Management, Entrepreneurship, and the Economic Readjustment of the Middle West

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THIS paper deals with the problem of the stagnation of the nation's "Old Industrial Heartland," focusing on developments in its middle western segment — defined as the Great Lakes states, or East North Central division, composed of the five states of Illinois, Indiana, Michigan, Ohio, and Wisconsin. It discusses the evolution of the problem as it was perceived at different times in the period since the end of World War II. It then explores two facets of the basic structural problem of the region's economy: the decline of the region's older basic industries and the failure of entrepreneurship to develop enough new activities to maintain the region's prosperity.

In a remarkable article published in 1939, two economists provided an analysis of a regional economy that was no longer growing. When Glenn McLaughlin and Ralph Watkins examined the "clinical records" of the Pittsburgh district in the late 1930s, they found that the region's stagnant economy was still dominated by the old industries established during its period of growth in the late nineteenth century. "None of the new important industries which have developed in the United States in the past forty years have taken root in Pittsburgh." [34, p. 9] Instead of going into new local industries, capital had been exported from the region, sometimes in the form of the establishment of branch plants by Pittsburgh corporations, as, for example, the steel complex at Gary, Indiana. Investment that was made in local industry was primarily to make improvements in the technology of existing industries. The result was high unemployment, well above the national average. Cyclical swings were getting more severe, and recessions were becoming longer. Increased government expenditures to deal with social problems might only stimulate further the decline of old industry. The authors concluded that without migration from the area Pittsburgh faced "a slow decrease in per capita income." [34, p. 13]

This describes many of the facets of the economic plight of much of the nation's Old Industrial Heartland several decades later. Indeed, McLaughlin and Watkins believed in 1939 that the fate of Pittsburgh was what was in store for the national economy in the immediate future because a mature economy would not generate enough new outlets for investment. From the point of view of geography, the impact of maturity and stagnation would fall most directly upon the Old Heartland of the Northeast and Middle West, where over two-thirds of the nation's manufacturing activity was then located. However, McLaughlin and Watkins, along with many other economists of the "stagnation" school of the Depression era, did not foresee two major developments of the post-World War II period:

(1) New growth industries, based on technologies not previously exploited, emerged in the postwar era. For a number of reasons, however, the new industries did not have to establish themselves in the Old Industrial Heartland; rather they found many positive factors influencing their location in what came to be called the "Sunbelt," the South and the West.

(2) At the same time, the general prosperity of the postwar era had the effect of putting new life into the older, mature industries of the Heartland. Suburbanization, the universal use of the automobile, creation of a new national highway system, the mechanization of agriculture, and the resumption of growth in the nation's largest metropolitan areas were among the trends that especially benefited, directly or indirectly, the complex of metallurgical-engineering industries that were so basic to the health of the middle western economy. In the late 1940s, the four largest industries of the Great Lakes states — machinery (except electrical), motor vehicles and parts, primary metals, and fabricated metals — accounted for just under one-half of the total manufacturing employment in the region.[1]

The economic trends of the 1950s and 1960s, contrasting so sharply with the Depression experience of the 1930s, seemed to generate a reasonably satisfactory rate of growth for the Middle West. Employment in manufacturing in the five Great Lakes states rose by 15.2 percent from 1948 to 1968, while total private sector employment grew by 37.5 per cent. It is true that these rates were lower than the national averages of 26.4 percent and 52.4 percent, respectively, for manufacturing and total private sector employment. But if there was a "slow-growth" problem, it was perceived to be a national problem that could be treated with demand management through appropriate federal fiscal policies. The regional economic policy that was evolving in the 1950s and 1960s tended to be concerned with areas of the country or with communities that had been obviously "left behind," like, most notably, Appalachia. Decision-makers in the Middle West who expressed concern about the region's concentration on heavy industry seemed to focus on the problem of cyclical unemployment associated with sharp swings in the production of durable goods rather

than with the position of the region's basic industries in the national and international economy. [23] Only a few astute observers placed the experience of the postwar years in long-run perspective. One of these was Victor Fuchs, who, in a study published in 1962, saw industry in the East North Central states since 1900 as exhibiting "a consistent trend beginning with very rapid comparative growth, becoming less rapid and changing to a comparative loss as we move closer to the present." [22, p. 189] But this did not appear to raise general alarm about the state of the economy of the Middle West. Indeed, the slow growth of manufacturing was believed by many to be associated with the emerging "Post Industrial" age, in which services would be more important than manufacturing as generators of growth. But careful observation revealed that in cities where manufacturing was declining (like Detroit) service employment was actually growing less rapidly than in cities where manufacturing employment was increasing.[2]

