January 1, 2004, marked the 10th anniversary of the enactment of the North American Free Trade Agreement (NAFTA), which expanded the free trade area formed by the Canada-U.S. Free Trade Agreement in 1989 to include Mexico. The liberalization of trade has had a dramatic impact on trade flows in North America. Between 1988 and 2003, total merchandise trade between the United States and Canada increased by 162.8%, and trade with Mexico increased by 438.9%, whereas trade with non-NAFTA countries increased by only 138.7%.

The success of NAFTA in promoting U.S. exports, especially exports to Mexico, has created the impetus to further expand the scope of free trade into Latin America. The United States and Chile signed a free trade agreement in September 2003, which has since been approved by the congresses of both countries. In addition, the United States has finished the negotiation of the Central American Free Trade Agreement with Costa Rica, the Dominican Republic, Guatemala, Honduras, El Salvador, and Nicaragua, and has begun negotiations of agreements with Bolivia, Colombia, Ecuador, Panama, and Peru. With NAFTA now 10 years old and more free trade agreements on the horizon, it makes sense to ask the questions, “What has been the impact of NAFTA on the U.S. economy?” and “How has Minnesota fared under NAFTA compared with the rest of the United States?”

This article begins by examining the overall impact of NAFTA on the U.S. economy, and compares the actual economic impact with predictions made.
in the early 1990s. We then examine the impact of NAFTA on the economy of Minnesota, focusing on the pattern of exports and production. We compare data on the performance of Minnesota exports with corresponding data for our neighboring state, Wisconsin, which has expanded its exports to Mexico far more than has Minnesota. We also consider why Wisconsin has had greater success in expanding exports to Mexico; is it because of a less Eurocentric attitude on the part of large, established exporters, or because of a greater willingness on the part small- and medium-sized firms in Wisconsin to enter a new export market? We find significant evidence for both explanations, especially the second, and we hypothesize that this greater willingness of small- and medium-sized firms in Wisconsin to begin to export to Mexico may have stemmed from more aggressive export promotion policies on the part of the Wisconsin state government.

This study evolved out of research originally supported by a grant from CURA’s Faculty Interactive Research Program in 1992. The original research project involved the construction of an applied general equilibrium model to analyze the impact of NAFTA on Minnesota's economy. Unfortunately, that model—like the other economic models described below that were developed to analyze the impact of NAFTA—failed to predict the large increase in trade flows in some sectors that has occurred during the past decade. The present study was directed at understanding why the earlier models were so wrong in their predictions. Additional support for this research was provided by the National Science Foundation.

Predictions about the Impact of NAFTA

The year preceding the approval of NAFTA by the U.S. House of Representatives in November 1993 was one of intense public debate. Some opponents of NAFTA, including Ross Perot and many labor union leaders, predicted that the trade agreement would result in a “giant sucking sound,” with jobs and incomes being sucked south of the border and U.S. income levels dropping sharply. Some proponents, including business groups and members of the Clinton administration, predicted that NAFTA would result in miraculous economic growth in Mexico and large trade surpluses in the United States. Ten years later, it is safe to say that none of these extreme predictions were accurate.

Economists who developed models to analyze the potential impact of NAFTA in the early 1990s were fairly unanimous in their predictions: NAFTA would have small but favorable overall impacts on Canada and Mexico, but virtually no macroeconomic impact on the United States, due to the differences in the relative sizes of the three North American economies. The models predicted that NAFTA would result in modest increases in trade volumes, with the largest increases occurring in sectors that already had significant amounts of trade. Unfortunately—at least for the economists involved—these predictions were also inaccurate. Trade volumes have exploded in North America, and some of the largest increases occurred in sectors where there had been little or no previous trade.

The Actual Impact of NAFTA

In what follows, we examine the changes in trade patterns that occurred between 1990 and 2000. We start in 1990 to focus our attention on NAFTA and the period leading up to it; we end in 2000 because of limitations on data availability. We focus on merchandise trade—that is, trade in goods—because of the availability of these data at the state level. Furthermore, the data indicate that the explosion of trade volumes in North America has been in merchandise trade, not services trade.

Increased Exports to Canada and Mexico. As Figure 1 illustrates, the ratio of U.S. exports to Canada to U.S. Gross Domestic Product (GDP) increased by 24.4% from 1990 to 2000. For exports to Mexico, this ratio increased by 126.6%. For exports to the rest of the world, this ratio increased by only 2.5%. In 2000, Canada was the United States’ largest export market, accounting for 22.6% of its exports (up from 21.1% in 1990), whereas Mexico had passed Japan to become the United States’ second largest export market, accounting for 14.1% of its exports (up from 7.2% in 1990). To put these numbers in perspective, in 2000 Canada and Mexico purchased far more U.S. exports—almost 70% more—than did the 15 members of the European Union, even though these 15 countries had more than six times the GDP of Canada and Mexico combined.

From 1990 to 2000, imports from NAFTA countries into the United States also increased, and the United States currently runs large trade deficits with both Canada and Mexico. It is important to note, however, that these trade deficits are far smaller proportionally than are the deficits that the United States runs with its other trade partners. In 2000, for example, Canada accounted for only 11.7% of the U.S. trade deficit, compared to 22.6% of U.S. exports; and Mexico accounted for only 5.6% of the deficit, compared to 14.1% of exports. In contrast, China accounted for 19.3% of the deficit, compared to 2.1% of exports. The large U.S. trade deficits of the late 1990s were largely a product of relatively high levels of productivity in the United States, which made it an attractive target for investment by foreigners. For the most part, the large trade deficits of the early 2000s have been a product of large U.S. government deficits. In each case, foreigners buy something else from the United States besides U.S. goods: U.S. private assets, including equities or corporate bonds, or U.S. government bonds.

Increased Employment and Productivity. Discussions of the gains and losses resulting from NAFTA often revolve around the number of jobs created and destroyed. Proponents of NAFTA claimed that it would result in 200,000 jobs created every year. Opponents argue that, in fact, it has resulted in 750,000 jobs destroyed. To put these numbers in perspective, consider that, every year in the United States, about 10% of all jobs are destroyed by quits, involuntary terminations, and firm closures, and about an equal number of jobs are created. During the 10 years since NAFTA was enacted, the average number of jobs in the United States has been about 130 million, which means that, during the past decade, roughly 130 million jobs have been destroyed and a similar number of jobs created.

The expansion of any trade relationship—like the expansion of trade with Canada and Mexico induced by NAFTA, or the current expansion of trade with China—results in both jobs created and jobs destroyed, much like the introduction of new technologies such as word processing. The important
questions are the following: Are more jobs created or destroyed? And are the jobs created better or worse, in terms of productivity and pay, than the jobs destroyed? Figure 2 shows that the period following passage of NAFTA was one of net job creation in the United States, with the number of jobs per 100 persons aged 15–64 rising from 72.3 in 1993 to 76.0 in 2000. In other words, the employment rate increased by 3.7%. At the same time, labor productivity, as measured by real output per worker, rose by 15.0%, as shown in Figure 3. Total compensation per worker showed similar gains during this period. The point of Figures 2 and 3 is not that NAFTA has been the sole cause of increased employment and rising labor productivity in the United States during the period 1994–2000. The economists who analyzed the potential impact of NAFTA in the early 1990s were right in pointing out that its macroeconomic impact would be small. American trade with Canada and Mexico has only increased from 4.1% of U.S. GDP in 1994 to 6.7% in 2000, whereas real U.S. GDP has increased by more than 30%. Nor is the point of Figures 2 and 3 to deny that some workers suffered losses as a result of the increased trade and investment flows that resulted...
The point is, rather, that it is difficult to argue that NAFTA has resulted in falling employment or income levels in the United States, as Ross Perot had predicted it would, whereas it is far easier to argue that NAFTA has played an important role in increasing productivity.

**NAFTA Exports Grew More in Wisconsin than in Minnesota.** As the data in Figures 2 and 3 indicate, the period 1994–2000 was one of increased employment and productivity in both Minnesota and Wisconsin. The employment rate increased by more than 6% in each state, and real output per worker increased by 19.2% in Minnesota and 10.6% in Wisconsin. The data depicted in Figures 4 and 5 show that NAFTA had a very different impact on Minnesota’s trade patterns than it did on Wisconsin’s, however. Although Minnesota’s exports to Canada and Mexico expanded only modestly, Wisconsin’s exploded.

From 1990 to 2000, the ratio of Minnesota exports to Canada to the Wisconsin Gross State Product (GSP) actually fell by 7.9%; for exports to Mexico, this ratio increased by 46.7%; and, for exports to non-NAFTA countries, the ratio fell by 7.1%. Canada was Minnesota’s number one export market throughout this period, whereas Mexico moved from number nine to six, passing Italy, France, and Korea, but still behind Canada, Japan, the United Kingdom, Germany, and the Netherlands. Overall, the ratio of Minnesota exports to GSP fell by 5.9%.²

In contrast, during this period of time, the ratio of Wisconsin exports to Canada to the Wisconsin GSP increased by 17.2%; for exports to Mexico, this ratio increased by 212.4%; and, for exports to non-NAFTA countries, the ratio fell by 2.8%. Canada was Wisconsin’s number one export market throughout this period, whereas Mexico moved from number eight to number three, still behind Canada and Japan. Overall, the increase in exports to NAFTA countries led Wisconsin’s ratio of exports to GSP to increase by 10.3%.

The decline in the relative importance of exports in Minnesota was reflected in the decline in the relative importance of the sectors that produce merchandise exports—agriculture, mining, and manufacturing. In 1990, these sectors accounted for 26.0% of Minnesota GSP; in 2000, they accounted for only 19.5%. In Wisconsin, the drop was proportionally smaller, from 32.1% to 26.9%. We should remember, however, that in both Minnesota and Wisconsin, the decline in the importance of these sectors was only relative. Other sectors—construction, utilities, and services—had both real output and prices that grew faster. In both Minnesota and Wisconsin, the real output at 1996 prices produced by agriculture, mining, and manufacturing increased substantially from 1990 to 2000, by 40.0% and 49.4%, respectively. In Minnesota, however, the real output of construction, utilities, and services increased even faster, by 55.3%, during this period, whereas in Wisconsin, the real output of these sectors increased more slowly, by 41.8%.

The data on employment and productivity in Figures 2 and 3 show that the period following NAFTA has been a good one for Minnesota at a macroeconomic level. Nevertheless, there are at least two reasons to be concerned by the relatively poor performance of Minnesota firms in expanding their exports to Canada and Mexico. First, NAFTA serves as a prelude to further economic integration in the Americas, and the failure of Minnesota firms to take advantage of export opportunities in Canada and Mexico may point to problems that will limit Minnesota’s ability to reap future gains. Second, the inability to expand exports as rapidly as states such as Wisconsin will lead to a further shrinking of the sectors that produce exports, which could make Minnesota more vulnerable to external shocks that increase the prices of the goods produced by these sectors relative to those of other sectors. In the event of a real devaluation of the U.S. dollar, for example, the prices of traded goods such as agriculture, mining, and manufacturing would increase relative to the prices of

² These data were obtained from the Massachusetts Institute for Social and Economic Research (MISER) at the University of Massachusetts at Amherst, which adjusts raw data from the U.S. Census Bureau’s Foreign Trade Division by filling in missing industry and state information. No state import data are available. Raw data from the U.S. Census Bureau indicate that between 2000 and 2003, Mexico fell to seventh on the list of Minnesota’s trade partners, as Ireland shot up from number seven to number two. In July 2004, MISER moved to Holyoke Community College and became the World Institute for Strategic Economic Research (WISER). Since 2000, MISER/WISER has not made adjustments to the U.S. Census Bureau data.
nontraded goods such as construction, utilities, and services. Such a devaluation would have a larger negative impact on Minnesota than on Wisconsin. It is likely that this sort of devaluation will eventually occur: Economic theory says that the massive trade deficits currently being run by the United States eventually will be followed by trade surpluses that will be accompanied by a real devaluation of the U.S. dollar.

Different Explanations for Why NAFTA Exports Grew More in Wisconsin

As the data in Figure 5 show, if Wisconsin had not expanded its exports to NAFTA countries—especially to Mexico—it, like Minnesota, would have seen its ratio of exports to GSP fall from 1990 to 2000, and it, like Minnesota, probably would have experienced a decline in the relative importance of its exporting sectors. Why were firms in Wisconsin more able than Minnesota firms to take advantage of NAFTA to expand exports? There are at least two alternative explanations of Wisconsin’s superior performance in exporting to NAFTA countries.

First, large Minnesota firms have been slow to take advantage of export opportunities in Mexico because of Eurocentric export strategies. An April 27, 1999, article in Fortune magazine cites 3M, Minnesota’s largest publicly traded firm, as a particular case in point. Some additional evidence in favor of the argument that Minnesota firms are more Eurocentric in their export strategies than are Wisconsin firms is provided by data on the distribution of exports before NAFTA was enacted. These data indicate that Minnesota exports are far more skewed to European countries than are the exports of either Wisconsin or the rest of the United States.

Second, the state of Wisconsin has adopted policies that assist small- and medium-sized firms to set up export operations in Mexico. Wisconsin operates a State Trade Office in Mexico City (see www.igaconsulting.com) that helps firms conduct market research and search for distributors and consumers. The Minnesota Department of Employment and Economic Development, located in St. Paul, has a limited ability to provide some of the same services. In a June 2004 interview with Minnesota Public Radio, Mary Regel, International Director at the Wisconsin Department of Commerce, said, “We have a very good office, and it works with many, many hundreds of Wisconsin companies to help them sell into Mexico.”

