

CHAPTER TEN

The industrial transformation of the Great Lakes Region

Richard Florida

Since the early 1980s, State, local and regional economic development strategies have faced an accelerating pace of technological change, new patterns of work and production organization. The globalization of technology and markets is transforming economic development as we know it. These strategies represented a considerable advance over traditional approaches to economic development, which were premised upon the core principles of the old mass-production economy and thus focused on the recruitment of industrial branch plants through the use of incentives such as tax breaks, industrial revenue bonds and so forth (Harrison & Kanter 1978, Blair & Premus 1987). The movement away from "smokestack chasing" involved a cluster of strategies designed to spur the development of locally based high technology, entrepreneurship and venture capital in an attempt to emulate California's Silicon Valley and Boston's Route 128 (Piore & Sabel 1984, Saxenian 1984, Birch 1987, Eisenger 1988, Osborne 1988, Rosenfeld 1992). A related set of strategies emphasized manufacturing through the development of policies and programs to encourage companies to adopt advanced manufacturing technology (Cohen & Zysman 1988, Shapira 1990, Rosenfeld 1992). In large part, these second wave strategies focused on providing technical assistance to firms in specific areas related to changing patterns of economic competition. Put simply, these approaches emphasized the use of specific government business services and in effect saw the role of government as providing direct "retail" economic development services to business.

Although producing some critical successes, these programs were unable to address the fundamental components of economic transformation and they failed to spur significant improvements in regional economic performance. Indeed, by the early 1990s, flagship programs that virtually defined the new wave, such as the Michigan Modernization Service, were abandoned. Others, such as the Ben Franklin Partnership, were substantially refocused and scaled back. And, in a discouraging turn of events, recent years have seen the resurgence of even more virulent rounds of smokestack chasing, as States continue their attempts to outbid one another to attract such companies as BMW, Daimler–Benz and United Airlines' Maintenance Center. These programs are limited by their failure to recognize that the heart of the economic change under way is a transformation in the nature of the production system itself. Pumping new technologies, new capital and new skills into an outmoded and vanishing production system, these approaches essentially boiled down to the use of new tools to fix an old economy.

The challenge for both development theory and practice is to move beyond the search for singular fixes such as technology development and export assistance, and to design strategies that effectively connect local and regional economies to the broader process of economic transformation.

In the following pages, we outline what we believe is an effective path for bringing economic development theory, practice and policy into tune with the demands of the new economy. Our strategy is based on a recognition of the fundamental transformation of our economy and of the need to reshape our regional economic infrastructures in ways that support this new economy. To make our ideas and concepts as concrete as possible, we focus on the experience of one region - the US Industrial Heartland - which is making the transition from traditional mass-production industrial organization to the new model of high-performance organization. We present the preliminary findings of a three-year research project conducted jointly by the Council of Great Lakes Governors, a consortium of the governors of the eight States bordering the Great Lakes and the Center for Economic Development at Carnegie-Mellon University, Pittsburgh. Once seen as a region of deindustrialization, disinvestment, despair and desolation, the Industrial Heartland provides a powerful lens from which to view the dynamics of the new economy and their potential to inform new regional economic development strategies and policies.

The transformation of the industrial Midwest

In the late 1970s and early 1980s, Midwest manufacturing appeared to be headed for near total collapse, and the region had the steepest decline in real income during the 1982 recession. However, by the early 1990s the Midwest was boasting rates of growth in productivity rivalling that of Japan, and rates of income and job growth outpacing the coastal regions of the USA. Moreover, a region that was once decimated by international competition had become the export belt of the USA. Although new technologies have played an important role in this transformation, the region's economic resurgence is the result of its ability to adapt to a more fundamental shift in the nature of production. New ways of organizing work, new relationships with suppliers and customers, and a focus on continuous improvement are the key elements of this new high-performance production system.

The Industrial Midwest is defined as the eight States that border the Great Lakes: Ohio, Michigan, Illinois, Indiana, Wisconsin, Minnesota, New York and Pennsylvania. The region is the historic centre of American heavy industry, and from the late nineteenth century to the mid-twentieth century was the dominant production region in the world (Meyer 1983). Its growth was informed by the system of scientific management and mass production (Hounshell 1984, Lazonick 1990, Womack et al. 1990) that provided an underlying logic for the region's economy and for government policy.

