Good Times and Bad Contributions to regional industrial growth are not constant over time. Changing economic conditions (recession, inflation, exogenous shocks) are likely to affect industrial growth within the national and regional economies and thus alter structural and competitive processes. Consider two subperi-
ods of similar length but dissimilar economic conditions—1961-70 and 1970-82—again following from trough to trough on the busi-
cess cycle. The first subperiod was characterized by a strong tendency toward lower and stable inflation and only minor recessions. The second subperiod was one of higher and accelerating inflation, very severe recessions, and energy price shocks. For the period 1961-70, there is a clear and surprising story to tell (see chart 2). The more stable eco-
nomic conditions of the 1960s were accompanied by a strong tendency among employment-growth rates in all of Ohio's industries and indus-
ty aggregates to approach the national standard. Although the structural shift toward nonmanu-
facturing for growth prospects. While the transmission mechanism here is far from clear, it may be that industry-specific and region-
specific factors account for a smaller proportion of growth dif-
fierentials than we might think. On balance, competitive effects outweigh structural effects because we need not defi-
cially need to determine why the industries where Ohio has long term in Ohio is associated with structural and competitive elements. In terms of the multi-
product firm analogy, we are unfa-
laborately represented in slow-growth
and competitive differentials are constant 
time. A healthy national eco-
omic climate significantly reduces 
tional industries to the 
the manufacturing regions that might guide further 
source of regional growth disparity.

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Economic Commentary
Sources of Regional Growth Disparity: The Case of Ohio's Industries

by Roger H. Hinderliter

Another explanation rests on the longer-term and more pro-
gressive changes in economic activity. As national output evolves structu-
ringly and becomes more heavily
serious problem in the U.S. economy. New growth or outright 
decline in employment is spreading from manufacturing to 
nonmanufacturing industries. This problem is not 
dispersely together on a regional or state economic level or in the United States. It is most acute in 
the United States. It is most acute in 
two subperiods—1970-82—which 
generated a much more severe recession and caused the nonmanufacturing regions to perform much less pronounced.

The major source of regional 

Ohio's industries still appear to be 
manufacturing and many nonmanufacturing indus-
tries. The production of goods has become increas-
ingly complex. Firms have become larger, with increases in the diversity of product lines. Firms also have become more highly regulated. These factors have promoted employment growth in both manufacturing and nonmanu-
facturing regions. The national or state economies in the nonmanufacturing regions are often not traded in national mar-
ket, but are important for the local and regional economies. In the simplest sense, Ohio no longer 

Another explanation rests on the longer-

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author and not necessarily those of the Federal 
Reserve Bank of Cleveland or of the Board of 
Governors of the Federal Reserve System.

1. This article is a revised, shortened version of a paper presented at a recent conference, "Regional 
Growth and Industrial Change," Federal Reserve 
Bank of Cleveland, November 18, 1983. The com-
plete paper is available from the author.

A Regional Industrial Framework The major source of regional growth is the national economy, and the rate of employment growth is closely linked to the 

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and resources, a region is influenced by national trends in labor markets, investment patterns, and technological advances. A region also participates in processes that are common to others in evolutionary changes in economic activity. If, for example, as per-capita income rises, economic activity evolves through secondary, and tertiary stages—from agriculture to manufacturing to services—all regions would reflect this pattern.

Despite the common factors, no region is simply a miniature version of the national economy. Natural resources differ across regions, as do the size and composition of the labor force. A region's industrial base is inherited from the past. These features impart a uniqueness, or inertia, to regional economies that can be prolonged over a long period of time. As a result, evolutionary changes in economic activity need not be transmitted to regions equally or proportionately to existing size.

Neither are national market trends reproduced precisely at the regional level; rather, sharing national trends is accomplished by slow, parallel movements transmitted through market linkages among regions. For example, if labor-force growth in region A exceeds that of region B, adjustments in relative labor costs can be expected to create incentives for labor to migrate from A to B, equalizing labor costs and reducing labor-force growth rates. Both A and B converge toward the national average. The tendency for regional differences to converge is a natural process, but convergence may be slow and regional differences could be cumulative. Thus, while migration flows are encouraged by labor-cost differentials, there also are costs, pecuniary and nonpecuniary (social reluctance, for example), that discourage migration.

Income transfers (unemployment compensation and welfare) may re-inforce a reluctance to migrate, or whether if workers are willing to migrate, other arrangements (for example, differences in unionization of the work forces) may make it difficult to exploit and equalize labor-cost differentials. These kinds of rigidities also exist in the labor-forces market. Hence, market differentials among regions can remain over long periods of time.

This discussion suggests two channels of regional growth disparity—industrial structure and a region's competitive position vis-à-vis the national economy. A region may grow relatively fast (or slowly) because it holds a relatively large concentration of industries that are growing rapidly (or slowly) throughout the nation. Thus, the region has a favorable (or unfavorable) industrial structure. A region also may grow relatively fast (or slowly) because its own industries outperform (or underperform) its regional counterparts and the national economy. Thus, the region has a favorable (or unfavorable) competitive position. Perhaps this will be clarified by an example.

Suppose that a manufacturing firm with a multiproduct line would grow rapidly or slowly, relative to its national counterparts, depending on the composition of its product lines. The firm's employment growth in Ohio for the period 1949-82 (measured from enough to trough to business cycle) is shown in chart 1. The axes are labeled in terms of the structural and competitive contributions to industry growth rates in Ohio. Diagonal lines represent equal growth curves, which are alternative structural and competitive contributions that yield the same industry growth rate. Three of these curves are labeled in reference to three growth rate. The top right quadrant in the chart represents the "best of worlds," where both structural and competitive components are sources of industry growth above the national average. The bottom right quadrant represents"worst of worlds," where both the structural and competitive components depress industry growth rate. An examination of Ohio's industry growth rates suggests two general characteristics of the state's industrial sector in the postwar period. First, a large concentration of zero-growth or near-zero-growth industries exist in the state, including total manufacturing and its durable goods and nondurable goods divisions. All selected manufacturing industries except transportation equipment and chemicals and petroleum. Second, the structural contribution to growth is generally positive for nonmanufacturing industries and negatively for manufacturing industries. The pervasiveness of underperformance for Ohio's manufacturing is disturbing and, on balance, outweighs the favorable industrial structure. Between 1949 and 1982, total employment in Ohio underperformed the national rate at 1.7 percent a year, on average, a shortfall of 1.5 percentage points from the national average of 3.2 percent. Nearly 0.4 percentage point of the shortfall is associated with Ohio's industrial structure. The shortfall resulting from some slowness of underperformance of Ohio's industries is about 1.1 percentage points. This strongly suggests industries contribute to demand and supply factors, including the cost and productivity of resources, transportation, and inter-industry linkages, have more to do with the observed employment growth patterns than do evolutionary changes in economic activity and rigidities of regional industries, but the competitive contribution is nearly always negative.

The exceptions again are transportation equipment and chemicals and petroleum. Indeed, these two industries escape the zero-growth cluster because the competitive contribution, although moderate, pays a positive role. The positive structural contribution is especially strong in services and finance. Two industries that have become prototypical examples of rapid-growth possibilities. In Ohio, however, supporting uneconomic industries that have become prototypical examples of rapid-growth possibilities. In Ohio, however, supporting uneconomic industries lag the national industries as much as many manufacturing industries.

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