Although both of these explanations, and even other factors, may have some part in explaining the difference between the export performance of Minnesota and that of Wisconsin, recent economic research—much of it conducted in the Department of Economics at the
University of Minnesota—suggests that the crucial factors are those that affect the decisions made by small- and medium-sized firms to begin to export to a specific market. The models that were used in the early 1990s to analyze the likely impact of NAFTA did not focus on this sort of decision and, consequently, failed to predict large increases in exports in sectors that had done little or no exporting before NAFTA.

Recent research on international trade focuses on the problem of an individual firm faced with the decision of whether or not to begin exporting to a given foreign market. There are two types of costs associated with exporting. The first are per-unit costs, such as shipping, insurance, and tariffs. The second are setup costs, which are one-time costs that must be incurred to begin exporting. Setup costs include the costs associated with conducting market research, redesigning packaging, training a new sales force, and setting up distribution networks.

If a firm is to undertake exporting, it must believe that the profits made from selling the good in another country will be large enough to cover the setup costs. Factors that affect the profits a firm can make from exporting include the per-unit exporting costs and the competition it faces from other producers selling similar products. Both the setup costs and the shipping and tariff charges will vary across firms, but on average, because of geographic proximity and more liberal trade policy, a firm's costs of exporting to Canada will be lower than the costs of exporting to a European country. Thus, it is more likely that a firm will be able to make enough profits to cover the setup costs if it exports to Canada rather than to Europe. In 2000, Minnesota firms exported more than 4.7 times as much to Canada than they did to the United Kingdom, Minnesota's most important European market. The Wisconsin data are even more striking; In 2000, Wisconsin firms exported 8.3 times as much to Canada as they did to the United Kingdom, which was also Wisconsin's most important European market.

This theory also provides a link between expanded exports and increased productivity: The firms that decide to start exporting tend to be more productive than the ones that do not. As these more productive exporting firms grow, they increase the competition for resources—such as workers—which makes it more difficult for less productive firms to turn a profit. Over time, the increased competition forces less productive firms to shrink or even shut down. The growth of high-productivity firms and the decline of low-productivity firms leads to an increase in aggregate productivity, as illustrated in Figure 3.

Methodology
With this theory in mind, we examined the data on exports to see whether the expansion of Wisconsin’s exports to Mexico was generated by a few large firms exporting more of the same sorts of goods to Mexico that they had been exporting before NAFTA, or whether it was generated by new firms that began to export after NAFTA. Ideally, we would have liked to use data on which firms were exporting and to where, but these data were not available. To get around this data limitation, we used an indirect approach. Instead of looking at firms that were not exporting to Mexico, we looked instead at goods that were not being exported. We know that if a good such as bituminous coal was not being exported to Mexico before NAFTA, then there were not any firms exporting bituminous coal to Mexico. If we see that, after NAFTA, some bituminous coal was being exported to Mexico, then we know that there were firms that decided to begin exporting bituminous coal to Mexico.

To perform this analysis, we examined data on exports to Mexico from Minnesota and Wisconsin by type of good being exported. The data are organized by the Standard Industrial Classification (SIC) System, which uses categories that group together goods with similar characteristics.¹

¹ The data reported in Table 1 are at the two-digit level of disaggregation. For example, the one-digit division 1-mining is subdivided into the four major groups with two-digit SIC codes that begin with the number 1: 10-metal mining, 12-bituminous coal, 13-oil and gas extraction, and 14-nonmetallic minerals, except fuel. The major groups could be subdivided further, into three-digit industry groups or even four-digit industries. The two-digit SIC data that we studied, however, are the most disaggregated state data readily available for the entire period 1990–2000. It would be useful to study more disaggregated data. Since 2000, the U.S. Census Bureau’s Foreign Trade Division has published state export data using the North American Industry Classification System (NAICS), rather than the SIC. The NAICS was developed in cooperation with Canada and Mexico. In contrast to SIC, which provides up to four-digit disaggregation of data, NAICS provides six-digit disaggregation.
Wisconsin operates a State Trade Office in Mexico City that assists small- and medium-sized firms to set up export operations in Mexico—one explanation for why Wisconsin has surpassed Minnesota in expanding its export markets south of the border.

For example, there is a group for fabricated metal products and another for nonmetallic minerals, except fuels. The data we examined fell into 28 different major groups, ranging from agricultural products—crops to electronic and electric equipment, except computer equipment. The different major groups are listed in Table 1.

We expanded the range of goods we were focusing on to include not only the goods that were not being exported at all before NAFTA, but also the goods that were being exported very little. We started by ranking the major groups of goods by how much they were being exported in 1990. Then, starting with the major groups that were exported the least, we added together as many major groups as needed to make up 10% of total exports. For the set of least-exported goods to account for exactly 10% of total exports, we had to split the last major group added to the set. This set of goods contains the “least-exported” goods for that trade relationship. For Minnesota’s exports to Mexico, for example, this set of goods consists of 21 of the 28 major groups. We used 77.8% of the last major group—rubber and miscellaneous plastic products—so that the set of goods was exactly 10% of total exports. The set of least-exported goods from Wisconsin to Mexico also contained 21 of the major groups, but not the same 21 as Minnesota’s set. The major group agricultural products—crops is in the set of least-exported goods for Wisconsin, for example, but not for Minnesota.

Analysis
Figure 6 tracks the share of the least-exported goods as a percentage of total exports from Minnesota and Wisconsin to Mexico from 1990 to 2000. For both states, the set of least-exported goods was constructed so that it constituted 10% of total exports to Mexico in 1990.

Notice that there was a significant jump in the share of least-exported goods as a percentage of total exports for both states between 1993 and 1994, as NAFTA induced firms to begin to export to Mexico.

For Minnesota, the share of least-exported goods as a percentage of total exports fluctuated a little, but increased to about 15% during the period, accounting for 17.0% of exports in 2000. Total exports from Minnesota to Mexico grew by 171.7%, whereas the exports of the set of least-exported goods grew by 361.9%. Within the set of least-exported goods, the major groups fish, hunting, and trapping; bituminous coal and lignite mining; forestry; and oil and gas extraction included goods that were not exported from Minnesota to Mexico at all in 1990 but that were exported in 2000.

The two major groups of least-exported goods with the largest increases in exports were paper and allied products and transportation equipment. Two major groups of least-exported goods—apparel and other textile products and metal mining—both had declines in exports during this period. With the exception of a few industries, the composition of exports from Minnesota to Mexico has remained relatively constant throughout the 1990s.

Unlike Minnesota, Wisconsin has seen a major change in its trade pattern with Mexico as a result of NAFTA. Goods that accounted for only 10% of Wisconsin’s exports to Mexico in 1990 grew to be 25.6% of its exports to Mexico in 1995 and accounted for 21.8% of these exports in 2000. Within the set of least-exported goods, the major groups bituminous coal and lignite mining and oil and gas extraction were goods that were not exported from Wisconsin to Mexico at all in 1990 but that were exported in 2000. The two major groups of least-exported goods with the largest increases in exports were chemicals and allied products and rubber and miscellaneous plastics products. In contrast to Minnesota, where the two major groups of least-exported goods with the largest increases in exports had a total increase of 599.5% (from $5.4 million in 1990 to $37.7 million in 2000), the two major groups of least-exported goods in Wisconsin with the largest increases in exports had a total increase of 1,568.9% (from $5.6 million in 1990 to $93.1 million in 2000).

It is the differences in the exports of least-exported goods that accounts for most of the differences between Minnesota and Wisconsin in their patterns of export growth to Mexico following NAFTA. The sets of most-exported goods from these two states to Mexico display considerable overlap and more similar growth rates than do the sets of least-traded goods.

For example, Table 1 shows that the five major groups of most-exported goods from Minnesota to Mexico in 1990 were industrial machinery and computer equipment; agricultural products—crops; food and kindred products; electronic and electric equipment, not computer equipment; and instruments and related products. Together, these five groups accounted for 83.8% of Minnesota’s exports to Mexico in 1990. By 2000, the exports of these five groups had increased by 152.8%,

---

4 The data that we used included four additional major groups—scrap and waste, used or second-hand merchandise, charity and military shipments, and special classification provisions—that we ignored as groups but included in our data for total exports and classified as other.

<table>
<thead>
<tr>
<th>SIC Code</th>
<th>Description</th>
<th>United States</th>
<th></th>
<th>Minnesota</th>
<th></th>
<th>Wisconsin</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>agricultural products—crops</td>
<td>1,338,690</td>
<td>3,108,919</td>
<td>17,039</td>
<td>42,663</td>
<td>200</td>
<td>5,902</td>
</tr>
<tr>
<td>02</td>
<td>agricultural products—livestock</td>
<td>102,673</td>
<td>146,705</td>
<td>3,642</td>
<td>658</td>
<td>7,844</td>
<td>4,514</td>
</tr>
<tr>
<td>08</td>
<td>forestry</td>
<td>22,010</td>
<td>39,949</td>
<td>0</td>
<td>47</td>
<td>17</td>
<td>77</td>
</tr>
<tr>
<td>09</td>
<td>fishing, hunting, and trapping</td>
<td>20,183</td>
<td>56,462</td>
<td>0</td>
<td>54</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>metal mining</td>
<td>36,600</td>
<td>50,080</td>
<td>104</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>bituminous coal and lignite mining</td>
<td>8,210</td>
<td>34,762</td>
<td>0</td>
<td>51</td>
<td>0</td>
<td>27</td>
</tr>
<tr>
<td>13</td>
<td>oil and gas extraction</td>
<td>109,616</td>
<td>656,348</td>
<td>0</td>
<td>33</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>14</td>
<td>nonmetallic minerals, except fuels</td>
<td>41,181</td>
<td>113,644</td>
<td>37</td>
<td>677</td>
<td>66</td>
<td>4,791</td>
</tr>
<tr>
<td>20</td>
<td>food and kindred products</td>
<td>1,155,746</td>
<td>3,523,776</td>
<td>15,847</td>
<td>38,107</td>
<td>6,285</td>
<td>43,116</td>
</tr>
<tr>
<td>21</td>
<td>tobacco manufactures</td>
<td>3,513</td>
<td>8,749</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>22</td>
<td>textile mill products</td>
<td>438,192</td>
<td>3,466,293</td>
<td>1,108</td>
<td>1,561</td>
<td>739</td>
<td>5,582</td>
</tr>
<tr>
<td>23</td>
<td>apparel and other textile products</td>
<td>542,192 a</td>
<td>2,854,859</td>
<td>866</td>
<td>191</td>
<td>56</td>
<td>2,979</td>
</tr>
<tr>
<td>24</td>
<td>lumber and wood products</td>
<td>292,227</td>
<td>522,265</td>
<td>455</td>
<td>1,344</td>
<td>324</td>
<td>4,498</td>
</tr>
<tr>
<td>25</td>
<td>furniture and fixtures</td>
<td>343,273</td>
<td>274,140</td>
<td>230</td>
<td>1,584</td>
<td>800</td>
<td>4,315</td>
</tr>
<tr>
<td>26</td>
<td>paper and allied products</td>
<td>946,615</td>
<td>3,085,086</td>
<td>3,184</td>
<td>23,877</td>
<td>8,305</td>
<td>40,957</td>
</tr>
<tr>
<td>27</td>
<td>printing and publishing</td>
<td>118,541</td>
<td>551,359</td>
<td>251</td>
<td>4,332</td>
<td>366</td>
<td>9,632</td>
</tr>
<tr>
<td>28</td>
<td>chemicals and allied products</td>
<td>2,336,344</td>
<td>8,147,373</td>
<td>2,455</td>
<td>6,987</td>
<td>3,470</td>
<td>51,161</td>
</tr>
<tr>
<td>29</td>
<td>petroleum and coal products</td>
<td>697,454</td>
<td>3,678,873</td>
<td>96</td>
<td>276</td>
<td>62</td>
<td>935</td>
</tr>
<tr>
<td>30</td>
<td>rubber and misc. plastic products</td>
<td>972,144</td>
<td>6,066,880</td>
<td>3,373 b</td>
<td>12,550</td>
<td>2,109</td>
<td>41,954</td>
</tr>
<tr>
<td>31</td>
<td>leather and leather products</td>
<td>134,449</td>
<td>770,665</td>
<td>123</td>
<td>457</td>
<td>747</td>
<td>5,179</td>
</tr>
<tr>
<td>32</td>
<td>stone, clay, and glass products</td>
<td>341,325</td>
<td>1,078,733</td>
<td>1,386</td>
<td>1,720</td>
<td>462</td>
<td>3,090</td>
</tr>
<tr>
<td>33</td>
<td>primary metal industries</td>
<td>1,635,573</td>
<td>4,978,683</td>
<td>708</td>
<td>6,946</td>
<td>2,239</td>
<td>9,247</td>
</tr>
<tr>
<td>34</td>
<td>fabricated metal products</td>
<td>1,267,620</td>
<td>5,695,395</td>
<td>4,987</td>
<td>10,596</td>
<td>8,044</td>
<td>63,215</td>
</tr>
<tr>
<td>35</td>
<td>industrial machinery and computer</td>
<td>4,001,232</td>
<td>14,293,643</td>
<td>78,064</td>
<td>160,744</td>
<td>62,356</td>
<td>239,540</td>
</tr>
<tr>
<td>36</td>
<td>electronic and electric equipment, except computer equipment</td>
<td>5,462,291</td>
<td>28,142,548</td>
<td>15,811</td>
<td>77,547</td>
<td>11,457</td>
<td>80,612</td>
</tr>
<tr>
<td>37</td>
<td>transportation equipment</td>
<td>3,933,715</td>
<td>13,699,706</td>
<td>2,200</td>
<td>13,789</td>
<td>3,838 c</td>
<td>42,001</td>
</tr>
<tr>
<td>38</td>
<td>instruments and related products</td>
<td>1,046,013</td>
<td>3,760,750</td>
<td>9,626</td>
<td>25,760</td>
<td>14,886</td>
<td>53,526</td>
</tr>
<tr>
<td>39</td>
<td>misc. manufacturing industries</td>
<td>496,263</td>
<td>1,101,571</td>
<td>440</td>
<td>1,453</td>
<td>1,840</td>
<td>9,387</td>
</tr>
<tr>
<td></td>
<td>other d</td>
<td>531,274</td>
<td>1,812,662</td>
<td>648</td>
<td>8,059</td>
<td>369</td>
<td>10,286</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>28,375,468</td>
<td>111,720,878</td>
<td>162,680</td>
<td>442,065</td>
<td>136,880</td>
<td>736,528</td>
</tr>
</tbody>
</table>

Sources: The Massachusetts Institute for Social and Economic Research (MISER); and the U.S. Census Bureau, Foreign Trade Division

Note: Export data in **boldface type** indicates a least-traded good in 1990.

a 60.7% of this group was included in the set of the United States’ least-exported goods.

b 77.8% of this group was included in the set of Minnesota’s least-exported goods in Figure 6.

c 9.0% of this group was included in the set of Wisconsin’s least-exported goods in Figure 6.

d The category “other” includes the following major groups: 91 - scrap and waste, 92 - used or second-hand merchandise, 95 - charity and military shipments, and 99 - special classification provisions.
from $136.4 million to $344.8 million. Table 1 also shows that the five major groups of most-exported goods from Wisconsin to Mexico in 1990 were industrial machinery and computer equipment; instruments and related products; electronic and electric equipment, not computer equipment; paper and allied products; and fabricated metal products. Together, these five groups accounted for 76.7% of Wisconsin’s exports to Mexico in 1990. By 2000, the exports of these five groups had increased by 354.8%, from $105.0 million to $477.8 million.

