

Chicago Fed Letter

Strategies for improving the Midwest work force

by *Richard Mattoon, senior economist*

Work force issues are critical to regional economic development. The Midwest faces a number of challenges in attracting and retaining skilled workers, training new entrants to the work force, and retraining displaced workers for a successful transition to new employment. How the region should respond to these challenges was the subject of a recent Chicago Fed conference.

Developing the right human capital to meet the needs of the region's economy represents a clear challenge to policymakers.

Critical issues facing the Midwest work force formed the theme of a one-day conference sponsored by the Federal Reserve Bank of Chicago and the Gerald R. Ford School of Public Policy at the University of Michigan. The November 21, 2002, conference at the Chicago Fed brought together academics, policymakers, and business people to assess the current status of the region's work force and identify strategies to attract, retain, and develop the best human capital.

Curt Hunter, senior vice president and director of research at the Chicago Fed, opened the conference by noting that the bank's 1997 study assessing the turnaround in the Midwest economy found that regional work force development and education strategies would be critical to sustaining the economic health of the region. The study suggested that as physical capital played a less important role in economic growth going forward, human capital would grow in its importance as an economic input. Hunter suggested that developing the right human capital to meet the needs of the region's economy represents a clear challenge to policymakers.

Overview of the Midwest work force

William Testa, vice president and director of regional programs at the Chicago Fed, provided an overview of

the Midwest work force. In the broadest terms, Testa described the region's work force as being marginally high income and having an above the national average concentration in manufacturing jobs. The region's work force tends to have moderate educational attainment with a higher than average percentage of workers having a high school or slightly better level of education and a lower percentage having a college or college plus level of education (figure 1). Other features of the region's work force include a tendency for out-migration to be led by younger and more educated individuals, a difficulty in attracting domestic in-migration, and a below the national average ability to attract foreign in-migrants, with the exception of Chicago. The region tends to exhibit a similar to the U.S. average urban/rural split when it comes to where jobs are located; however, the Midwest's large cities tend to be among the most racially segregated in the nation. While rural areas have been expanding their share of the region's manufacturing jobs, income gains from this shift have been paltry, as the types of manufacturing attracted to rural areas have not been characterized by high wages.

Testa noted that the Midwest emerged as a high-income region during the late nineteenth and early twentieth

1. Educational attainment, 1990

	High school	High school graduate	Some college	College	Advanced degree
	(- - - - - percent - - - - -)				
U.S.	24.8	30.0	24.9	13.1	7.2
Illinois	23.8	30.0	25.2	13.6	7.5
Indiana	24.4	38.2	21.9	9.2	6.4
Iowa	19.9	38.5	24.7	11.7	5.2
Michigan	23.2	32.3	27.1	10.9	6.4
Wisconsin	21.4	37.1	23.8	12.1	5.6

century through growth in agriculture, manufacturing, and increased urbanization. The region's wealth was based in natural resources and its ability to take advantage of its central geographic location to be a transportation hub for the nation. Testa suggested that this structure led to the region's changing performance in terms of per capita personal income over the last several business cycles (figure 2). The rise in per capita income throughout much of the 1990s could be attributed to the increased efficiency of midwestern business gained through the introduction of new technologies and firm restructuring. The region also benefited from an absence of certain factors that affected other regional economies, such as the savings and loan crisis and the decline in defense spending. In addition, a falling dollar and low energy prices benefited the region's manufacturers.

Testa concluded by suggesting that the lack of an available work force in the late 1990s most likely constrained the region's growth. He also suggested that much of the region's strong performance in the 1990s came from fully employing its work force rather than from significant gains in wages.

Midwest work force quality

Dan Sullivan, vice president and director of microeconomics at the Chicago Fed, presented joint work with Dan Aaronson, senior economist and economic advisor also at the Chicago Fed, on regional differences in worker quality. Measuring worker quality is important because it is one of several factors that supports labor productivity growth and

it is one factor that can be influenced by public policy. Sullivan began by defining worker quality as being a composite of attributes such as years of education and experience, sex, and other factors that are related to relative wage levels at a point in time. Research on worker quality assumes such differences in relative wages reflect corresponding differences in worker productivity. Thus, changes over time in the distribution of such labor force characteristics should lead to changes in productivity levels. Sullivan and Aaronson's work finds that worker quality has contributed a non-trivial 0.22 percentage point of the 2.7% average annual growth in productivity since 1967. Their research suggests that labor quality growth has varied over time. During the late 1980s and early 1990s, labor quality grew relatively rapidly, averaging about 0.5% per year. Recently, growth has slowed to half that number, and Sullivan projects future growth to slow even further. He attributes this largely to slower growth in education levels and the aging of the Baby Boom generation. Sullivan did offer some caveats about the nature of these measures of worker quality. The available data allow for only gross measures of education and work experience. Indicators of the quality of education or work experience cannot be discerned. Second, wages may not be precisely related to the

productivity of an individual. Finally, workers may not capture the full benefits of their education. Positive externalities of education can spill over to society in general.

