The Core Model: What Factors Influence Associational Involvement in Workforce Development?

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Using data from a national sample (n=716) of American business associations we examine the prevalence of workforce development activities among associations. This study examines the relationship between the level of workforce development services provided in the organization, organizational characteristics, economic development and partnerships. The results show that more heavily resourced organizations, as well as those with deep economic development activities, provided higher levels of workforce development. Moreover, the study shows that training partnerships are important.

Keywords: Workforce Development, Business Associations, Economic Development

In the last two decades, globalization and the restructuring of industries and firms have radically changed the nature of the employment relationship in the U.S. With restructuring, and the need to obtain greater production flexibility, many firms are downsizing and outsourcing production and service activities. As a result, internal labor markets have been devolved. Workers can increasingly expect to advance by moving between firms, rather than upward within a single firm as in the past (Harrison, 1997; Kallenberg & Associates, 1997). Greater global competition and the introduction of more computer-based technology are also prompting employers to require greater skill and educational levels from those they hire (Autor, Levy, & Murnane, 2001; Grubb, 2001; Kane & Rouse, 1995; Murnane, Willet, & Levy, 1995; Tilly & Tilly, 1998). In turn, employers depend more on the external labor market to meet their hiring needs and less on an internal queue of internally trained and nurtured workers. As a consequence, they are increasingly disconnected from potential pools of workers. This necessitates greater employer scrutiny of potential employees, which can raise hiring costs (Rosenbaum & Binder, 1997).

Many scholars hold that these changes disproportionately impact low-skilled or underemployed workers. Low-skilled workers do not have the "weak ties" that lead to employment in "good" job settings—those which offer some skill ladders within the job setting and opportunities for career advancement (Holzer, 1996; Osterman, 1999). Low-skilled and low-wage workers also face increased demands for skill in entry-level jobs, but lack the personal resources to obtain new skills on their own (Kazis & Miller, 2001).

In this environment, intermediaries are increasingly engaged in the "matchmaking" that is now required to make the employment relationship work (Harrison & Weiss, 1998; Jobs for the Future, 1998; Melendez, 1996; Seavey & Kazis, 1994). Community-based organizations and governmental agencies have been training, placing, and supporting low-income and low-skilled people for the last several decades (Cordero-Guzman, 2000; Harrison & Weiss, 1998; Melendez, 1996). Scholars and policymakers have also begun to take notice of less traditional intermediaries, such as community colleges, unions, and temporary help agencies (Fitzgerald, 1997; Melendez et al., 1999; Seavy, 1998).

The most successful intermediaries have adopted a dual strategy of improving the skills of disadvantaged workers while servicing the needs of employers in low wage labor markets (Kazis & Miller, 2001; Osterman, 1999). Community based organizations and community colleges have consistently provided connecting services to workers as intermediaries (Grubb, 2001; Melendez, 1997; Melendez & Harrison, 1997). It is in this context that business associations have begun to play an important role in providing access to existing networks of employers that share a common interest in economic development, and the emerging or incumbent workforce. The recent surge in the participation of business association's participation in programs targeting the disadvantaged, such as "school-to-work" and "welfare-to-work," has raised awareness of the potential role that they can play in providing new paths to employment opportunities. However, of these non-traditional intermediaries, business associations remain the least understood and studied.

Theoretical Framework

What are business associations?

Business associations are membership organizations representing individual firms. As Knoke (1990) points out, associations like other collective action organizations "seek non-market solutions to individual or group problems." As such, they work outside of the market in the policymaking, educational, service spheres. Exempt from direct political activities—as are all non-profits—they may represent their business constituency by lobbying legislators. While business associations may buy and sell goods and services, they are not for-profit entities. Associations are distinguished from firms in that member firms are not linked by ownership or contractual ties (Doner, Schneider, & Wilson, 1998).

