchases on raw materials would be able to enjoy cheaper prices.

External economies on the other hand, depend mainly on three different economies. As mentioned above, economies of concentration states that when firms in an industry are located close together, they can enjoy the pool of skilled workers and infrastructure provided by locality. Hence, through the provision of such valuable manpower and infrastructure, firms are able to attain lower average costs of production by employing these skilled workers with high productivity, or using the efficient road and communications networks to reduce transport and managerial costs. Unlike internal economies, external economies are independent of the size of the individual firms in the industry as both small and large firms benefit from it.

This study aims to investigate the effect networks have on the acquisition of external economies. The objectives of the study are:

1. To determine if businesses located in clusters are benefitting from external economies; and
2. To identify the extent to which these firms are using their networks in accessing these external economies.

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