The major problem that surfaced in the 1960s was perceived to be the "decline of the central city." Suburbanization in the postwar period had devastating effects on the old core city of the metropolitan area. A theme began to emerge in the literature that the central city had lost much of the economic purpose that had contributed to its growth in an earlier era. [4] The technology of the nineteenth century had encouraged the concentration of population and economic activity in a small geographical area. New technology now liberated people and economic activity from the need to be so close together. [10]

In turn, it was clear that the burden of the decline of the central city, as well as of the slow growth of industry, fell disproportionately on those who had arrived most recently — black migrants from the South — in the form of high unemployment and limited opportunites. However, the social diagnosis made in the mid-1960s was that the poor, especially the minority poor in the central cities, were poor because they lacked the appropriate skills, education, and motivation. The cure for poverty, therefore, was to consist in training and educational programs to provide people with the job skills that, it was presumed, they needed to be integrated into a modern industrial, urban economy. This was the cornerstone of the "War on Poverty." Less attention was directed to the availability of jobs for those who were being trained and motivated. [31] In the 1970s, the full extent and implications of the declining position of the Middle West in the national economy became clear. From 1968 to 1978, employment in the region's manufacturing industries actually decreased by about 1 percent, in contrast to a national gain of about 5 percent. An increase in employment in the private sector service areas of 35 percent fell short of the US average gain of 43 percent. Growth of total private sector employment in the Great Lakes states of 19 percent lagged well behind the national increase of 29 percent. Worse was to come in the ensuing half decade. High unemploy-

ment, consistently above the national average, was the most obvious manifestation of the situation. By the early 1980s, some of the major industries of the region were in crisis, with production running at low levels not experienced since the days of the Great Depression.

Where the central city had earlier been seen as the problem, now alarm was expressed about the decline of major metropolitan areas. The Census of 1980 revealed that several of the largest metropolitan areas of the Middle West had indeed experienced population declines during the 1970s, while others barely held their own. As Wilbur Thompson commented, "in a paradox more apparent than real, we are both moving away from larger, *older* cities and simultaneously building a new set of large cities to host many of our newest industries, in Houston, San Jose, and Phoenix, to name a few." [46, p. 234] The plight of the large metropolitan areas of the Middle West, as well as many of the region's small and medium-sized urban communities, began to be defined as an economic problem closely related to the condition of its leading industries.

In the absence of a widely accepted "economics of decline," there developed a search for the causes of the region's economic ills, popularly defined as "loss of jobs." Attention at various times was directed to plant closings and movement of industrial production to the Sunbelt (especially by the "conglomerates"),[5] to imports, to foreign investment by multinational corporations, to the shortcomings of management, and to the general failure of the "system." [6, 15, 21, 24, 25, 41] Some blame was assigned to the elderly who retired to Sunbelt localities and there spent pension money supplied by northern corporations, representing a drain of capital from the Old Heartland. [37] Steelworkers carried out a ritual murder of a Toyota [35], and a Michigan congressman raised the specter of racism with his comment that it was "the little yellow people" who were the cause of his constituents' economic misery. [38]

When the Old Industrial Heartland felt threatened by the implications of a decline of its economic base, society believed almost instinctively that something that rightfully belonged to it — a superior economic position — was being taken away. The various explanations offered of the Middle West's industrial problems provided a sense of satisfaction, and some had an element of plausability on the surface. However, just as Jan de Vries has found to be typical for economies in decline, as the various popular theories and hypotheses were carefully examined and found wanting as meaningful explanations of very real problems, society would have to recognize that elements of its regional economy were no longer optimal in the context of the national and world economy. [14] In the late nineteenth and early twentieth centuries, the region's economy had been integrated into the national and international economy principally through the creation of the world's most efficient metallurgical-engineering complex.

Business and political leaders of an earlier era had not had to give much thought to how the industry of the region related to industry in other regions of the nation or to industry in other countries of the world. Thus, only slowly did a new perspective develop.

