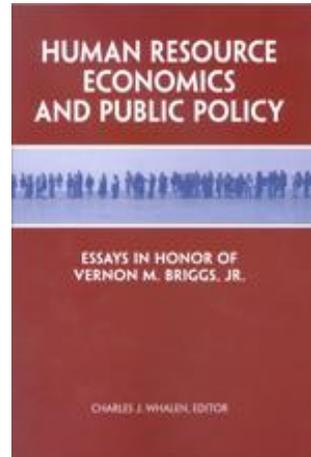

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Sectoral Approaches to Workforce Development: Toward an Effective U.S. Labor-Market Policy

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11

Sectoral Approaches to Workforce Development

Toward an Effective U.S. Labor-Market Policy

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Labor-market policies refer to government interventions to support and improve labor-market operations for workers and employers. All major industrialized nations have some form of labor-market policy, but such policies differ widely in design, size and scope, and implementation.

Economists generally distinguish between active and passive labor-market policies (Kletzer and Koch 2004), and nations typically offer a mix of active and passive policy elements. Active labor-market policies include five types of activity: job matching and job search assistance (such as public employment services), enhancing the supply of labor (e.g., training), reducing labor supply (by means such as encouraging early retirement or prorating unemployment benefits to accommodate reduced work weeks), creating stronger labor demand (e.g., through public works or public service employment), and changing the structure of demand (e.g., by the use of employment subsidies) (Auer, Efendioglu, and Leschke 2008). An example of a passive policy is a program that extends or expands unemployment insurance. Active labor-market policies have also been called “selective labor-market policies” to distinguish them from macroeconomic policies and to emphasize their targeted nature (Marshall 1984). Sweden and other European nations, as well as a few Asian countries, provide examples of countries that have long pursued labor-market policies emphasizing active elements,

whereas the United Kingdom and the United States are often seen as examples of countries that have adopted more passive forms (Kletzer and Koch 2004).

Active labor-market policies can aim at a variety of goals, including promoting the expansion of employment, facilitating adjustments to changes in technology or the economy, and reducing inequality and the incidence of poverty. In his career, Vernon Briggs conducted research on all of these topics, with a particular concern for the effective implementation of programs. Yet, a key theme of his work has been reducing poverty and improving the well-being of poor people, especially African Americans and Latinos (e.g., Briggs 1973; Briggs and Marshall 1967). Among the lessons learned from that work about effective workforce-development programs since the 1960s is that the best programs operate on both the supply and demand sides of the labor market.

In this chapter, we examine major changes in the context within which modern labor-market policies operate, the nature of the current U.S. workforce- and economic-development “systems,” and the major challenges and opportunities these systems face. We then look at an important strategy that appears to be effective in bringing together key elements of workforce- and economic-development policies: sectoral workforce development. A belief motivating many sectoral programs is that people who work full time should not be poor. We present emerging evidence on the effectiveness of such sectoral approaches and outline guiding principles for policymakers and program administrators to follow in pursuing them. Sectoral workforce-development approaches offer a much needed, major step toward implementing more active labor-market policies in the United States.

THE ECONOMIC, LABOR-MARKET, AND DEMOGRAPHIC CONTEXT

In the early 1960s, the United States began moving toward development and implementation of comprehensive workforce-development policies.¹ Since that time, the economic, labor market, and demographic context within which these policies and their accompanying programs

operate has changed dramatically. Many of these contextual changes have important implications for workforce policies and programs.

The mid to late 1950s were a time of unprecedented economic growth and broadly shared prosperity. Employment was expanding in most sectors of the economy (including manufacturing), real wages were rising, and many more workers found that they were part of a “social contract” that offered them health benefits, opportunities for training and career advancement, as well as economic security in return for their commitment to working hard and long for their employer (see King, McPherson, and Long 2000; Marshall and Tucker 1992; Osterman 2007). Moreover, immigration was at relatively low levels as the domestic workforce expanded to meet the growing demands of a booming post–World War II economy (Borjas 2007). The United States had emerged from World War II with an intact economy and faced limited economic competition from other nations.

This is not to say that serious labor-market problems were completely absent. Some groups of workers—especially minorities and low-skilled workers—were largely bypassed or did not participate fully in the postwar economic successes (Harrington 1963). Moreover, there was a trend toward “creeping prosperity unemployment,” attributed to the effects of technological change and disproportionate demand for highly skilled and educated workers (Killingsworth 1968; Long 1972). U.S. policymakers began to enact legislation to address these and related problems by means of a “system” of diverse policies and programs. Current economic, labor-market, and demographic conditions, however, bear little resemblance to the context and conditions facing policymakers in those earlier periods. Several points serve to illustrate the breadth and depth of the changes.

First, the U.S. economy has become overwhelmingly a producer of services. The share of employment in the traditional goods-producing industries—which includes mining, manufacturing, and construction—fell from 35.6 percent in 1958 to a low of just over 16 percent in 2007 (BLS n.d.). Within the goods-producing sector, the share of employment in manufacturing fell even more precipitously, from a high of 28.5 percent in 1958 to a postwar low of 10.1 percent in 2007. The service sector, including the government, now accounts for nearly 84 percent of all nonfarm jobs. Moreover, as this shift to services was continuing

its relentless pace, the economy also was becoming far more tied to information. A large majority of workers are now employed in knowledge-based or information-related jobs. As Marshall and Tucker (1992) phrased it, more and more workers are now “thinking for a living.”

Second, as Tom Friedman argued in his 2005 book *The World Is Flat*, a number of major developments have “flattened the world” and dramatically opened up global interconnectedness in many respects. These include the fall of the Berlin Wall and the collapse of barriers impeding trade with the former Communist countries starting in 1989; the rise of the Internet and tools for using it more effectively in the 1990s; and the rapid growth of off-shoring and both out- and in-sourcing of production, among others.² Friedman found that these world-flattening forces led to a “triple convergence” through which a new global playing field was being created at the beginning of the twenty-first century. New forms of business and organizational practices and employee skills emerged to take advantage of the new interconnected world, and 1.5 billion new “plug and play” workers from China, India, and the former Soviet Union joined the global workforce. Increased globalization and interdependence in world markets means that a far greater share of the American economy now is exposed to global markets, and more U.S. workers are competing with much cheaper labor elsewhere in the world than ever before. A few short decades ago, workers with limited skills and education felt most of the pain, but now even those possessing relatively high levels of skill and education are adversely affected by globalization (Friedman 2005).

Rob Atkinson (2005) describes the evolution of the American economy as proceeding from a Mercantilist, craft-based economy during the 1840s through the 1880s; to a factory-based, industrial economy during the 1890s through the 1940s; to a corporate, mass-production economy from the 1950s through the late 1970s; and finally, after several decades of “turbulent transition,” to the “new economy,” which is decidedly entrepreneurial and knowledge-based since 1994. Atkinson’s comparison of the two most recent periods, summarized in Table 11.1, captures the transition that Friedman’s book describes.