That Wisconsin’s exports of most-exported goods increased more than those of Minnesota is further indirect evidence of Eurocentric export strategies on the part of Minnesota firms. Nevertheless, a look at the other groups of goods being exported shows a far more dramatic difference between the two states. Minnesota saw the exports of goods not in the five most-exported major groups increase by 269.8%, from $26.3 million in 1990 to $97.2 million in 2000. Although this increase is impressive, the corresponding increase for Wisconsin was far larger: 712.6%, from $31.8 million in 1990 to $258.7 million in 2000.

Conclusions
The enactment of NAFTA has had a dramatic effect on the pattern of U.S. trade. From 1990 to 2000, exports to Canada (adjusted for U.S. GDP growth) grew 8 times faster—and exports to Mexico grew 42 times faster—than exports to the rest of the world. Our research shows that not all states have responded to NAFTA in the same way. Minnesota and Wisconsin, two very similar states, have had very different experiences under NAFTA. In Wisconsin, trade with Mexico has boomed, whereas in Minnesota, trade with Mexico has grown only slightly faster than trade with the rest of the world. One striking difference between the growth of trade in these two states has been the ability of each state to export goods that either were not being exported or were being exported very little before NAFTA. As summarized in Figure 6, the exports of these least-exported goods grew much more quickly in Wisconsin than in Minnesota.

Our results suggest that some difference in policy between the state government in Minnesota and that in Wisconsin has helped Wisconsin firms expand their export markets in NAFTA countries, especially in Mexico. One possibility, along the lines of the theory outlined here, is that the Wisconsin Trade Office in Mexico City has encouraged small- and medium-sized Wisconsin firms to begin export to Mexico by reducing their export setup costs.

More research is needed on the relationship between state export-promotion policies and the growth of state exports. Frequently cited research by Timothy Wilkerson at the University of Akron and Lance Eliot Brouthers at the University of Texas at San Antonio has fostered the perception that foreign state trade offices do little to encourage state exports. Their research is based on regression analysis that uses 1990 data on the levels of state exports. It would be useful to analyze more recent data on the growth—rather than the levels—of state exports. More important, future research could employ the sort of economic theory outlined here, rather than relying on purely statistical analysis, as in the work of Wilkerson and Brouthers.

It is essential that research on the effectiveness of state export promotion policies be couched in terms of economic theory. Only then can we answer the question of whether or not it is good public policy for a state government to pay some of the export setup costs of small- and medium-sized firms, such as conducting market research and searching for distributors and consumers. Is it better public policy to leave these costs to be paid for by the firms themselves? The theory that we have outlined here suggests that state export promotion may be good public policy. There are likely to be increasing returns involved in the collection of information by a state office about export opportunities to another country. This information can then be distributed as a public good to firms from the state.

If states are to take advantage of the further expansion of free trade into Latin America, it is important that they learn as much as possible from NAFTA. Although both Minnesota and Wisconsin
Wisconsin have been able to export successfully to the geographically close, English-speaking country of Canada, there may be a larger role for state governments to play in encouraging exports to countries such as Mexico. Larger Minnesota firms may also want to be wary about concentrating their export strategies in Europe, where opportunities for expanding exports during the last decade have been smaller than opportunities for expanding exports to Latin America, and are likely to be smaller still during the next decade.

Timothy J. Kehoe is professor of economics and Distinguished McKnight Professor at the University of Minnesota, and an adviser to the Federal Reserve Bank of Minneapolis. In 1994, he advised the Mexican government on the impact of joining the North American Free Trade Area. His research and teaching center on the theory and application of general equilibrium models. Kim J. Ruhl is assistant professor of economics at the University of Texas at Austin. At the time the research for this article was conducted, he was a graduate student in the Department of Economics at the University of Minnesota and a research assistant at the Federal Reserve Bank of Minneapolis. His research interests include the modeling of international trade agreements, the effect of international competition on productivity, and the aggregate implications of firm entry and exit.

This study evolved out of research originally supported by a grant from CURA's Faculty Interactive Research Program in 1992. The program was created to encourage University faculty to carry out research projects that involve significant issues of public policy for the state and that include interaction with community groups, agencies, or organizations in Minnesota. These grants are available to regular faculty members at the University of Minnesota, and are awarded annually on a competitive basis. Additional support for this study was provided by the National Science Foundation.

The authors would like to thank Thu-Mai Ho-Kim of the Analysis and Evaluation Office of the Minnesota Department of Employment and Economic Development for helpful advice and discussions. The data used in this article are available at www.econ.umn.edu/~tkehoe/. The views expressed here are those of the authors, and not necessarily those of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.

Project Funding Available

The Community Assistantship Program (CAP) at CURA matches community-based nonprofit organizations, citizen groups, and government agencies in Greater Minnesota with students who can provide applied research assistance. Student assistantships are designed to help meet community needs while offering students career-related experience. Eligible organizations define a research project, submit an application, and, if accepted, are matched with a qualified student to carry out the research. See the Project Awards announcement on pp. 23–24 for examples of recent and current CAP-supported projects.

Currently, CAP is accepting proposals for projects for the summer of 2005 (June through August). The deadline for applications is February 1, 2005. For more information, to discuss potential projects, or for assistance with applications, contact Will Craig, CURA's associate director, by e-mail at capcura@tc.umn.edu or by phone at 612-625-3321, or visit www.cura.umn.edu/programs/CAP/cap.html.
Since 1981, the Minneapolis Neighborhood Employment Network (NET) has been a leader in the effective delivery of employment and training services to low-income communities in Minneapolis. During its history, NET and its partners—the Minneapolis Employment and Training Program and various job bank affiliates—have received positive recognition for their innovative approach to employment training and their high degree of accountability. The most important recognition, however, has been that NET has achieved its original goal of helping low-income residents of Minneapolis find and hold employment.

The NET strategy is in fact a method of organizing rather than a specific program. The strategy empowers neighborhoods to deliver public and private employment and training resources by recognizing that each neighborhood is somewhat different and by enabling the development of mini-strategies that reflect unique neighborhood priorities and issues. The strategy also recognizes that there is strength and increased knowledge through affiliation and partnership, and that strong, competent management can occur through the use of nontraditional models.

Since its inception, NET has often sought out the academic capabilities of the Center for Urban and Regional Affairs (CURA) to help provide insight into the complexities of the issues surrounding employment and training. This article chronicles the history of the Neighborhood Employment Network, including its development, the creation of a partnership with the Minneapolis Employment and Training Program, and the role CURA has played in supporting NET.

Creation of the Neighborhood Employment Network

In 1980, Mayor Donald Fraser recognized that the City of Minneapolis faced a number of challenges and opportunities. At the local level, economic redevelopment efforts had led to the completion of a number of building projects, with accompanying potential for job growth. At the national level, passage of the Job Training Partnership Act provided an opportunity to take a fresh look at the management of employment and training services. Mayor Fraser and the Minneapolis City Council concluded that Minneapolis should develop a strategy to ensure that the city’s “hard-to-employ” residents would benefit from these changes.

In 1981, Mayor Fraser and the city council created the Minneapolis Employment Strategy Task Force. The task force consisted of 39 business and civic leaders, staffed by a consultant from Brooks, McAvey, and Associates and chaired by Roger Hale, then chief executive officer of the Tennant Company, a local manufacturer. Funding for the nine-month effort was provided by contributions from the private sector.

The task force began its work with several carefully defined assumptions: first, that there would be continued employment opportunities in the Minneapolis area; second, that public sector resources would continue to decrease and that an effective strategy could not involve the creation of a new bureaucracy nor be heavily dependent on public appropriation; and third, that the task force should not spend too much time evaluating existing employment and training organizations because the ultimate goal was to improve efficiency and effectiveness.

At the end of the nine-month process, the task force published the Employment Strategy for Minneapolis. The document was lengthy and comprehensive, and it offered three major recommendations:

1. divide Minneapolis into neighborhoods that can be served by a neighborhood-focused employment and training system of job banks;
2. provide the job banks with a business partner that can offer leadership and access to resources; and
3. incorporate computer technology to ensure that current job openings are communicated to the neighborhoods and job banks in a timely manner.

The Employment Strategy for Minneapolis was presented to the city council in December 1981 and, as is too often the case, it was “filed.” In early 1982, Roger Hale asked the mayor about the status of the strategy and volunteered to spend a few more months with the project to see if it could be tested.
True to the basic assumptions under which the task force had labored, the implementation of the strategy was a low-key affair and was undertaken without the promise of funding. For six months, two people working as independent consultants met with neighborhood organizations and business and community leaders asking the question, “Are you and your organization concerned enough about unemployment of the ‘hard-to-employ’ to volunteer to create a neighborhood-centered job bank?” The answer given by seven neighborhood organizations and businesses—including General Mills, the Soo Line Railroad, Honeywell, Norwest Bank, and Prudential—was “yes,” and the NET concept was born.

During the early 1980s, NET operated as an unincorporated organization, with the Minneapolis Foundation acting as the fiscal agent. Funding was provided by corporate and foundation philanthropy, and Michael Brinda acted as consulting staff to Roger Hale. It should be noted that with the exception of NET’s incorporation as a 501(c)3 nonprofit organization in 1986, this nonbureaucratic, low-cost organizational structure remains the operational model today.

By the mid-1980s, the idea of an affiliation of neighborhood job banks facilitated by the NET staff had gained general acceptance. The opportunity to build a lasting partnership with the Minneapolis Employment and Training Program (METP)—the city program charged with administering government job training and placement services for Minneapolis residents—arose when NET accepted an offer to share office space with the mayor. In addition to expanding the NET partnership, the move demonstrated the high priority both the city and the mayor placed on employment training.

The mid-1980s were also an era of significant corporate involvement and support of the neighborhood job bank concept. Projects such as NET-TIE, a railroad tie recycling business; Phillips Works, a community-based book binding business; the Phillips’ Bakery; and Project for Pride in Living provided transitional employment for many people while exposing the neighborhoods to the realities of small business ownership. In addition, corporations such as Dayton Hudson and Prudential developed innovative projects to support the work of the neighborhood job banks.

By 1986, the cumulative positive impact and significance of the affiliated neighborhood job banks began to be felt throughout the city. Building on the positive relationship that existed between NET and METP, METP began to provide staff in the neighborhood job banks. Government employment and training staff worked alongside their nongovernmental organization (NGO) counterparts, providing intake for people into a variety of employment and training programs. Although the government staff provided access to government-funded programs, the NGO staff provided for direct job placement with operational support being provided by the United Way and other corporate philanthropy.

NET Partners with CURA
With the successes of the job banks in attracting and serving job seekers during the mid-1980s came the realization that there were many questions about barriers to employment that the “hard-to-employ” faced for which no one seemed to have answers. In the summer of 1988, NET contracted with CURA to complete a client survey of those individuals using the services at the NET Job Banks. Although the outcomes of the mid-1980s were important benchmarks for NET and the community partners in showing the success of the NET concept, much of the hard data concerning who was being served and how well they were served was still missing. Anecdotal evidence was all that NET and the job banks could use to talk about the services and those being served. The choice of CURA as an academic research partner to obtain these data was an obvious one; NET did not possess the research capabilities for surveys and data collection, while CURA could provide not only access to these research skills but also the prestige that comes from being affiliated with the University of Minnesota.

The need for a comprehensive study of the NET approach was threefold. First, NET wanted to better understand who was actually using its services and whether or not these individuals really fit the stereotype of the “hard-to-employ.” Second, the organization wanted to find out what NET users were looking for with respect to employment, both in the immediate and intermediate (two- to five-year) future. Finally, NET wanted to learn what its clients believed made it difficult to secure and maintain desired jobs.