Business associations represent a collective membership of firms. Knoke (1990) distinguishes them from other social agencies in that they have formal rules for membership, restricting the type of organization/individual that can join. Business associations, such as chambers of commerce, often represent firms from a diversified set of industries that share a common location—be it a neighborhood, city, metropolitan, or larger area. Other business associations—also called trade associations—focus on members within one or a few related industries. For example, the American Furniture Manufacturers Association and the Southern Forest Products Association represent members in a specific industry. Trade associations may also operate at different geographic levels but generally appear at the local level only where that industry is concentrated in the region or state.

The Primary Activities of Business Associations

Economic development is in many respects the core of associational activity. Economic development—which can be defined as "the process of creating wealth through the use of all resources" has served to anchor associational activities in the U.S. since the early 20th century Mathur, 1999: 3, quoting Bingham, Hill, & White, 1990)—. Associations were opposed to federal intervention into wages and unionization at least in part because of the perception that government action would reduce their ability to grow and respond to changes in the economy (Weir, 1992). Like their European cousins, business associations in the U.S. have focused on many aspects of economic development including, 1) regulation of businesses, 2) taxation, 3) public policy, and 4) business growth and development.

Renewed scholarly interest in the last two decades in geographic clusters of firms has also brought increased attention to the institutions—such as business associations—that serve them. Scholars have especially studied these collective institutions and the role they play in industrial development in Europe and less developed countries (Doner & Schneider, 2000; Nadvi, 1999; Schmitter & Streeck, 1999). Much less has been written about business associations and cluster institutions in the U.S.—in part due to a long-standing view that business associations here function primarily to lobby the government to ease regulations and/or to oppose unions (McCormick, 2000). This new literature on clusters and cluster institutions, however, suggests that business associations can play an important and proactive role in developing firms and industries, along with the local economies in which they are situated.

The literature on associational involvement with economic development is limited, but it does identify critical roles that associations have played. These include lobbying government for lower taxes, greater governmental efficiency, and/or for infrastructure provision. Doner & Schneider (2000) label these "market-supporting" activities. Business associations may also engage in "market-complementing" activities that attempt to solve various market imperfections. These can include pushing for certain macroeconomic policies, organizing interfirm cooperation to provide bulk services like marketing or insurance (especially important for small firms), and the creation and adoption of certain production or technology standards.

Business Associations and Workforce Development

While many firms have long been interested in upgrading the skills of their internal workforce, only recently have associations begun to view this activity as workforce development and to ponder ways to extend this activity to employees of smaller firms or with lower skills. This shift reflects both a new commitment to issues of employment and training in companies and the growing inability of firms to find qualified entry level and skilled employees. The current system of U.S. Business Associations have their roots in the industrialization push in the last century, and evolved as strategies for business to work with government.

Peak organizations like the U.S. Chamber have not played a prominent role in workforce issues. Part of the explanation for their lack of interest lies in the connection between organizations and their member firms. As Knoke demonstrates, the voluntary nature of associational membership means that associations will in general follow the goals of their membership rather than leading the members (Knoke, 1990).

Associations are membership organizations, and must adhere to the interests of their most vocal members at any given time. Since no one association emerged as the dominant voice for business in the U.S. in the 20th century, the

roles they played were fragmented. The heterogeneity of U.S. economic activity means that the interests of firms are too dispersed to be represented by one collective body. In contrast to the U.S., in Germany membership in the local Chambers, which are responsible for the German training system, is mandatory (Crouch, Finegold, & Sako, 1999).

Partnerships and "Sustainable" Economic and Workforce Development

The literature on workforce development supports the critical role that organizational networks or formal partnerships play in providing services, particularly to the disadvantaged. Recent scholarship on Workforce Development networks originated as an extensive study of community based organizations (CBO) and networks authored by Harrison and Weiss (1998). However, associations typically provide services through intermediary networks, which facilitie workforce development outcomes but may not provide any of the services directly.

Research Questions

While researchers in the United States have started to explore the role of U.S. business associations in workforce development, there remain major questions about the basic level of involvement by organizations in workforce development. Moreover, we simply have no current research trying to explain the factors that encourage business associations to get involved in workforce development. To better understand the role of associations in workforce development we try to answer the following questions:

1. What percentage of business associations are involved in workforce development?
2. Do larger and more heavily resourced organizations tend to get involved in workforce development more often than smaller agencies?
3. What impact does engagement in economic development activities have on the level of engagement with workforce development?
4. How do organizational partnerships with businesses or training organizations impact the level of engagement with workforce development?