Third, the nature of work and the workplace has also changed dramatically, as many analysts have noted (e.g., Cappelli 1999; Cappelli et al. 1997; Marshall and Tucker 1992; Osterman 2007). Where work

Table 11.1 A Comparison of Mass Production and Entrepreneurial, Knowledge Economies

Issue	Mass production economy	Entrepreneurial, knowledge economy
Economy-wide traits		
Markets	Stable	Dynamic
Competition scope	National	Global
Organization form	Hierarchical	Networked
Production system	Mass	Flexible
Key production factor	Capital, labor	Innovation, knowledge
Key technology driver	Mechanization	Digitization
Competitive advantage	Economies of scale	Innovation/quality
Importance of research	Moderate	High
Relations between firms	Go it alone	Collaborative
Workforce		
Policy goal	Full employment	High incomes
Skills	Job-specific	Broad, sustained
Nature of employment	Stable	Dynamic
Government		
Business-government relations	Impose requirements	Assist firm growth
Regulation	Command & control	Market tools/flexibility

SOURCE: Atkinson (2005, p. 96).

had long been highly structured, repetitive, and hierarchical, it has now become flexible and fluid, and built more around tasks than jobs. The types of skills required to succeed in the new economy are quite different (Levy and Murnane 2004), as are those needed for long-term job retention and career advancement.

Fourth, the United States has experienced increasing disparities of income and wealth in the past few decades, as have other nations (see, for example, Galbraith 1998; Marshall 2000). Real earnings have flattened or declined for all but the most highly educated males, while they have grown only marginally for females, even as female labor-force participation has increased markedly (Mishel, Bernstein, and Shierholz 2009). The gap between the haves and have-nots has grown. In fact, as *Tough Choices or Tough Times*, the 2006 report of the New Commission on Skills of the American Workforce (2007) has noted, real

earnings appear to be flattening even for workers with four-year college degrees.

Fifth, as a recent Aspen Institute report pointed out, in sharp contrast to recent periods in its history, the United States faces three critical gaps over the next few decades: workers, skills, and wages (Aspen Institute 2003). The native-born workforce will be flat or declining for the near future, meaning that we will have to rely more on foreign-born workers, shift even more work off shore, or introduce more labor-saving technology into the workplace. In addition, new workers are expected to enter the workforce with lower education and skill levels than they did in the preceding period. At the same time, real wages are expected to decline in the future for many groups in the labor market. The latter two issues were addressed in several works by Briggs, who argued that the influx of large numbers of low-skilled, undocumented Mexican workers adversely affected job opportunities and substantially depressed real wages for African-American males in Los Angeles and other urban areas for many years (Briggs 1984, 2003).

Finally, workers are experiencing a breakdown of the “social contract” that prevailed in many workplaces during the early postwar era (Cappelli 1999; King, McPherson, and Long 2000; Osterman 2007). A growing majority of workers can no longer count on being rewarded to the same extent as in earlier decades when they devote their working lives to their employer, especially with respect to job security, opportunities for training and career advancement, and secure retirement income.

Labor economists once could clearly articulate the “career ladders” that workers could use to advance within a given employer or industry if they obtained the requisite education, skills, and experience. In today’s labor markets, this is no longer the case. Several as yet imperfect metaphors are emerging to describe and understand the way labor-market advancement works. Two such metaphors—the “career lattice” and the “climbing wall”—suggest that progression may sometimes require sideways or even downward movement for workers as they navigate today’s labor markets.³ As the metaphors suggest, workers will require different types of safety nets in this new environment. There may also be related, nonlinear work-arounds for potential skill shortages, such as community-college skill training and certification for graduates of four-year colleges

who have general knowledge but need practical skills or experience applying that knowledge before they can secure better paying positions (Glover et al. 2005).

Research made possible by the recently available (longitudinal, linked) employer-employee data files from the Longitudinal Employer-Household Dynamics Program (LEHD), a joint initiative of the U.S. Census Bureau and the U.S. Department of Labor's Bureau of Labor Statistics, has led to new insights on career development in today's labor markets. Brown, Haltiwanger, and Lane (2006) studied job ladders and actual career paths of workers over a decade in five industries: semiconductors, software, financial services, trucking, and retail food. Their research documented that the quality of career paths varies by industry as well as by firm. In general, workers improved their career paths by moving *into* semiconductors, software, trucking, or financial services and by moving *out* of retail food. The researchers also found a general pattern with regard to inter-firm differences and their effects. While acknowledging significant variations across firms, they write: "The basic message here is that businesses with higher-quality workforces and lower churning are more likely to survive" (Brown, Haltiwanger, and Lane 2006, p. 54). For the individual worker, it made a big difference whether the person got a job with a high-wage, career-oriented firm.

Andersson, Holzer, and Lane (2005) also used LEHD data to follow and analyze the experiences of low-income workers in California, Florida, Illinois, Maryland, and North Carolina during the late 1990s.⁴ They found considerable mobility into and out of low-earnings categories during the six years tracked by the study. But earnings increased only from \$12,000 to \$15,000 per year for these workers. Success differed by racial group. White males and Asians had the highest transition rates. In cases involving a transition into construction and manufacturing, African-American males were underrepresented relative to whites and Latinos. Of particular interest were the findings about successful transitions out of low earnings. Transitions out of low earnings were "associated with subsequent employment in high-wage industrial sectors, larger firms, firms with lower turnover, and, especially, high-wage firms" (Andersson, Holzer, and Lane 2005, p. 143). They were also more common among workers who changed jobs rather than stayed in them. Increased earnings for job-changers tended to accrue to those

who changed jobs from a low-paying to a higher paying position early on and subsequently remained with that firm.

Taken together, this new, transformed context suggests that the old approaches to workforce development, based on outmoded conceptions of the economy and labor markets, are unlikely to perform well, now or in the foreseeable future. New workforce organizational forms appear to be needed to respond to the changing nature of labor markets. Before we can say that with confidence, however, we need to examine American workforce- and economic-development systems more closely. In many respects, these aren't really "systems" at all, but fragmented sets of strategies and programs addressing ad hoc problems for varying target groups with widely differing needs and expectations.