The most obvious facet of the economic problems of the Middle West was the declining position, first relative then absolute, of its metallurgical-engineering industries. Earlier employment growth in this complex of region-forming (or export) industries, which still accounted for nearly one-half of total manufacturing employment in the Great Lakes states in the late 1970s, in turn stimulated the growth of employment in region-serving (or local) economic activities — those that served the needs of the regions's population (the multiplier effect).[4] Problems encountered by industries producing steel, automobiles, farm machinery, construction equipment, and other metallurgical and engineering products would be transmitted to the rest of the economy, including the public sector.

The dynamics of the postwar boom had favored the metallurgical-engineering industries of the Middle West through the 1950s and 1960s. However, by the 1970s it seemed that these trends were playing themselves out. For example, the annual production of cars and trucks in the United States had almost doubled from the early 1950s to the early 1970s, a rate of growth related to the sharp increase in the number of households owning cars — from 50 percent of the total in 1945 to 80 percent in 1965. [3, p. 48] The all-time high in production of motor vehicles in the United States reached in 1978 was only slightly above (by 2 percent) the previous peak of 1973. [50, p. 576] Even more telling, sales of passenger cars (combined domestic and imported) apparently peaked in 1973, with the level of that year not quite reached in the next high of 1978. [40, p. 142] Many of the other trends that had benefited the basic industries of the Middle West during the postwar boom also showed signs of slowing down. Farm mechanization was just one of these: An annual increase in farm labor productivity of 6 percent from 1945 to 1970 dropped to 3 to 4 percent in the 1970s, suggesting that the potential for further application of mechanical technology to agriculture was declining. [3, pp. 72–73] Perhaps the broadest measure was the slowing growth in consumption of steel in the United States: Average annual tonnage used increased little after the mid-1960s. [11, p. 24]

In the meantime, the position of US producers in the world's metallurgical-engineering industries was undergoing dramatic change. At the end of World War II, the United States had been the undisputed leader in many branches of these industries. The advantages of the United States were great: a huge capital stock, advanced technology, a large market enabling producers to take full advantage of the economies of scale, and abundant sources of inputs. However, during the 1950s and 1960s, the

rest of the industrial world (Europe and Japan) and even some of the developing countries were catching up with the leader. [5] From the mid-1950s to the mid-1970s, the United States's share of world steel production declined from over 35 percent to less than 20 percent; of world motor vehicle production from two-thirds to one-third. [11, pp. 24–25; 50, pp. 575-76]

While US foreign economic policy contributed to the rapid growth of manufacturing in other countries, which in turn spelled relative decline for the United States, it is difficult to see how the United States could have retained for very long the position of predominance in the world economy that it held right after World War II. The desire for economic growth was as strong elsewhere as it was in the United States, and the technology was mobile. Indeed, the economic growth of other countries enabled them to buy more of the products of many US industries, and American consumers benefited from a greater variety of goods, often at lower prices. While the internationalization of the American economy, marked by a sharp rise in US foreign trade and investment, created opportunities, it also posed difficult problems of adjustment, especially for the nation's metallurgical-engineering complex. [19]

Significantly, the new and expanded metallurgical-engineering industries in other parts of the world looked increasingly to the American market at a time when that market appeared to be slowing down. For the first time, US producers had to meet effective foreign competition in the domestic market. Intense competition in stagnating markets revealed flaws in competitive performance that had not been critical until the domestic industry was subjected to the stresses of competition. [19, 51] The symptom of competitive weakness was the growing role of imports in the domestic market. By the late 1970s, imports were accounting for a substantial share of the US market not only for steel and automobiles but also for a wide variety of other items like tools and hardware, fabricated structural metal products, industrial and farm machinery, appliances, and railroad equipment. [11, p. 150] All of this led Paul Samuelson to proclaim in 1981 that "the evidence is strong that steel and autos have lost [their] comparative advantage." [29, p. 151] This also seemed to be the case for other products of the American metallurgical-engineering industries.