Methodology

This section describes the organizational data used to investigate the research questions outlined. We analyze data from a national survey of business associations. The data was collected in 2003 using a computer assisted telephone interview (CATI) by interviewers from the Ohio State University Center for Survey Research. The sample was drawn from Gale's Associations Unlimited; from the organizations identified as associations (25,000 organizations), limited to the approximately 2500 that had a budget of at least $25,000 annually, and were located in the United States. The Gale's list was stratified into two categories of associations, trade and chamber, which were sub-divided into two additional stratum, local-regional and national. These four strata were sampled proportionally to assemble an analytical sample that would reflect the geographic scope and organizational differences between chambers of commerce and trade or industry associations. This resulted in a sample of 965 organizations contacted for interviews. The final sample size for the survey contained 716 organizations, representing a response rate of 74%..

The interviews were conducted with the contact identified in the Gale's Association survey, or the individual reported to be responsible for Workforce or Human Resource Development.

Instrument Construction

This survey emphasized the following areas, the prevalence of workforce development services among associations, the partnerships associations engage in to provide these services, the connections to economic development, and the integration with member services provided by firms, drawing on the definitions of workforce development in Jacobs and Hawley (2003) as well as the extensive literature from economics and planning (Harrison & Weiss, 1998) The survey allows us to focus on the following basic objectives:

1. Estimate the prevalence of workforce development services among a random sample of associations;
2. Describe how differences in associations characteristics lead to the propensity to offer workforce development services;
3. Identify the key partnerships associations engage in when providing workforce development services;
4. Outlining the relationship between economic development and workforce development within associations; and
5. Describing the educational activities that associations are engaged in with both youth and adults.

The survey also focused on the issue of the relationship between economic development and workforce development and investigated the importance of partnerships between business, education, and non-profit organizations in workforce development.

The survey design allowed for both the summative study of the prevalence of workforce development as well as more in depth analysis of the way that workforce development is carried out among the associations. Section A of the survey instrument contains data on all organizations that were selected for study. Section B was limited to a sub-sample of the associations that were reported to have workforce development based on completing section A. Sections C-H looked at specific aspects of the workforce development activities of business associations.

Measures

The primary purpose of the 2003 survey was to examine the prevalence of workforce development activities among U.S. business associations, and to look at how partnerships and economic development impacted the propensity for organizations to carry out workforce activities.

The survey instrument proposed a new working definition of workforce development. The survey defined workforce development operationally as performing one or more of the following five functions: 1) Bring employers together to solve workforce issues collectively, for instance helping employers attract and recruit workers; 2) Broker and/or provide services for workers such as job search, training, or support services like management or apprenticeship training; 3) Broker and/or provide any work-related activities for students like mentoring or internships; 4) Participate in or broker education-related activities in the community, such as developing job standards or curriculums; and, 5) Participate on governance boards related to the local workforce development system, such as serving on a Workforce Investment Board. Each of the sites were asked if they did these activities, extensively, moderately, minimal, or none.

From this set of questions we generated a continuous measure (WFD) that summarizes across these five measures (plus one for other activities) the level of involvement in workforce development. The item ranges from 0-6. Organizations are awarded 1 for whether or not the business association carries out workforce development in at least one of the five areas. The sixth item is for other workforce development activities.

In the subsequent analysis we measure what factors impact the level of engagement with workforce development. Using the model we developed in the literature section we hypothesize that the level of participation is dependent on a serious of interrelated organizational factors; type of association, size of association, economic conditions, strength of the member network, prior experience in economic development, and the capacity to form organizational partnerships. To that end we operationalize the model using the following variables:

Type of association: (Chamber=0, Trade=1) The analysis uses chamber as the omitted category.

Staffing Size of Association: Number of staff (in natural log) in 2002.