During the 1970s and early 1980s, the region experienced disinvestment and deindustrialization coincident with the decline of this mass-production model (Bluestone & Harrison 1982). Traditional manufacturing corporations moved plants to the Sunbelt and the developing nations in search of low costs, docile labour, and so-called "better business climates" (Crandall 1993). The region was rocked by plant closings. Many of the region's steel mills closed, as steel producers consolidated their operations or diversified into the energy sector or other business. The region's unemployment rate exceeded the national average, reaching 25 per cent in some industrial cities. The eight Great Lakes States had the highest rate of business failures and the steepest decline in real income in the nation.

By the late 1970s and early 1980s, a consensus view emerged: the Midwest region would face long-run, secular, and chronic disinvestment and deindustrialization (Bluestone & Harrison 1982) brought on by a shift of traditional industries to low-wage locations (Crandall 1993), the development of new high-technology complexes in California and New England (Saxenian 1994), and a broader shift to a post-industrial service economy (Bell 1973). The consensus among business leaders, policy-makers and

academics was that the region would never again be a centre for competitive manufacturing – its costs were too high, and its labour climate too adversarial. The manufacturing belt, it was argued, would be left behind in a broad and fundamental shift to a post-industrial economy of high technology, finance and services.

It is increasingly recognized that such predictions were premature and in many cases incorrect. The Industrial Midwest has not deindustrialized – nor has it become a post-industrial economy. Our fundamental hypothesis is that the region's industrial base is in the throes of a complex transformation and restructuring, catalyzed by an emerging core of high-performance companies such as Xerox, Motorola, Honda, Bosch and countless others. At the same time, too many of the region's manufacturers remain locked in the old mind-set of cost-cutting, downsizing, short-termism, disinvestment and management by stress. Thus, we suggest that the intersection of these two trends has produced a complex process of economic transformation, characterized by expanding clusters of propulsive growth alongside continued pockets of decline: a phenomenon of reindustrialization within deindustrialization.

A review of aggregate economic performance provides considerable support for this hypothesis. After a severe contraction from 1977 to 1987, manufacturing output from the Industrial Midwest grew at 7.8 per cent from 1987 to 1988, surpassing not only the 7.4 per cent rate of the USA as a whole, but also the 6.3 per cent rate for Japan and the 5.2 per cent rate for Germany. From 1980 to 1988, manufacturing productivity in the Industrial Midwest rose by 36 per cent, compared to 15 per cent for Germany, 32 per cent for the USA, and 52 per cent for Japan. Roughly 15 per cent of this gain for the region came from 1986 to 1988, a surge that not even the Japanese economy could match. A Federal Reserve Board study found Midwest manufacturers to be 20 per cent more efficient than their national counterparts. Meanwhile, the region's manufacturing employment has virtually stabilized, after shrinking 15 per cent from 1977 to 1982 and continuing to fall until the late 1980s. Despite having only 30 per cent of the nation's population, the region accounts for 36 per cent of all manufacturing output in the USA, 60 per cent of the steel, 55 per cent of its automobiles, and 50 per cent of its machine tools. Remarkably, the Industrial Midwest produced more automobiles and steel in 1992 than a decade before, even when counting the General Motors plant closings.

Explaining the economic turnaround

There are several potential explanations and hypotheses for the economic transformation of the Industrial Midwest.

INDUSTRIAL CLUSTERS

Research by Michael Porter (1990) suggests that regional economic performance depends upon local competition and the vitality of industrial clusters of related and supporting industries. According to this view, improved regional economic performance is attributable to increased levels of local competition and the development or revitalization of clusters of related and supporting industries in the automotive assembly, automotive parts production, steel and other related industrial sectors. Variants of this approach would suggest that improved regional performance is related to the adoption of new technology and the "downsizing" or disaggregation of large vertically integrated manufacturers and the emergence of networks of small and medium-size enterprises (Piore & Sabel 1984, Birch 1987).

GLOBALIZATION

A second hypothesis links the region's improved economic performance to its increasing integration into the world economy (Reich 1991, Dicken 1992, Council on Urban Economic Development 1993). According to this perspective, the region's turnaround is at least in part linked to its increasing integration to the global economy (Federal Reserve Bank of Chicago 1993). There is considerable support for this hypothesis. In 1991, for example, the region shipped over \$100 billion dollars in manufactured goods to more than 80 countries, including \$9.4 billion to Japan and \$5.6 billion to Germany. The region's rate of increase in manufactured exports is double the national average, leading the Wall Street Journal (1993) to proclaim that the region "singlehandedly" returned the USA to the position of the world's largest exporter.