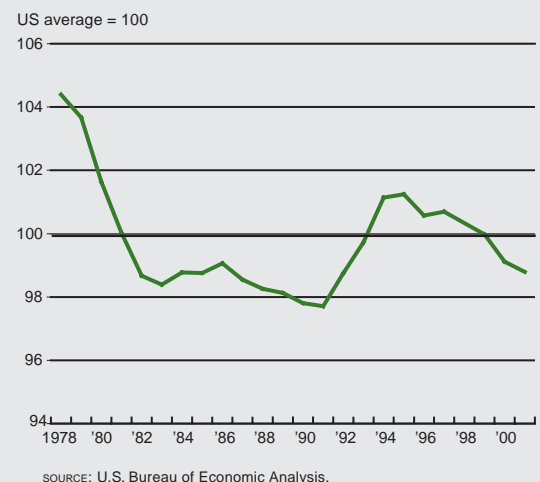
In comparing the experience of the Midwest to the U.S. as a whole, Sullivan suggested that the Midwest is perhaps the "most average" region in the country. It has caught up to the U.S. in education, has somewhat better levels of worker experience, and modestly faster worker quality growth over the last 20 years. As with the U.S., much of this has to do with the changing demographics of the work force. In particular, going forward this will be driven by a decline in the share of prime-age workers as Baby Boomers pass their peak earnings and productivity years and head toward retirement (figure 3). Sullivan suggested that these demographic factors might increase the role for adult education.

Finally, he discussed research on the effect of labor quality on gross state product. His work suggests that a 1% gain in worker quality equates to a .83% gain in gross state product. Sullivan concluded that this provides very modest evidence of the importance of worker quality for improving state gross product.

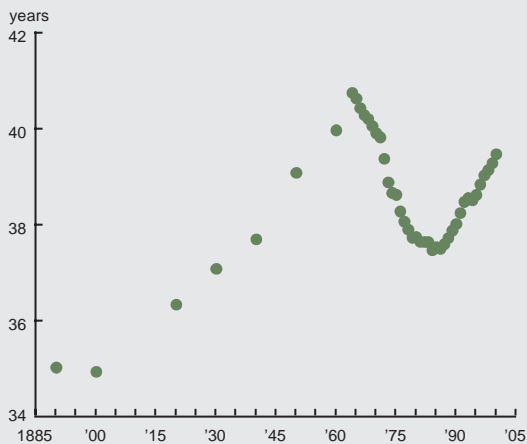
Work force issues I—Immigration, ex-offenders, brain drain

Professor Barry Chiswick from the University of Illinois at Chicago kicked

2. Per capita personal income, Midwest vs. U.S.



3. Average age of the labor force, 1890–2000



SOURCE: Aaronson and Sullivan, 2001, "Growth in worker quality," *Economic Perspectives*, Federal Reserve Bank of Chicago, Fourth Quarter, p. 59.

off a panel on strategies for enhancing the region's work force by discussing the effects of immigration on the region. Chiswick began by noting that immigration policy is established at the national level but that issues regarding immigrant absorption and adjustment are local choices. He noted that where immigrants settle tends to be determined by the location of ports of entry, the presence of family and friends, and the location of jobs. Because of this, immigration tends to be concentrated in a handful of key locations. For example, 26.5% of immigrants in 2000 landed in California and 12.5% in New York. By comparison, only 10% of immigrants ended up in the Midwest, and the majority came to large metropolitan areas (in particular Chicago). Of major metropolitan areas, Chicago ranked fourth in the nation as a destination for immigrants, while Detroit ranked eighteenth and Minneapolis/St. Paul ranked twenty-sixth. Where immigrants come from has changed significantly in the last 40 years. From 1951 to 1960, 68% of immigrants came from Europe or Canada. By 2000, the leading region of origin was Asia with 30%. Other major countries or regions of origin for immigrants in 2000 were Mexico (20%), other Latin American nations (24%), and Europe/Canada (18%). In addition, the number of annual immigrants has increased significantly. From 1951 to 1960, the

total per year averaged 251,000. By 2000, that number had jumped to 850,000.

