

Regional clusters and jobs for inner city workers: the case of transportation, distribution, and logistics

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This article examines the usefulness of a particular type of industry cluster – transportation, distribution, and logistics (TDL) – for linking less-skilled workers in the inner city to job opportunities that exist in a larger regional economy. The findings are based on case studies of cluster-based development in three metropolitan regions: Indianapolis, IN, Louisville, KY, and Memphis, TN. These regions are known for their high concentrations of TDL firms. The TDL cluster was selected as the focus for this study because it potentially offers substantial employment opportunities for low-skilled workers at the entry-level and might be able to accommodate those that are hard to employ. The article discusses what these regions have done to leverage TDL to provide jobs for inner city workers and identifies some of the factors that either enhance or constrain the cluster’s usefulness for that purpose.

Keywords: regional development; economic development; community-based organizations; workforce development; social capital

Introduction

The purpose of this study is to examine the usefulness of industry cluster-based development as a framework for improving the labor market prospects of inner city residents. Residents of the inner city are disproportionately represented among the unemployed and poor (Engberg, 1996). Many factors contribute to the plight of inner city residents including human capital and social capital deficiencies that make it difficult for them to qualify for entry-level positions or be connected to information about job opportunities that exist in the larger regional economy. Thus, economic development strategies aimed at helping inner city residents must focus on building their human capital through educational and skills advancement, and strengthening their social capital by linking them more fully to regional employment opportunities.

Economic development strategies that target key industry sectors or “clusters” offer a potentially promising framework for making the connection between inner city workers and the jobs that are available in a larger regional economy. An industry cluster is a geographically concentrated group of interrelated firms and supporting organizations (Porter, 2000). The purpose of cluster-based development is to identify and target key industries in order to systematically support their

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competitiveness and growth in a particular geographic region. Cluster strategies recognize the interdependencies among target industries and the organizations that support them, and seek to facilitate collaborations that benefit firms and regions. The need for qualified and skilled workers is a shared concern around which cluster firms and related organizations will often join together to address.

The idea of targeting strategically important business clusters has gained widespread acceptance as a way for regions to better understand their economies and take actions to become more competitive as a whole. However, it is not given that cluster-based development will improve the economic prospects of less-skilled workers in the inner city. This study hypothesizes that to be effective in this regard, would require that the cluster approach place a greater emphasis on questions of equity in terms of how the benefits of regional clusters can reach the people and places that are most in need. The distinctive aspect of a cluster-based approach is that it emphasizes the linkages and interdependencies among *multiple* related industry sectors. As a result, a cluster approach can potentially provide a broader range of employment opportunities for inner city workers than strategies that target a narrower segment of firms or a single sector. But, the lack of an explicit focus on helping disadvantaged, less-skilled workers could limit the extent to which regional cluster development efforts will benefit those most in need.

This study extends the industry cluster model of economic development by incorporating a more explicit focus on equity and distributional concerns. The research examines the usefulness of the cluster-based approach for linking less-skilled workers in the inner city to job opportunities that exist in a particular regional industry cluster: transportation, distribution, and logistics (TDL). The findings are derived from field work conducted in the three metropolitan regions of Indianapolis, Indiana, Louisville, Kentucky, and Memphis, Tennessee. These regions are known for their high concentrations of firms in TDL (see Table 1) and each region has identified this “cluster” as an important part of its overall economic development strategy. The article compares and contrasts how these regions are using their respective TDL clusters to provide employment opportunities for inner city workers. The TDL cluster has not received much attention in previous research because of its perception as a low-tech, low-wage group of industries.

The TDL cluster was selected as the focus for this study because it potentially offers substantial employment opportunities for low-skilled workers at the entry-level and might be able to accommodate those that are hard to employ for a variety of reasons. The findings are based primarily on in-depth interviews with local experts from government agencies, education and training providers, non-profits, community-based organizations (CBOs), and business representatives in each region. In comparing and contrasting the three study regions, the article identifies some of the factors that potentially enhance or inhibit the intentional and strategic use of the TDL cluster to improve employment opportunities for inner city residents.

Industry clusters and equity

Cluster-based economic development strategies typically have not explicitly focused on increasing opportunities for economically disadvantaged people and places, with the exception of cluster-based policies in lagging regions abroad (Rosenfeld, 2002b) and to some extent Michael Porter’s (1995) work on inner city competitiveness in the US. Clusters have most often been used to target industries for recruitment and for

Table 1. Top 25 Transportation and Logistics Clusters by MSA.

MSA	Employment	Population	Employment per capita*	Firms	Wages
Houma-Bayou Cane-Thibodaux, LA	6,714	201,137	3.34	196	\$69,110
Laredo, TX	7,567	233,152	3.25	637	\$28,256
Lebanon, PA	2,714	127,889	2.12	19	\$14,111
Anchorage, AK	6,344	362,340	1.75	222	\$56,490
Savannah, GA	5,734	329,329	1.74	180	\$42,357
Valdosta, GA	2,237	130,170	1.72	22	\$40,000
Memphis, TN-MS-AR	21,423	1,280,533	1.67	447	\$39,984
Weirton-Steubenville, WV-OH	2,043	122,580	1.67	20	\$32,587
Kankakee-Bradley, IL	1,836	110,705	1.66	17	\$23,938
Harrisonburg, VA	1,915	117,563	1.63	17	\$25,000
Texarkana, TX-Texarkana, AR	2,119	134,215	1.58	29	\$58,000
Altoona, PA	1,897	125,527	1.51	32	\$41,656
Columbus, OH	26,487	1,754,337	1.51	386	\$32,501
Cheyenne, WY	1,244	86,353	1.44	18	\$42,897
Honolulu, HI	12,985	905,601	1.43	366	\$43,093
Harrisburg-Carlisle, PA	7,508	528,892	1.42	127	\$36,442
Louisville/Jefferson County, KY-IN	17,313	1,233,735	1.40	263	\$36,697
Houston-Sugar Land-Baytown, TX	77,098	5,628,101	1.37	1,606	\$45,734
Atlanta-Sandy Springs-Marietta, GA	69,446	5,278,904	1.32	1,382	\$46,364
Tulsa, OK	11,763	905,755	1.30	185	\$38,676
Fayetteville-Springdale-Rogers, AR-MO	5,533	435,714	1.27	103	\$36,491
New Orleans-Metairie-Kenner, LA	13,020	1,030,363	1.26	574	\$51,205
Eau Claire, WI	1,963	157,808	1.24	20	\$29,349
Indianapolis-Carmel, IN	20,800	1,695,037	1.23	348	\$29,688
Salt Lake City, UT	13,374	1,099,973	1.22	275	\$50,899