The fall of steel was particularly dramatic, as it was among the first of the major industries to feel the full impact of the new patterns of competition unleashed in the world economy. The American industry's loss of leadership stemmed in part from significant gains that foreign producers made in their productivity. Discovery of rich ore deposits in other areas of the world and a decline in ocean shipping costs conferred on producers in Japan and elsewhere the kind of advantages that the United States had long derived from Lake Superior ore and the efficiency

of Great Lakes shipping. Furthermore, Japan and some of the developing countries played a strategy of "greenfield" expansion, incorporating new technologies of steel making into large integrated mills, built from scratch to maximize the returns to be gained from application of the new technologies. [11, pp. 20–28]

At the same time, problems related to corporate bureaucracy and oligopoly, coupled with the presence of a strong union, contributed to decreasing ability of the American industry to compete effectively with foreign producers, first in export markets and then in the domestic market. Explanations of the "problem of steel" offered from the early 1960s on involved a variety of factors: pricing rigidities related to the long industry tradition of price stability, reluctance to expand in the immediate post-World War II years, then playing a strategy of "brown-field" expansion of investing in an obsolete technology within existing plant layouts when the industry did decide to expand in the 1950s (thereby increasing steel-making capacity in the United States by almost 50 percent in a decade), high wages and costly work rules, and a long tradition of distrust between steel management and government officials that prevented development of an industrial policy to cope with new competitive pressures. [1, 11, 36, 47, 51]. The competitive weakness of the American steel industry showed up after the lengthy strike of 1959, during which imports first gained a foothold in the US market; but nothing in the experience of the long steel strike of 1952 could have led either managers or union leaders to expect this result, since the steel industries of Europe and Japan were then still heavily involved in rebuilding their own economies. [27, p. 2036] In the early 1970s, the already high wages of steel workers rose dramatically, apparently because management believed that a fall in the value of the dollar coupled with restrictions on imports would reduce the pressure on prices in a booming domestic market and thereby allow the increase in costs to be passed along to buyers. [11, pp. 35–38]

Problems for the North American segment of the increasingly internationalized automobile industry came to the surface in the 1970s. Until the oil shock of 1973–1974, most of the American market was, in effect, a protected one for domestic producers because of strong consumer preference for larger cars than were affordable in Europe or Japan, where the other major producers for the world market were located. This enabled US car makers to pass on to buyers the cost increases that resulted from the bureaucratic proliferation of salaried personnel[5] as well as from the high wage rates and expensive fringe benefits determined in collective bargaining with the United Automobile Workers. Selling "world cars" in direct competition with European and, especially, Japanese manufacturers revealed the higher costs of US makers that had acumulated in the days when "size differentiation" had protected the American market. While

foreign competition in the domestic market was intensifying, the ability of US producers to adjust was hampered by a sharp increase in unit labor costs in the late 1970s, a result primarily of the application of a cost-of-living escalator, and by a sharp drop in demand for large cars when gasoline prices rose dramatically in 1979. [18, 29]

Corporations facing stagnating markets and intensifying competition generally implemented a strategy of "defensive investment," defined by A. Lamfalussy as "a reliance upon minor innovations, upon improvement of existing capital goods, and upon rationalization." [30, ch. 7] Huge amounts of capital were sometimes applied to carry out a strategy of defensive investment. For example, in the 1970s, US automobile companies invested $27.5 billion in domestic facilities and another $18.3 billion in foreign affiliates, not to expand output or to make new kinds of products, but to improve the efficiency of existing operations, even though this large capital outlay strained the finances of all members of the industry. [33, pp. 239–243; 40, pp. 300–301]

In the case of steel, rationalization involved a geographical movement of the industry toward the Great Lakes, where the nation's most efficient mills were located, and closing of those less well situated, such as those in the Youngstown area. [11, pp. 140–47; 43, pp. 190–92] As one observer commented, the task of phasing out a substantial portion of the nation's steel-making capacity from 1977 to 1980 was "facilitated by the ease with which public reaction to plant closures could be deflected against imports." [36, p. 77]

Rationalization of industries typically led to a shrinking of the work force, both blue collar and white collar, whether or not reduced output was planned. Indeed, new concepts of corporate decision-making advanced in the early 1980s held that a decline in the number of middle managers in staff positions in large corporations would result in improvements in the decision-making process as well as reductions in costs.[6] Although predicitions about the eventual fate of America's metallurgical-engineering industries differed, the most optimistic view saw slow future growth of these industries in the international economy, with much of that growth taking place outside of the developed world. [17, pp. 93–96] If a strategy of defensive investment worked, in the sense of enabling American producers to compete effectively, that would imply little or no growth of output or employment. If a multiplier effect of the growth of region-forming industries had operated earlier to stimulate the growth of region-serving activities to supply the needs of the local population, would a multiplier effect of shrinkage or stagnation of export industries work toward stagnation also of local industries?

