

OUTLINE OF TRED BOOK

Working title: "Targeting Regional Economic Development"

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Chapter Description (November 22, 2006)

II.4. Overview of the Theory Behind TRED (Author tbd [Deller?](#))

This chapter provides a theoretical overview of the economics behind industrial targeting. Alternative theories of firm local and expansion decisions are reviewed in a non-technical manner. Basic distinctions between cost minimization and demand maximization are described with special care to the differences between manufacturing, service and retail types of businesses. Specific attention is placed on how policies can, or can not, fit into the location and expansion decisions of firms.

Abstract for Editor Review

(Note: Much of this chapter will build on Chapter 3 from Shaffer, Deller and Marcouiller *Community Economics: Linking Theory and Practice*. (2004))

The use of targeted regional economic development (TRED) is based on strong theoretical understandings of how regional economies are structured and how firms make location and expansion decisions. Firms make such decisions in order to maximize profits through minimizing the costs of operations while maximizing the demand for their goods and services. All of this takes place within a spatial setting. Targeted development policies as well as the analytical tools that are employed to identify potential industries to target have generally focused on the two special cases of the general profit maximization problem. These include cost minimization and demand maximization. Firms can be grouped into these two special cases depending on the nature of the structure of demand. For some types of firms, the location of the firm itself does not influence the demand for its products. These types of firms make location and expansion decisions based solely on costs of production. As outlined in Chapter II.2 the first "wave" of economic development policies focused on these types of firms, primarily manufacturing, by trying to market themselves as low-cost locales and by offering tax and other cost related incentives. The policy of "smoke-stack chasing" is strongly rooted on the theory of firm location through cost minimization.

For other types of firms, such as retail and many service firms, the location decision has a strong impact on the revenue generating capacity of the firm. The microeconomic foundations of central place theory tell us that in a spatial world there will be a unique and predictable pattern of these types of firms across the economic landscape. Increasingly many communities are attempting to rebuild downtowns by targeting businesses based on the firm location theory of demand maximization. Targeting tools such as threshold analysis, trade area analysis, spatial analysis in the spirit of Reilly's Law of Retail Gravitation are all based on the common theoretical foundation.

An aspect of firm location that relates to regional uniqueness is based on the productivity and availability of primary factors of production. The importance of primary factor resources provides a basis for the concept of *regional comparative advantage*. Traditionally, these have been identified to include land, labor, and capital. Regional advantages begin to surface when we continue to relax the spatial assumption of a featureless plane to account for differences in the endowments of primary factors of production. Factor endowments, factor productivities, and factor markets differ from one region to the

next. In this regional advantage framework, different factor resource endowments and productivities lead to relative factor scarcities. These factor productivity advantages reflect unique characteristics of a region's land, labor, and capital endowments. For example, advantages in land productivity can reflect climate, growing season, and/or soil characteristics. Advantages in labor productivity could reflect high skill levels and/or large workforce numbers. Advantages in financial capital productivity could reflect lower regional investment risk because of safer, more secure or supportive political systems. Where factor resources are more productive, the natural tendency is for increased specialization based on production that relies on those factors that are relatively more productive.

The framework of comparative advantage in factor resources provides another reason why regions tend to exhibit production cost differences. In regions with highly productive and large labor forces, this relative production advantage leads to a cost advantage as outlined in the earlier section on cost minimization. Likewise, regions endowed with rich land and low-risk capital enjoy relative advantages. With increased specialization, trade can act to aggregate regional advantages to higher overall levels of productivity across space. The benefits of trade are the ability to increase consumption of the good in which you are relatively disadvantaged in producing. This is the standard argument for free trade where prices for all goods and services equilibrate to the point where the region most advantaged in production, determines the price of the goods and services sold.

The scope of comparative advantage involves several key issues. First is a region's natural endowment of factor resources. These include the initial endowment and availability of land, labor, and capital. They reflect the existing climatic conditions (temperature, precipitation) and topography (mountains, rivers, etc.). Next are favorable production (firm) conditions that have been outlined in earlier sections of this chapter that focus on production inputs (backward linkages or cost minimizing components) and markets for outputs (forward linkages or demand maximization components). Also as discussed earlier, transportation considerations of regions (such as infrastructure) lead to transportation and marketing cost advantages. Proximity to centers of research leads to technological advantages. Good examples of this can be found where research parks founded by institutions of higher education provide centers of innovation and lead the development of high technology sectors.

In a more latent way, two additional aspects delineate the scope of regional comparative advantage. First, as outlined above institutional advantages can exist that speak to issues of production risk. These include the underlying stability of political institutions building on our often overlooked assumption of law and order. Regions without sound and equitably enforced legal structures often suffer from economic disadvantage. The second latent aspect that relates to the scope of regional comparative advantage is quality-of-life. Amenity factors of regions affect how individuals make locational decisions. Also, firms can use a region's amenity base as an issue in location and thereby affect where labor and capital become employed.

Regional advantages play a part in the previously described process of a firm's decision to maximize profits through minimizing costs and maximizing revenues. The initial endowment and underlying productivity of factor resources combined with the availability of these resources and the knowledge of their use to lead to competitive opportunities for firms and increased specialization of regional output.

An important insight to location and regional economics is the concept of industry clusters. Industrial clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions in a particular field that compete but also cooperate. A cluster is a geographically bounded concentration of independent businesses with active channels for business transactions, dialog, and communications, and that collectively shares common opportunities and threats. The geography that we are talking about can be a single city, or a region, or a state, or even national or multi-national in nature. The geography relates to distance over which informational, transactional, and other efficiencies occur. The boundaries of clusters are flexible and are more art than an exact science. Clusters provide a constructive and efficient form for dialog among private businesses, their suppliers, their customers, governments and other institutions.

Clusters typically encompass an array of linked industries and other entities important for competition. Some of these include the following: suppliers of specialized inputs such as components, machinery and services; providers of specialized infrastructure such as rail and power; extend downstream and laterally to manufacturers of complimentary products; can be companies and industries related by skills, technologies or common inputs. They can be institutions as governments and universities such as standard-setting agencies, think tanks, and vocational training providers. They can also be trade associations.

The role of government in cluster development is really removing the obstacles, or relaxing constraints, or eliminating inefficiencies in productivity and productivity growth. The emphasis is on dynamic improvement more than market share.

Clusters are critical to competition because modern competition depends upon productivity. It does not depend on access to inputs or scale of individual enterprises. Productivity depends on how companies compete not on the particular fields in which they compete. Competition is employing sophisticated methods, or using advanced technology, or offering unique products and services. Clusters can affect competition in three general ways. One, they can increase the productivity of companies based in the area. Two, they can increase competition by driving the direction and pace of innovation which underpins future productivity growth. Finally, clusters affect competition by stimulating the formation of new businesses which expand and strengthen the cluster itself.

There are similarities between agglomeration economics and clusters. The difference is that agglomerations are essentially a static concept that essentially considers cost. A cluster or competitive advantage is a dynamic concept because it involves how firms continually innovate and transfer knowledge among themselves.