Budget of Association. Budget (in natural log) in 2002.

Economic Conditions: This is a dichotomous variable equal to one if the association reported that their area/industry is experiencing a labor shortage or low unemployment.

Strength of member network: This is a continuous measure representing the historical level of involvement with workforce development. It ranges from 0-4, with 0 indicating that workforce development was not an important priority, and 4 showing that workforce development was the most important priority.

Economic development priority: This is a continuous measure capturing the degree to which respondents reported that economic development was or was not a priority for their member firms. The measure ranges from 1 to 4, with 1 equaling not at all important and 4 representing most important.

Prior experience in economic development: Economic development is operationalized as three different variables, each of which are standardized with a mean of 0 and a standard deviation of one, “Policy information,” “market information,” and “technical information.” These three variables are constructed based on the types of activities that business organizations carry out in economic development. “Policy information” is constructed from items representing lobbying on economic development issues and information on policy or legislation. “Market information” represents those activities carried out by associations in providing economic information, offering marketing assistance by providing membership contact information, or providing import or technical assistance. The final area, “technical information” incorporates information showing involvement in items such as research and development or strategic planning.

Capacity to form partnerships: Partnerships are operationalized through two variables, each of which are standardized with a mean of 0 and a standard deviation of one, “Training related partnerships” and “Business Related Partnerships.” These items are constructed from individual survey results on partnerships. “Training related partnerships” represent the involvement of the organization with educational or community agencies. “Business related” partnerships represent the involvement of the organization with unions, state agencies, and member or non-member firms.

Analytical Methods

The primary objective of this study is to model the organizational level characteristics that lead to the level of engagement with workforce development. Because of this focus we used weighted regression analysis to provide

estimates of the relative impact. The research uses a procedure in the STATA software that allows for analysis of survey data. In this analysis the data are stratified by organizational type (trade, chamber) and geographical location (local/regional, national). The data are also weighted to reflect the proportion of the sample interviewed actually existing in the population of organizations from Gale's Associations Unlimited.

The survey regression analysis was conducted to determine if type of association, member network, prior experience with economic development, and capacity to form partnerships are robust predictors of workforce development involvement when controlling for staff size, budget, and economic conditions. Three regression models are presented. Model A, or the Reduced Form model, regresses *wfdscale* on size of association, economic conditions, and strength of member network. Model B, or the "Economic Development" model adds the three measures representing economic development. Model C, or the "Partnership Model" substitutes two measures representing the capacity to form partnerships.

Results

*Research Question 1:*This first question asked about the percentage of organizations sampled that reported carrying out workforce development activities. Over all, 49% percent of all the organizations carried out workforce development activities. This varies substantially by the type of organization. National Chambers of Commerce and local Chambers were most likely to carry out workforce development, with 69% and 65% respectively carrying out workforce development, while National Trade and Industry Associations were least likely to participate in workforce development (38%).

Research Question 2: Do larger and more heavily resourced organizations tend to get involved in workforce development more often than smaller agencies? The first statistical model (Model A) in Table 1 shows the estimated impact on the level of workforce development activities based on organizational characteristics (staff size, annual budget). There is a significant linear relationship between workforce development and organizational characteristics ($F=27.67$, df (8,684), $p<0.000$). The R-square is 0.239, implying that 24% of the total variance in workforce development level is explained by the variables in this model. The coefficients on the independent variables illustrate the importance of prior economic development activity. The coefficient on "economic development priority" is statistically significant and positive (.30, $p<000$), illustrating the finding that organizations which have prior experience with economic development are more likely to be involved extensively in workforce development. In contrast, organizations that have prior experience with governmental projects (e.g., through JTPA or WIA) are less likely to be providing high levels of workforce development activities to member firms. Moreover, organizations that are experiencing a labor shortage in their region or industry are more likely to be carrying out higher levels of workforce development (.48, $p<.000$). These findings do differ between types of associations, and national chambers or local chambers appear to have higher mean scores on the workforce development scale. Organizations with larger budgets and staffing have, somewhat predictably, higher predicted scores on mean level of workforce development (staffing, .09, $p<.1$; budget, .12, $p<.05$).