Using interviews and short basic-skills exams, CURA researchers went to each job bank during the months of July and August and met with roughly 150 clients. Their findings proved to be important to both NET and the job banks. In general, clients who were interviewed defied typical stereotypes of the hard-to-employ, and the study highlighted the truly diverse nature of the people who were using the services provided. Furthermore, the interviews showed that most clients had a vision of where they wanted to be in the future, but that immediate needs often overshadowed that vision.

Armed with the findings from the CURA study and the positive experiences from having government and nongovernment staff work together throughout the 1980s, the NET Job Banks began to act as contract vendors for METP during the early 1990s. The concept was simple: using discretionary funds from Community Development Block Grants, establish job placement goals and then pay the NGOs for the number of placements they made. This venture was so successful that during the next few years, METP established an ongoing community-based delivery system to provide employment and training services to residents of Minneapolis. Unique to Minneapolis and the NET Job Banks is that this method is totally performance-based. Payments are made to the NGOs only after initial placement and subsequent job retention at 90, 183, and 365 days. More than 10,000 people have received assistance in finding employment under this administrative approach.

Although the early 1990s were significant for the move to a community-based employment and training delivery system, NET and the affiliated job banks were aggressive on a number of special projects during this time. For example, the job bank located at Loring Nicollet-Bethlehem, working with the SuperValu Corporation, pioneered Minneapolis’ reverse bus commute effort. This innovative program facilitated bus service from Minneapolis neighborhoods with high concentrations of low-income workers to employment centers in southwest metro area suburbs. With funding from the McKnight Foundation, NET also
developed a supported-work project called NET-Jobs, which delivered specialized services to people facing multiple employment barriers.

An International Exchange

In October 1992, NET was afforded the opportunity to present an overview of its program at a conference convened by the Paris-based Organization for Economic Cooperation and Development (OECD).

The accomplishments of NET had come to the attention of this international organization earlier in the year, and with support from a Fannie Mae Foundation grant, the program had the chance to share its knowledge with employment and job training colleagues from around the world.

The exposure that NET received at the OECD meeting led to a number of additional opportunities to explore European employment and training programs. In 1993, the British Council provided funding to allow NET to participate in a meeting of European employment counselors titled Euro-counsel. In 1994, the German Marshall Fund (GMF) of the United States provided funding for an exchange program with employment and training counterparts in the Netherlands. To meet the information needs of the visitors from the Netherlands and the funding requirements of the GMF, NET once again turned to CURA, this time for a student to support the effort. The NET/Netherlands project produced lasting friendships, insights into the integration of physical and social planning as practiced in Rotterdam, and a report produced in partnership with the Ministry of Home Affairs of the Netherlands titled Business Philanthropy and Corporate Social Responsibility. During the next five years, NET continued to share its expertise with and to learn from its European counterparts. A project that explored the European foyer housing concept was implemented at the Harriet Tubman Center, a woman’s shelter, and the NET facilitation model was discussed with mayors from cities throughout France.

The Maturing of the Job Banks

The mid-1990s proved to be a most interesting time for NET. The world of affordable computer technology had finally caught up with the Employment Strategy for Minneapolis recommendation for the use of technology to post job openings in a timely manner. Together with the HIRED job bank, NET secured funding from the McKnight Foundation to enable each job bank to have a computer and participate in HIRED’s job listing service, known as JobLink. In addition to the timely listing of employment opportunities, the job banks now had the ability to link to METP and electronically record placements and retentions.

During the late 1990s, NET membership expanded from voluntary participation to participation that was mandated as a condition of the adult services vendor contracts with METP. The group had matured and was now responsible for the placement and retention of more than 700 people per year. Although the scope and sophistication of NET had increased, the corporate support and partnerships that were envisioned in the Employment Strategy for Minneapolis and that were responsible for much of the success of NET had diminished.
Corporate buyouts, mergers, and relocations contributed to significant losses in funding and, more important, to the loss of leadership and outright partnerships with the neighborhood job banks.

The challenges of the late 1990s provided an opportunity for NET to again seek the help of CURA. The single greatest challenge of the period was the pending federal welfare reform effort. In conjunction with METP and Hennepin County Training and Employment Assistants, NET contacted CURA for help in understanding the needs of those who would be impacted by the change in welfare rules. In response, CURA facilitated a research team that to date has published two reports on the implications of welfare reform for low-income people.

A New Design
In 1997, the Minneapolis Foundation provided the funding for a CURA project to evaluate METP and make recommendations to the mayor about the most appropriate administrative structure for the program. From February through August, a design group of 20 met to consider how best to structure METP to meet the challenges of the 21st century. In October 1997, they published their report, titled New Designs for the Minneapolis Employment and Training Program.

Through this project, the relationship between CURA and NET remained strong as Michael Brinda, director of NET; Tom Scott, director of CURA; and Chip Wells, director of METP, headed the design team steering committee. The New Designs recommendations for METP were that the NET system operating within Minneapolis should remain in place to continue delivering decentralized services to the community, and that METP should be incorporated into the Minneapolis Community Development Agency to share city resources. Although the first recommendation was followed, the second was not, resulting in METP’s structural relocation to the Department of Health and Family Support.

In addition to the New Designs report, the NET/METP partnership benefited from its relationship with CURA through the use of geographic information systems (GIS) technologies. CURA facilitated a GIS project to produce location maps that identified, by individual job bank, the location of each clients’ workplace. This information proved useful in the development of placement strategies, as well as transportation planning.

New Century, New Challenges
As NET entered the new century, the challenges posed by the increasing number of immigrants and refugees impacted the job banks’ abilities to make placements and sustain retention. In 2001, NET again called on the research and organizing capabilities of CURA to assist in the production of a diversity training manual. With funding provided by the McKnight and Bush Foundations, NET asked CURA to facilitate the development of A Supervisor's Guide to Managing a Diverse Workforce. The report was aimed at middle managers new to diversity in the workplace and challenged employers to view the new workforce as a business asset rather than a diversity hurdle. Upon completion of the guide, NET hired the Pillsbury House Theatre Company, Breaking Ice, to adapt the guide for a stage production titled Hard at Work that could be distributed on videotape with the guide.

The changing economic conditions of the new century provided NET with the opportunity to revisit the structural organization of METP. Following the 2002 mayoral election, the City of Minneapolis considered how to restructure city government to provide a more efficient system for serving residents. A plan for organizational redesign and realignment was finalized in the June 2002 publication, Strengthening Community and Economic Development in Minneapolis, and approved by the Minneapolis City Council in May 2003. As part of this reorganization, a new agency—Community Planning and Economic Development (CPED)—was created in an attempt to streamline the governance structure, share resources, develop new partnerships between once separate agencies, and save money.

Although the recommendations of New Designs for the Minneapolis Employment and Training Program were not immediately accepted, the reorganization of Minneapolis city government in 2002 provided an opportunity to revisit the findings of the report. As Minneapolis went about merging the offices of the planning and housing departments with those of the community development agency, the report’s recommendation that METP should merge with the redevelopment authority was finally realized. In the summer of 2003, METP became a part of CPED. Seeking to build on the CURA study from 1997, NET sought and obtained funding to research and publish a report on best practices from

---

1 David Hollister, Mary Martin, and Connie Wanberg, Findings from the First Phase of a Study of the Transition from Welfare to Work in Hennepin County, Minnesota (Unpublished, 1999), 70 pp.; and David Hollister, Mary Martin, and Connie Wanberg, Findings from the Second Phase of a Study of the Transition from Welfare to Work in Hennepin County, Minnesota (unpublished, 1999), 37 pp. Both reports are available from CURA.
the merger of employment and training departments with economic development departments. The resulting report, Best Practices: Merging the Minneapolis Employment and Training Program into the Office of Community Planning and Economic Development, offered insights into how other cities have managed the restructuring process, how linking economic development with employment and training services can benefit the hard-to-employ, and why it is imperative that the merger goes beyond a simple name change and attempts to reorganize how services are provided.

Today, the Neighborhood Employment Network is a partnership of 10 vendors and 14 job banks (Figure 1 and sidebar). Each vendor is autonomous and responsible for its own operating budget and mission. Neighborhood job banks are staffed with certified career development professionals and networked with the larger social service community. A multitude of languages and cultures are reflected among the job bank staff. Job bank resources include state-of-the-art computerized job listing services, client assessment tools, and local and regional business contacts. The partnership meets bimonthly to network, engage in peer learning, and meet with businesses that are seeking employees. The results are placement rates of more than 700 low- and moderate-income people per year, with average wages at placement above the livable wage standard set by the Minneapolis City Council.

Conclusion
Since 1981, NET has operated as a low-cost, nonbureaucratic, independent facilitator for the affiliation of neighborhood job banks in Minneapolis. Nearly 25 years later, the mission of helping low- and moderate-income residents of Minneapolis find and hold employment continues to be met. This retrospective provides an opportunity to identify some of the insights and lessons learned during NET’s history.

First, one of the keys to NET’s success has been its ability to maintain...
a singular commitment to its original mission of helping low-income people find and keep jobs. Although NET’s work with community partners has presented many opportunities during the years to move beyond this original goal, the organization has resisted the tendency toward mission creep. A consistent focus on providing employment and job training services has been an important part of NET’s ability to build and maintain strong relationships with neighborhood organizations, government agencies, and local businesses to deliver employment and job training services.

Second, NET has maintained a decentralized approach to providing employment services to clients. Because these services are provided on a neighborhood-by-neighborhood basis rather than through a more uniform or centralized approach, neighborhood job banks are empowered to respond to the unique economic and employment challenges in their communities, and services can be more carefully tailored to the needs of individual clients. On a larger scale, NET’s decentralized structure has allowed it to successfully adapt to changing statewide economic and employment conditions and to continue to ensure the delivery of essential services at the local level despite fluctuations in federal and state funding for such programs.

Third, NET demonstrates the potential value of public/private partnerships in providing employment services. Essentially NET acts as an intermediary between neighborhood job banks and local and state government. Although some might be tempted to view NET as simply another level of bureaucracy, NET’s involvement has been critical to how services are delivered. Not only has NET been able to leverage social service and other community resources in ways that government agencies alone may not have been able to, but it also has allowed these services to be provided more effectively and efficiently at less cost through outsourcing to existing community service providers.

Finally, NET illustrates the importance of local political support for successful employment and job training programs. Minneapolis mayors Donald Fraser, Sharon Sayles Belton, and R. T. Rybak all proved to be vocal supporters of having a nongovernmental organization such as NET play a role in delivering government services, and the long-standing collaboration between NET and the City of Minneapolis has produced strong working relationships as well as mutual respect and trust. In 2004, the City of Minneapolis underscored its commitment to job training by taking the unprecedented step of creating a new employment and training initiative called Closing the Gap. The new program will, in effect, double the amount of locally controlled funding available to help unemployed people enter the job market and thereby improve their economic situation. The Neighborhood Employment Network looks forward to the opportunities and challenges that this new program will create.

Although there is a great deal of excitement about the enhanced role for employment and training in Minneapolis, changes are inevitable. During the next two years, the retirement of key government managers and staff will impact the way employment training services are delivered. The Neighborhood Employment Network itself has established 2008 as a “sunset” date for the program. These impending changes provide an excellent opportunity for a public policy debate about the role that NET-like intermediary organizations can play in delivering not just employment and training services, but a wider array of services in partner-
New Era for Government Training Service Organization

With 87 counties, 853 cities, 1,972 townships, 341 school districts, and numerous special districts, Minnesota ranks sixth in the nation in the number of local government entities. This strong emphasis on local governance has its benefits but also its challenges. For example, how do local policy makers, staff, and appointed officials in diverse settings and from diverse backgrounds gain the knowledge to make informed decisions about the future of their communities and the skills to work effectively with other stakeholder groups?

In 1976, CURA convened a group of local government officials, state legislators, and higher education representatives to address this very question. Government Training Service (GTS) was the result. Structured as a public, joint powers organization, its governing members have included the Association of Minnesota Counties, League of Minnesota Cities, Minnesota Association of Townships, Minnesota Regional Development Organizations, Minnesota School Boards Association, Minnesota State Colleges and Universities, State of Minnesota, and University of Minnesota.

The guiding principles behind the creation of GTS were to bring together the providers and consumers of education and training, to develop quality programs available to all local governments so that each local entity did not have to “reinvent the wheel,” and to consider economies of scale. What emerged was a vehicle ideally suited for addressing intergovernmental and multisector educational needs. Through the years, GTS proved to be a valuable training arm for smaller public sector groups and associations that did not have staff or expertise to address specific issues or problems in their communities. Conferences and workshops on topics as diverse as community policing, government information technology, violence in the community, or quality in education brought people together to develop a common understanding of the issue, learn about innovations and best practices in other communities, share diverse perspectives, solve problems, and sometimes even generate new knowledge.

Unfortunately, in times of major budget deficits, education and training are often the first budget items to be cut. Our small but critical Minnesota legislative appropriation, in place since 1981, was just one of many cuts made during the 2003 state legislative session. In addition, Local Government Aid was reduced significantly and legislation was passed limiting state contracts for the biennium. Finally, neighboring Minnesota Public Radio bought the building that housed the GTS office, forcing us to find new quarters. These factors converged to create an unpredictable future for GTS.

During nine months of discussion that involved representatives from the governing-member organizations, several things became clear. First, GTS provided valuable programs and services, and many clients wanted to continue working with the program. Second, our experience and expertise in collaborative efforts had potential benefits and applications for the nonprofit community in Minnesota as well. Finally, many new opportunities could be pursued through creation of a new structure, development of new products and services, and interaction with new audiences. Consequently, the GTS governing board decided to officially dissolve the joint powers organization on March 31, 2004, and member organizations transferred the GTS name, intellectual property, contracts, and monies to a newly incorporated nonprofit organization.