THE AMERICAN WORKFORCE-DEVELOPMENT "SYSTEM"

Frederick Harbison, in his classic 1973 volume, *Human Resources as the Wealth of Nations*, explained that human resource development—what we now more commonly refer to as workforce development—encompasses three broad functions:

- *Maintenance*, including cash welfare benefits (such as Temporary Assistance for Needy Families), in-kind support (e.g., food stamps, assistance with transportation, and child-care subsidies), Unemployment Insurance payments, and income supplements for the working poor available through the Earned Income Tax Credit;
- *Utilization*, including basic labor exchange services through the Employment Service or one-stop core services supported by the Workforce Investment Act (WIA) of 1998, as well as similar private efforts matching workers and jobs (such as CareerBuilder.com and Monster.com); and
- *Development*, including a broad array of efforts intended to build workers' skills at all levels, by means of adult basic education (ABE), occupational skills training, customized training, on-the-job training, and apprenticeship.

Yet, on the surface, it would appear that very little about our current approach to workforce development in this country can accurately be characterized as a “system.” In fact, as noted above, what has evolved over the decades is really a hodgepodge of programs and initiatives funded by various federal, state, local, and private entities and operated by a similarly varied mix of public and private organizations with widely divergent goals and expected outcomes.⁵

Osterman (2007) outlined a framework for publicly funded workforce development. He spelled out several key functions of this system, starting with improving skill levels—its “core” function—and job matching to better connect workers and employers in the labor market. He also envisioned a series of demand-side functions, including working directly with employers and their associations to help them become more economically competitive and provide training and career opportunities to less-educated and low-skilled workers. According to Osterman (2007, p. 125), the publicly funded system for less-skilled adults and dislocated workers comprises six main “buckets” (with Fiscal Year [FY] 2005 federal budget amounts shown in parentheses):⁶

- WIA programs geared primarily toward poor adults (\$1.5 billion);
- WIA and Trade Adjustment Assistance programs for dislocated workers (\$1.6 billion);
- ABE programs funded by federal and state governments (\$570 million in federal grants to states; totaling around \$2.1 billion, including state-reported matching funds);
- State-funded programs providing training to incumbent workers (\$270 million);⁷
- The Employment Service or one-stop system supported largely by WIA for job matching (\$0.9 billion); and
- Community and technical college programs (totaling \$12 billion to \$20 billion, including state and local contributions along with \$1.2 billion in federal Perkins funding).⁸

To this list, apprenticeship programs need to be added. Although apprenticeship programs received only \$21 million from the U.S. Department of Labor in FY 2005, this covered only the expense of

administering the apprenticeship registration system and a few demonstration grants. Apprenticeship is primarily financed by employers and, in the union sector, through collective bargaining. In some areas, apprenticeship training is provided in collaboration with community and technical colleges.

To fully characterize the broader system, we must add employer-provided training, education, and career development to these public “buckets.”⁹ U.S. employers are responsible for the lion’s share of workforce-development activity. The American Society for Training and Development (ASTD) estimates that employer spending on formal workplace learning—on such activities as on-the-job training, customized training, work-based learning, and tuition assistance—exceeded \$139 billion in 2007, about two-thirds of which was spent on internal workplace learning (Paradise 2008). Employers in the ASTD survey spent \$1,103 per worker/year, about 2.15 percent of payroll.

Employer spending disproportionately favors better educated and higher skilled workers (Lerman, McKernan, and Riegg 2004). Employers across industries tend to provide far better training access and financing to their most skilled workers. The low level of training offered to the least skilled employees makes it more difficult for them to advance. Advancement out of low-wage work has become a critical issue, posing a serious obstacle for workers who want to move up to jobs with family-supporting incomes.

America’s workforce development efforts fall far short of being a coherent “system” and have many serious shortcomings, among them the following:

- Public workforce-development programs have too often failed to effectively engage employers. With few exceptions, the publicly funded workforce system does not connect well with employers. Despite the fact that workforce investment boards must be composed of a majority of business representatives, a study of the implementation of the WIA in eight states concluded that employer involvement in workforce development is weak in many areas (Barnow and King 2005; Rockefeller Institute of Government 2004a,b).
- Most public workforce training programs have not been well connected to educational institutions, especially community

colleges (Grubb 1996a,b; Grubb et al. 1999). Although community and technical colleges generally enjoy a better reputation with employers as a source of trained workers than do workforce programs (Laufer and Winship 2004), their completion rates are very low (McIntosh and Rouse 2009). Few students obtain any form of credential. Further, community colleges rarely offer effective job placement services.

- The training in American public workforce development is generally too short term to have the necessary impact (King 2008). In a study of persistence and outcomes of community college in Washington State, Prince and Jenkins (2005) found that at least one year of community college work with a credential is needed to make significant advancements in employment and earnings.
- Even short-term follow-up services are rarely provided in workforce-development programs, yet the highest turnover of new employees occurs during the early stages of their employment (Price 1977, p. 84).
- Federal support for workforce development, broadly considered, has been on the decline for decades, despite a growing need for publicly funded efforts in an increasingly global marketplace.

Despite these shortcomings, in the past decade new approaches to workforce development have emerged that show real promise to help improve the employment and earnings of low-income individuals. These so-called sectoral strategies, utilizing workforce intermediaries as key actors, appear in part to succeed by making explicit connections to economic development, among other important steps. A brief review of economic development follows in the next section.

ECONOMIC DEVELOPMENT AND WORKFORCE DEVELOPMENT

In the United States, the traditional approaches to economic development and workforce development have differed substantially.¹⁰ In economic development, the key focus is on marketing or “branding” to attract firms and jobs to the area. Attention to specific workforce issues, if any, is typically limited to recruiting high-level out-of-area talent to fill top positions in management, engineering, and marketing. Economic developers tend to leave details to the market after an initial assist through public sector incentives. In contrast, workforce developers are concerned about these details, including which occupations might be critical for a given industry cluster to flourish, how *local residents* might best be prepared for these jobs, how long the process to prepare the workforce might take, and how this process will be financed.

A market approach may take many years to accomplish, during which time area residents will not be prepared for jobs, so companies will incur added costs to recruit out-of-town employees for the available jobs. Also, individual employers typically do not foresee skill shortages until they are imminent. Firms in growing clusters frequently do not identify or project their workforce needs more than a few months into the future and are generally unwilling to commit significant resources to planning.

Successful, timely preparation of area residents often requires considerable planning and sustained investment—and coordination—of public and private resources. To be effective, a workforce-development system must give attention to the need for workers across the spectrum of skill levels. Workforce developers are aware that one must plan ahead to develop and deploy effective training programs. Traditionally, the workforce system has been charged primarily with addressing *current* workforce demands and training for *existing* jobs. However, workforce development systems have begun moving toward innovation and capacity building for the emerging future.