Based on 2007 employment per capita. *Author's calculation. Cluster employment divided by total population, multiplied by 100. Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School. Note: The Harvard Cluster Mapping Project defines the transportation and logistics cluster to include air transportation, bus transportation, marine transportation, ship building, transportation arrangement and warehousing, trucking terminals, airports, and bus terminals.

increasing the competitiveness of the key industries that already exist within a region. But as Porter (1995) suggests, "The most exciting prospects for the future of inner city economic development lie in capitalizing on nearby regional clusters: those unique-to-a-region collections of related companies that are competitive nationally and even globally" (p. 60).

The fundamental question, then, is how can clusters be utilized to achieve greater equity in the distribution of economic development opportunities such that regional prosperity is more widely shared? Rosenfeld (2003) ponders precisely this question by asking: "Can clusters become equitable and just tools for economic development or do cluster strategies skew resources to those already better off" (p. 359). Answering this question is important because "the governmental and non-governmental entities that support clusters as development strategies do have social and civic

responsibilities to see that their investments ultimately have a reasonable chance to reach all segments of the population and all regions” (Rosenfeld, 2002a, p. 9).

In this sense, cluster-based development can relate to the sectoral employment programs being implemented throughout the US that do explicitly seek to promote greater equity. These sectoral initiatives are designed to expand job opportunities for low-income workers by preparing them for specific occupations within targeted industry sectors (Clark & Dawson, 1995; Dresser & Rogers, 1998; Giloth, 1995; Siegel & Kwass, 1995). Sectoral initiatives and cluster-based strategies share a focus on facilitating collaboration between industry and supporting organizations. However, cluster-based development is primarily intended to boost industries and companies with “no inherent employment strategy embedded” within it, “which may or may not improve the job opportunities for any particular group of workers” (Conway, Blair, Dawson, & Dworak-Muñoz, 2007, p. 13). By contrast, sectoral initiatives are much more explicitly concerned with disadvantaged people and their relation to the competitiveness of industries and regions. Another important distinction between cluster and sector strategies is that clusters are comprised of *multiple* related industries (e.g. TDL) and not just a single sector (e.g. distribution). As such, a broader cluster of firms may provide a wider range of job mobility and career advancement opportunities for disadvantaged, inner city workers.

While it is useful conceptually to differentiate cluster strategies from sectoral employment strategies, the overlap between them is inescapable. Several foundations and other organizations have been experimenting with sector-based initiatives and their experiences thus far are relevant to this study. These include major multi-site demonstrations supported by the Annie E. Casey Foundation, Charles Stewart Mott Foundation, Aspen Institute, and the National Economic Development and Law Center. These programs strive to connect workers and potential workers from low-income communities to livable wage jobs in a region’s growing industry sectors. They often focus on a narrow set of entry-level occupations in a small number of industries that might be most appropriate for less skilled people such as health care, metalworking, and construction trades. Giloth (1998) refers to this approach as “job-centered economic development” because it “focuses on identifying and accessing good jobs, networking among employers, building career ladders, enabling job retention, and advocating policies in support of livable wage jobs” (p. 2).

The organizations implementing sectoral employment programs serve as labor market intermediaries by improving the flow of information and linking qualified workers to good job opportunities within target sectors (Molina, 1998). Labor market intermediaries are organizations that “help broker the employment relationship through some combination of job matching, training, and career support services” (Benner, Leete, & Pastor, 2007, p. 10). While matching job seekers with employers has typically been performed by temporary agencies, staffing firms, and government workforce and social service agencies, increasingly industry associations, CBOs, community colleges, and labor unions are getting involved in this arena (Giloth, 2004). Two examples that illustrate the roles that CBOs can play by serving as labor market intermediaries on behalf of inner city workers are the Milwaukee Jobs Initiative (Dresser & Rogers, 1998) and Project Quest (Quality Employment through Skills Training) in San Antonio (Harrison & Weiss, 1998). Initial assessments of major sectoral initiatives in the US show promising results in terms of higher wages, decreased poverty, and improved job quality, and increased job satisfaction for low-income workers (Roder, Clymer, & Wyckoff, 2008; Conway

et al., 2007; Zandniapour & Conway, 2002). Although sectoral employment programs tend to focus on individual industry sectors rather than broadly defined groups of related industries or clusters, they provide a glimpse into the potential of cluster-based development as a framework for connecting residents of the inner city to opportunities in the larger regional economy.

The social capital dimension of sectoral employment programs can be extended to cluster-based economic development. It accentuates the deliberate linkage efforts required to strengthen the connections between inner city workers and the competitive regional clusters that drive metropolitan economies, and underscores the need for intermediary organizations to connect inner city residents to better job opportunities in those clusters. This linkage role is important for inner city workers who typically do not live in communities where major employers exist and often lack the personal and professional connections through which information about job openings is shared. In this way, intermediary organizations can create valuable connections on behalf of inner city residents that fill the gaps in their existing social networks and enhance their employment and economic prospects. These social network proxies for inner city workers matter because significant employment opportunities often come about as a result of “who you know” and “who knows you”.