In the context of world economic history, stagnation of the metallurgical-engineering industries of the Middle West could hardly be called

an unexpected development. No society could expect to maintain forever its predominance in a particular set of economic activities, even if it continued to perform those operations efficiently. This in turn implies that continued growth in a mature economy depends upon the emergence of new kinds of economic activities. Francois Crouzet's observation about the problems of Victorian Britain and its declining position in the world economy of the late nineteenth century could be applied to the American Middle West in the mid and late twentieth century: Britain "could not maintain growth by always making the same products,"[7] but needed to create "new industries, new products, and new skills to replace those which were suffering from new competition." [12, p. 380] Closer to our problem in time and place, Wilbur Thompson provided in the early 1960s what turned out to be sound (but not sufficiently heeded) advice to Detroit when he warned that the metropolis "should spend less time worrying about losing a share of some existing industry and more time working to cultivate new replacement industries." [45, p. 229]

In the pattern of regional distribution of manufacturing that evolved in the decades after World War II, the Middle West continued a heavy concentration of the older industries established in the late nineteenth and early twentieth centuries. Not only was it experiencing intense competition in these industries from foreign producers by the 1970s; but the region was also losing a portion of these established activities, as capital was exported in the form of branch plants (like automobile assembly facilities) to serve the growing markets of the South and West.[8] Yet the Middle West was attracting a disproportionately small share of the newer industries that were emerging and growing in the years after World War II.

So the fundamental problem of the Middle West had to be defined as a failure of entrepreneurship to develop enough new activities to sustain the region's prosperity, granted that the older industries would not continue to expand indefinitely under even the best of circumstances. But this too was not an entirely unexpected development.

Industrialized regions like the Middle West may display the kind of "persistence patterns" typically found in areas specializing in the production of staple commodities for export. As W. T. Easterbrook has noted, the course of economic development of a persistence area remains largely within the limits of the structure initially established to organize the production of the staple commodity on which it specializes. While economic growth may be sustained as long as the original conditions prevail, institutions and attitudes associated with the original economic structure retain control and make difficult an adjustment to new conditions. [16] The remark of a journalist about the South as late as the 1920s — "Cotton is Religion, Politics, Law, Economics, and Art" [48, p. 124] — may be an

appropriate characterization of Detroit and automobiles or of Peoria and tractors in the late twentieth century.

In the setting of an economy with a large proportion of its resources invested in a set of old, well-established, and once prosperous industries, it is not surprising that stagnation induced a strategy of defensive investment in those industries in an effort to preserve them, to a greater extent than a strategy of "enterprise investment" to supply growing markets with new products. [30, ch. 6] As H. W. Richardson has argued in his analysis of over-commitment of the British economy to a few major industries in the late nineteenth and early twentieth centuries, "transition costs" are inevitably involved in developing a new economic base. These transition costs include not only assembly of the factors of production but, even more important, creation of a widespread belief in society that major change is essential to future economic well-being. It is easy for a community or a region to believe that the benefits of past growth of familiar industries will continue indefinitely and that manifestations of secular stagnation are only temporary cyclical fluctuations. [42]

Recent literature suggests at least three specific types of transition costs resulting from the heavy commitment of the Middle West to its complex of metallurgical and engineering industries: a shortage of potential entrepreneurs, especially of science-based enterprises, related to the occupational structure of the labor force in the dominant industries of the Middle West; the "rollout" effect of high wages in those industries, a result of the combination of corporate market power and strong unions; and a relatively low level of interest on the part of the region's leading financial insitutions in new ventures in new fields. [44, pp. 51–56; 46, pp. 238–46] All of these call for detailed investigation.

The experience of Michigan demonstrates some of the difficulties — psychological transition costs — involved in developing widespread agreement that a regional economy can be too heavily committed to a single industry and, therefore, that efforts should be made to encourage the growth of other industries. In the late 1950s, some of the state's political, business, and labor leaders, concerned about cyclical unemployment and the resulting instability of state and local government finances, urged an industrial policy of diversification. Since that time, several major efforts were made to identify specific problems and to find ways to implement meaningful policies and programs.[9]

Periodically, a commission of experts and community leaders representing diverse interests issues a multipoint program calling for a number of lines of action and study. For example, a report in 1959 recommended fourteen points, including improvement of Michigan's transportation system, creation of a committee to determine ways to take advantage of the state's water resources, a study of the characteristics of the unemployed,

and identification of "high tech" industries of value to Michigan's economy. During the 1960s, state government grants totalling nearly $1.5 million were made to universities and colleges to carry out research programs in areas "which will be of immediate or long-range benefit to the economic development of this state."