On April 1, 2004, staff came to work for the nonprofit Government Training Services (the addition of a small “s” to our name heralded a big event!). We have a new seven-member transition board, charged with creating bylaws and policies to govern the new entity, and recruiting a permanent governing board by the beginning of our first full fiscal year on January 1, 2005. Our transition board members include three individuals from the previous governing board—Monica Dwyer Abress, Mark Karnowski, and Brenda Norman—as well as Helene Johnson, Stuart Mason, Bob Ryan, and Patty Wilder. Their time and effort working on these important tasks have been greatly appreciated.

Today, the new GTS has an expanded mission and a different address. We are now located at 2233 West University Avenue in St. Paul, in a building shared with many other nonprofit organizations. We dedicate our time to helping those who provide services to Minnesota citizens and communities meet current needs for knowledge and skills, and prepare for the changes to come. We continue to provide a full range of conference, education, and project management services, but we now place a stronger emphasis on bringing together intergovernmental and multisector groups to address issues that require concerted efforts by diverse stakeholders. These issues can arise on a statewide, countywide, or communitywide basis.

Recent initiatives have included facilitating citizen engagement efforts; offering a workshop titled Local Government 101 to various public and nonprofit audiences to help clarify the different functions of townships, cities, counties, and schools; and developing the GTS Training Network to provide discounted training opportunities to local government members throughout the state. Information on all programs and services offered by GTS is available at www.mngts.org.

During the past 27 years, the priorities and resources of each GTS member organization have evolved, the social context in our state has changed, technology has emerged as a key force, and budgets have cycled up and down. It has been a challenging but exciting journey. We are thankful to those who had the vision to create and guide GTS as a public organization, and are proud to carry on that legacy through a structure that is better adapted to the needs of today.

—Helene Johnson, executive director of Government Training Services
This article is the third in a three-part series on the Minneapolis Neighborhood Information System (MNIS), a program at the Center for Urban and Regional Affairs that assists neighborhood organizations in acquiring data and using geographic information systems (GIS) analysis and mapping to meet their revitalization goals. The article provides a summary of an independent evaluation of the MNIS program that was conducted to fulfill one of the requirements of the Department of Commerce's National Telecommunications and Information Administration Technology Opportunity Program (TOP) grant, which provided funding for the MNIS program.

Methodology
The evaluation was designed to examine a range of potential program outcomes, including (1) whether the program changed the strategies and activities of program stakeholders (neighborhood organizations and City of Minneapolis agencies) and (2) whether the program led to changes in the physical conditions in the participating neighborhoods or to changes in public policy.

We interviewed MNIS staff, employees of each of the participating neighborhood organizations, City of Minneapolis staff who worked with the MNIS program, and staff from five comparison neighborhood organizations. Both the participating and the comparison neighborhood groups were interviewed twice, once at the beginning of the program in 2001 and once at the end in 2004. The comparison neighborhoods were chosen to represent a range of characteristics, including neighborhood location, housing conditions, and neighborhood organization characteristics (see Figure 1).

Program Outcomes
The three partners in the MNIS program—the City of Minneapolis, the participating neighborhood organizations, and CURA-MNIS staff at the University of Minnesota—were each responsible for carrying out various activities to implement the MNIS program. In this section, we examine how successfully the important elements of the program were carried out.

City of Minneapolis. The City of Minneapolis agreed to deliver several items to make the MNIS program operational. First, City staff created a data download Web site, a source for neighborhood organizations to access a range of data items for all properties within their boundaries. The Hennepin County Tax Assessor's Office, the Minneapolis Housing Inspections Office, the Minneapolis Department of Planning and Zoning, and the Minneapolis Public Works Department provided the data. The City made the data available online in December 2002, 15 months after the TOP grant was awarded and the MNIS program began operation. The data's release was delayed for several reasons. First, the City needed to establish a network of "data stewards"—City staff members responsible for updating and maintaining the quality of the data within the data set made available to participating MNIS organizations. Second, there was significant instability in the City's management of the MNIS effort. The City of Minneapolis, like many local governments in Minnesota during the early part of this decade, experienced a budget crisis during this period. As a result, GIS staff were cut and program progress was interrupted. At the same time, the City changed project managers for the MNIS program three times during the program's three years.

Ultimately, the City's ability to combine databases from several departments and make them available online was greatly facilitated by a multimillion dollar "Enterprise GIS" effort it had begun in 1998. Enterprise GIS involves both the integration of all the City's data systems into one system and the decentralization of GIS capabilities to all departments. The MNIS download Web site pulls data directly from the Enterprise GIS system.
The City also created a “feedback loop,” whereby neighborhood organizations can notify City staff of errors in the database and provide documentation to support their claim. City staff members then incorporate the corrections into the database after verifying them. The City wanted the feedback loop in place prior to release of the data, and this also delayed release of the online database.

In addition, the city created an early warning system designed to predict housing abandonment. The system, which “scores” residential properties on various dimensions, is available online, but was not released until December 2003, a full 18 months after it was scheduled to become available. Once again, the delays were mainly bureaucratic (staffing, budgets, project management, legal issues), but there was also some disagreement as to what indicators of abandonment could be used and how the formula to determine risk of abandonment should work.

Finally, the City agreed to make available to neighborhood organizations GIS tools to facilitate quick and easy mapping analysis. The availability of these analytic tools (e.g., map templates) online would allow groups with little or no GIS expertise to easily create maps of interest to them. This task has not yet been completed. There is currently no source of automated GIS applications that would allow a Neighborhood organization to easily create a map from the data that are available online. Given the difficulties of learning GIS software and the resource constraints neighborhood organizations that want to use GIS face, the lack of such a tool kit is an important shortcoming of the program.

**CURA-MNIS Staff.** The Center for Urban and Regional Affairs is the administrative home for MNIS staff. The MNIS staff works directly with neighborhood organizations to build their capacity to use GIS software and electronic databases, and to help them identify ways to utilize the City data in the work of their organizations. From June 2001 through the end of the grant period in September 2004, MNIS staff conducted GIS training for participating organizations on a monthly basis. Virtually all the neighborhood organization staff members we interviewed indicated that they felt the trainings were convenient and useful. Many respondents commented specifically on the usefulness of the step-by-step handouts, which they considered indispensable when trying to replicate the applications learned at earlier training sessions. Others responded well to the hands-on nature of the training.

In addition to training sessions, MNIS staff also provided regular consulting on GIS and mapmaking issues to the 12 participating neighborhood organizations. Many of the groups identified the MNIS staff’s ongoing technical assistance as an indispensable part of the program that helped them use GIS software and City data more fully than they would have otherwise.

In the spring of 2003, MNIS staff began preparing the MNIS Handbook, a GIS “how-to” manual. The handbook was designed to be used as a reference tool, with basic instruction on how to use GIS software and spatial data at the neighborhood level. As of August 2004, however, the handbook has not been completed or disseminated to participating MNIS organizations.

**Neighborhood Organizations.** Between June 2001 and the end of 2003, MNIS neighborhood organizations sent 48 different people to MNIS training sessions. There was a wide range of involvement in the trainings, with some organizations sending several staff members to multiple training sessions and other organizations sending only a few staff to a handful of sessions. Neighborhood organization staff members reported varying levels of confidence in their abilities to use GIS and manipulate the MNIS data. Four reported a high degree of confidence in their ability to use the software and prepare maps. Three organizations reported the ability to complete basic steps, while relying heavily on MNIS staff for help. Two other organizations reported a high
degree of confidence during the first round of interviews, but had lost staff members since that time and reported in the most recent interviews that they are not using the software or reported a lack of confidence in their in-house ability to do so. The final three organizations reported having no confidence in their ability to use GIS software and to access the MNIS data.

The regular use of maps is quite common among MNIS member organizations, and significantly more common than among the comparison neighborhood organizations. Most of the maps organizations participating in the MNIS program make are used for strategic purposes (to plan organizational strategy or analyze conditions that affect strategic choices). Four organizations—Hawthorne Area Community Council, Holland Neighborhood Improvement Association, Seward Neighborhood Group, and Northside Residents Redevelopment Council—were especially focused on using maps for strategic purposes. The most common strategic use of GIS and mapping technologies was the charting of Neighborhood Revitalization Program (NRP) expenditures to serve as an evaluation of the Phase I NRP activities taking place in the neighborhoods. Other strategic uses of mapping included land-use studies that highlighted various aspects of the neighborhoods such as developable land and possibilities for higher density housing; and maps that identified the location of vacant storefronts, absentee landlord properties, crime calls, problem properties, and a range of other neighborhood characteristics. The second most common use of maps was for administrative purposes. This included, most commonly, the use of GIS data to create mailing labels and to make maps with information useful to staff and board members.

Although most of the participating MNIS neighborhood organizations had originally planned in 2001 to add their own data to the City data that were available online, most had not followed through on that plan by 2004. In most cases, the lack of follow-up was attributed to staff turnover at the organization.

Neighborhood Organization Involvement in MNIS

The 12 participating MNIS organizations can be placed into three tiers relative to their level of participation in MNIS (Table 1). These tiers are defined by four characteristics: (1) the degree of on-staff expertise in GIS within the organization, (2) the ability to independently generate GIS and mapping products, (3) the extent of the organization’s contributions to the development of the MNIS program, and (4) the ability to identify significant impacts of GIS technology and MNIS participation on the organization’s activities.

Organizations in the top tier (Elliot Park Neighborhood, Inc.; Hawthorne Area Community Council; Longfellow Community Council; Powderhorn Park Neighborhood Association; and St. Anthony West Neighborhood Organization) rank highly on most or all of these dimensions. They have considerable in-house GIS capabilities, they have played important roles in creating and developing the MNIS program, they have contributed significantly to MNIS steering committee activities, and they report significant organizational impacts and can illustrate multiple ways in which MNIS has increased their organizational efficacy and efficiency.

Organizations in the second tier (Harrison Neighborhood Association, Northside Residents Redevelopment Council, Seward Neighborhood Group, and Standish-Ericsson Neighborhood Association) were slightly less involved in MNIS. They have generally identified a need for GIS proficiency and they value the potential benefits of MNIS participation for their organization, but they either have not acquired or have not retained sufficient in-house capacity to be confident in using the MNIS program over time. These organizations typically rely more on MNIS staff to produce the mapping products they want. Although they are able to experience benefits from participation in the MNIS program, as a rule they do not do so independently, nor to the degree that they would like. Most of the organizations in this category indicated that they just do not have the capacity to use GIS as much as they would like or had this capacity at one time during the program, but lost it as key staff members moved on.

The final tier of neighborhood organizations (East Phillips Improvement Coalition, Holland Neighborhood Improvement Association, and Whittier Alliance) includes groups that have participated very little in the MNIS program. These are organizations that either have not taken advantage of the program or have indicated that mapping and GIS capabilities are a relatively low priority for their organization. It should be noted that circumstances can change rapidly for neighborhood organizations so that the level of involvement and expertise in a specific organization can fluctuate over time.

Organizations that had previous GIS experience were much more likely to be heavily involved in MNIS. Having had GIS expertise prior to participation in MNIS reflects both a preexisting capacity and an organizational
commitment to GIS activities. Previous capacity and commitment to GIS correlates strongly with a high degree of involvement in MNIS. In addition, organizations that identified a specific reason for joining MNIS were much more likely to be heavily involved in the program. Having general or indistinct reasons for joining the MNIS program did not translate into high levels of involvement. Quite predictably, the degree to which organizations availed themselves of the training opportunities is highly correlated with organizational involvement in MNIS. Tier one organizations sent more staff members to the trainings on average compared to other organizations, their staff members attended more training sessions overall (on average, about twice as many sessions as the other organizations), and the average number of training sessions attended by each staff member was significantly higher. Attendance at training sessions is both a reflection of the organizational priority given to the MNIS program and a measure of the in-house capacity that these organizations were creating over the course of the program.

Program Outcomes

Changes in Practice. Participation in the MNIS program does not seem to have changed the way neighborhood organizations conduct their business or altered their organizational strategies. Although participation in the program does seem to have led to a continued and frequent use of maps in organizational activities, these groups made frequent use of maps prior to participation in the program as well. Although organizations anticipated adding their own data to MNIS to increase its utility, the degree to which this has taken place has not matched the organizations’ own expectations. Additionally, although the early warning system might lead to new organizational strategies to prevent housing abandonment, the system has not been operating long enough for such strategies to have materialized yet.