Trends in the TDL cluster

The TDL cluster cuts across a number of industry sectors including trucking, warehousing, courier services, air transportation, distribution, and wholesale trade. These sectors can provide significant numbers of entry-level jobs for people with limited education and lower skill levels. The cluster has historically been involved with the mere movement of goods, but now managing the information and services supporting that activity is becoming just as important (Feldman, Bell, & Salamon, 1996). The job opportunities available within TDL are diverse, ranging from lower wage entry-level warehouse workers to higher-tech, knowledge-intensive logistical management. Some analysts view the cluster as a dynamic set of growing high-wage industries and believe “it is a mistake to see transportation and distribution as consisting of low wage enterprises, workers in coveralls, and forklift trucks” (Regional Technology Strategies, 1999, p. 72). A chronic shortage of qualified workers, particularly in trucking services, becomes more acute during periods of robust economic growth.

Trends in the TDL cluster are requiring firms to demand a higher level of skills from certain workers. Increased use of automation and technology within TDL could reduce the number of low-to-mid skill occupations available for less skilled inner city workers, but it is unlikely to substantially reduce the need for workers at the lowest level who do the manual labor of picking, packing, and loading. However, automation and technology might affect the career advancement prospects of entry-level workers with low education levels and limited skills. In light of increasing skill requirements, training and certification becomes more critical given the fact that cluster firms tend to promote from within.

Research design and methods

To examine how the TDL cluster might be used to create employment opportunities for inner city workers, I used a case study research protocol to conduct fieldwork in

three metropolitan regions: Memphis, Tennessee, Louisville, Kentucky, and Indianapolis, Indiana. My approach to conducting the research and reporting findings is consistent with how many qualitative studies in community and economic are done (for examples see Kimelberg, 2010; Mayer & Greenberg, 2001). The data in Table 1 show how the TDL clusters in these regions are compared to other prominent ones in the US. The TDL clusters in the three study regions are roughly comparable to each other in terms of employment levels. The average wage levels for TDL within the study regions represent a range of possible employment opportunities for inner city workers.

The research is based on a series of semi-structured interviews with 10 local experts in each study region. In total, 30 face-to-face interviews were conducted with representatives from local governments, CBOs, chambers of commerce, education and training providers, and cluster firms. An initial list of cluster firms was identified from the membership databases of local and national transportation-related organizations. The actual list of firms selected for interviews was generated through contacts with knowledgeable local experts and a review of published documents and media reports.

I sent letters to make the initial contacts with potential interviewees and followed up with phone calls to explain the research study, secure participation, and schedule the interview meetings. Interviews lasted roughly 45 minutes to an hour. Each interview session was tape-recorded, with advance permission, from which a professional transcription service generated verbatim transcripts. The actual identities of those interviewed for the study are not disclosed in order to maintain anonymity and protect professional reputations. The data collected from interviews were supplemented with quantitative data about the TDL clusters, information from a review of relevant documents, and personal observations within each region. This was done in order to triangulate the data for the possibility that findings from multiple sources will converge (Creswell, 2003; Yin, 1994).

The research for this article was one component of a much larger study on the role of regional industry clusters in urban economic development that was funded by the US Department of Housing and Urban Development through its Doctoral Dissertation Research Grant program (Morgan, 2004). The interviews conducted for the larger study on the role of the TDL cluster in urban economic development produced a more than 540 pages of transcripts. This article focuses only on the interview responses from local experts in each region regarding the use of TDL to provide employment opportunities for inner city workers. The actual interview questions used to guide the conversations with local experts included the following:

- (1) What efforts have been attempted to connect the TDL cluster to low-income, inner city communities? How have they fared?
- (2) Are there any local efforts to connect inner city workers to employment opportunities in TDL industries?
- (3) Are you aware of any CBOs involved in preparing inner city workers to meet the requirements for jobs in TDL industries?
- (4) What are education and training providers doing to prepare disadvantaged, inner city residents for jobs in the TDL cluster?
- (5) What barriers do you think inhibit the ability of inner city communities to tap into the economic opportunities created by the TDL cluster in the broader region?

I initially did a quick read of the transcripts to gain a general sense of the relationship between the TDL cluster and inner city employment efforts in each region. I subsequently re-read the transcripts more carefully in order to identify key themes related to how the TDL cluster is used to create employment opportunities for inner city workers. I used open coding techniques (Strauss & Corbin, 1998) to conceptualize the interview data and organize raw responses into categories that reflect the key themes. Categories were assigned based on the frequency of a particular theme (i.e. how often different respondents said the same thing). Within the categories of recurring themes, I tried to capture any variations across regions and by type of respondent (e.g. CBO staffers vs. economic development professionals).

Findings

This section discusses the key findings from the case study research in each region. To allow the richness of the data to “tell the story”, the analysis liberally integrates direct quotes from the structured interviews with local experts to demonstrate how the study regions use (or fail to use) their respective TDL clusters to create and expand employment opportunities for disadvantaged inner city residents. The findings are organized based on the recurring themes from the case studies and interviews across regions with regard to: (1) employment opportunities within the cluster; (2) perceptions of job quality and desirability; (3) career paths in TDL; (4) roles of intermediary organizations; and (5) the need for a strategy to utilize the TDL cluster to provide inner city employment.

Employment opportunities in the TDL cluster

Many of the interview respondents observed that TDL industries provide meaningful entry-level job opportunities for inner city workers and those most in need, including people who might be hard to employ for a variety of reasons. A chamber of commerce executive in Memphis explained why entry-level TDL jobs are good to have as part of a region’s employment mix:

There’s still a lot of poverty here. We have people that need the first job out. What these firms say is “Give me somebody that has a decent work ethic and certain levels of math and so forth and I’ll train them.” That’s what we’re trying to do to make sure that nobody’s left behind. In that industry you’ve got a range. There are people on the low end. That industry will hire people that are just off the streets, prisoners, ex-offenders and whatever else. Yet they also have people making \$12-plus an hour with benefits and medical coverage. There’s a spectrum of pay within that. If somebody gets in at the entry level, then there’s an opportunity for him or her to advance.