Chiswick next turned to the issue of the skill level of immigrants. He characterized the trend in skills to be a case of the "disappearing middle." Immigrants today tend to fall into either very low or very high skill levels. He suggested some possible avenues for improving immigrant absorption policy. First would be to reduce barriers for transferring skills. Licensing practices can often prevent skilled immi-

grants from working in their profession even when they are fully qualified. A second policy would emphasize retraining for immigrants with country-specific professional skills that might not be applicable in the U.S. For example, lawyers and other legal professionals often have country-specific knowledge and would need retraining for the U.S. labor market. Finally, improvement in English language skills and speeding up the "Americanization" process can help smooth immigrant assimilation.

Economist Kristin Butcher of the Chicago Fed next discussed issues facing ex-offenders in the labor market. Butcher noted that these issues are important for two simple reasons—first, there are a significant number of inmates in the country; and second, 95% of them will be released into the general population at some point. In the Midwest the prison population grew from around 60,000 in 1977 to over 220,000 by 1998. In 1998, over 100,000 sentenced prisoners were released in the Midwest. Butcher reported that the likelihood of going to prison during one's lifetime is roughly 5%, but that this figure rises to 28.5% for black men.

Most prison sentences tend to be less than four years. In Illinois in 2000, 57.7% of the sentences were for one to three years with a median sentence of three years and a median prison stay of nine

months. Other characteristics of the inmate population in Illinois include being overwhelmingly male (94%), fairly young (33 on average), and low-skilled (56% high school dropouts).

Butcher next focused on whether there is a relationship between having a criminal record and labor market outcomes. She suggested three approaches to thinking about this question. First, there may be no link. These are people who would have had bad job prospects even without a criminal record due to other attributes. Second, a criminal record acts as a red flag to potential employers, who think that anyone with a criminal record would be a poor employee. Third, being incarcerated degrades human and social capital, making an individual less able to succeed in the workplace. Butcher noted that the literature has yet to resolve this question, but it has established a reasonable case for the impact of incarceration on earnings. Naturally, the effectiveness of policies to improve ex-offenders' labor market outcomes will depend on why ex-offenders' labor market outcomes are so poor. Butcher then analyzed the pitfalls and benefits of several different existing and potential policies, including "second chance" policies that expunge or redact a prison record for a period of time; and the Federal Bonding program, which issues bonds for people deemed "unbondable" under private insurance. This program protects an employer against theft by an employee and issues \$5,000 bonds for a minimum of six months. The program has existed since 1966 and has experienced a default rate of only 1% but has not been widely utilized. In FY 2000, only 32 bonds were in force in Illinois and 670 nationwide. One problem that Butcher suggested can occur with second chance programs is that employers can begin to discriminate against individuals who do not have criminal records but are perceived as belonging to groups likely to have criminal records.

Another option is to improve prison programs to better develop human and social capital that will help the released prisoner. Prison programs tend to concentrate on educational (high school/GED) or

4. Illinois prison programs, 2000

Program type:	Program completions	% of prison population
Education	3,025	6.4%
Vocation	2,256	4.8%
Prison industries	1,427	3.0%
Employment	11,512	24.4%

SOURCE: Lawrence, Mears, Dubin, and Travis, 2002, "The practice and promise of prison programming," Urban Institute, May.

vocational training. In addition, programs are offered in employment services such as work attitude and punctuality. Programs can also deal with issues such as anger management and drug rehabilitation. Butcher noted that one of the greatest challenges facing prison programs is that the short stays of most inmates make it impossible for them to complete their courses (see figure 4). Butcher also noted that many of the jobs in prison industries in Illinois are geared toward producing products needed by the Illinois Department of Corrections and other state agencies rather than being geared toward work opportunities available in the larger economy. For example, a large percentage of Illinois prison industry jobs are in the garment industry, a sector that offers little employment in Illinois.

Butcher concluded with several research suggestions. First, there needs to be a better understanding of why employers are reluctant to hire ex-offenders. Second, prison programs need to do a better job at providing training to offenders that will improve their hiring prospects in the labor market. Third, more needs to be done with re-entry programs that concentrate on connecting inmates to relevant services on the outside. Finally, better evaluation is needed to clarify what works and doesn't work in improving the employment prospects for ex-offenders.