Instead, the main impact of the MNIS program on these organizations has been to enhance the work they were already engaged in. A frequent comment by MNIS participants is that the program has improved the work they do and given them greater legitimacy with funders, developers, and policy makers. One neighborhood organization acknowledged that having access to the MNIS data supplemented their hands-on knowledge of their neighborhood and allowed them to get ahead of the “development curve” to create a land-use plan that will guide future development. Several of the neighborhoods also stated that MNIS has allowed them to more effectively engage volunteers and better serve residents. A large majority of the participating organizations gave the MNIS program high marks. They claimed that it has been very useful to them and most organizations can point to a number of ways the program has had a

<table>
<thead>
<tr>
<th>Tier</th>
<th>Neighborhood organizations</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Elliot Park Neighborhood, Inc. Hawthorne Area Community Council Longfellow Community Council Powderhorn Park Neighborhood Association St. Anthony West Neighborhood Organization</td>
<td>in-house staff trained and competent in GIS able to produce GIS products independently makes regular contributions to MNIS program development and steering committee activities identifies significant impacts of MNIS and GIS tools on organizational activities</td>
</tr>
<tr>
<td>2</td>
<td>Harrison Neighborhood Association Northside Residents Redevelopment Council Seward Neighborhood Group Standish-Ericsson Neighborhood Association</td>
<td>incomplete or inconsistent in-house training in GIS values GIS contribution, but relies on MNIS staff to produce GIS products desires to expand GIS capabilities</td>
</tr>
<tr>
<td>3</td>
<td>East Phillips Improvement Coalition Holland Neighborhood Improvement Association Whittier Alliance</td>
<td>little to no in-house training in GIS unable to use GIS software little to no involvement in MNIS program development and steering committee activities has not prioritized GIS mapping tools</td>
</tr>
</tbody>
</table>

Virtually all of the neighborhood organization staff who were interviewed felt that the monthly GIS training sessions offered by MNIS were both convenient and useful. The program evaluation found that attendance at these training sessions was highly correlated with an organization’s overall involvement in the MNIS program.
CURA Receives TOP Grant for 2004

The Center for Urban and Regional Affairs, in partnership with the Minnesota Department of Employment and Economic Development, the Minnesota Housing Finance Agency, the Minnesota Office of Revenue, the Metropolitan Council, Ramsey and Hennepin Counties, and various Twin Cities neighborhood organizations and community development corporations, has been awarded a three-year, $600,000 Technology Opportunities Program (TOP) grant from the U.S. Department of Commerce to fund a new initiative called Minnesota 3-D. The project will provide an integrated, Internet-accessible system of employment, housing, and development information and analysis tools for neighborhoods, community development corporations, employment trainers, businesses, central cities, suburbs, counties, and state agencies in Minnesota. Minnesota 3-D will be a “first-of-its-kind” system, combining existing regionwide parcel-level housing data with statewide employment and demographic data obtained through agreements with the U.S. Bureau of Labor Statistics, the Social Security Administration, and the U.S. Census Bureau.

Minnesota 3-D will be used to support the next generation of community economic development, in which jobs and housing are located near each other. The project will include a suite of Internet-based applications that will provide geographic analysis of current development patterns, encourage job creation near areas with underutilized workforce assets, promote housing production and reinvestment near job growth areas, and support community economic development activities at the local level. The award will allow CURA to broaden its efforts in community GIS and capacity building, which began with the Minneapolis Neighborhood Information System (MNIS) project in 2001.

positive effect on their activities (for specific examples, see the previous article in this series, which appeared in the Summer 2004 issue of the CURA Reporter).

The MNIS program did involve a significant change in the way the City of Minneapolis conducts its business related to property data, as well as the degree of public access to that data. Under the MNIS program, the City combined several data sources, organized them by neighborhood and property identification number, and made them publicly available online. The city also constructed the online early warning system and the feedback loop. All these represent new ways of doing business for the City.

It was hoped that MNIS would increase the accuracy of the City’s data, primarily through the operation of the feedback loop. For the most part, however, this feature of the online system has been unused. According to some of the neighborhoods, they stopped using the feedback loop when they failed to see any results from its use. According to the City, it received only three instances of feedback between March and August 2004, and roughly 20 for the entire year. At the same time, the process of creating the Enterprise GIS system and the MNIS online data system has led to increased data accuracy because it forced departments to be responsible for the data they provide and reinforced the need for strong data stewardship.

Changes in Neighborhood Conditions and Public Policy

We were unable to establish any connection between the MNIS program and changes in the physical condition of the participating neighborhoods. For example, the concern of many MNIS organizations about vacant and abandoned housing decreased significantly from the first year of the program to the last year due to the strong housing market in the Twin Cities metropolitan area and the resulting decline in vacancies. The number of vacant and abandoned housing units in participating MNIS neighborhoods declined from 78 at the beginning of 2001 to 35 in the summer of 2004, a 55% reduction. In the rest of the city, however, the number of boarded properties declined by 57% during the same time period.

There are two likely reasons for the lack of program impact on neighborhood housing conditions. First, the City of Minneapolis was experiencing a robust housing market during the program period. The magnitude of the market changes likely swamped the impact of the MNIS program. Second, and more important, the element of the program that was most likely to produce a neighborhood impact—the early warning system—was not completed until the last year of the program. There simply has not been enough time for the MNIS organizations to use the system to identify potentially troubled properties and develop intervention strategies.

The MNIS program has resulted in some measurable public policy impacts. First, the changes in City policy regarding data collection, maintenance, and public availability are important policy changes that put Minneapolis at the forefront of cities nationwide in its efforts to share electronic property data between public and nonprofit agencies. Second, one MNIS organization, the Hawthorne Area Community Council, was able to use resources available through MNIS to create an advocacy campaign that resulted in a change in City policy regarding the disposition of vacant lots (see the article on MNIS in the Summer 2004 issue of the CURA Reporter for details). Finally, MNIS neighborhood groups have been using GIS to help establish a better informational foundation for an array of city-managed redevelopment processes, including the Lake Street redevelopment initiative, the Midtown Greenway planning process, and the Harrison-Glenwood Avenue redevelopment plan.

The Future of MNIS

Neighborhood organizations face a number of constraints in trying to use GIS in their regular organizational activities. The technical aspects of learning GIS are a challenge for organizations that typically have little time to devote to ongoing training. High turnover among neighborhood staff also means that once obtained, on-staff technical expertise often must be maintained by training new employees.

Given these constraints, it is notable that a majority of the participating MNIS organizations have been able to benefit from the program as much as they have. Of the 12 participating organizations, 9 make more than occasional use of MNIS resources and can point to significant contributions the program has made to their organization’s activities. The groups have made strategic use of their mapping capabilities and the
program has generated a range of benefits, from providing greater access to data to ensuring greater accuracy of the data itself.

The creation and maintenance of GIS capacity within neighborhood organizations remains the greatest challenge for M NIS as it moves forward. The role of M NIS staff as a training and consulting resource for neighborhood organizations is essential to the success of this kind of program. This capacity can be sustained if the following recommendations are followed:

- The M NIS training and consulting role should be retained in any future version of this program.
- Staff from M NIS or the City of Minneapolis should develop automated applications that allow users to complete simple tasks—such as creating mailing labels and creating basic standard maps—to give neighborhoods the ability to use GIS without having to learn the intricacies of the software.
- The M NIS program should consider offering onsite training for neighborhood organizations to allow more of their staff members to attend.
- The M NIS staff should complete and distribute the M NIS “how-to” manual.

The City of Minneapolis also should be commended for creating online access to a single, unified database of property information. To maximize the impact of M NIS in the future, we recommend the following:

- Establish regular meetings between the data users (neighborhood organizations) and the data stewards (City staff). A closer dialogue between the groups could help to enhance the operation of the feedback loop, as well as improve communication between the people involved in implementing the M NIS program.

Edward G. Goetz is a research associate at CURA and professor at the University of Minnesota’s Humphrey Institute of Public Affairs, where he directs the Urban and Regional Planning Program and serves as Associate Dean for Academics. Brian Schaffer is a student in the Masters of Urban and Regional Planning Program at the Humphrey Institute of Public Affairs, and a graduate research assistant with the Minneapolis Neighborhood Information System.

Project Awards

To keep our readers up-to-date about CURA projects, each issue of the CURA Reporter features a few capsule descriptions of new or recently completed projects. The projects highlighted in this issue were made possible through the Community Assistantship Program (CAP), which connects communities in Greater Minnesota with University of Minnesota faculty and students. These projects help rural communities take advantage of University resources and expertise, allow students to apply their knowledge and skills in the field, and encourage faculty to become more aware of and involved in rural issues in the state. The projects described here represent only a portion of those that will receive support from CURA and its partners during the coming year.

- **Gale Woods Farm Educational Program.** Gale Woods Farm is a working educational farm located 30 miles west of Minneapolis in Minnetrista. It is a recent addition to the Three Rivers Park District, which was established to promote environmental stewardship through recreation and education in a natural resources-based park system. The Gale Woods Farm Educational Program allows groups to receive hands-on farming experience and learn about topics such as veterinary skills, soil science, water quality, and wool processing. Research assistant **Courtney Tchida**, a graduate student in agriculture, food, and environmental education at the University of Minnesota, helped increase awareness of Gale Woods Farm among high school agriculture teachers, and prompted them to think about how this facility might fit into their curricula. Tchida conducted surveys with approximately 24 teachers who represent 30 different schools. The results indicated that teachers were excited about opportunities to fit Gale Woods Farm into their curricula, and that the facility will enable them to offer hands-on opportunities not available elsewhere. In addition, Tchida created farm-based curricula on composting, food security, and land stewardship. These materials, as well as her discussions with teachers, will help project supervisor Tim Reese and others at Gale Woods Farm provide curriculum modules for high school agricultural groups (such as Future Farmers of America) and for summer classes that involve in-class preparation activities followed by a visit to the farm to do hands-on projects.

- **New York Mills Rural Arts Project for Youth.** The New York Mills Arts Retreat and Regional Cultural Center is a nonprofit organization whose mission is to provide residents of rural Minnesota with access to the same cultural opportunities that are available in large metropolitan areas. The organization specifically serves the community of New York Mills (population 1,200), located in west central Minnesota about 80 miles southeast of Fargo, as well as more than 100,000 residents living within a 75-mile radius of the center. Through two CAP projects spanning the last two summers, the cultural center has researched, planned, and begun implementation of a new arts program for youth. This program aims to serve 5,000 students in grades 7 to 12 in 14 rural communities surrounding New York Mills. During the summer of 2003, CAP research assistant **April Newman**, an undergraduate student in accounting at the University of Minnesota, surveyed students, school administrators, teachers, and community members in the target communities to determine their level of interest in youth arts programming. Based on the report that Newman generated, cultural center director Lina Belar applied for and was awarded a three-year, $34,800 grant from the Bush Foundation to implement a youth arts program. Thanks to funding from CURA, Newman returned this past summer as a CAP research assistant to develop an implementation plan for the program. This work resulted in the development of a publicity plan, program schedule,
youth arts Web site, and bimonthly newsletter. The cultural center officially
launched the program at the end of August with a youth pizza party. The
center conducted three workshops in September for 20 to 30 students, and
is moving forward with a schedule of events for this school year that will
include flamenco dancing, marimba music, a mural project, and a photo-
ography workshop.

■ A Decade of Women’s Leadership: Learning from Minnesota Rural
Futures Award Winners. Minnesota Rural Futures (MRF) is a nonprofit orga-
nization that works to provide recogni-
tion for the role that women play in
agriculture and rural life. Each year,
MRF recognizes six women who have
shown exceptional leadership. Thanks
to funding from the Otto Bremer Foun-
dation, CAP research assistant Megan
Barnett, an undergraduate student in
psychology at the University of Minne-
sota, was able to conduct a survey of
award winners from the past 15 years
and create a database of information
about those winners. Barnett also
analyzed women’s leadership roles in
agricultural organizations in Minnesota.
She found that although more than half
of Minnesota residents are female, only
one-third of the leaders in rural Minne-
sota are women, and females constitute
only one-quarter of the total number of
leaders listed as contacts for agricultural
organizations in the state. The survey
of MRF award winners found that
women who are in leadership positions
encourage other females to engage in
leadership activities. The MRF database
is intended to increase communica-
tion between women leaders, as well as
encourage up-and-coming rural women
to take on leadership positions.

■ Balancing Development with
Conservation in the Brainerd Lakes
Area. The Brainerd Lakes Area Conser-
vation Collaborative (BLACC) was
created to help elected and appointed
officials make informed decisions about
conservation and development in Crow
Wing County. The collaborative
recently issued a report titled Inventory
and Assessment of Natural Resources in
Crow Wing County: A Framework for
Conservation and Recreation Planning.
The report has four purposes: (1) to
help decision makers recognize poten-
tial long-range results of their land
management decisions, (2) to suggest
ways local decision makers can better
balance development and conservation,
(3) to help communities determine
which natural areas should be
protected, and (4) to recommend what
types of development are appropriate
for development-designated areas.
Research assistant James Lehnhoff, a
graduate student in public affairs at the
University of Minnesota, was hired
through CAP to help BLACC create 41
maps for the report using geographic
information systems (GIS) software.
The maps show such things as where
priority conservation areas are located,
where potential recreational areas
might be sited, where groundwater
contamination is a real possibility, and
where development is most appropriate.
Crow Wing County will use the report
to help develop new zoning and subdi-
vision ordinances by identifying loca-
tions of unspoiled habitat, locations of
sensitive indicator species, and areas
with water quality issues. The county
will also use the report to complement
and assist in the development of the
Crow Wing County Parks, Trails, Recre-
ation and Open Space Master Plan.
Governor Tim Pawlenty’s Water
Quality Initiative for the five-county
North Central Region of Minnesota
(Cass, Crow Wing, Aitkin, Hubbard,
and Itasca Counties) has already
endorsed the report.

■ Dream of Wild Health. Peta Wakan
Tipi (which means “Sacred Fire Lodge”
in the Lakota language) is a nonprofit
organization in St. Paul that promotes
the social, economic, physical, and
cultural health of Native American
people through culturally appropriate
programming. This programming
includes transitional housing for Native
American men and women; intensive
employment training and support; and
the Dream of Wild Health program,
an agriculture and health initiative
that preserves, propagates, and distrib-
utes indigenous heirloom seeds, and
promotes sustainable agricultural
practices as understood by the indig-
enous peoples of the Upper Midwest.
In partnership with the University of
Minnesota Extension Service, the U.S.
Department of Agriculture’s Sustainable
Agriculture Research and Education
grant program, and Blue Cross/Blue
Shield of Minnesota, Peta Wakan Tipi
has created a Diabetes Prevention

Garden, as well as a curriculum to
promote diabetes prevention among
Native American youth through hands-
on activities such as games, stories, and
crafts. Given the high rates of diabetes
and the under-use of mainstream
medical services in Native American
communities, this project has the
potential to create a unique model for
culturally relevant health promotion.
Through funding from the McKnight
Foundation, CAP research assistant
Deborah Garrido, a graduate student
in nutrition at the University of Minne-
sota, has been hired to assist with this
project. Garrido will use evaluations
and pre- and post-testing to examine
the responses of youth involved in
the program and determine if this
curriculum has helped them learn
about diabetes risk factors, symptoms,
and prevention strategies. Based on
these findings, the curriculum will be
revised, if necessary, and finalized for
wider use.

