Identification of Industry Clusters

For Guiding

Economic Development Efforts

In Cincinnati USA

Prepared for

The Cincinnati USA Partnership

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Executive Summary

Purpose

In order to strengthen its economic development performance, the Cincinnati USA Partnership has chosen to adopt a strategy that identifies and focuses on a limited number of industry clusters. The information contained in this report is intended to guide the Partnership and its members in their business attraction, retention, and development efforts and to serve as a foundation for policy decisions.

Employment Overview

- The first three sections present an overview of employment by industry and occupation, along with recent and projected changes. Together, they offer a picture of the context in which the subsequent cluster analysis is developed.

Employment by Industry

- Cincinnati USA's economy is no longer dominated by manufacturing industries. Today, more people are employed in professional and business services than in manufacturing.
- The most important changes that have occurred in the Cincinnati area's industrial composition between 1990 and 2000 are the increases in various service sectors and the decline in manufacturing.
- In the next five years, Cincinnati USA's economy will be affected by national growth in service-producing sectors. Some of the most rapid growth is expected to occur in industries that have considerable employment in high skill-high wage positions.

Employment by Occupation

- Overall, the occupation structure in the Cincinnati area is similar to the national structure, though Cincinnati USA has significantly more employment in production-related occupations, and an above average number of workers in high-paying executive, professional, and technical occupations.
- Between 1990 and 2000, occupational employment in the Cincinnati area showed tremendous growth in service occupations as well as executive, professional, & technical occupations. Precision workers, machine operators & blue collar occupations showed little growth through the period.
- In the next five years, the greatest increases are expected in *Management, business, & financial*, *Professional and related*, and *Service* occupations. Of these occupation groups, the first two are mostly made up of positions requiring at least a four-year college degree. The third area, *Service*,

includes a wide variety of job types, including many that also require at least some amount of specialized post-secondary training, if not a college degree.

Use of Clusters in Economic Development

- Section 4 offers a short explanation of what industry clusters are, and how they can be used in setting a regional economic development strategy.

- Structural changes in the Cincinnati area economy call for new approaches to economic development. Cluster analysis helps economic development specialists monitor and understand these economic changes and take appropriate actions for the benefit of their communities.

- Clusters grow naturally, and it is difficult and expensive to create clusters through public policy. While the development of clusters should be market-induced, some proactive attention is appropriate.

- Cluster policy should be used in an interactive way. Clusters are dynamic. A cluster analysis is not a one-time prescription. To be successful, there should be good communication with the analysts, business community, and the policy makers/implementers.

- Cluster policy is most valuable in identifying targets for recruitment and retention. For recruitment, cluster analysis is able to define an environment in which certain firms are more likely to succeed. Obviously, the probability of successfully recruiting firms that are well suited to a region is higher than for firms less well suited. For more effective retention of firms, better knowledge of clusters can help economic developers focus on strengthening the cluster by supporting the infrastructure underlying the cluster.

- The cluster approach is widely used. At least half of all states and major metropolitan areas have carried out cluster studies or are in the process of doing so.

Approach to Cluster Identification

- Section 5 documents the results of the process of identifying industry clusters. It contains information about the clusters considered in this analysis, the screening criteria that are used to promote or exclude various clusters, and a final list of the clusters proposed to the Partnership as candidates for economic development efforts.

- The first step in identifying industry clusters for the Cincinnati USA region is to find industries that are related at the national level by being part of the same supply chain. Each pair of industries in the same supply-chain cluster is linked in one of the following three ways:

  - one buys from (sells to) the other, either directly or indirectly;

- their purchase patterns from other industries are similar; or
- they have similar sales patterns to other industries.

- The next step is to subject the 29 clusters identified by the factor analysis technique to six different statistics that can be used for screening and cluster evaluation. They are 1) high average wages, 2) a strong employment base, 3) an export, rather than local, industry, 4) a high location quotient, 5) strong national growth, and 6) strong local growth relative to national growth. This screening process produces a list of ten candidate clusters.

- Validation of the ten candidate clusters begins by comparing them to clusters from six previous studies for the Cincinnati USA region. The final validation of cluster recommendations is the linking of these industrial clusters to occupational clusters that are strong in the region.

Listing of the Ten Candidate Clusters

- Section 6 presents brief snapshots of each of the recommended candidate clusters, to serve as a ready reference for economic developers and decision-makers. It also contains diagrams of several clusters for the purpose of illustrating relationships within clusters.

- The ten Cincinnati USA clusters recommended as candidates for targeting by the Cincinnati USA Partnership are as follows:

Office-Oriented Clusters

1. ***Advanced Design Services***—offers good wages and high national growth
2. ***Business Management***—has strong wages and local concentration
3. ***Financial Services***—is strong in wages and growth

Technology-Oriented Clusters

4. ***Biotechnology***—shows reasonably good wages and growth
5. ***Digital Equipment & Telecommunications***—has one part that is relatively strong in wages and another with strong growth
6. ***Software & Data Processing***—is high on wages and growth

Manufacturing-Oriented Clusters

7. ***Advanced Manufacturing***—is very large, has moderate wages, a very strong local concentration
8. ***Aerospace***—specifically engines and equipment, has a strong local concentration and is strong in wages
9. ***Chemicals & Plastics***—has relatively good wages and a very strong local concentration
10. ***Motor Vehicle Manufacturing***—has moderate wages and good local growth

- Each of the ten clusters had average annual wages at least as high as $35,000 in 2001.

- Each of the ten clusters can be considered an export cluster engaged in selling goods and/or services to businesses outside the region.

- Each of the ten clusters accounted for at least one percent of employment in the Cincinnati MSA in 2001.

- All ten of the clusters have critical occupations that are concentrated within the Cincinnati USA region.

- The analysis in this report discovers two new clusters, *Advanced Design Services* and *Business Management*, that have not been recommended in any of six previous relevant cluster analyses for the Cincinnati USA region.

- The ten clusters differ with respect to strength of location quotient, national growth, and relative local growth.

Cluster definition is an art as well as a science, so the final definition of any cluster selected by the Partnership will also be based on other criteria as well, including the political and strategic considerations previously identified by the Partnership.

Data Sources and Definitions

This project began with extensive data collection and analysis for the Cincinnati USA region, defined as the new 15-county Cincinnati Metropolitan Statistical Area.[1] The U.S. Census Bureau's County Business Patterns (CBP) database was selected as the principal source for a detailed picture of employment by industry and occupation. Its primary limitation is that it does not include people who are employed in the public sector, those who work on farms, and those who are self-employed. Other federal data sources include the 1990 and 2000 U.S. Censuses, employment projections from the Bureau of Labor Statistics (BLS), BLS wage and salary data by industry and occupation, and the latest NAICS-based input-output tables for the U.S. economy.[2]

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[1] The 15-county Cincinnati Metropolitan Statistical Area (MSA) includes Hamilton, Butler, Warren, Clermont, and Brown Counties in southwestern Ohio; Boone, Kenton, Campbell, Gallatin, Grant, Pendleton, and Bracken Counties in northern Kentucky; and Franklin, Dearborn, and Ohio Counties in southeastern Indiana.

[2] The 1997 Benchmark Input-Output Accounts for the United States are based on NAICS (North American Industrial Classification System). As opposed to the former SIC (Standard Industrial Classification) system which classifies establishments that have similar products, NAICS groups together establishments with similar production processes.