The Rise of Cluster-Driven Economic Development

The initial description of industry clusters traces back to economist Alfred Marshall, who described the advantages found in externalities of specialized industry locations in his *Principles of Economics* (1890). Michael Porter of the Harvard Business School popularized the modern concept of industry clusters (Porter 1990). Although Porter's initial work on competitive advantages was originally applied to nations, he soon recognized that most economic activities take place at the regional level. So, he extended his theory and applied it to regional, state, and metropolitan economies as well (Porter 2000). According to Porter, clusters are a striking feature of the economy of virtually every country, region, state, and even metropolitan area, especially in advanced economies (Porter 1998b). It is now common for states and regions to use clusters to help them target economic development activities. Porter defines a cluster as "A geographically proximate group of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (such as universities, standard-setting agencies, trade associations) in a particular field, linked by commonalities and complementarities" (Porter 2000, p. 16).

Clusters can take varying forms, depending on their depth and sophistication, but a majority of them include end-product or service companies; suppliers of specialized inputs, components, machinery, and business services; financial institutions; and firms in related industries. They may also include the producers of complementary products and specialized infrastructure providers, including governmental entities (Porter 1998b, p. 199). Porter argues that clusters may be considered an alternative way of organizing a value chain (Porter 1998a, p. 80).

In *The Competitive Advantage of Nations*, Porter (1990) developed the Diamond Model in which the competitive advantage of nations lies in four interlinked factors: 1) demand conditions, 2) industry strategy or rivalry, 3) related and supporting industries, and 4) factor conditions. In the model, government plays a role as catalyst and challenger—encouraging and pushing businesses to raise their aspirations and move to higher levels of competitive performance, stimulating early demand for advanced products, focusing on specialized factor creation, and stimulating local rivalry by limiting direct cooperation and enforcing

anti-trust regulations. Porter used his “diamond of advantage” notion to determine which firms, sectors, or industries had competitive advantages, and his emphasis on the importance of related and supporting firms or industries encouraged interest in clusters.

Clusters offer an organizing framework for understanding regional economies and for developing economic strategies. Cluster analysis can help diagnose a region’s economic opportunities and challenges and identify what a region might do to influence its economic future. It can help highlight a region’s competitive strengths and weaknesses and clarify an area’s economic drivers.

Regional economies are composed of three main types: natural-resource clusters, local clusters, and traded clusters, which can be characterized as follows:

- *Natural-resource clusters* are found in regions where a particular natural resource is abundant.
- *Local clusters* are found in every region and produce goods and services that are needed by the local population (these include retail and personal-services firms, and hospitals and other medical-services institutions).
- *Traded clusters* in a region produce goods and services that are in competition with other regions and nations. They trade across the nation and even the globe (semiconductors and medical devices, for example) and tend to be concentrated in only a few regions.

Traded clusters tend to drive regional prosperity. Although local clusters account for roughly two-thirds of employment in an average region, traded clusters are usually the keys to the prosperity and growth of the region. This is because traded clusters can achieve higher productivity and attain growth that is unconstrained by the size of the local market. The success of traded clusters creates much of the demand for the services and products of local clusters. Traded clusters bring new value to a region, rather than simply shifting value within a region (Porter 2003).

Stuart Rosenfeld, who has conducted research with regions, states, and community colleges, defines an industry cluster as “a geographically bounded concentration of similar, related or complementary

businesses, with active channels for business transactions, communications and dialogue, that share specialized infrastructure, labor markets and services, and that are faced with common opportunities and threats” (Rosenfeld 1997, p.10). In a more recent publication, he explains the concept in more operational terms: “A cluster consists of groups of companies and/or services and all of the public and private entities on which they in some way depend, including suppliers, consultants, bankers, lawyers, education and training providers, business and professional associations and government agencies” (Rosenfeld 2002, p. 8).

Rosenfeld further explains the minimum requirements of a cluster as follows: “A scale of demand sufficient to produce externalities (i.e., sufficient number of firms with common or overlapping needs to create or attract more services and resources, including labor, than would be available to more isolated firms).” He identifies the externalities produced by mature and growing clusters. They include mid-skilled technical labor-force members who are educated locally and area professionals (such as bankers, consultants, and accountants) with a depth of understanding regarding the needs of local firms. “There is a depth of relationship among members within the region. The dynamics of clusters are embodied in the value-added and knowledge-adding chains among its members” (Rosenfeld 2002, pp. 9–10).

Rosenfeld’s explanation highlights the importance of the mid-skilled labor force and the workforce-development system’s role in creating it, as does a recent work by Holzer and Lerman (2007). Of course, workforce quality is one of several factors that influence economic development by means of a regional industry cluster. Others include innovation, entrepreneurship, and business incubation, venture capital funding, infrastructure development, product characteristics, the location of suppliers, availability of professional services, competitors, and the customer base.

In the past decade, a number of states have begun pursuing cluster-based economic-development strategies to bolster the competitiveness of their economies and have attempted to link them much more closely to their workforce-development strategies. The National Governors Association’s (NGA) Center for Best Practices has played a key role in fostering the development and use of such strategies over the past decade, using multi-state “policy academies” as a key tool (see NGA

Center for Best Practices 2002; Simon and Hoffman 2005). For example, six states—Idaho, Missouri, Montana, New Jersey, Ohio, and Virginia—participated in NGA’s Next-Generation of Workforce Development Project, with support from the Ford Foundation and the U.S. Department of Labor, and have continued to develop policies and activities that better link their economic- and workforce-development systems.

SECTORAL APPROACHES TO WORKFORCE DEVELOPMENT

Labor-market intermediaries have been in existence for a long time (see Levitan, Mangum, and Marshall 1981, chapter 24; National Commission for Manpower Policy 1978). They range from the public employment service to union hiring halls and staffing agencies. A new form of labor-market intermediary has been developed since the 1990s, which has come to be called a “workforce intermediary” (Giloth 2004). These intermediaries have several distinguishing features, including an explicit “dual-customer” focus on both participants and employers, serving as integrators of varied funding streams, fostering new ideas and solutions and the pursuit of high-skills, high-wage strategies rather than simply promoting labor-force attachment, among others (Giloth 2004, p. 7). Workforce intermediaries often pursue sectoral approaches to workforce development, operating in partnership with industry clusters. These sectoral partnerships connect supply and demand for a cluster of firms. They generally focus their efforts on improving the economic status of low-income residents in American cities (Clark and Dawson 1995).

A sectoral strategy to workforce development functions as follows. It *targets* a specific industry or cluster of occupations, developing a deep understanding of the interrelationships between business competitiveness and the workforce needs of the targeted industry. It *intervenes* through a credible organization or set of organizations, crafting workforce solutions tailored to that industry and its region. It *supports workers* in improving their range of employment-related skills, improving their ability to compete for higher quality work opportunities. It

meets the needs of employers, improving their ability to compete in the marketplace. And it *creates lasting change* in the labor-market system to the benefit of both workers and employers (Conway et al. 2007).