■ Strengthening Sustainable Farmers’
Electronic Communication. The
Sustainable Farming Association (SFA)
of Minnesota is a nonprofit educational
organization of farmers and other
individuals committed to the ecologi-
sely sound and profitable production
of a diverse array of healthy foods,
renewable energy, and natural fiber.
The association’s membership includes
approximately 500 farm families state-
wide who demonstrate sustainable
farming practices through field days,
farm tours, teaching, and mentoring,
and who often partner with University
of Minnesota researchers to explore
innovative techniques. With funding
assistance from the West Central
Regional Partnership and CURA, CAP
research assistant Kevin Logan, an
undergraduate student in computer
science at the University of Minnesota
at Morris, will redesign and update SFA’s
Web site (www.sfa-mn.org) based on a
survey of farmers and other collabora-
tors to collect content information and
determine which elements of the Web
site will be most helpful. The redesigned
Web site is intended to increase commu-
nication and information-sharing
among sustainable farmers, reduce
organizational costs by reducing travel
time and expenses, lay the groundwork
for online interest groups, and educate
consumers about sustainable farming
and products.
At the end of 2003, national and local newspapers carried stories of worsening economic conditions for Americans. For the second year in a row, household income fell and the poverty rate rose. Midwesterners and people of color were particularly hard hit. Minnesotans, however, escaped the worsening economic situation. In Minnesota, median income and the poverty rate remained level. In 2002, median household income in Minnesota was 30% above the national level and the poverty rate was about half the national rate. With signs of a recovery from the “jobless recovery” of the last year or so, guarded optimism seems to be returning, at least on the job front.

Although it is natural to focus on short-term ups and downs in economic conditions, economic progress is best measured over much longer periods of time than one or two years. In the mid-1990s, we published two reports for CURA on the changing economic fortunes of Minnesotans during the rather turbulent 1980s, a time of stagnating real earnings and rising poverty rates. We found that poverty rates among people of color were three to four times those of White Minnesotans, and that Minnesotans of color were considerably less likely to hold a “good” job than were comparable White Minnesotans. We found that the keys to avoiding poverty are clear: work and productive attributes such as education and English language proficiency, which increase the chances of employment and increased earnings.

The incidence of poverty is greater in Minnesota households headed by women than those headed by men. Almost half of poor individuals in the state in the year 2000 lived in households headed by single women, like the single mother of three children pictured here at a food kitchen.
In this study, which was supported through a New Initiative grant from CURA, we examined how Minnesotans fared during the prolonged economic expansion of the 1990s. In particular, we looked at the percentage of Minnesotans who held “good” jobs and the percentage of Minnesotans living in poverty. We also looked at the percentage of Minnesotans who are considered working poor—that is, working but earning below the poverty line. In May 31, 2004, cover story in Business Week magazine titled “Working Poor,” Michelle Conlin and Aaron Bernstein highlighted the plight of such workers, who constitute about one-quarter of the U.S. workforce between the ages of 18 and 64. About 20% of the working poor are foreign-born, mostly from Mexico, and the majority possess a high school diploma.

We looked at differences among major racial/ethnic groups: Whites, Blacks, American Indians, Asians, and Hispanics. Although the population of Minnesota is not very racially or ethnically diverse compared to that of the nation as a whole (11.8% people of color compared to 30.9%), the percentage of people of color grew rapidly during the 1990s (from 6.3% of the population in 1990), and issues of race and ethnicity increasingly capture public attention. In a follow-up study that will be published in a future issue of the CURA Reporter, we will investigate the changing fortunes of new immigrants to Minnesota. During the 1990s, Minnesota’s foreign-born population more than doubled, with particularly notable increases in Hmong, Mexican, and African immigrants.

### Data

As in our earlier studies, our data are drawn from the Minnesota Public Use Micro Sample (PUMS) of the 1990 and 2000 U.S. Censuses. Both PUMSs are a 5% random sample of the population. We base our analysis on households headed by an individual 16 years of age or older, and our racial/ethnic categories are based on single-race responses only. As in our earlier analyses, the definition of poverty used in this article is the federal definition established by the Office of Management and Budget and is based on the amount of money needed to purchase a least-cost nutritionally adequate food plan. The poverty level depends on a household’s size, the presence of children under the age of 18, and the age of the householder (under 65 years of age, or 65 years of age and older). If the total income of a household in the sample was below the appropriate poverty threshold, then the family or individual was classified as poor. We define a job as being a good job if it pays at least 150% of the poverty level. Such a job would support a middle-class standard of living. We also investigated if a greater percentage of Minnesotans held jobs that were even better than a good, middle-class job.

### The Changing Face of Poverty

The poverty rate declined 22% during the 1990s and, despite a 12% growth in the population, the number of poor Minnesotans declined by 13%. Table 1 displays poverty rates and numbers of poor by race/ethnicity in 1990 and 2000 (the poverty figures are actually based on income during the year before the U.S. Census was taken). Poverty rates fell for all groups, with declines most notable for Blacks, American Indians, and Asians. The decline was most modest for Hispanics. In other words, irrespective of race or ethnicity, an individual in Minnesota was less likely to be poor in 2000 than in 1990. Despite declines in poverty rates, Blacks, Asians, and especially Hispanics experienced an increase in the numbers of people in poverty during the 1990s because of population growth within these groups. Population growth by racial/ethnic group is shown in Figure 1. Although the population of the state increased by 12.4%, the number of Blacks increased by between 81% and 112% (depending on the definition of race used), the number of Asians by between 87% and 113%, and the number of Hispanics by 166%. Changes in poverty rates and population numbers resulted in a 23% increase in the number of poor Blacks and a 143% increase in the number of poor Hispanics. In 1990, 80% of the poor were White, whereas in 2000, 67% of the poor were White. In 1990, only 1 poor Minnesotan in 50 was Hispanic, whereas in 2000, almost 1 in 10 poor Minnesotans was Hispanic.

---

Table 1. Poverty Rate in Minnesota by Racial/Ethnic Group, 1990 and 2000

<table>
<thead>
<tr>
<th></th>
<th>Total Population*</th>
<th>White</th>
<th>Black</th>
<th>American Indian</th>
<th>Asian</th>
<th>Hispanic†</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1990</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of poor individuals</td>
<td>402,089</td>
<td>317,878</td>
<td>31,724</td>
<td>18,386</td>
<td>23,500</td>
<td>10,295</td>
</tr>
<tr>
<td>Poverty rate</td>
<td>9.3%</td>
<td>7.9%</td>
<td>39.1%</td>
<td>43%</td>
<td>38.1%</td>
<td>27.6%</td>
</tr>
<tr>
<td><strong>2000</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of poor individuals</td>
<td>349,404</td>
<td>238,478</td>
<td>38,918</td>
<td>12,118</td>
<td>24,825</td>
<td>25,061</td>
</tr>
<tr>
<td>Poverty rate</td>
<td>7.3%</td>
<td>5.7%</td>
<td>26.8%</td>
<td>27.3%</td>
<td>20.7%</td>
<td>22.1%</td>
</tr>
</tbody>
</table>

* Rows do not add up to the figures shown for Total Population because only single-race responses are reported for each racial group; those who chose multiple racial designations or chose “other” as their racial designation are included in the Total Population figures, but not in the counts for individual racial groups.

† Hispanic is an ethnic category and is shown separately. People of Hispanic origin can be of any race.

---

2 Editor’s note: Although inconsistent with CURA’s editorial style, the terms Black, American Indian, and Hispanic have been retained in this article for consistency with the racial/ethnic categories used by the U.S. Census Bureau, from which the bulk of the data in this report was obtained.

3 Beginning with the 2000 U.S. Census, respondents were able to choose more than one racial designation to describe themselves. For the purpose of this analysis, only single-race responses were included.
In 2000, the poverty rate, shown in Table 2, was greatest in households headed by young people 16 to 25 years of age (24.2%) and lowest in households headed by an individual 46 to 55 years of age (4.3%). As in the 1980s, the decline in the poverty rate was greatest for households headed by an individual over the age of 65. The decline was three times that for the youngest households. Thus, despite a decade of economic expansion, households headed by young Minnesotans continued to struggle to find an economic footing whereas the position of older-headed households continued to improve.

The incidence of poverty was greater in Minnesota households headed by women than those headed by men, and was particularly high in those headed by unmarried women. Almost 20% of individuals in households headed by single females were in poverty in 2000, but this was an improvement on 1990 when 26.3% of such individuals were poor. Almost half of poor individuals lived in households headed by single women.

Conlin and Bernstein's Business Week cover story on the working poor noted that cutthroat competition among companies may mean that “the bottom rung is as high as most workers will ever get.” Although this is perhaps a bit exaggerated, some evidence suggests that upward mobility for U.S. workers is now more difficult than in the past. However, it is not only economic competition that puts pressure on low-wage workers. For more than a decade, the United States has implemented significant welfare reform designed to move people off welfare and into the labor market. These forces appear to have been present in Minnesota during the 1990s. Figure 2 presents data on the increase in the number of working poor in Minnesota, as well as their representation among the poor. The first column for each racial/ethnic group is the ratio of the number of working-poor people (that is, individuals in a household that is poor but where the householder works) in the state increased by 2% (ratio 1.02), the number of White people in working-poor households declined by 16% (ratio 0.84). The second column is the ratio of the percentage of the poor who were working poor in 2000 relative to that number in 1990. This number tells us if the representation of the working poor among the poor increased during the 1990s; ratios greater than 1.00 represent an increasing representation of working poor among the poor. From the second column, we see that a poor person in 2000 was 18% more likely to be a working-poor person than they were in 1990. Although the number of working poor increased by 2% for the state, the stories for individual racial/ethnic groups vary dramatically. The number of White Minnesotans in a working-poor household decreased by 16%. In contrast, the number of working-poor Black people more than doubled (ratio 2.26) and the number of Hispanic working-poor people more than tripled (ratio 3.13). About half of all poor Whites and Hispanics lived in households where the household worked, and about 40% of Blacks, American Indians, and Asians lived in such households. These are significant increases from 1990 for all groups except Whites. Statewide, the percentage of the poor who were...
The face of poverty in Minnesota has changed during the last decade, so too has the face of the working poor. In 1990, only 1 in 20 working-poor people were Black and 1 in 10 were Hispanic. In 1990, only 1 in 20 working-poor people were Black and only 1 in 50 were Hispanic. Just as the face of poverty in Minnesota has changed during the last decade, so too has the face of the working poor.

Data on labor force participation rates in Minnesota by race/ethnicity for those aged 16-64 suggest that differences in labor force participation and employment contributed to racial/ethnic differences in poverty, and that work is no guarantee of an escape from poverty (although it certainly helps, as we shall soon see). Table 3 provides estimates of the percentage of householders in the labor force (those employed or actively seeking work) and the percentage employed by race/ethnicity. Roughly 9 out of 10 White householders participated in the labor market and 86% were employed. However, the labor force participation rates of most of the other groups are 10 percentage points lower and, for American Indians, 16 percentage points lower. For Whites, Asians, and Hispanics, most of those who were in the labor force were employed. This was not the case for Blacks and American Indians; for these groups, only about 9 out of 10 of those who wanted to work were able to find work.

A statistical investigation of the factors associated with being employed suggests that an additional year of education increased the chance of a male householder being employed by 1%, having a disability decreased it by 3.4%, and living in the Twin Cities metropolitan area increased it by 1.2%. Blacks and American Indians were 4.3% and 5.3%, respectively, less likely to be employed than Whites and Asians with the same levels of education, work experience, language skills, disability status, and residence. Hispanics were 2.7% more likely to be employed. The effects for female householders are similar, except that Black women are 7% less likely to be employed than similar White, Asian, and Hispanic women. The effect of having a disability was a 5.4% reduction in the likelihood of a woman being employed. It is not clear whether these differences across racial/ethnic groups reflect differences in the quality of observed characteristics, differences in characteristics not measured in the U.S. Census, or discrimination. Data on labor force participation and employment suggest that at least part of the difference in poverty rates by race and ethnicity is due to differences in being involved in the labor market, but part of this difference may be due to discrimination in the labor market.

**Characteristics of the Poor**

In our earlier study of the 1990 U.S. Census, we used statistical analysis to identify characteristics of householders and their households that were associated with them being poor. Table 4 summarizes the findings of a similar analysis of the 2000 U.S. Census data. The numbers shown in Table 4 represent the impact of each characteristic on the probability that the household is classified as poor. Those who work are less likely to be poor: the chance of being poor was 6.8% lower if the householder was employed and an additional 4.9% lower if his or her spouse was employed. Education and language skills are valued in the marketplace; each additional year of education decreases the chance of being poor by almost 2%, as did speaking English well or very well. These impacts take into consideration the effect of being employed and all of the...
other characteristics shown in Table 4. Where you live and the type of work you engage in also matters. Metro area residents were 2.4% less likely to be poor than nonmetro residents, and those in service or farm jobs were somewhat more likely to be poor than those employed in white-collar or blue-collar jobs (1.8%). Again, these differences existed after taking into consideration whether the householder was employed and his or her education and language skills. Differences in household structure also were associated with differences in poverty. It is not clear whether these difference cause or are caused by poverty—that is, does being poor lead to the breakup of marriages or does not being married lead to poverty? Causation likely goes in both directions, thus we note here the association between household structure and poverty without attributing causation. Having children was associated with higher rates of poverty. Married couples with children were 1.7% more likely to be poor than were married couples without children. The differences were much larger for single moms (7.2%) and single dads (3.8%). This effect is not explained by the fact that households with children are larger than those without children because we also took into account household size. Each additional person in the household increased the chance of poverty by almost 1%.