In describing the importance of having a diverse range of employment opportunities within a region, an economic developer in Memphis echoed this sentiment:

Some of the political leadership in our community has said, “We don’t need to attract any more distribution jobs. We want to be the center for rocket science and brain surgery.” Well, hey, we want to be that, too. Our answer to that is, “Great.” Let’s launch off of that into bio-logistics and other things. But let’s also make sure that

we're providing jobs for all those who need them. We've got a lot of people that need work.

A local official in Louisville highlighted the importance of the employment opportunities made possible through TDL's entry-level jobs:

Even if they are working part-time pushing boxes, they are making \$8, \$9 or \$10 an hour with benefits. You are providing lots of employment opportunities to college kids, mothers working part time and all kinds of people. And you've got all these possibilities for spin-off companies wanting to take advantage of the logistics base.

The data in Table 2 provide additional evidence that the TDL cluster has ample job opportunities for inner city workers based on sheer numbers. The occupational category with single largest number of jobs in all three regions is laborer and material mover by hand. This is a set of positions that requires minimal skills and no formal education or training. Despite the numbers of jobs available, CBO staff in the study regions expressed a fundamental concern about the low-wage, low skill nature of the work within TDL and questioned the premise that these jobs are useful as a means for improving the long-term employment prospects of inner city workers. The president of a Memphis CBO noted the low wage levels and other challenges faced by people taking entry-level jobs in TDL:

There are a lot of lower end jobs in distribution and warehousing. The folks that are working there are the folks that need linkages in every way. They need social service providers, affordable housing providers as well as educational opportunities that can better their existence. The problem is that these jobs are always going to be here. While Memphis may be the distribution capital of America, the jobs don't pay anything.

A TDL expert at one of the universities in Louisville reiterated this point in commenting on the nature of the entry-level jobs in the cluster:

Table 2. Employment in selected TDL occupations by study region.

Occupation title	Indianapolis	Louisville	Memphis
Laborers and freight, stock, and material movers, hand	27,690	14,760	29,600
Truck drivers, heavy and tractor-trailer	17,240	10,730	15,340
Stock clerks and order fillers	11,600	10,120	11,200
Industrial truck and tractor operators	6,190	6,680	4,960
Truck drivers, light or delivery services	6,140	4,780	4,110
Packers and packagers, hand	5,740	3,970	4,160
Shipping, receiving, and traffic clerks	5,660	5,890	8,110
Driver/sales workers	2,510	2,020	2,070
First-line supervisors of helpers, laborers, and movers, hand	1,890	890	1,630
First-line supervisors/managers of material-moving operators	1,700	1,570	1,740
Transportation, storage, and distribution managers	820	610	1,160
Couriers and messengers	550	560	290
Logisticians	480	280	750

Source: May 2008 Occupational Employment and Wage Estimates. US Bureau of Labor Statistics.

I guess that gives somebody a minimum wage job, but a person could not support a family on that wage. It is below the level that you could support a family on, so they are part-time and second jobs for a lot of folks. We don't see a whole lot of the higher dollar jobs coming in, and that's just the nature of logistics industry. They basically just need strong backs.

The data in Table 3 confirm what many of the people interviewed claimed regarding the relatively lower pay in entry-level TDL jobs. Entry-level positions in TDL include so-called "picking and packing" and jobs as couriers that pay well below the average wage in each region. The next tier of jobs such as laborers, freight and material movers, stock clerks, and shipping clerks pay a higher wage, but still below average for the regions. The higher wage jobs in the cluster are mostly supervisory, management, and technical logistics positions, which are fewer in number and require relevant work experience and higher levels of formal education and skills. Truck driver positions pay reasonably well and are the second most plentiful group of TDL occupations in the three study regions.

Entry-level positions in TDL require some physical capacity for heavy lifting and moving of cargo. Beyond that, there are minimal requirements for such positions. Some of the larger companies require a high school diploma or GED. The availability of clearly defined opportunities to advance beyond the entry-level varies considerably by company. Larger companies like FedEx and UPS appear to provide more options for entry-level workers to move up along a career ladder. As a FedEx executive noted:

The entry-level job at FedEx is handler, which means that the units of knowledge are at the lowest point. However, for the most part, any employee that is ready to take on more responsibilities, within 30 to 90 days can move up to what we refer to as the higher units of knowledge work, which is checker/sorter, ramp agent, team leader, material handler—all of which require decision-making skills. The starting salary here is above \$10.50 an hour. So, it's not exactly what I would call entry-level dollars, but yes, it

Table 3. Average annual wages for selected TDL occupations by study region.

Occupation title	Indianapolis	Louisville	Memphis
Packers and packagers, hand	\$21,850	\$20,240	\$20,680
Couriers and messengers	\$23,310	\$22,030	\$24,150
Driver/sales workers	\$24,380	\$26,470	\$24,430
Stock Clerks and order fillers	\$24,400	\$22,380	\$22,650
Laborers and freight, stock, and material movers, hand	\$24,660	\$23,730	\$22,990
Shipping, receiving, and traffic clerks	\$28,710	\$30,190	\$28,010
Truck drivers, light or delivery services	\$29,490	\$31,120	\$28,900
Industrial truck and tractor operators	\$30,210	\$28,610	\$26,560
Truck drivers, heavy and tractor-trailer	\$37,420	\$37,660	\$41,010
First-line supervisors of helpers, laborers, movers, hand	\$44,970	\$44,540	\$45,370
First-line supervisors/managers of material-moving operators	\$52,150	\$53,590	\$64,290
Logisticians	\$68,010	\$67,080	\$53,150
Transportation, storage, and distribution managers	\$82,810	\$92,250	\$87,390
All Occupations in MSA	\$41,420	\$38,920	\$38,030

Source: May 2008 Occupational Employment and Wage Estimates. US Bureau of Labor Statistics.

would be entry-level work. I think the starting salary for a forklift operator outside of FedEx is \$7-\$9. Our forklift operators are considered premium; they are not entry level here. They earn in the \$12 an hour range, but nobody starts as a forklift operator. You start as a handler and work through the process.