In the aftermath of the "oil shock" of 1973–1974, so disastrous to the automobile industry, a newly appointed Council issued twenty recommendations for short-term action and twenty-four more for long-term action, reflecting different weighting by participants to different facets of the state's problems. Recommendations included a call for a referendum on legalized casino gambling in Detroit, a review of the impact on business of state taxes and unemployment insurance rates, creation of joint labor-management councils, establishment by the Michigan Travel Bureau of "an outreach program to ensure that people who come in frequent contact with travelers provide the friendly welcome and professional services that are expected," and more active recruitment of "high technological content industries."

Over two decades, the various commissions, as well as the research grants, appeared to have achieved relatively little in terms of the objective of diversification. Recommendations were often too general; they sometimes directed attention to issues not central to the state's basic economic problems; and they tended to emphasize concern about government revenues. Commissions were formed and studies undertaken during periods of recession. Reports were then issued during recovery periods. In the atmosphere of near euphoria when production and employment seemed to be recovering, it was difficult for even the most pessimistic to maintain their pessimism about the future growth prospects of an industry that had for so long been so closely associated with the lives of the state's residents. In the words of an economist who has reviewed these efforts, there still existed in the early 1980s a need for "a long-term, institutionalized commitment to economic development."

In the meantime, other lines of action were being pursued to "cultivate new replacement industries." Although the Middle West had lagged behind other regions in developing the concept of the industrial research park linked to major universities [44, p. 21], concerted efforts were being made to apply this concept to create new industries. But as a recent survey of the experience of New England suggests, the presence of major universities is not sufficient to promote the growth of industry based on new technology. Just as important is the innovative business ability needed "to move products from the idea stage into production" and to markets. [26, p. 46] Furthermore, a study of the history of the semiconductor industry indicates that the reputation of the universities near Silicon Valley as leaders in

solid state electronics may be perceived as more a result of the region's industrial and technological growth than a cause of it. [7, pp. 126–27]

While some promising developments were taking place to encourage the emergence of new forms of economic activity, much of the political thrust of the Middle West appeared to be to seek to preserve as much of the older structure as possible by whatever means. Experience seemed to provide evidence to support the observation of Jane Jacobs, that the political system tends typically to protect those whose interests are attached to the older industries in what she sees as the basic conflict in stagnant economies between those whose economic interest are with the well-established economic activities and those whose interests lie with the emergence of new activities. [28, pp. 248–50]

NOTES

1. Data on employment have been compiled from [49].

2. Calculations made by R. D. Norton show that in twelve large Northeastern and middle western cities, manufacturing employment declined by 34 percent and service employment advanced by 55 percent from 1948 to 1972. By contrast, in twelve other large cities, mostly in the Sunbelt, manufacturing employment grew by 214 percent and service employment by 263 percent. [39, p. 96]

3. Much of the literature dealing with plant closings referred to any corporation with multiplant operations as a "conglomerate."

4. See [32] for an analysis of the role of regional specialization in economic growth and development. A useful discussion of the distinction between city-forming (or export) and city-serving economic activities, which may be extended to the regional level, is contained in [2, pp. 14–20]. The concept of "development block" emphasizes the interdependence of innovations in complementary phases of the industrial process in economic development. [13]

5. From 1947 to 1970, white-collar employees in the motor vehicle and equipment industry grew by 39 percent while production workers declined by 2 percent. During those years, white-collar workers as a proportion of the labor force in the industry advanced from 18 percent to 24 percent. [9, unpaged]

6. For example, Ford Motor Company reduced its North American salaried staff by about 30 percent in the early 1980s. [20, p. 104] See "A New Era for Management" [8, pp. 50–86].

7. While major industries of both late nineteenth century Britain and late twentieth century American Middle West were affected by the growth of foreign competitors, the impact was felt differently. For Britain, it was export markets; for the United States it was the domestic market.

8. From the point of view of the South and West, this represented a process of "import replacement" that was feasible when markets in those regions had reached a level to support production of manufactured goods formerly imported. Of the forty-two automobile assembly plants in the United States that produced 1981 models, four were located in the Far West and five in the South. Twenty-two were in the Great Lakes states and adjacent cities (St. Louis and Louisville), and eight were in the Northeast.

9. The following summary of Michigan's efforts to diversify is based on [23].

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