Yolanda Kodrycki, assistant vice president at the Federal Reserve Bank of Boston, presented her research on the "brain drain" phenomenon. Increasingly,

states are growing concerned that they are unable to retain or attract college graduates that they view as being critical to their economic growth. Kodrycki's research examines why some regions have higher proportions of college graduates than other regions. She suggested four factors help

determine where college grads locate. They are: the quality and accessibility of educational institutions, availability of jobs that make use of advanced skills, cost of living, and amenities. Essentially, college graduates are far more mobile than high school graduates (see figure 5).

Kodrycki identified two strategies for attracting college students. The dominant strategy is to grow and retain your own. The probability that a person who went to high school and college in the same state will stay in that state is significantly higher than for a person who leaves their home state for schooling. This is particularly true for the Midwest, where the level of non-migrants as a percentage of 31 to 41 year-olds with bachelor's degrees is slightly above the U.S. average at roughly 18%. Where the Midwest has a particular shortcoming is in the second strategy of attracting college-educated migrants to the region. Kodrycki cited statistics that show that the East North Central region lost roughly 26% of its college graduates from the classes of 1979-91 to other regions. The U.S. average for this statistic is 23.5%. However, while these figures are comparable, the percentage of college graduates East North Central gained via in-migration was only 9.8% versus a U.S. average of 23.5%. Kodrycki said that factors that tend to cause college graduates to leave their state include: a history of prior moves and poor

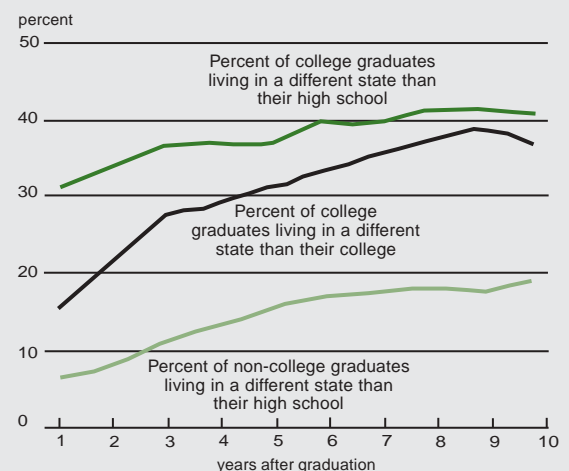
economic conditions in the home state (including low employment growth or a high unemployment rate or low pay for college graduates). Interestingly, people from seacoast states are less likely to move, suggesting that this is a strongly valued amenity. Finally, housing costs seem to be insignificant to the location decision of recent college graduates. Kodrycki noted that the Midwest's economic and amenity indicators are mixed when it comes to attracting college graduates (see figure 6).

Kodrycki concluded by offering some advice to Midwest states. First, the region should continue to pay attention to "grow your own" strategies through educational opportunities. This has been a traditional strength for the region. Second, states should continue to develop attractive job opportunities for college students. College students will stay if interesting jobs are available. Finally, the region may want to try attracting graduates from other regions based on better promoting the region's benefits and opportunities.

Keynote—Work force opportunities for low-skilled workers

Rebecca Blank, Dean of the Gerald R. Ford School of Public Policy, delivered the keynote address for the conference on the topic of work force opportunities for low-skilled workers. Blank based her remarks on evidence from Michigan, Illinois, and Ohio. She noted that in

5. The "brain drain"



SOURCE: www.bos.frb.org/economic/neer/neer2000/neer100c.pdf.

6. Midwest economic indicators and amenities rankings

	Employment growth (1 = highest ranking)	Unemployment (1 = low)	Seacoast (1 = yes)	College graduate pay (1 = high)	Median home price (1 = low)
Illinois	41	42	0	12	31
Indiana	31	37	0	34	9
Iowa	36	16	0	41	3
Michigan	35	50	0	10	12
Ohio	40	43	0	19	19
Wisconsin	26	28	0	23	22

SOURCE: www.bos.frb.org/economic/neer.neer2001/neer101b.pdf.

the late 1970s workers without a high school education in these states tended to earn relatively high wages in comparison to the nation. However, this advantage quickly eroded, and today low-skilled workers in the region have wages on par with those of their national peers. Since wages for low-skilled workers have declined nationally since the 1970s, this means wages have declined at an even faster rate among low-skilled workers in the Midwest.