As will be discussed later in greater detail, the interview responses indicated that such clearly defined career progression opportunities do not exist at many of the cluster's smaller firms. Career advancement from the entry-level is associated with the larger employers within the cluster and appears to be more the exception than the rule.

Perceptions of job quality and desirability

A consistent theme across the study regions was that core entry-level jobs in TDL are considered undesirable by potential workers. This viewpoint is based on the perception and to some extent the reality (shown above in Table 3), that TDL jobs are low paying and provide little opportunity for career advancement. Since entry-level warehousing and package handling jobs do not require high levels of education and skill, the people willing to do the work earn relatively low pay. The work is physically demanding and working conditions are not always the best. Potential workers must also be flexible in the hours that they work, particularly at the overnight shipping hub facilities, which require working the night shift. In addition, a lot of the jobs in TDL are part-time, temporary, and/or seasonal positions and do not include full benefits. Even the dominant companies like FedEx and UPS rely on a workforce at their hub facilities that is more than 75 percent part-time. As a result, employee turnover at the entry-level can be high and the perception of TDL job quality generally is low. According to an economic development executive in Indianapolis:

The most prominent opportunities within the cluster are fairly low-skilled, low-paying warehouse jobs—temporary jobs at FedEx. Those folks are in there from 2:00 in the morning until 5:00 or 6:00. It's not full time. So at the end of the day we have to ask the question, "Where are the workforce opportunities within that industry that provide living wages, career advancement, and so forth?"

The job training coordinator at a CBO in Indianapolis commented on how the lackluster perception of TDL jobs can keep inner city workers from considering such jobs as a viable employment option:

You don't see certain things about that industry that are attractive to potential workers. I think you have got an industry that on the surface doesn't appear glamorous one bit. But it feeds households and puts kids through college and has done so for decades. I don't think you've got enough folks coming from the inner city and more disadvantaged communities that look at that and even remotely vision that as an opportunity for them.

Employment opportunities at the larger companies like FedEx and UPS are somewhat more desirable than those at a typical TDL firm because of the benefits they provide even for part-time workers. Larger firms seem to have more of a commitment to providing some opportunities for folks to develop their skill levels and advance within the company. But most TDL companies use staffing agencies to hire entry-level workers and bring them on as temporary workers with no benefits. This contributes to the perception that many of these positions are essentially dead

end jobs. For example, staffers representing CBOs in inner city Louisville indicated that the larger TDL companies do not typically recruit their clients directly and tend to hire packagers and handlers through temporary staffing agencies. By doing so, companies avoid paying for employee benefits and get an opportunity to evaluate work performance before making a commitment. This sort of arrangement can lead to permanent employment for inner city workers, but workers will typically start on a part-time, temporary basis. The negative perceptions regarding job quality and desirability make inner city CBOs in all three regions reluctant to target TDL industries for their clients or to connect to the cluster in any meaningful way to provide employment opportunities for inner city residents. These CBOs desire to place inner city residents in jobs that pay good wages, provide benefits, and have advancement potential. They are concerned about providing their clients with the skills needed to secure living wage employment that leads to long-term economic self-sufficiency. According to the training manager at a CBO in inner city Indianapolis:

We equip people to become self-sufficient. We don't want to train people to go out and get minimum wage jobs. We want to train people to get jobs that are going to at least start them on the path to self-sufficiency. Those \$9, \$10, and \$11 an hour jobs where they will have a career path and where they will be able to grow and support their families.

Although CBOs recognize the overall importance of TDL to their respective regions, they question the cluster's potential for providing increased economic opportunity to inner city residents. According to a community development practitioner in Memphis:

Some of the dominant industry clusters here in Memphis don't really provide good jobs. We are specifically not going to put people in distribution industry jobs because those jobs are considered, for the most part, to be minimum wage jobs. There is no career path associated with them for most people. So, that is certainly an issue here.

It was clear in all three regions that CBOs do not go out of their way to place their inner city clients in TDL jobs, despite the cluster's prominence in their regional economies.

An executive at one of the smaller TDL companies in Memphis was conflicted about the role of the cluster in advancing the economic prospects of disadvantaged inner city workers:

It's a double-edged sword. It's good that we're providing a lot of jobs and we employ several hundred people, but at the same time I recognize there are a lot of working poor at these wage levels. So I get really excited when we have some people that move through these entry-level wages into higher salary positions. That's probably more the exception than the rule. So in one respect it's kind of sad; in another respect it's still providing some income. So how do you change things and make it better?

This concern about job quality helps explain why most of the CBO staff interviewed across the three study regions expressed considerable doubt, if not dismay, at the prospects of using the TDL cluster as a means for providing better employment opportunities for inner city workers. Even those that see some value in using the TDL cluster as a mechanism for increasing economic opportunity among inner city residents cautioned that a number of barriers stand in the way of

effectively doing so. These include the lack of clearly defined career paths within cluster occupations, gaps in the roles of workforce intermediaries, lack of policy coordination among economic, workforce, and community development efforts, and the absence of a deliberate strategy for utilizing TDL as means for boosting inner city employment.

Career paths within cluster

Assuming entry-level workers have the desire and ability to obtain better jobs within TDL, it is unclear whether such advancement opportunities widely exist and are readily accessible. Many of those interviewed in the study regions were skeptical about whether clearly defined career paths are apparent among the cluster's occupations. According to an economic developer in Indianapolis:

The question is, are you positioning people into a career path, or are you just putting them into a job? I would question whether or not there is an obvious career path once someone gets into that position. Do they have increased capacity to add to their skill-base that makes them able to move somewhere else? Is there a career path within the industry that they can follow? Or is the fact that you get in there and you have a job mean that you don't now have enough money to continue training and you don't have enough time, and so do you get stuck in that position?