INTERNATIONAL INVESTMENT

A variant of the globalization hypothesis focuses on the relationship between international investment and improving regional performance. This perspective suggests that international investment, especially that from Japan, has played a key role in rebuilding the region's traditional industries. More than half of all Japanese foreign direct investment in automobiles, steel and rubber is concentrated in four Great Lakes States: Ohio, Indiana, Michigan and Illinois (Florida & Kenney 1991). A recent report by the McKinsey Global Institute found that international investment increases national and regional productivity by facilitating the transfer of best-practice organizational and management techniques. Thus, Japanese inward investment has facilitated the transfer of world-class manufacturing technology and state-of-the-art management practices to the industrial Midwest, leading over time to higher rates of adoption and diffusion of these practices and techniques by domestic as well as international manufacturing establishments in the region (Kenney & Florida 1993, McKinsey Global Institute 1993).

LOW LEVELS OF DEFENCE DEPENDENCE

A fourth hypothesis is that the economic transformation of the Midwest industrial base is linked to the relatively low level of defence dependence of its major manufacturing sectors. Research by Swonk (1990) notes that the industrial Midwest never became as defence dependent as those in other parts of the country winning the region (on a per capita basis) only one third as much defence business as California and Massachusetts. In 1991, Michigan, Indiana and Wisconsin ranked 48th, 49th and 50th respectively in federal spending per person. The Midwest is less defence-dependent than any other region, with defence outlays per person of only 60 per cent of the national average. The region's \$444 per person in defence spending compares to more than \$1200 per capita for California and more than \$1400 for Massachusetts. As a result, Midwest manufacturers have retained their commercial focus and are better positioned to weather proposed defence cuts.

SHIFT TO HIGH-PERFORMANCE ECONOMIC ORGANIZATION

A potentially integrative theory, and one that we have organized our continuing research around, suggests that the economic transformation of the industrial Midwest reflects a deeper shift in the nature of production organization and management. According to this perspective, the economic transformation of the industrial Midwest is tied to the shift from traditional forms of mass-production organization to a new model of high-performance organization. As defined in the literature, high-performance

organization refers to a cluster of best-practice organizational and managerial techniques that, when taken together, harness intellectual as well as physical resources at all levels of the firm and the broader production system in which individual firms are embedded (Zuboff 1989, Florida 1991, Nonaka 1991, Drucker 1993, Kenney & Florida 1993). Put somewhat differently, the improved economic performance of the industrial Midwest is tied to relatively high rates of adoption, diffusion and penetration of highperformance principles by manufacturers in the region.

According to this perspective, the transformation of the industrial Midwest thus reflects a deeper and more fundamental transformation in the nature of capitalism - a shift to a new knowledge-intensive economy, where the keys to success are harnessing the ideas and innovative capabilities of all workers from the R&D lab to the factory floor to turn out the high-quality, state-of-the-art products the world's consumers want to buy. Under this new form of organization, the factory itself is becoming more like a laboratory, with knowledge workers, advanced high-technology equipment, and clean-room conditions free of dirt and grime. Indeed, as Drucker (1993) and Nonaka (1991) suggest, capitalism may be entering into a new age of knowledge creation and continuous innovation. This new system of knowledge-intensive capitalism is based upon a synthesis of intellectual and physical labour: a melding of innovation and production (see also Florida 1991, Kenney & Florida 1993). This new system of economic organization, these scholars argue, represents a major advance over previous systems of Taylorist scientific management or the assembly-line system of Henry Ford, where the principal source of value and productivity growth was physical labour.

The shift to high-performance manufacturing can be understood at three interrelated levels. First, international investment has resulted in the transfer of best-practice technology and management. Secondly, domestic firms in the region have made substantial investments in organizational restructuring. Firms such as Xerox, Motorola and Steelcase responded to mounting global competition by restructuring themselves into better organizations than they were before. These companies invested heavily in new factories and production technology, instituted total-quality-management programs, and developed powerful partnerships with their suppliers, increasing their ability to compete globally and capture new overseas markets for their products.