Research Question 3: What impact does engagement in economic development activities have on the level of involvement with workforce development? Model B in Table 1 shows the estimated impact on the level of workforce development activities of participation in one of three economic development activities, "policy information," "market information," and "technical information." There is a significant linear relationship between workforce development and organizational characteristics ($F=28.82$, df (11,681), $p<0.000$). The R-square is 0.288, implying that 28% of the total variance in workforce development level is explained by the variables in this model. The coefficients on the control variables are reduced somewhat, but do not change fundamentally in terms of statistical significance or direction. The three measures of economic development participation are statistically significant. The variable with the largest coefficient is "market information" (.21, $p<.000$). Both "technical information" and "political information" are statistically significant. Since these variables are standardized, the coefficients are comparable in the same scale. Differences remain in Model B between national/local chambers and trade associations. Chambers have higher predicted mean scores on workforce development than do trade associations, controlling for all other items.

Research Question 4: How do organizational partnerships with businesses or training organizations impact the level of engagement with workforce development? Model C in Table 1 shows the estimated impact on the level of workforce development activities of organizational connections to two types of partnerships, "training-related" partnerships and "business-related" partnerships. There is a significant linear relationship between workforce development and partnerships ($F=42.05$, df (10,682), $p<0.000$). The R-square is 0.356, implying that 36% of the total variance in workforce development level is explained by the variables in this model. While the control variables incorporated into model A do not change in direction, there are no differences in organizational type for this model. Moreover, of the two partnership variables, training-related and business-related, training-related

partnerships have a stronger relationship to the level of workforce development (.72, p<000). Differences between types of associations do not exist in Model C, while the benefit to larger budgets does remain.

Table 1: Regression Results from an Analysis of Factors that Predict Workforce Development Involvement by Business Associations (n=695)

	Model A	Model B	Model C
Number of Staff (2002)	0.098	0.06	0.05
	(-1.69)~	-1.07	-0.92
Size of Annual Budget (2002)	0.122	0.061	0.098
	(2.55)*	-1.32	(2.22)*
Labor Shortage Among Members (2002)	0.479	0.402	0.394
	(5.94)**	(5.14)**	(5.29)**
Prior Economic Development Activity	0.303	0.155	0.223
	(4.29)**	(2.24)*	(3.27)**
Prior Government Workforce Development Activity	0.449	0.311	0.292
	(2.31)*	(-1.51)~	(-1.63)~
National Chamber	1.186	1.173	1.244
	(2.48)*	(2.76)**	(3.43)**
Local Chamber	0.702	0.645	0.115
	(4.49)**	(4.17)**	-0.73
National Trade and Industry	-0.561	-0.527	0.045
	(3.86)**	(3.53)**	-0.29
Policy Information		0.176	
		(3.03)**	
Market Information		0.211	
		(3.18)**	
Technical Information		0.294	
		(4.71)**	
Training Related Partnerships			0.717
			(8.44)**
Business Related Partnerships			0.088
			-1.54
Constant	-1.833	-0.382	-0.978
	(2.96)**	-0.61	(-1.71)~
Observations	695	695	695
R-squared	0.24	0.31	0.36

Absolute value of t-statistics in parentheses
* significant at 5%; ** significant at 1%

Conclusions

Business associations play a critical role in the workforce development system. While they are technically non-profits they link together business organizations and employees in unique ways. Many associations have a long history of providing human resource development services to participating firms and offer vocational preparation to entry level employees in conjunction with unions (McCormick, 1996). To better understand the prevalence of workforce development activities among associations and to look at the linkages between workforce and economic development we surveyed a random sample of 716 associations in 2003. Additionally, we examined the importance of partnerships between associations and business or training organizations.

The results of the study reveal that just about one half of associations over all are involved in workforce development activities. This is the first estimate based on a random sample that any researchers have been able to report. It is important to note that Chambers of Commerce were more likely to engage in workforce development than their trade and industry counterparts.