Sectoral approaches offer promise to help resolve problems that have long plagued workforce development in America. In particular, such programs:

- Offer a means to effectively engage employers in public workforce development by focusing on selected industries and firms, developing a keen knowledge of their situation, and implementing strategies to meet their needs.
- Help integrate funding streams, putting pieces together to provide effective services to reach successful outcomes. This is achieved through advocacy and expert knowledge of the fragmented array of available public workforce, social services, tuition assistance, and work-support programs.
- Work with community colleges as partners, improve their performance, and help provide more substantial training tailored to employer needs.
- Provide support and follow-up services that help clients keep the jobs they obtain.

In short, sectoral programs serve as integrators. They convene the parties and establish public/private partnerships. They fill the gaps in service needs to help ensure successful completion of training and entry into career paths.

Sectoral workforce-development programs target a particular industry—and specific occupations within it—to improve the quality of job opportunities available to low-income and disadvantaged individuals. They take a dual customer approach, serving both employers and job seekers. They establish sustained relationships with firms over extended periods of time and develop deep knowledge of the industry. They match workers to jobs through careful screening, and address whatever skills are needed for the jobs, including “soft” skills, life skills, language skills, literacy and basic skills, and occupational skills. At the same time, they develop expertise in overcoming barriers of disadvantaged workers and implement support and follow-up services to help assure training completion, certification, and job retention.

Sectoral workforce-development programs operate on both the supply and demand sides of the labor market. They take a systems approach, and the lasting changes they seek may involve the modification of industry practices, educational institutions, training programs, or public policy. Sectoral programs seek to promote access to jobs by removing barriers to getting good jobs or advancing to better jobs. Alternatively, where jobs offer low wages, few benefits, and poor working conditions, sector strategists may focus on improving the quality of jobs. According to *A Governors Guide to Cluster-Based Economic Development*:

The best sectoral organizations are more than brokers or bridges between disadvantaged communities and industry; they help articulate career paths and advancement opportunities, develop standardized industry training, establish standards for job quality and working conditions, assist with market coordination, broker business networks, and help develop strategic plans. Successful intermediaries employ staff with solid cluster experience and expertise, people who understand employers' needs but also have the trust of the communities they serve. (NGA Center for Best Practices 2002, p. 32)

Sectoral workforce development can provide an effective complement to economic-development activities, especially as cluster-driven economic development has become an increasingly popular approach. Indeed, combining the two offers the logical and practical means to promote a regional economy and help ensure that local residents benefit from the job growth that occurs. Sectoral programs have the potential to address three goals simultaneously: increase skills, improve productivity, and enhance regional competitiveness. Sectoral workforce-development programs aim to create value for employers and to strengthen their targeted industry sector(s) while creating pathways to employment and advancement for low-income individuals (Giloth 2004).

Sectoral workforce-development programs began during the 1990s with funding from philanthropic organizations. Since then, variations of the sectoral approach have become more widely adopted. A recent survey of sectoral workforce programs made by the Workforce Strategies Initiative at the Aspen Institute found 227 organizations targeting approximately 20 industries (Conway et al. 2007, p. 82). In 2001, the U.S.

Department of Labor funded 39 Workforce Investment Boards to participate in a Sectoral Employment Demonstration project (Pindus et al. 2004). Subsequent Labor Department initiatives—including the High Growth Job Training Initiative and the Community-Based Job Training Initiative, which sought to link workforce-development organizations with high-growth industries in need of skilled workers—included elements of sectoral approach. In 2006, the NGA, in collaboration with the Corporation for a Skilled America and the National Network of Sector Partners, began a project with 11 states to accelerate state adoption of sectoral approaches to workforce development.

Sectoral programs are undertaken by collaborations, usually including community colleges as training partners. The collaborations can be initiated, organized, and led by any of a variety of organizations, including community-based organizations, local workforce-investment boards, educational institutions, faith-based organizations, or industry associations.

The Effectiveness of Sectoral Workforce Development

Evidence is emerging on the effectiveness of sectoral workforce-development approaches. The National Economic Development and Law Center and the National Network of Sector Partners have documented sectoral workforce practices.¹¹ Evaluations of sectoral programs have been conducted by several organizations, including the Aspen Institute, Public/Private Ventures (P/PV), Abt Associates, the Ray Marshall Center, and others. Some of these studies include longitudinal data on participant outcomes, and a few have actually estimated program impacts on employment, earnings, or other measures.

The Aspen Institute and P/PV have conducted the most extensive field research on sectoral workforce programs. As part of its Sectoral Employment Development Learning Project, Aspen's Workforce Strategies Initiative group conducted case studies of six sectoral programs and collected data on participants at the start of training, and at 90 days, at one year, and at two years after training. The six programs and their industry targets are presented in Table 11.2.

The Aspen Institute's in-depth case studies—which relied on pre- and post-training comparisons rather than an experimental or

Table 11.2 Six Sectoral Workforce Programs Studied by the Aspen Institute

Program (location)	Target industry
Asian Neighborhood Design (San Francisco, CA)	Construction industry
Garment Industry Development Corporation (New York, NY)	Garment industry
Focus: HOPE (Detroit, MI)	Metalworking manufacturing
Jane Addams Resource Corporation (Chicago, IL)	Metalworking manufacturing
Paraprofessional Healthcare Institute (Bronx, NY)	Home care (home health aides)
Project QUEST (San Antonio, TX)	Health services; business systems and information technology; and maintenance, repair, and overhaul (including heavy equipment/diesel mechanics, aircraft mechanics, auto collision repair technicians, and electricians)

SOURCE: Conway et al. (2007).

quasi-experimental design—found that 87 percent of participants completed their training and, on average, participants increased their earnings by 41 percent within one year after training. Across all the programs, average earnings rose from \$9,036 shortly before or during training to \$19,809 two years after training. This increase reflected a rise in both wages and hours worked. Also, significant proportions of those placed in jobs were receiving fringe benefits. In the second year of employment, large shares of participants reported receiving health-care benefits (65 percent), paid vacation (77 percent), paid sick leave (64 percent), and pensions other than Social Security (59 percent). Fully 82 percent of respondents reported that they were satisfied with the quality of their jobs, and the same percentage believed that their future job prospects improved due to their participation in the sectoral program (Zandniapour and Conway 2002, pp. 9–11).

P/PV studied a wider array of nine sectoral initiatives, including six skills-training organizations, two social enterprises (to place day laborers and home health-care providers), and a membership organization

(for family child-care providers). These programs are listed in Table 11.3.

The P/PV study included baseline and one- and two-year follow-up studies administered by Abt Associates. Although two of the initiatives, ARCH and PhAME, tried to establish in-house training and failed, the others were able to recruit and place low-income, less-educated, and minority individuals into employment previously unavailable to them. Participants experienced more stable employment, higher hourly wages, and better quality jobs. P/PV concluded that the most successful organizations sought to combine employment and training services for job seekers with efforts to influence the practices of employers and educators or to change state policies to do so (Roder, Clymer, and Wyckoff 2008).