The most important policy to improve the prospects of low-skilled workers in the long run, Blank noted, is to continue to improve the current K-12 educational system and to improve graduation rates. However, for low-skilled workers already in the labor market, she suggested that subsidizing wages has proven to have significant benefits. Research on the minimum wage has found that recent increases in the wage have not displaced workers, and work on the earned income tax credit (EITC) has shown that this provides a significant incentive to work for low-skilled workers. The EITC raised the earnings of recipients by \$1,600 in 2000. A third strategy would target non-job work support. For many populations, this is critical to success in the job market. In particular, this would include support for child care, health insurance, transportation, and English language training.

Blank suggested two other policy areas that are important for low-skilled workers. First, traditional job training may provide some benefits, although Blank noted that evidence suggests that many programs have not worked. The one

exception has been job training designed for women in the welfare population. Finally, policies that affect the macroeconomy also matter. Low unemployment rates clearly improve the job prospects of low-skilled workers. Recent declines in wages among low-skilled workers have been linked to macro trends in globalization, changing technology in the workplace, and deunionization. How these trends evolve will affect wage prospects among the less skilled over the next decade.

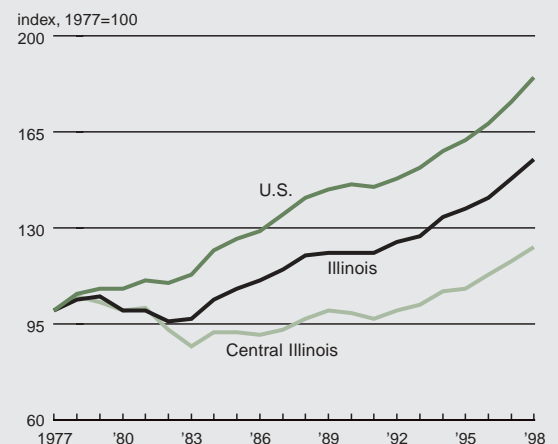
Work force issues II—Strategies for central Illinois, displaced workers, spatial mismatch, and employment and training support

Richard Judy, president of Work Force Associates, presented work that he had done on work force challenges facing a five-county region (Stark, Marshall, Peoria, Woodford, and Tazewell) in central Illinois. Judy noted that the region's economic growth (as measured by gross product) had significantly lagged both the U.S. and Illinois (see figure 6). Judy attributed this to the difficulty the region was having in transitioning from its traditional economic base of agriculture, food processing, and heavy manufacturing to other types of industries. In particular, Judy said it was critical for the region to develop new and stronger export-oriented industries. He noted that the region has several positive attributes,

including good schools and infrastructure, fair taxes, regional cooperation, and good public services. Judy said that a challenge to the region's attempt to develop more knowledge-based industries (such as bioscience) would be a potential lack of workers. He added that strategies could be devised to address this situation by augmenting work force growth (boost participation rates, spur growth of work force population) and raising worker productivity and work force quality. In general, Judy said that strategies that would position the region as a "learning community," with affordable and accessible education available throughout one's lifetime, could serve as a key to renewed economic growth in central Illinois.

Professor Robert LaLonde of the University of Chicago presented research he has conducted on programs designed to help displaced workers. In particular, LaLonde's work has focused on the effectiveness of retraining programs in improving the employment and wage outcomes for displaced workers. LaLonde discussed two broad findings. First, retraining displaced workers is a productive investment for society and workers; however, retraining does not substantially reduce the costs to displaced workers of losing their jobs. LaLonde's work looks at displaced workers with three or more years of tenure with their employer. Workers with longer tenure have usually developed some firm-specific

7. Central Illinois GDP growth, 1972-98



SOURCE: Bureau of Economic Analysis and estimates based on BEA data.

skill or attribute that often can't be easily transferred to another firm. LaLonde characterized the pattern of earnings for displaced workers as declining sharply after initial job loss and, even after re-employment, never fully recovering to where they would likely have been if the workers had stayed with their original firms. New jobs found by displaced workers often pay only 75% of former earnings.

Because displaced workers have firm-specific knowledge, they often must be retrained to find new work. Retraining services vary. They can include simple reemployment services such as job search assistance to formal retraining, ranging from specialized programs for the displaced, existing courses at community colleges and technical schools to on-the-job training with private employers. Both experimental and non-experimental evidence suggest modest earnings impacts from training. The experimental case dealt with the Texas Worker Readjustment Demonstration project. The project was conducted in the cities of Houston and El Paso in 1984-85. The average pre-displacement tenure of the subjects was three to four years with a mean number of weeks of training of 20 weeks. The first year impact on men's wages was \$800 or 5%. For women the result was far better, with training raising earnings by \$1,675 or 28%.