Thirdly, high-performance organization is also diffusing into the broader manufacturing supplier base. Findings from a survey of roughly 2000 small and medium-size manufacturers in the industrial Heartland

indicate that many of these companies — more than half of all survey respondents — are implementing elements of high-performance organization, such as total-quality-management programs, self-direct work teams, and just-in-time inventory control. Research by MIT's Paul Osterman indicates that roughly one-third of this nation's manufacturing companies are engaged in the transition to high-performance.

Regional dimensions of economic transformation

The process of economic transformation has an important regional dimension. Indeed, we suggest that regions are inextricably connected to the process of economic transformation.

Until the late 1970s, the Midwest economy grew by extracting natural resources such as coal and iron ore, making materials such as steel and chemicals, and manufacturing durable goods such as cars, appliances and industrial machinery (Meyer 1983). The region prospered because it had natural comparative advantages that allowed it to be a mass producer of commodities competing largely on the basis of relatively low production costs. Public policies emphasized the financial incentives, reduction of the marginal costs of operation, and regulation of business externalities and, at the State level, the recruitment of branch plant firms. But, since the early 1970s, the economies of the Midwest, the nation and the world have changed fundamentally. Global competition has shifted the base of manufacturing activity, as foreign competitors have succeeded in making lowercost commodities to challenge the region's companies in both domestic and international markets. Global markets are now demanding increasingly sophisticated, high-quality, high-value-added products and services, not just commodities (Dicken 1992, National Council for Urban Economic Development 1993).

In an important and provocative essay in Foreign Affairs, Ohmae (1993) suggests that regions or what he calls region-States are coming to replace the nation-State as the centrepiece of economic activity. In his words:

The nation state has become an unnatural, even dysfunctional unit for organizing human activity and managing economic endeavor in a borderless world . . . On the global economic map the lines that now matter are those defining what may be called region states.

Region-States, Ohmae points out, are fundamentally tied to the global economy through mechanisms such as trade, export, and both inward and outward foreign investment – the most competitive region-States are not only home to domestic companies, but are attractive to the best companies from around the world.

We begin from the notion that regions must be defined by the same criteria and elements that comprise a high-performance firm: continuous improvement, knowledge creation, organizational learning, and integration into global markets. Regions must adopt the principles of high-performance economic organization and in effect become learning, or knowledge-creating regions (Cooke 1996).

Learning regions provide a series of related infrastructures that can facilitate the flow of knowledge, ideas and learning. In other words, learning regions provide the crucial inputs required for high-performance economic organization to flourish: a manufacturing infrastructure of interconnected vendors and suppliers; a human infrastructure that can produce knowledge workers, facilitate the development of a team-orientation, and which is organized around life-long learning; a physical infrastructure that facilitates and supports constant sharing of information, electronic exchange of data and information, just-in-time delivery of goods and services, and integration into the global economy; and a capital allocation and industrial governance system attuned to the needs of high-performance organizations (Table 10.1).

Major transformations are already occurring in the manufacturing infrastructures of regions. Mass-production organization was defined by a high degree of vertical integration and internalization of capabilities. External supplies tended to involve ancillary or non-essential elements, were generally purchased largely on price, and were stored in huge inventories in the plant. High-performance economic organization is characterized by a much higher degree of reliance on outside suppliers and the development of co-dependent complexes of end-users and suppliers. In heavy industries, such as automobile manufacturing, large assembly facilities play the role of a hub, surrounding themselves with a spoke network of customers and suppliers in order to harness innovative capabilities of the complex, enhance quality and continuously reduce costs. A learning region requires a manufacturing of infrastructure of globally orientated firms with R&D and innovative capabilities and dense, interactive and co-dependent supplier relations.

Regions have a human infrastructure – a labour market from which firms draw "smart" workers. Mass-production industrial organization was

Table 10.1 From mass production to learning regions.

	Mass production region	Learning/knowledge- creating region
Basis of competitiveness	Comparative advantage based upon: • natural resources • physical labour	Sustainable advantage based upon: • knowledge creation • continuous improvement
Production system	Mass production physical labour as source of value separation of innovation and production	Knowledge-based production continuous creation knowledge as source of value synthesis of innovation and production
Manufacturing infra- structure	Arm's-length supplier relations	Supplier systems as a source of innovation
Human infrastructure	Low-skill low-cost labour Taylorist work force Taylorist education and training	Knowledge workers Continuous improvement of human resources Continuous education and training
Physical and commu- nication infrastructure	Domestically orientated physical infrastructure	Globally orientated physical and communication infrastructure
Industrial governance system	Adversarial relationships Top-down control	Mutually dependent relationships Network organization
Policy system	Specific retail policies	Systems/infrastructure orientation