Table 11.3 Sectoral Programs Studied by Public/Private Ventures

Program (location)	Target industry/occupation
Skills-training organizations	
Action to Rehabilitate Community Housing (ARCH) (Washington, DC)	Paralegal profession
Philadelphia Area Accelerated Manufacturing Education, Inc. (PhAME)	Manufacturing
Southern Good Faith Fund (Pine Bluff, AR)	Certified nursing assistants
Training, Inc. (Newark, NJ)	Information technology
Project QUEST (San Antonio, TX)	Health services; business systems/information technology; and maintenance, repair, and overhaul
WIRE-Net (Cleveland, OH)	Metalworking
Social enterprises	
Quality Care Partners	Health care
New Hampshire Community Loan Fund	
Primavera Works (Tucson, AZ)	Day laborer
Membership organization	
Day Care Justice Co-op	Child care
Direct Action for Rights and Equality (DARE) (Providence, RI)	

SOURCE: Roder, Clymer, and Wyckoff (2008).

Examples of Successful Sectoral Programs

Project QUEST is a training and support services program in San Antonio aimed at working poor people with high-school degrees (Rademacher, Bear, and Conway 2001). Project QUEST was founded as a nonprofit organization in 1992 by two community organizations, Communities Organized for Public Service (COPS) and Metro Alliance, both affiliated with the Industrial Areas Foundation (see chapter in this volume by Ernesto Cortés Jr.). The program identifies jobs in high demand that pay a living wage and works with firms to identify job openings and the skills required. Training is provided through local community colleges and usually lasts from one to four semesters. The program provides modest financial support, extensive counseling, and follow-up services.

Lautsch and Osterman (1998) estimated that post-program earnings for Project QUEST participants increased over their pre-program earnings by \$7,457 (p. 221). Zandniapour and Conway (2002) compared pre- and post-program earnings of participants in San Antonio's Project QUEST and five other sectoral workforce programs over a two-year period and found significant improvements in hourly pay and hours of work earnings, and proportions of participants covered by fringe benefits, as previously summarized. To be sure, these results are based only on simple pre-post comparisons of gross outcomes and do not address the value-added issue. The impacts of Project QUEST are currently being evaluated by P/PV. In addition, P/PV has evaluated three other sectoral programs using a random assignment design and found strong positive impacts, as previewed in a brief published in May 2009. The evaluated programs are Jewish Vocational Services in Boston, MA, Per Scholas in New York, NY, and the Wisconsin Regional Partnership in Milwaukee, WI (Maguire et al. 2009).

Project QUEST has been replicated by four sister organizations in Texas and Arizona: Capital IDEA (Austin), VIDA (Rio Grande Valley), Project ARRIBA (El Paso), and JobPath (Tucson). All of these programs were established during the mid to late 1990s by their local interfaith organizations, multi-denominational coalitions of congregations from churches and synagogues established through the Southwest Chapter of the Industrial Areas Foundation. Key benefits of this model are that

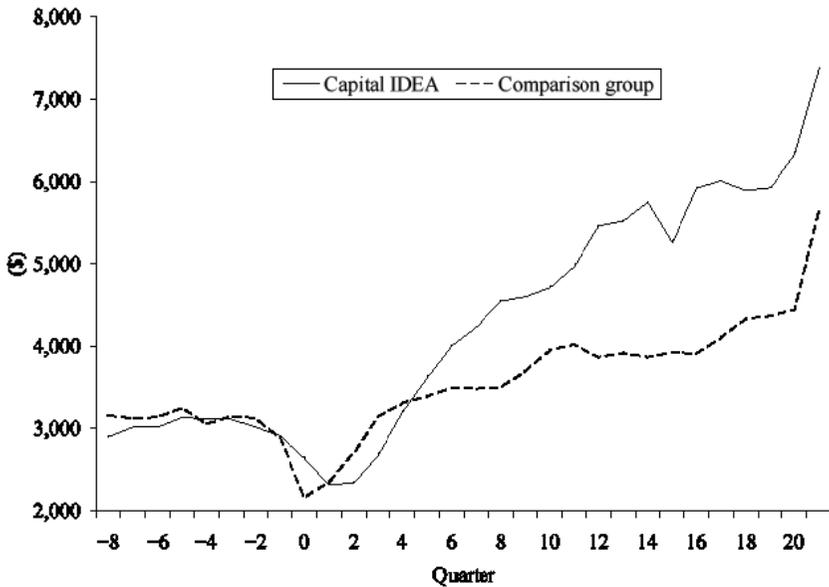
the local interfaith organizations help in providing political support and raising funds for the programs, assist in identifying suitable candidates for participation, and provide mentoring and motivational support.

Capital IDEA offers occupational skills training and extensive support services to low-income residents, concentrating on long-term engagement to improve education and labor-market outcomes. It takes a sectoral approach, focusing on occupations in high demand, typically with starting wages of \$14 per hour or more in health care, information technology, accounting, wireless technologies, utilities, and education. Fully three-quarters of Capital IDEA's training in the 2003–2006 period was in nursing and allied health careers, and its training is usually provided through Austin Community College.

The evaluation results for Capital IDEA's efforts are noteworthy. Whereas the previous studies were only able to make simple comparisons of participant earnings before and after training, Smith, King, and Schroeder (2007, 2008) documented the gross labor-market outcomes for participants from Capital IDEA and estimated labor-market impacts for participants using a quasi-experimental design. They measured the value added of intensive occupational skills investments with wrap-around support services provided through Capital IDEA relative to registration for or receipt of low-intensity labor-force attachment services. Comparison group members drawn from the local Employment Service, and WIA "core services" rolls were closely matched on an array of variables, including age, race/ethnicity, gender, and prior employment and earnings patterns, through a technique known as weighted multivariate matching.¹² Incremental training impacts were estimated over a five-year period following program entry. The study is continuing, so longer term impacts will be documented as additional data become available.