In addressing this issue, a local government official in Memphis characterized TDL jobs in the following manner:

It's a good place to start. I think people get tired of that kind of work if there's no way within the company to increase your skills and move up. So one of the reasons there's a lot of turnover is that there is no skills development in those companies. It's a great place to learn to work, whether or not somebody wants to move boxes for the rest of their life. Maybe some people do. It's a great place for entry level. I'm just not sure it's a great place to stay forever.

Although some higher end, better paying jobs exist in TDL, they are heavily outnumbered by the lower-level positions. There are fewer supervisory and management level positions to which entry-level workers might aspire (see Table 2). Taking an entry-level job in TDL presents a dilemma for less-skilled workers. Since formal training is not required for the lower-level jobs, people in those positions usually will not get an opportunity to upgrade their skills in order to advance within a company. Some companies provide internal training for the next tier of positions, but generally TDL firms have very little incentive to provide training to those at the entry-level. Indeed, it seems that many companies do not necessarily view entry-level workers as viable candidates for higher-level positions. Part of the problem has to do with the temporary status of many entry-level TDL workers. Only permanent workers are considered for promotion opportunities and many at the entry-level start with temporary placements with no guarantee of long-term employment.

The lack of training opportunities for entry-level TDL workers clearly inhibits the ability for career advancement, which further limits the capacity of the cluster to improve the long-term economic prospects of inner city workers. This is a function of the job requirements at the entry-level, but also reflects the preferences of workforce development policy. Increasingly, the intent of workforce development

programs has shifted from mere job placement to equipping people to support themselves financially over the long term. This focus on self-sufficiency through living wage employment means that jobs considered to be dead end with little advancement potential are less likely to be eligible for training dollars. The manager of a community development program in Memphis made the following observation with regard to this policy emphasis:

There are a lot of people that will say that any job is better than no job. I agree with that. But, I think in terms of actually investing resources in workforce development that we don't want to put resources into training people for distribution jobs. If we were going to train someone, we would rather train them to work in a field that has opportunities for advancement. Of course all those distribution jobs aren't bad. Those jobs are better than no jobs but . . .

Some CBOs in Memphis indicated that federally funded job training programs are administered in the region such that people taking TDL jobs lose out on opportunities to acquire skills to advance themselves. For example, CBOs that become certified training providers in Memphis/Shelby County often have difficulty qualifying participants to receive training vouchers through the federal Workforce Investment Act. This is partly because job counselors deem that no training is necessary for entry-level positions in TDL. Without access to federal job training funds, entry-level workers must rely on the training opportunities made available through their employers. However, TDL companies might be reluctant to invest in training entry-level workers for fear that they might leave for higher-paying positions elsewhere.

Inner city workers often take TDL jobs by default when no other opportunities are available despite having gone through training to acquire new skills. The training coordinator at a CBO in Memphis noted this tendency to view TDL as an employer of last resort:

Our students graduate from our training with a new skill set. They don't even want to work in the FedEx hub or somewhere like that. They have higher aspirations. And some of them have seen their classmates get jobs. The ones that aren't working yet say, "Well, should I just take whatever is available? I really need money." They've invested the time to get this training, but if they can't get a job soon, where they can use those skills, they're going to take whatever they can get to pay the bills. The available jobs are those low-paying jobs in warehousing and distribution. They know that they can get a job like that today. They can get those jobs without investing in further education or training.

The fact that entry-level TDL jobs require little or no formal training serves almost as a disincentive and deterrent for workers to acquire additional education and training, even though that is precisely what will be needed to advance to a higher-level position.

Roles of workforce intermediaries

Several entities exist in the three study regions that function as workforce/labor market intermediaries, in a general sense, between TDL firms and workers. For example, community colleges such as Ivy Tech in Indianapolis, Jefferson Community and Technical College (JCTC) in Louisville, and Southwest Tennessee Community College engage in "market-molding" activities (Benner et al., 2007, p. 61) by

providing pre-employment and vocational job training to prepare people for TDL jobs. JCTC is one of the founding educational partners in the UPS Metropolitan College Program, which enables employees who work overnight at the UPS package sorting facility in Louisville to attend college with tuition paid while continuing their employment. Ivy Tech offers an Associate of Science degree in TDL and Southwest Tennessee Community College offers an Associate of Applied Science degree in logistics/transportation management. While these specialized degree programs are indicative of how the study regions are responding to the workforce needs of TDL generally, there was no evidence of any special outreach to residents of inner city communities.

It is also unclear which organizations in the study regions are systematically fulfilling the job matching function, which Benner et al. (2007) refer to as “market-meeting”, specifically between TDL firms and inner city workers. Part of this void has to do with the reluctance of inner city CBOs to place their clients in entry-level TDL jobs due to the negative perceptions of job quality and desirability, as previously discussed. With many CBOs unwilling to serve as a match-maker between inner city workers and TDL firms, there is an opportunity for other organizations to step in and perform such a role. For example, in Indianapolis, many of those interviewed suggested that the local workforce development board, known as the Indianapolis Private Industry Council could perhaps take the lead in facilitating stronger connections between regional clusters and the inner city workforce.

Despite their concerns about the nature of entry-level positions and the lack of career advancement opportunities within TDL, inner city CBOs in Louisville have been involved in the recruitment process for the UPS Metropolitan College Program. This has the potential to provide opportunities for disadvantaged residents to enter the TDL industry and receive tuition assistance to attend college while working part-time at UPS. Another TDL-related career program has been created at a local high school located in the inner city west Louisville area. The clothing retailer Guess, Inc. has a major distribution facility in Louisville and is a major sponsor of the program. The program is designed to increase awareness among inner city high school students about career opportunities available in distribution and logistics.