characterized by a schism between physical and intellectual labour: a large mass of relatively unskilled workers who could perform physical tasks but had little formal involvement in more managerial, technical or intellectual activities, and a relatively small group of managers and executives responsible for planning and technological development. The human infrastructure system of mass production - the system of public schools, vocational training, and college and university professional programs in business and engineering - evolved over time to meet the needs of this massproduction system, turning out a large mass of cogs-in-the-machine and a smaller technocratic elite of engineers and managers. The human infrastructure required for a learning region is quite different. As its name implies, a learning region requires a human infrastructure of knowledge workers who can apply their intelligence in production. The education and training system must be learning system that can facilitate life-long learning and provide the high levels of group-orientation and teaming required for high-performance economic organization.

All regions possess a physical and communications infrastructure upon which organizations deliver their goods and services and communicate

with one another. The physical infrastructure of mass production facilitated the flow of raw materials to factory complexes and the movement of goods and services to largely domestic markets. High-performance firms are global players. Thus, the physical infrastructure of the new economy must develop on a global basis links to, and facilitate the movement of, people, information, goods and services. Furthermore, high-performance organization draws a great portion of its power from the rapid and constant sharing of information and increasingly electronic exchange of key data between customers, end-users and their suppliers. For example, Johnson Control's factory, which manufacturers seats for Toyota's Kentucky assembly plant, receives a computerized order for seats as each new Camry begins its way down the assembly line. A learning region requires a physical and communication infrastructure that facilitates the movement of goods, people and information on a just-in-time basis.

To ensure growth of existing firms and birth of new ones, all regions have a capital allocation system and financial market. One of the existing weaknesses in the USA is that financial systems are creating impediments to high performance. For example, our interviews with executives, and surveys of high-performance firms, indicate that banks often require inventory to be held as collateral, creating a sizeable barrier to the just-in-time inventory and supply practices that define high-performance economic organization.

All regions provide mechanisms for industrial governance: formal modes and informal patterns of behaviour between and among firms, and between firms and government organizations. Mass-production regions were characterized by top-down relationships, vertical hierarchy, high degrees of functional or task specialization, and command-and-control methods of organizing. Learning regions must develop governance structures that reflect and mimic those of high-performance firms, that is co-dependent relations, network organization, flat or lean organization, and a focus on customer requirements. This goes for government and non-profit organizations, particularly economic development organizations, as well as for private enterprises.

Learning regions provide the crucial inputs required for high-performance economic organization to flourish: a manufacturing infrastructure of interconnected vendors and suppliers; a human infrastructure that can produce knowledge workers, facilitates the development of a team-orientation, and which is organized around life-long learning; a physical infrastructure that facilitates and supports constant sharing of information, electronic exchange of data and information, just-in-time delivery of goods and services, and integration into the global economy; and a capital allocation and industrial governance system attuned to the needs of high-performance organizations.

Implications for economic development strategy and policy

The processes of economic and regional transformation hold considerable implications for economic development policy.

The incredible strength of the US economic organization in the first half of the twentieth century was premised in large measure upon a close fit between mass-production industrial organization and government policy. The vitality of the nation's mass-production system was bolstered by a broader political economy that supported mass production - everything from roads, railways and ports to the land-grant post-secondary education system that grew up alongside and in support of mass-production industry. But, we suggest that government economic policy (regional economic development policy included), which once worked so well, may be thought of as being increasingly out of sync with the demands of the emerging high-performance model of economic organization. One way to think about this policy environment is as a large and increasingly unwieldy layer-cake of policies and programs that built up over time to meet the needs and requirements of a bygone industrial epoch. This massproduction policy system is not only costly and inefficient: it comprises a considerable obstacle to the emergence of the new economy.

According to this view, the US economy at the national and regional levels is caught between two business climates: an old one structured to accommodate the dynamics of mass production, and an emerging high-performance one. The nature of economic transformation thus entails completing the transition between business climates. The role of economic development policy is to develop an institutional framework that can facilitate the shift to this new production system and, just as importantly, to eliminate any remaining policy and regulatory barriers that inhibit its emer-gence. New policies and strategic investments are likely to be required to shape and leverage reindustrialization simultaneously, and to expand the evolution of the new system of production organization upon which it is based.