Five years (20 quarters) after their initial entry into training, Capital IDEA participants, a group that entered in the 2003–2005 period and included both graduates and program dropouts, enjoyed a substantial earnings advantage over comparison group members (Figure 11.1).¹³ At the end of five years, the statistically significant advantage was about \$1,500 per quarter (or about \$6,000 per year) and still widening. By the end of the period, participants were experiencing roughly a 100 percent gain in quarterly earnings compared with their two-year pre-program

Figure 11.1 Quarterly Earnings for Capital IDEA Participants and Members of a Comparison Group



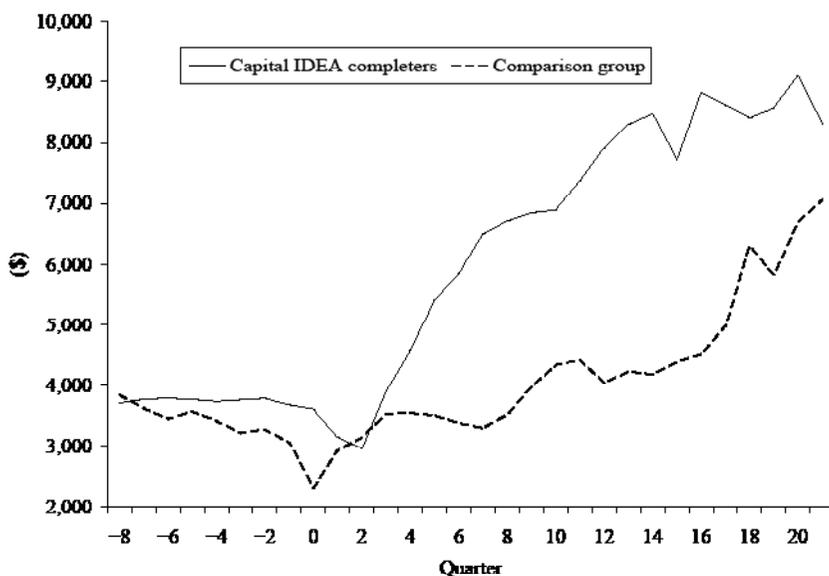
NOTE: “0” represents the participant’s entry into the training program.

SOURCE: Smith, King, and Schroeder (2008).

average. In contrast, the earnings of the comparison group members who only had the benefit of less intensive labor-force attachment services flattened out for much of the post-entry period.

Further analysis suggests that, much like the results reported in a “tipping point” study in Washington State (Prince and Jenkins 2005), the earnings impacts appear to be strongly associated with program completion and attaining the occupational (nursing/allied health) certificates. As Figure 11.2 shows, program completers actually garnered most of the impacts. In addition to enjoying substantial continuing earnings effects from Capital IDEA’s sectoral workforce-training program, Capital IDEA participants were also significantly more likely to qualify for Unemployment Insurance benefits and much less likely to claim them in the follow-up period than were their comparison group counterparts (Smith, King, and Schroeder 2008).

Figure 11.2 Quarterly Earnings for Capital IDEA Program Completers and Members of a Comparison Group



NOTE: “0” represents the participant’s entry into the training program.

SOURCE: Unpublished results for 2003–2005 Capital IDEA program completers (Ray Marshall Center).

These results provide compelling empirical evidence that a sectoral training strategy can be successfully implemented through an established workforce intermediary with strong employer engagement and commitment to a high-skills, high-wage strategy for its participants.

Promising sectoral training programs have been operating and are now emerging in other parts of the country as well, including the following.

- *Workforce Solutions—The Gulf Coast Workforce Board* (Houston, TX). For the past several years, Houston’s workforce board has been operating a large-scale sectoral initiative focused on the region’s expansive health-care industry sector, which includes numerous hospitals and universities, among other employers (see Love et al. 2006). This effort has been driven by perceived shortages of nurses in the region, and the initiative

has advocated successfully for improvements in Texas state policies and budgets for nursing education.

- *The Wisconsin Regional Training Partnership (WRTP)* (Milwaukee, WI). WRTP is a nonprofit organization begun during the 1990s with the assistance of the Center on Wisconsin Strategy at the University of Wisconsin. The initiative is a collaboration of employers, unions, and community residents developed in response to the devastating decade of the 1980s, during which Milwaukee lost a third of its industrial base, and poverty and unemployment rose dramatically. WRTP helped manufacturing recover in Milwaukee by assisting local companies to modernize plants and adopt innovative workplace practices; upgrading the skills of incumbent workers; and recruiting, training, and mentoring new workers to replace large numbers of retiring workers. By the year 2003, the WRTP collaboration had grown to 125 worksite partners covering about 125,000 employees. The partners had invested more than \$100 million in education and training. WRTP had placed more than 1,400 community residents into jobs at family-supporting wages. In short, WRTP has benefited employers, workers, unions, and the community (Bernhardt, Dresser, and Rogers 2004). In recent years, WRTP has expanded to replicate its collaboration model in other Milwaukee industries, including construction, health care, transportation, and utilities.
- *The Investing in Workforce Intermediaries Initiative/National Fund for Workforce Solutions* (multisite). This initiative, which was initially created and funded by the Annie E. Casey, Ford, and Rockefeller Foundations, began in 2004–2005 in five sites and one state—Austin, Baltimore, Boston, New York, San Francisco, and Pennsylvania. Sites with workforce-intermediary organizations and supporting partners were provided with seed funding and encouraged to focus their efforts on a few growth sectors of their local economies while creating career pathways for less-skilled workers. Health care was chosen as a target sector in most of the sites. The initiative has grown into a larger effort involving about a dozen sites around the country with funding from the National Fund for Workforce Solutions, which

includes support from foundations, corporations, and the U.S. Department of Labor's Employment and Training Administration (see Griffen 2008; National Fund for Workforce Solutions 2008). A related initiative, the *Jobs-to-Careers Initiative*, supports a number of intermediary-driven, work-based learning and career advancement projects in health care with funding from the Robert Wood Johnson and Hitachi Foundations and others. Boston-based Jobs for the Future is coordinating all of these efforts.

- *WIRED Initiative* (multisite). The U.S. Department of Labor's Employment and Training Administration began the *Workforce Innovation in Regional Economic Development (WIRED)* demonstrations in 13 regions in late 2006 and has since expanded to a total of 39 regions across the country.¹⁴ Regional WIRED projects, not surprisingly, vary widely in their sectoral emphases, funding mix, and participating actors, but all of the projects are explicitly focused on more closely aligning economic- and workforce-development strategies in key sectors, often with the active involvement of workforce-intermediary organizations.
- *Tulsa Initiative* (Tulsa, OK). The Ray Marshall Center is currently working with colleagues in a project led by Harvard's Center for the Developing Child to design and implement a sectoral jobs strategy for the parents of children in local Head Start and Early Head Start programs in a unique dual-generation anti-poverty initiative. The initiative draws on findings of the interdisciplinary science of early childhood and early brain development, as well as emerging evidence that children in families with stable and growing incomes have significantly improved academic and behavioral outcomes (Yoshikawa, Weisner, and Lowe 2006). Candidate target sectors for the Tulsa Initiative include health care, manufacturing (including aerospace), early childhood development, and construction.

GUIDING PRINCIPLES FOR COORDINATED SECTORAL DEVELOPMENT

Sectoral workforce programs are labor-market intermediaries that serve dual customers—both employers and workers (and job applicants) in an industrial cluster of firms that they come to know well. Successful sectoral strategies can address multiple goals simultaneously, including strengthening regional competitiveness and workforce preparedness and promoting broadly shared prosperity and family self-sufficiency. They can align workforce development with economic development to benefit local residents. The National Center on Education and the Economy (NCEE) has conducted a series of case studies of local initiatives to combine workforce development with economic development (NCEE 2007).

