

Capital Formation Institute

Premier information on early stage investment

Home

About CFI

Viewpoints

VC Online

AudioBlog

Research

Publications

Education

Press Releases

Sponsors



VIEWPOINTS ARCHIVE

Clusters and Competitive Advantage



Vincent J. Pascal

Ph.D.

Eastern Washington University
Cheney, WA

Promoting economic cluster formation based on technological innovation has become an important new strategy for global competitive advantage and entrepreneurial growth. In *The Competitive Advantage of Nations*, Michael Porter hypothesizes that nations gain significant competitive and economic advantage where concentrations of firms (clusters) exist in home markets of similar or related industries. Cluster location relationships help produce beneficial advantages such as knowledge spillover, ease of access to skilled labor, better acquisition and assembly of the inputs of production, and competitive pressures to innovate and increase productivity.

Clusters are found in all 50 U.S. states and around the globe. Some well known U.S. clusters are those in microelectronics found in the Silicon Valley of California; household furniture in North Carolina; entertainment in Hollywood; and gambling casinos in Las Vegas. Regardless of location, a relatively small number of clusters usually account for a major share of the economic activity within a geographic region and the vast share of exports sent out of the region.

Identifying a cluster is straightforward: first find the number of firms and employees by industrial sector in association directories and existing databases such as County Business Patterns or Employment Service 202 Reports. Then create a measure of concentration, the *location quotient* (LQ), the ratio of employment or companies within the defined boundary of the cluster to the same ratio for the nation. LQs greater than 1.0 denote a higher-than-average concentration and a possible

VIEWPOINTS

Essential ideas and tested techniques for starting and growing entrepreneurial ventures.

Click:

Article

Archives

economic competitive advantage.

Problems with the LQ measure include technical difficulties in identifying cluster boundaries and usage of several definitions of clusters. Nevertheless, there is consensus among researchers that clusters represent geographic concentrations of businesses that share related production inputs, specialized labor pools, distribution and communication channels, and network associations.

Clusters are mainly composed of local, resource-dependent, and traded industries. Of these, traded industry clusters have the greatest economic regional impact because of their influence on wages in local industries. Traded industries, such as motion picture and videotape production and automobile assembly, are not resource dependent and sell products and services across regions and sometimes across countries. Another cluster type identified, the *systematic knowledge cluster*, is comprised of education, banking, industry, and government for the purposes of forming clusters of technological innovation systems. Often the coordinated actions of these parties result in world-class value systems.

Clusters are associated with cultures that promote growth and innovation as new technology is created from old technology and spin-off businesses are created from old businesses. Innovation is motivated because of increased exchanges of knowledge and employees within and between cluster companies. Within clusters an infrastructure exists to support entrepreneurship, including an entrepreneurial environment and capital (venture capital) knowledge. Within this highly competitive environment, the drive to rapidly commercialize innovation is another factor that contributes to the better economic performance of clusters.

Because of their proximity advantages, clusters make the “cultural” generation and transmission of knowledge more efficient. Economic activity based upon new knowledge (e.g. innovation) has a greater propensity to concentrate within clusters than outside of clusters.

Studies reflect that new firm founding rates are greater in clusters than elsewhere. This may be because clusters provide an attractive circumstance for entrepreneurs or new subsidiaries. Industrial clusters comprised of small or young companies are more conducive to new business formation than clusters made up of mature and large companies. Companies located in clusters are better able to perceive new buyers needs than isolated competitors

because many buyers relocate to clusters to take advantage of cluster economies. In addition the inputs needed for new business formation (e.g. capital, skilled labor, specialized equipment or components, suppliers, markets) are more readily accessible in clusters than they are elsewhere.

Thus, new firm formation is greater in clusters because market opportunities are more easily perceived within clusters. The specialized inputs needed for new firm formation (e.g. capital, skilled labor, suppliers, etc.) are more easily accessed within clusters, and cluster economies make it more attractive for new firms to locate within these concentrations.

As a consequence of cluster performance, governments have become increasingly involved in motivating regional cluster development as a means of economic development. Some authors argue that the government's role should be as facilitator rather than director in cluster development. They argue that the government should enable cluster development by concentrating on providing an educated skilled workforce and physical infrastructure.

Promoting cluster formation, especially those based upon technological innovation, is increasingly viewed as the new basis for competitive advantage and economic development in a global economy. The understanding of those factors that motivate cluster formation as well as amplify (or diminish) the regional economic impact of cluster economies will certainly continue to be a public as well as academic priority.

Note:

The above article is a summary of the research report "Clusters: Public Entrepreneurship at the Marketing Interface". To request a copy please contact Dr. Vincent J. Pascal (509-358-2241 or vpascal@mail.ewu.edu)

Capital Formation Institute, Inc.

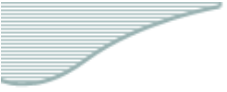
a 501(c)(3) non-profit organization

Office of Science, Technology Transfer and Economic Outreach
University at Buffalo, 1576 Sweet Home Rd., Amherst, NY 14228

Subscribe to *AudioBlog*



Contact us at dloague@cfi-institute.org



©2006 CFI
All information herein provided as a public service