The interviews revealed some significant gaps in the roles of intermediary organizations with regard to providing the critical support services that many inner city workers need in order to take full advantage of the regional employment opportunities in TDL. TDL employers expect entry-level workers to possess so-called “soft skills”. Soft skills are the intangible aspects of being a good and dependable employee that play an important role in workplace success. These include showing up to work as scheduled, having a good work ethic, and working well with co-workers and superiors. The TDL employers who were interviewed indicated that many candidates for entry-level jobs in their firms are apparently lacking in soft skills, which hurts their long-term employment prospects. A vice president at a major TDL company in Indianapolis indicated that lateness and absenteeism are the primary reasons for employee terminations at her facility. The president of a mid-sized distribution company in Louisville described what makes for a successful employee:

In our business the operating equipment is a forklift. You are picking something, or you are unloading something. So I don't know that we are looking for skills so much as what

we do have is trainable. What is most important to us is reliability. Are they going to show up to work? Are they going to show up on time? Are they going to show up sober? Are they conscientious? Do they have a work ethic? Do they work hard?

The soft skills that employers complain about include the most basic, commonsensical ways of conducting oneself that most people would take for granted in a potential employee. Soft skills are not typically a part of the curriculum in public schools and community colleges. CBOs fill this gap to some extent by offering courses on proper workplace etiquette, interviewing, responsibility, team building and adding value to an employer. Such training helps smooth out the rough edges thereby easing the transition into successful employment. Yet, soft skills training is not fully integrated into publicly funded training programs, partly due to assumptions about who should be responsible for equipping people with such skills. As a workforce development official in Louisville commented:

No one is quite clear about whose job it is to teach this kind of stuff. You are teaching them job readiness skills. You are teaching them to wear a suit or to dress nicely. You know, to show up on time, to be 10 minutes early, to make sure you know how to get there, to make sure that just because you have the sniffles doesn't mean you don't go in. It is all of these sort of soft things that most kids get from watching their parents and other influential adults in their life.

Ironically, another critical missing link between inner city workers and TDL employment is transportation itself – being able to get to and from work. Limited transportation access is a barrier for TDL jobs not only because of where the jobs are geographically located in relation to the inner city, but also due to the time of the day when much of the work occurs. Packing and sorting facilities operate overnight requiring many employees to work the night shift. The problem is that public transit in the study regions stops running at a certain point in the evening. Local transit systems are examining ways to address the needs of night shift workers. In Louisville, for example, a “night owl” bus runs during the non-traditional night shift hours serving selected locations. UPS also operates an after hours shuttle bus to transport night shift workers to and from it Louisville hub.

The night shift schedule for TDL jobs creates a transportation issue for inner city workers but accentuates the child-care dilemma they face as well. As the general manager of a TDL facility in Memphis noted:

With warehousing and distribution, a lot of activity happens at night and on weekends. That's just when the work has to be done. Then you encounter the single-parent situations, when a person really needs to work while their kids are at school. So, that disqualifies a lot of people. Of course we're too small to do childcare.

Although many warehousing jobs run through the night shift, child-care services are typically only available during regular business hours. For second or third shift jobs, the challenge of getting to and from work combined with childcare issues poses a major obstacle for inner city workers. As a response, some CBOs in the study regions work with inner city residents to help them develop contingency plans around both transportation and child care. Inner city job applicants are encouraged to build a network of family, friends, or neighbors to help them when such situations arise. In this way, CBOs can help their clients overcome the barriers of transportation and childcare on the path toward economic self-sufficiency. While

some CBOs in the study regions provide assistance with access to transportation and childcare, there was a sense that this intermediary role needed to be strengthened among CBOs and expanded to involve other types of organizations since the need is so great.

Strategy for utilizing TDL to provide jobs for inner city workers

While the TDL cluster is a central component of the regional economic development plans prospects for all three study regions, only Louisville has an explicit strategy for leveraging TDL to directly benefit the inner city and its workers. In addition, the UPS Metropolitan College program in Louisville represents a real opportunity for connecting inner city workers to both higher education and jobs in the TDL cluster. The case study research and interview findings suggest that of the three regions, Louisville is being the most intentional about utilizing the TDL cluster to provide greater inner city employment opportunities.

In early 2000, local officials in Louisville embarked upon the West Louisville Competitive Assessment and Strategy Project. The project was led by the then Mayor David Armstrong in partnership with representatives from community-based groups and the private sector. It was an effort to identify strategies to spur economic development in West Louisville. West Louisville is a part of the city that suffers from all of the problems that plaque disadvantaged inner city areas including high poverty and unemployment. Yet the area also has high concentrations of manufacturing and warehousing firms that pay good wages in addition to a critical mass of transportation and warehousing firms. Louisville brought in the Initiative for a Competitive Inner City (ICIC) to assess the economic competitiveness of this distressed area of the city. ICIC is a non-profit research group founded by Harvard Business School Professor and cluster guru Michael Porter.

The objective of the West Louisville strategy was to determine what assets exist in that economically challenged area of the city and to figure out how to take advantage of them in a way that benefits inner city residents. The analytical study behind the inner city West Louisville strategy revealed a number of interesting findings. According to the President of a CBO involved in the effort:

What we found was that some of the strongest, highest paying companies in the whole region are physically located in West Louisville. So how could you have this potential economic vitality in your back yard and still have continuous poverty around. And when we looked closer, we found that the work force at those companies was not from the "hood", if you will. It was from other places.

The strategy is based on the premise that West Louisville should build on its strengths and become more integrated with the larger regional economy. The inner city strategy for West Louisville explicitly utilizes the region's target industry clusters including TDL (ICIC, 2001). The strategy explores how best to incorporate inner city Louisville into the regional vision for the target clusters.

The West Louisville study identified TDL as one of the focal clusters because it has a significant presence in the inner city area and is a critical element of the broader economic development strategy for the region. The study noted a number of competitive advantages for TDL within inner city west Louisville. These include its strategic location, access to two of the region's four interstates, direct rail access, and proximity to ports.