Effective industry engagement is critical to success. Success begins with careful selection of industries and firms facing shortages of skilled workers, collaborating with employers to clearly identify the skills needed, and finding ways to fulfill those needs. Sectoral workforce programs usually focus selectively on good jobs offering high pay along with benefits and opportunities for advancement. Alternatively, they may target low-wage jobs that are key entry points into the labor market for low-skilled individuals but the jobs could be improved through restructuring or connecting them with pathways leading to higher wage jobs. Sectoral workforce development aims at long-term retention and career advancement, whether through ladders or lattices, in the “right” firms and industries. As programs build capacity, they can partner with multiple sectors, enabling them to offer participants a wider array of occupational opportunities.

Sectoral workforce programs operate as intermediaries between the supply and demand sides of the labor market, serving as interpreters, integrators, and facilitators. There is a critical need for good communication between economic developers and workforce developers, between industry and educators, and between participants and social service agencies. Sectoral workforce programs can use a variety of approaches that benefit low-income workers by producing “systems changes” in industry practices, education and training, and/or public policy.

Training is geared to employer needs. Appropriate preparation in math and reading and in acquisition of English language is usually a key beginning, but effective accelerated remediation strategies and preparation in these foundation skills should be closely connected to occupational skill preparation. Such connections are often missing.

Sectoral programs partner with community colleges and help them become more effective at producing the skills that employers need. At least one and often two years of education or training beyond high school plus certification are needed to produce levels of knowledge and skills that are meaningful to industry. This is not a new message. Similar recommendations have been made by the New Commission on Skills for the American Workforce in their 2006 report, *Tough Choices or Tough Times*, and by the Skills2Compete campaign.¹⁵ Long-term, serious training is markedly different from workforce development of the past. As LaLonde concluded in his 1995 review of evaluations of public training programs: “The best summary of evidence about the impact of past programs is that we got what we paid for . . . Not surprisingly, modest investments usually yield modest gains—too small to have much effect on poverty rates” (LaLonde 1995, p. 149).

Wherever possible, classroom instruction is joined with work-based learning, combining earning with learning through paid internships, apprenticeships, or other hands-on practical experience. This not only enhances learning but also gives job seekers early exposure to the types of work involved, provides an important technique for engaging employers, and offers a source of income for households during long-term training.

Case/care management is provided through the program to encourage completion of training. This includes individual counseling, peer group meetings, tuition assistance, and work supports (such as child care, transportation, social services, and income supplements). Follow-through services are available afterward to help ensure retention on the job after graduation.

To be sustained, a sectoral workforce program needs to maintain good records and build a track record of performance through credible evaluation of results achieved, producing outcomes for workers, employers, and the public. Evaluation not only documents program

success to justify continued funding, but also feeds a process of continuous improvement.

Revitalizing Active Labor-Market Policy in America

Evidence is accumulating to demonstrate that many workforce-development programs yield strong rates of return to participants, employers, and the public (King 2008; King et al. 2008; Smith, King, and Schroeder 2007). Yet for decades, workforce development has been relegated to a minor role in American economic policy for reasons that are now well documented. As noted in this chapter, substantial work has been under way in recent years to more closely align economic- and workforce-development policy through sectoral strategies and to introduce new organizational forms—workforce intermediaries—that could and should raise its profile. Sectoral workforce strategies—bolstered through the use of workforce intermediaries and pressing for high skills and high wages for all workers, including those who have not had access to good opportunities—represent the way forward.

Notwithstanding the deep recession that has been under way since 2007, there are likely to soon be real opportunities for turning the nation's current workforce-development situation around through such active labor-market policies. First, while many older workers may choose to work longer to restore the value of their severely depleted retirement savings, jobs will open up in the future as the baby boom generation begins to retire in large numbers. Second, as the Aspen Institute's 2003 report suggested, the United States will face three important gaps in the near future: workers, skills, and wages. More effective workforce strategies are needed to ensure that workers will be there with the right skills to address these gaps as they surface. Third, considerable knowledge and experience have been developed—at all levels—about how to connect economic and workforce policies for enhanced, lasting impacts that can benefit employers and workers; the result is insight that can now be put to use more broadly. Finally, there seems to be a growing, though grudging, recognition that the labor-market policy mix the United States has been content with for years, one tilted heavily toward passive rather than active elements, has not worked all that well and that new, more active approaches are in order.

The challenge will be to secure the necessary resources and reach a sufficient scale in order to truly make such policies work at the level we now need. The sectoral workforce-development approaches outlined in this chapter hold enormous promise and would move the United States much more toward the active labor-market policy that is sorely needed.

Notes

1. Mangum (1976) and Clague and Kramer (1976) document the early history and evolution of what were then known as “manpower” policies.
2. In-sourcing involves arranging for previously subcontracted work to be done in-house, often in a stand-alone facility.
3. For example, Stevens (2001) describes the climbing wall metaphor and discusses its implications for workforce-development policy, while the Council for Adult and Experiential Learning (2005) outlines the way career lattices are being used in designing effective interventions for training and employing nurses.
4. This research is reinforced and expanded upon in a follow-up volume using LEHD data by Brown, Haltiwanger, and Lane (2006).
5. Barnow and King (2005) describe the “system” in a report prepared for the Rockefeller Institute of Government. Two companion volumes (Rockefeller Institute of Government 2004a, b) offer details for the eight states and more than a dozen local areas that participated in the field network study, which was funded by the U.S. Department of Labor’s Employment and Training Administration and led by the Rockefeller Institute of Government.
6. These amounts are derived mainly from the President’s FY 2006 budget request and related documents. Kletzer and Koch estimate that, including all active and passive labor-market activities, U.S. spending in 2000 amounted to only about 0.38 percent of gross domestic product.
7. State Unemployment Insurance–funded training programs, their key features, and the literature on their effectiveness are reviewed in King and Smith (2007).
8. Federal funds have historically accounted for only about 6–10 percent of total Perkins spending. Overall community and technical college spending on workforce-related programs is likely to be many times greater than the total shown here.
9. This discussion draws on King (2008).
10. This discussion draws on Glover et al. (2005).
11. The National Economic Development and Law Center has recently been renamed Insight Center for Community Economic Development. See <http://www.insightccd.org/>.
12. Details of the matching procedure, a variation of “nearest-neighbor” matching, are provided in Smith, King, and Schroeder (2008).

13. Krueger (2003) observed a similar pattern of earnings for similar investments in training and workforce services.
14. See <http://www.doleta.gov/wired/> for more information.
15. See <http://www.skills2compete.org> for more information.

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