For single-mother households, employment was even more important than it was for other households. If a single mother was employed, her household was 26% less likely to be poor than if she was unemployed. Single mothers who did not speak English well were at a 9% disadvantage, and those who lived outside the metro area were 7% more likely to be poor. These findings underscore the importance of jobs to single mothers and their families as they moved off welfare. The prospects of single mothers were further enhanced if they had marketable education and language skills and if they lived in the metro area where jobs were more plentiful.

Racial/ethnic differences in poverty remained even after we took into account differences in employment, education, English language skill, and household structure, but these differences were smaller than they were in 1990. In other words, the effect of race diminished during the decade. In 2000, Black households in Minnesota were 4.6% more likely to be poor than White households, whereas American Indian households were 3.7% more likely, Asian households 2.8% more likely, and Hispanic households less than 2% more likely to be poor. For single Black and American Indian mothers, the racial/ethnic differences were much greater—about 9%. It is not clear whether these differences reflect differences in the characteristics that were measured and are discussed in this article, unmeasured differences between the groups, or discrimination. Whatever the cause of the existing differences, it is notable that the impact of race/ethnicity halved during the 1990s (taking into account other factors).

### The Story on Good Jobs

Much attention during the last year or two has focused on the loss of lucrative white-collar jobs as these jobs have moved offshore. For the last decade, there also has been concern about the loss of good blue-collar jobs because of globalization. The concern has most often taken the form: Can the head of a household earn enough by himself/herself to support the entire family? Thus, our analysis focuses on the earnings of the householder rather than those of the entire household. Some family members may work not because they wish to, but rather because the earnings of the householder are too low to support the family, so looking at total household earnings does not address the crux of the policy question. For each household, we compared their earnings to those of the official poverty level for their household. The question is, did householders in Minnesota gain or lose good jobs during the 1990s?

For the state as a whole, the news was good (see Table 5). The vast majority (88%) of jobs held by householders paid above the poverty level. A large number (77%) were also “middle-class” jobs—that is, they paid 150% of poverty level or more. About two-thirds of jobs paid 200% of poverty level or more, and about 40% were very good jobs paying more than three times the poverty level. During the 1990s, a greater percentage of jobs paid above the poverty level (an increase of two percentage points). There was a three-percentage-point increase in

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>2000 Percentage Impact (%)</th>
<th>1990 Percentage Impact (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>4.6</td>
<td>6.7</td>
</tr>
<tr>
<td>American Indian</td>
<td>3.7</td>
<td>7.5</td>
</tr>
<tr>
<td>Asian</td>
<td>2.8</td>
<td>6.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.7</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Source: Regression equations estimated by the authors based on data from the Minnesota Public Use Micro Sample (PUMS), 2000 U.S. Census.

Note: A positive number indicates the attribute is correlated with an increased likelihood of a person being in poverty.
householders holding middle-class jobs and five-percentage-point increases in jobs above 200% and 300% of poverty level. Despite nationwide reports of a loss of good jobs, there does not seem to be much evidence that this occurred in Minnesota during the 1990s.

Male householders were more likely than female householders to hold a good job (81% compared to 66%, 1990 figures not shown in table). The male advantage increased the higher the earnings from the job, with 44% of male householders holding jobs that paid 300% of poverty level or more compared to 32% of female householders. These gaps increased somewhat during the 1990s. The metro area held a higher percentage of well-paying jobs. Fully 85% of metro-area householders held jobs paying 150% or more of poverty level, compared to 73% of non–metro-area householders. The metro-area advantage was even greater for very well paid jobs: 54% for jobs paying at least 300% of poverty level compared to 32% in the non–metro area.

As can be seen in Table 5, there were substantial differences by race and ethnicity in the quality of jobs people held in 2000. Although most minority householders held jobs paying above the poverty level, the percentages for Asians and Blacks were about 10 percentage points lower than for Whites, whereas for American Indians and Hispanics the differential was about 20 percentage points. The differential widened for better paying jobs. For example, Whites were 30% more likely than Blacks to hold a good job

### Table 5. Percentage of Jobs in Minnesota That Pay Above the Poverty Level by Racial/Ethnic Group, 1990 and 2000

<table>
<thead>
<tr>
<th>Percentage of jobs in 2000 that paid . . .</th>
<th>All races/ethnicities</th>
<th>White</th>
<th>Black</th>
<th>American Indian</th>
<th>Asian</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above poverty level</td>
<td>88</td>
<td>89</td>
<td>77</td>
<td>72</td>
<td>78</td>
<td>70</td>
</tr>
<tr>
<td>150% or more of poverty level</td>
<td>77</td>
<td>79</td>
<td>61</td>
<td>54</td>
<td>65</td>
<td>53</td>
</tr>
<tr>
<td>200% or more of poverty level</td>
<td>66</td>
<td>67</td>
<td>48</td>
<td>41</td>
<td>52</td>
<td>39</td>
</tr>
<tr>
<td>300% or more of poverty level</td>
<td>41</td>
<td>42</td>
<td>25</td>
<td>23</td>
<td>33</td>
<td>22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage of jobs in 1990 that paid . . .</th>
<th>All races/ethnicities</th>
<th>White</th>
<th>Black</th>
<th>American Indian</th>
<th>Asian</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above poverty level</td>
<td>86</td>
<td>86</td>
<td>80</td>
<td>66</td>
<td>76</td>
<td>76</td>
</tr>
<tr>
<td>150% or more of poverty level</td>
<td>74</td>
<td>75</td>
<td>67</td>
<td>54</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>200% or more of poverty level</td>
<td>61</td>
<td>61</td>
<td>51</td>
<td>35</td>
<td>46</td>
<td>50</td>
</tr>
<tr>
<td>300% or more of poverty level</td>
<td>36</td>
<td>37</td>
<td>31</td>
<td>18</td>
<td>30</td>
<td>26</td>
</tr>
</tbody>
</table>

Source: Calculated by the authors using data from the Minnesota Public Use Micro Sample (PUMS), 1990 and 2000 U.S. Censuses.

### Table 6. Correlates of Holding a “Good” or “Very Good” Job in Minnesota, 1990 and 2000

<table>
<thead>
<tr>
<th>2000</th>
<th>150% or more of poverty level</th>
<th>300% or more of poverty level</th>
<th>1990</th>
<th>150% or more of poverty level</th>
<th>300% or more of poverty level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>3.2</td>
<td>5.8</td>
<td>2.6</td>
<td>4.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Experience</td>
<td>1.0</td>
<td>1.0</td>
<td>1.1</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Sex</td>
<td>-12.5</td>
<td>-14.4</td>
<td>-15.0</td>
<td>-14.2</td>
<td>-14.2</td>
</tr>
<tr>
<td>Not proficient in English</td>
<td>-12.3</td>
<td>-18.4</td>
<td>-8.5</td>
<td>-0.3</td>
<td>-0.3</td>
</tr>
<tr>
<td>Disability</td>
<td>-6.5</td>
<td>-4.7</td>
<td>-15.2</td>
<td>-13.2</td>
<td>-13.2</td>
</tr>
<tr>
<td>Metro-area residence</td>
<td>14.2</td>
<td>21.0</td>
<td>14.4</td>
<td>-19.4</td>
<td>-19.4</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>-15.5</td>
<td>-20.1</td>
<td>-13.4</td>
<td>-13.7</td>
<td>-13.7</td>
</tr>
<tr>
<td>American Indian</td>
<td>-11.6</td>
<td>-9.7</td>
<td>-12.9</td>
<td>-13.7</td>
<td>-13.7</td>
</tr>
<tr>
<td>Asian</td>
<td>-14.7</td>
<td>-16.8</td>
<td>-21.3</td>
<td>-19.4</td>
<td>-19.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-13.8</td>
<td>-13.3</td>
<td>-13.4</td>
<td>-11.3</td>
<td>-11.3</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>-12.3</td>
<td>-23.3</td>
<td>-18.4</td>
<td>-23.7</td>
<td>-23.7</td>
</tr>
<tr>
<td>Farm</td>
<td>-10.7</td>
<td>-25.2</td>
<td>-22.8</td>
<td>-17.2</td>
<td>-17.2</td>
</tr>
<tr>
<td>Blue collar</td>
<td>-2.7</td>
<td>-4.5</td>
<td>-5.2</td>
<td>-8.8</td>
<td>-8.8</td>
</tr>
</tbody>
</table>

Source: Regression equations estimated by the authors based on data from the Minnesota Public Use Micro Sample (PUMS), 1990 and 2000 U.S. Censuses.

Note: A positive number indicates an attribute is correlated with an increased likelihood of a person holding a job that pays above the poverty level.

* Considered a “good” job for the purpose of this study.
† Considered a “very good” job for the purpose of this study.
Each year of additional education increases the probability of holding a good job by 3.2%, and of holding a very good job by 5.8%.

and 68% more likely to hold a job paying at least 300% of poverty level. The relative positions of American Indians and Hispanics were far worse: Whites were almost 50% more likely to have held a good job and 90% more likely to have held a job paying 300% or more of poverty level. Although Whites, American Indians, and Asians made gains in all categories in the 1990s, Blacks and Hispanics experienced declines. For example, Blacks and Hispanics were less likely to hold a good job in 2000 than in 1990 (six- and seven-percentage-point decreases, respectively). The declines for Blacks and Hispanics could reflect a worsening position for them in the labor market. More likely is that the labor market skills of new immigrants were lower than those already resident in the state or that other characteristics predisposed them to poverty.

Table 6 shows characteristics of householders that are significantly associated with their holding a good job or very good job. The characteristics are the same for both good and very good jobs, but the size of the impacts differs. The keys to holding a good job are education, work experience, proficiency in English, and good health. These characteristics of householders were more important in increasing the chance of holding a very good job (those paying at least 300% of poverty level). For example, one extra year of education or 10 years of work experience increased the chance of holding a good job by 3.2% and 1%, respectively, but increased the chance of holding a very good job by 5.8% and 10%. Other factors that mattered were occupation and place of residence. Higher paying jobs were available in the metro area and in white-collar occupations. The penalty for being a service or farm worker was especially large for very good jobs. That is, very good jobs are scarcer in these sectors.

Even when personal characteristics such as education, experience, language skills, residence, and broad occupational group were taken into account, people of color were much less likely to hold good jobs than were Whites. The differences were about 15 percentage points for good jobs and were somewhat larger for Asians and Blacks for very good jobs. As we have noted above, we are unable to say whether these differences reflect discrimination or some other factor. The negative employment effect for people of color decreased slightly during the 1990s for Hispanics and Blacks, but decreased by 30% for very good jobs for Blacks. For American Indians and Asians, the negative impact of race/ethnicity on holding a good job increased during the 1990s.

**Conclusion**

Our analysis of data from the 2000 U.S. Census and a comparison with data from the 1990 U.S. Census does not support a generally pessimistic view of the economic position of most Minnesotans. During the 1990s, the poverty rate and number of Minnesotans who were poor both declined. However, rapid population growth among Blacks and Hispanics led to increases in the number of poor in these groups. Poverty rates remained high in single female-headed households and 50% of the poor lived in such households. Despite declines in the number of poor Minnesotans, there was an increase in the number of working poor in the state, except among Whites. For all racial/ethnic groups, the working poor comprised a larger percentage of the poor in 2000 than they did in 1990. An encouraging sign was the large reduction in the impact of race on the chance of being poor, after taking into account other factors.

A greater percentage of Minnesotans held good jobs in 2000 than in 1990. Gains were particularly large for very good jobs, those paying three or more times the poverty level. Whites, American Indians, and Asians enjoyed such gains, but Black and Hispanic Minnesotans were less likely to hold a good job in 2000 than in 1990. Blacks and Hispanics benefited from a decline in the negative effect of being a person of color on the likelihood of holding a good job, taking into account other factors, whereas the position of American Indians and Asians worsened. What these results mean is that changes in the "pure" impact of race/ethnicity were outweighed by changes in other factors.

Economic success was associated with better education and health, greater English language proficiency, more work experience, and living in the Twin Cities metropolitan area. Workers in service and farm jobs were less likely to make a good living, and Minnesotans of color were less likely than White Minnesotans to hold good jobs, even taking into consideration other factors that are related to greater economic success.

These results, like those in our earlier study, point to continued improvement in the economic situation of most Minnesotans and to the importance of education and other market skills in securing a promising economic future. One bleak spot is the increase...
among the poor of the working poor. That is, more of the poor are poor not because they lack a job, but because the job that they have does not pay above the poverty line.

Dennis A. Ahlburg is senior associate dean and Industrial Relations Land Grant Professor of human resources at the University of Minnesota’s Carlson School of Management, as well as a past holder of the Fesler-Lampert Chair in Urban and Regional Affairs. He teaches human

resources management, labor economics, and quantitative methods, and is currently conducting research in the areas of disability and work, college dropout and youth labor market success, retention of employees, employment and poverty, and population growth and economic development. Yong Nam Song is associate professor of economics at Chonbuk National University in Korea and a visiting associate professor at the Carlson School of Management. His research interests include the monetary value of

job stability in the U.S. and Korean labor markets, regional distribution of good jobs in the United States and Korea, and estimating the value of transportation safety.

The research upon which this article is based was supported in part through a New Initiative grant from CURA. These grants support projects that are initiated by faculty, community organizations, government agencies, or students and that are not appropriate for consideration under another CURA program.