Associations are influenced by organizational characteristics in terms of what leads to higher levels of workforce development involvement. The regression analyses consistently showed that associations with larger budgets and more staff were more likely to carry out higher levels of workforce development. Moreover, associations that viewed economic development as a high priority were not likely to report higher levels of workforce development.

One of the principal research questions was focused on the role of current economic development activities, as opposed to general vision of economic development as a priority, in the provision of workforce development. This item showed that involvement in one or more of the three areas of economic development (market, technical, or political) led to substantial involvement with workforce development.

However, business partnerships were not as important as training related partnerships to the provision of workforce development services. This raises an important question about the types of partnerships required by businesses.

Contributions to HRD Knowledge

Research into business associations is less common that it should be in the Human Resource Development field. Associations are critical intermediary agencies in training and development, offering technical assistance and direct services to small and medium sized firms in particular. Our awareness as scholars of the role of associations is limited to the small number of HRD researchers working on government oriented HRD, where the lines between HRD and Workforce Development have begun to be more blurred. Within this small number of studies scholars active in HRD have explored a wide range of topics. These topics include conceptualizing workforce development (Holton & Wilson, 2002), workforce development programs and partnerships (Worlow & Roth, 2004). However, the research in the HRD field is largely conceptual in nature, and fails to document the empirical focus of workforce development among associations or other intermediary agencies. In contrast, the policy field has conducted extensive research into workforce development intermediaries (Giloth, 2004). This research has some important implications for HRD researchers as they continue to develop this research area.

Developing an understanding of the complexity of HRD offered through associations. Associations provide many types of workforce development or HRD services. The most common, as described above, are those activities provided for students through cooperative education or work based learning. Over one third of associations, however, broker or provide direct services to workers in member firms, such as training and development activities. Therefore, the term workforce development is a more appropriate term to use when referring to these organizations as it covers societal and organizational activities as well as business interventions (Jacobs, 2000; Jacobs & Hawley, 2003).

Partnerships are a critical aspect of workforce development. Associations engage in partnerships to provide training related services to firms. Frequently, contacts between associations and unions or associations and educational organizations are used to provide direct services in firms. However, our understanding of the relationship between partnerships and the quality of workforce development services is unclear. This research opens up the questions about the relative importance of training or business related partnerships.

References

Autor, D., H, Levy, F., & Murnane, R. J. (2001). *The skills content of recent technological change: An empirical exploration (working paper 8337)*.Cambridge, MA: National Bureau of Economic Research.

Bingham, R. D., W.Hill, E., & White, S. (Eds.). (1990). *Financing economic development: An institutional response*.Newbury Park, CA: Sage.

Cordero-Guzman, H. R. (2000). *Interorganizational networks among community-based organizations.* Paper presented at the APPAM, Seattle.

Crouch, C., Finegold, D., & Sako, M. (1999). *Are skills the answer? The political economy of skill creation in advanced industrial countries*. New York: Oxford University Press.

Doner, R. F., Schneider, B. R., & Wilson, E. J. (1998). Can business associations contribute to development and democracy? In A. Bernstein & P. L. Berger (Eds.), *Business and democracy: Cohabitation or contradiction?* (pp. 126-147). London: Pinter.

Fitzgerald, J. (1997). *Making connections: Community colleges best practices in connecting the urban poor to education and employment*. Chicago, IL: University of Illinois at Chicago, Great Cities Institute.

Giloth, R. P. (2004). *Workforce development politics: Civic capacity and performance*. Philadelphia: Temple University Press.

Grubb, W. N. (2001). Second chances in changing times: The roles of community colleges in advancing low-skilled workers. In R. Kazis (Ed.), *Low-wage workers in the new economy* (pp. 283-306). Washington, D.C.: Urban Institute Press.

Harrison, B. (1997). *Lean and mean*. New York: Guildford Press.

Harrison, B., & Weiss, M. (1998). *Workforce development networks: Community-based organizations and regional alliances.*Thousand Oaks, CA: SAGE Publications.