The lessons from the emergence of a new economy based upon highperformance principles hold two potential immediate implications for economic development policy. First, high-performance economic organization requires policies that work at the systems level. The essence of high-performance organization is its systems orientation. We therefore hypothesize that public and regional interventions to improve competitiveness must also share this systems orientation. The high-performance revolution necessitates that policies and services shift from a focus on specific firms or sectors to the networks of companies that make up high-performance production systems. Indeed, our preliminary research and interviews with high-performance firms suggest that they are not inclined to support direct government intervention in the management of the enterprise of the sort provided by manufacturing extension centres.

The challenge for economic development policy is not to provide specific services, but to create the structure, rules of the game and incentives required for high performance. In essence, the issue is not to give firms, regions and communities specific information and assistance, but to provide a new economic framework and set of incentives. This further suggests that technical assistance to firms, workers and communities is likely to be more effective if linked to policies designed to transform the overall business climate. For example, public financing for manufacturing technologies will likely have only limited impact if regulations create a bias against private financing for low-inventory firms. Similarly, technical assistance to reduce pollution may have greater impact if environmental regulations do not create a bias towards installing end-of-pipe control equipment. And, customized training programs are likely to be more effective with a general education system orientated around problemsolving skills, team capabilities and outcome-based learning. In contrast with mass production, high-performance organization depends upon a fundamentally different infrastructure of education and transportation investments, and environmental, financial, and business regulations.

Secondly, high-performance economic organization has a significant regional dimension. Unlike the period since the early 1970s, when the decline of mass production encouraged dispersion, high-performance organization creates powerful centrifugal forces. Put simply, place matters to the high-performance economy. This dynamic is reflected in a changing industrial landscape. The mass-production economy was marked by large-scale production facilities served by many scattered and unrelated suppliers, for example, the global factory and the world car strategy. Conversely, high-performance production is marked by dense corporate complexes of endusers and key suppliers (Florida & Kenney 1991). Hence, although mass-production facilities became increasingly free of locational constraints,

high-performance production complexes are more firmly rooted in specific places. No production trend in recent times has offered as great an opportunity to establish an industrial stake in regional development.

Thus, once in place, high-performance production complexes tend to have a natural bias towards investment and improvement of the surrounding supplier base and economic area. The improved competitiveness of existing businesses and investment in advanced services and programs enhances the creation of the emergence of such clusters. In Battle Creek, Michigan, Nippondenso was a leading force in the restructuring of community college programmes and the creation of advanced industrial services to support its supplier base. In an inner-city neighbourhood of Columbus, Ohio, the LSE corporation has established a state-of-the-art steel facility based on high-performance principles. And Motorola has invested in transforming the entire educational program of the five school districts serving its major production facilities. High-performance economic organization thus creates considerable incentives for regional redevelopment by stimulating private investment in regional firms, workers and community institutions.

Summary

Since the early 1970s, experts have predicted a shift from manufacturing to a post-industrial service economy, or from basic industries to high technology. In the wake of the predictions, efforts were made to invest in new critical technologies and industries. But, the change under way in the USA and throughout the world is not one of old sectors giving way to new, but is more fundamental in terms of the way goods are produced and the economy itself is organized – from a mass-production economy to a new knowledge-based economy. This change holds sweeping implications for government. The critical need for government economic development policy is not to help invest in new technologies, but to help put in place the economic infrastructure required for the new economy to flourish. The challenge is to redesign the broad infrastructure of government economic policy and the incentive system it helps to set in place, in ways that can facilitate – not impede – the shift from mass production to high-performance economic organization.

The emergence of high-performance economic organization offers a unique opportunity to establish a unified framework for industrial and

regional revitalization. This opportunity rests in the critical dependence of high-performance economic organization on new type of policy system and related regional infrastructure. Our findings and those of others have documented the emergence of high-performance economic organization in and around the industrial Midwest. Our findings further indicate that existing retail-led approaches to economic development policy are out of sync with their needs. This work suggests the need to move to systems-level or infrastructure approaches that can provide a broad climate in which high-performance economic organization can take root and flourish.

Given all of this, economic development policy must be reorientated to speed the development of a business climate and overall economic infrastructure that enables workers, firms and communities to make the transition to the new economy. Economic development policy-makers and professionals must help put in place the incentive structure and regional infrastructure. Long-run economic growth and development fundamentally depends upon it.