LaLonde's non-experimental work with Sullivan and Jacobson in Washington state found long-term earnings impacts of 7% for men and 8% for women. This evidence was based on a study of nearly 100,000 displaced workers from 1990 to 1994. Roughly 20% of these workers enrolled in community college and 11% completed at least one for-credit course. The average age was 36 for men and 37 for women. Workers appeared to have higher earnings gains when their coursework concentrated on technical/quantitative subjects. Again, while these results suggest positive gains, the impacts are modest when compared with the workers' likely earnings prior to displacement. LaLonde also noted that while older workers receive similar returns to schooling as younger people, they are

less likely to go back to school for training because the private costs of attending school are much higher for older workers. LaLonde concluded by suggesting that to get a \$7,000 gain in earnings for a displaced worker, roughly \$70,000 in retraining expenditures would be needed.

Professor Dan McMillen from the economics department at the University of Illinois Chicago discussed evidence of spatial mismatch in the Chicago metro area. McMillen explained that spatial mismatch research came to the fore in the 1960s when John Kain began examining the movement of manufacturing from the cities to the suburbs. The problem was that low-skilled urban populations that had held manufacturing jobs now found themselves unable either to find transportation to suburban job centers or to find low-cost housing. McMillen presented evidence that suggests that in Chicago the mismatch may be more a product of race, opportunity, and discrimination than other factors.

McMillen provided maps that demonstrated that low-cost housing does exist in suburban Chicago. Further, when examining the location patterns of specific ethnic groups, it is clear that low-wage Hispanics have been more willing (and perhaps have had greater opportunity) to move to suburban locations and have found housing. In contrast, blacks remain far more segregated on the south side of the city. Using a dissimilarity index¹ for whites and blacks, McMillen reported that midwestern cities are particularly segregated. Of the top ten most segregated cities, Gary, Indiana, ranked 1; Detroit ranked 2; Milwaukee, 3; Chicago, 5; Flint, Michigan, 7; Cleveland, 9; and Saginaw-Bay City-Midland, Michigan, 10.

McMillen concluded with some observations about where employment growth is occurring in the metro area. While Cook County has the largest share of employment, from 1990 to 2000 the fastest employment growth in four key sectors of the economy (manufacturing; finance, insurance, and real estate; services; and transportation) were in

the collar counties (see figure 7.) In fact, Cook County lost employment in every sector except services. Given the differences in the dispersion of blacks and Hispanics in the Chicago area, McMillen suggested that racial and discrimination issues may be maintaining the high concentration of blacks in a handful of neighborhoods.

Kelly DeRango, a research fellow at the W. E. Upjohn Institute, discussed the Georgia Frontline Decision Support System (FDSS), a pilot project of Upjohn, the U.S. Department of Labor, and the state of Georgia to create an integrated, coordinated, and comprehensive employment service delivery system. The system is designed to bring together information for both customers and staff that will improve decisions regarding job prospects and service referrals. It uses client information and existing state data to help workers to find work and to identify which programs are most likely to help an individual client based on the experience of prior clients with a similar profile. This is accomplished by using statistical methods to relate customer characteristics, labor market information, past work history, and service participation to employment outcomes.

DeRango noted several technical challenges in designing the system. These included:

- How to get the information to users,
- How to present this information in a way that it will be used by customers and staff and provide the greatest benefits,
- How to keep the information up to date, and
- How to integrate the information from labor market information and various one-stop employment programs so that it is accessible when needed.

The goal of the FDSS is to better target available resources for clients. The FDSS helps users address such key concerns as: the probability of returning to work in the same industry, estimating reemployment earnings, identifying related occupations, and searching for targeted

information about specific jobs. It also can rank job services and training opportunities by effectiveness with regard to employment outcomes. The system merges data from unemployment insurance wage records, program records such as employment security, Job Training Partnership Act/Workforce Investment Act, and Welfare to Work, as well as state labor market information. Clients enter their information and the system provides a customized profile of the individual's employment prospects. The FDSS is also a regional system that divides Georgia into four regions—Atlanta, Coastal, Northern, and the balance of the state. The project is currently in a pilot phase in the state of Georgia.

Conclusion

This fourth conference in the Chicago Fed's Midwest Infrastructure Program series helped identify the current condition of the region's work force and began to shape strategies that can help enhance regional human capital. It is clear that work force development retains its importance as a critical economic development strategy for the Midwest.

¹ In this case, the dissimilarity index measures the percentage of the black population that would have to move in order for them to have the same spatial distribution as the white population.

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