Harrison, B., & Weiss, M. (1998). *Workforce development networks: Community based organizations and regional alliances.*Thousand Oak, CA: Sage Publications.

Holton, E., F. III, & Wilson, L. (2002). Delivering workforce development programs and services. *Advances in Developing Human Resources, 4*(2), 167-179.

Holzer, H. (1996). *What employers want: Job prospects for less-educated workers*. New York: Sage Publishers.

Jacobs, R. L. (2000). Human resource development and the emergence of workforce development. In W. Ruona & G. Roth (Eds.), *Philosophy of human resource development* (pp. 65-70). San Francisco: Berrett-Koehler.

Jacobs, R. L., & Hawley, J. D. (2003). *Workforce development: Definition and relationship with human resource development.* Paper presented at the Academy of Human Resource Development Annual Conference, Minneapolis, MN.

Jobs for the Future. (1998). *Employer intermediaries: A briefing paper.*Boston, MA: Jobs for the Future.

Kallenberg, A., & Associates. (1997). *Nonstandard work, substandard jobs*. Washington, D.C.: Economic Policy Institute and Women's Research and Education Institute.

Kane, T. J., & Rouse, C. E. (1995). Labor market returns to two and four year colleges. *American Economic Review, 85*(3).

Kazis, R., & Miller, M. (Eds.). (2001). *Low-wage workers in the new economy*. Washington, D.C.: Urban Institute Press.

Knoke, D. (1990). *Organizing for collective action: The political economies of associations*. Hawthorne, NY: A. de Gruyter.

Mathur, V. K. (1999). Human capital based strategy for regional economic development. *Economic Development Quarterly, 13*(3), 203-216.

McCormick, L. E. (1996). *A life-cycle model of manufacturing networks and Chicago's metalworking industry.* Unpublished doctoral dissertation, Massachusetts Institute of Technology, Cambridge, MA.

McCormick, L. E. (2000). *An analysis of the economic development role of business associations and other intermediary organizations serving Appalachian industries* (2nd Edition). Washington, D.C.: Appalachian Regional Commission.

Melendez, E. (1996). *Working on jobs: The center for employment training*. Boston, MA: Mauricio Gaston Institute.

Melendez, E. (1997). The potential impact of workforce development legislation on community-based organizations. *New England Journal of Public Policy, 13*(1).

Melendez, E., & Harrison, B. (1997). Matching the disadvantaged to job opportunities: Structural explanations for the past successes of the center for employment training. *Economic Development Quarterly, 12*(1), 3-12.

Melendez, E., with Luis Falcon, McCormick, L., Montrichard, A. d., Suarez, C., Gester, K., et al. (1999). *The welfare to work policy shock: How community colleges are addressing the challenge*. New York, NY: New School University, Community Development Research Center.

Murnane, R., J., Willet, J. B., & Levy, F. (1995). The growing importance of cognitive skills in wage determination. *Review of Economics and Statistics, May*.

Osterman, P. (1999). *Securing prosperity: The American labor market, how it has changed and what to do about it*. Princeton, NJ: Princeton University Press.

Rosenbaum, J. E., & Binder, A. (1997). Do employers really need more educated youth? *Sociology of Education, 70*(January), 68-85.

Seavey, D., & Kazis, R. (1994). *Skills assessment, job placement, and training: What can be learned from the temporary help/staffing industry?* Boston, MA: Jobs for the Future, Inc.

Seavy, D. (1998). *New avenues into jobs: Early lessons from nonprofit temp agencies and employment brokers*. Washington, D.C.: Center for Community Change.

Tilly, C., & Tilly, C. (1998). *Work under capitalism*. Boulder, CO: Westview Press.

Weir, M. (1992). *Politics and jobs: The boundaries of employment policy in the United States*. Princeton, NJ: Princeton University Press.

Worlow, C. S., & Roth, G. L. (2004). *Partnerships in workforce development: A case study of intermediary involvement.* Paper presented at the Asian Association of Human Resource Development, 3rd Annual Conference, Seoul, Korea.