The study claimed that West Louisville's most significant advantage for TDL is its available workforce. The ICIC researchers supported this assertion by noting the high demand for truck drivers in Louisville. West Louisville is home to a substantial number of TDL companies, but they tend not to hire from the inner city labor pool. The ICIC/West Louisville study sees great opportunity for using TDL to link inner city residents to jobs:

Many entry-level positions, such as freight handling, in the transportation and logistics cluster have minimal educational requirements so a variety of skill levels could be accommodated. Most distribution and logistics jobs pay competitive wages, while technical logistics jobs also provide career track opportunities. With the right training, West Louisville residents without higher educational attainment can access such job opportunities (ICIC, 2001, p. 27).

One of the specific recommendations coming out of the ICIC/West Louisville study is to link the inner city workforce to the strong demand for truck drivers in the region by utilizing existing education and training programs. The Greater Louisville Chamber of Commerce's Transportation/Trucking Network is offered as a possible vehicle for making this linkage happen. An economic development executive in Louisville echoed this sentiment:

I think there's a lack of knowledge about the fact that there's a significant available work force there [in West Louisville]. I think the perception is that the inner city work force isn't getting the work. And that's partly true. So we've got work to do in that area. But it's a potential gold mine. There are people who need to work, employers who need folks. If we figure out how to connect it all up, we will really have something there.

Louisville has completed the initial process for devising a cluster-based strategy for achieving economic development in the inner city. The region has created an advisory group and is moving forward with an action plan to implement some of the recommendations in the ICIC study including those focused on TDL.

Conclusion

The findings from this research suggest that the usefulness of the TDL cluster for linking inner city workers to greater economic opportunity is limited by: (1) the dominance of low-wage, low skill positions at the entry-level within the cluster; (2) negative perceptions of job quality and desirability; (3) unclear career paths in cluster occupations; and (4) lack of a deliberate strategy and explicit focus on the inner city.

The low-wage, low-skill nature of many entry-level TDL jobs poses both an opportunity and a challenge for using the cluster to expand employment opportunities for disadvantaged residents of the inner city. The opportunity lies in the fact that the cluster's entry-level occupations require minimal formal education and only the most basic of skills. Such jobs would ostensibly be a "good fit" for inner city residents who lack higher-level skills and education. Some would argue that entry-level TDL jobs are a means for providing less educated and less skilled inner city residents with access to decent paying employment until they can do better. From this view, if these jobs are available and suitable for less skilled workers then they are preferable to having no job at all. TDL jobs enable less skilled workers and those dislocated from traditional manufacturing work to obtain gainful employment. Such jobs help mitigate the employment uncertainty created by the transition

to the new economy. They can serve as stopgap employment until a worker can retool, obtain higher skills, and find other work.

The viability of using TDL as part of an inner city employment strategy can be improved by figuring out how to enhance job quality and career advancement possibilities from the entry-level to better paying occupations within the cluster. The specification of formal career pathways within the cluster is an important way to achieve this outcome. A career pathway is “a series of connected education and training programs and support services that enable individuals to secure employment within a specific industry or occupational sector, and to advance over time to successively higher levels of education and employment in that sector” (Jenkins, 2006). The interview findings revealed considerable doubt about whether viable career paths exist within TDL. Yet, the US Department of Education’s Office of Vocational and Adult Education has delineated a very detailed series of pathways within TDL as part of its “Career Clusters” initiative (NCTEF, 2008). The study regions could apply this information to their respective TDL clusters to more clearly identify the education and skills needed for inner city workers to advance beyond the entry-level. Since career pathway initiatives target jobs in industries of importance to regional economies they are a natural complement to industry cluster strategies. In addition, most career pathway programs also target low-income workers. For example, the Kentucky Community and Technical College Systems (KCTCS) supports the creation of career pathways by requiring local colleges to build alliances with social service agencies and other organizations to ensure that disadvantaged students have access to critical support services like transportation, child care, career counseling, and job placement.

Increased education and training to prepare inner city workers to take on higher level jobs within the TDL cluster combined with clearly designated career paths will help make connecting to the cluster more beneficial. Still, there is a need for entities with the primary mission, resources and capacity to facilitate the linkages required for inner city workers to gain greater access to regional employment opportunities afforded by the cluster. There are many potential organizations that can and do play a part in this workforce intermediary role including community colleges, local workforce investments boards, and faith-based institutions. But inner city CBOs can serve as intermediaries for not only for job training, counseling, and placement, but also for enhancing access to transportation and child care. Indeed, CBOs might be the entities best suited to help disadvantaged, inner city workers learn the “soft skills” that TDL employers suggest can be lacking among many such job applicants. To take on this expanded intermediary role in any systematic way, however, will require greater resources and capacity than most inner city CBOs currently possess.

The research findings presented in this article are based on one particular type of industry cluster (TDL) in three metropolitan regions, which limits the ability to generalize about other types of clusters located in different regions. Still the findings provide some partial insight into whether cluster-based development can be a useful framework for enhancing the employment prospects for inner city workers. The experiences in the study regions suggest that the TDL cluster can be helpful in this regard, but not without a certain level of intentionality. The findings from Louisville, in particular, highlight the importance of having a deliberate strategy for connecting inner city workers to employment opportunities in the TDL cluster.

The broader implication is that regional industry clusters will benefit disadvantaged residents of the inner city only to the extent that cluster strategies

explicitly incorporate such a focus. It is here that cluster-based development can learn from the sectoral employment model, which does explicitly try to address the policy gaps in order to create mutually beneficial outcomes for disadvantaged workers and employers in target industry sectors. In return, cluster strategies focused on groups of related industries can enhance more narrow sector-based strategies by offering access to job opportunities that allow skills to be transferred laterally across multiple sectors (Woolsey, 2007). While strategies targeting individual sectors emphasize upward job mobility, when tied to a multi-sector cluster strategy, they can facilitate greater lateral job mobility as well. Both types of job mobility are important in a dynamic global economy.

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