



# The Workforce and Economic Recovery

## Effects of Hurricane Katrina

The estimated \$100 billion in damages from Hurricane Katrina in August 2005 is just one gauge of the hurricane's economic effect. Another important consideration is its effect on labor markets. Natural disasters usually involve temporary disruptions to the local economy through direct and indirect effects on local infrastructure, business structures and other business capital, residences, and the population, especially the workforce. Decisionmakers who are guiding economic recovery in the Gulf States and those who must consider how to handle future disasters need to know how Katrina affected local employment levels generally and how it affected workers and their jobs, including, more specifically, those displaced to other regions.

Researchers from the RAND Corporation Gulf States Policy Institute used data from the federal monthly Current Population Survey (CPS) to examine the short- and longer-term influences of Hurricane Katrina on individuals and labor markets in Alabama, Florida, Louisiana, and Mississippi—the states most affected by the storm. The researchers focused on trends over time for four key outcomes for individuals ages 25–64: (1) the percentage of people in that age group who are considered to be labor force participants, i.e., they may be either employed or not employed but actively looking for work; (2) the percentage of people in that age group who are employed; (3) the percentage of labor force participants who are unemployed, also known as the unemployment rate; and (4) the percentage of the employed who are self-employed. These indicators were examined before and after the hurricane for each of the four states and compared with patterns in states not affected by Katrina and in the United States as a whole.

The CPS also provides an opportunity that has not been available in research on other natural disasters—to go beyond aggregate measures

### Abstract

Analysis of data on the effects of Hurricane Katrina on the labor market experience of individuals ages 25–64 in Alabama, Florida, Louisiana, and Mississippi shows that the aggregate detrimental labor market effects of natural disasters may be short-lived. One year after Katrina, the percentage of people working or looking for work in the Katrina-affected states had rebounded to earlier levels except in Mississippi. But these aggregate patterns mask important differences for some groups affected by the hurricane. For example, evacuees who did not return had higher labor force dropout and unemployment rates but also the highest rates of self-employment up to one year later.

of labor market indicators to examine outcomes for individuals directly affected by the hurricane. This is because the CPS added several questions to the survey conducted monthly from October 2005 to October 2006 to track individuals who were displaced to any other part of the United States even temporarily because of the hurricane. Thus, the researchers could examine the characteristics and labor market outcomes for three specific groups in the Katrina-affected states, namely, those who did not evacuate, those who evacuated temporarily and returned, and those who evacuated and never returned in the first year following the hurricane. These groups could also be compared with individuals in other states not affected by the hurricane.

### Aggregate Patterns Show Short-Lived Negative Labor Market Effects

Considering aggregate labor force patterns for all individuals ages 25–64 in the Katrina-affected

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states, the researchers found relatively short-term negative labor market consequences followed by eventual recovery. These findings are consistent with prior studies of aggregate labor market effects following hurricanes and other natural disasters such as earthquakes and tornados. For example, between 2003 and August 2005 when Katrina struck, the labor force participation rate and the employment rate were relatively stable in the United States, although they were generally lower in the South and even lower in the Katrina-affected states (with the exception of Florida). Both rates decreased in Louisiana, Alabama, and, to a lesser extent, Florida directly after the hurricane. However, by the end of 2006, labor force participation and employment had rebounded to pre-Katrina rates, or in the case of Louisiana, to higher rates. Mississippi did not fare as well, with labor force participation and employment rates remaining below pre-Katrina levels by several percentage points one year after the storm. The patterns for the unemployment rate, which had been on the decline before the hurricane, were more complex across the four affected states. Nevertheless, with the exception of Mississippi, the affected states showed a general pattern of higher rates of unemployment after the hurricane followed by a convergence toward pre-hurricane levels by 2006.

### **Displacement Is Associated with More Detrimental Labor Market Outcomes**

Although informative, these aggregate findings do not illuminate how different groups fare in the labor market, whether they remain in their communities or evacuate for short or long periods of time. In the case of Katrina, an estimated 1.1 million people evacuated from their homes. We might expect such evacuees, because of their displacement, to be more likely to experience unfavorable labor market outcomes, such as being out of the labor force altogether or unemployed. Among evacuees, we might expect those who return to do better than those who do not return, either because their economic losses may have been smaller or because they had larger support networks that allowed them to return. On the other hand, those who do not return may remain away because they are better off in their new location than they would be if they returned home.

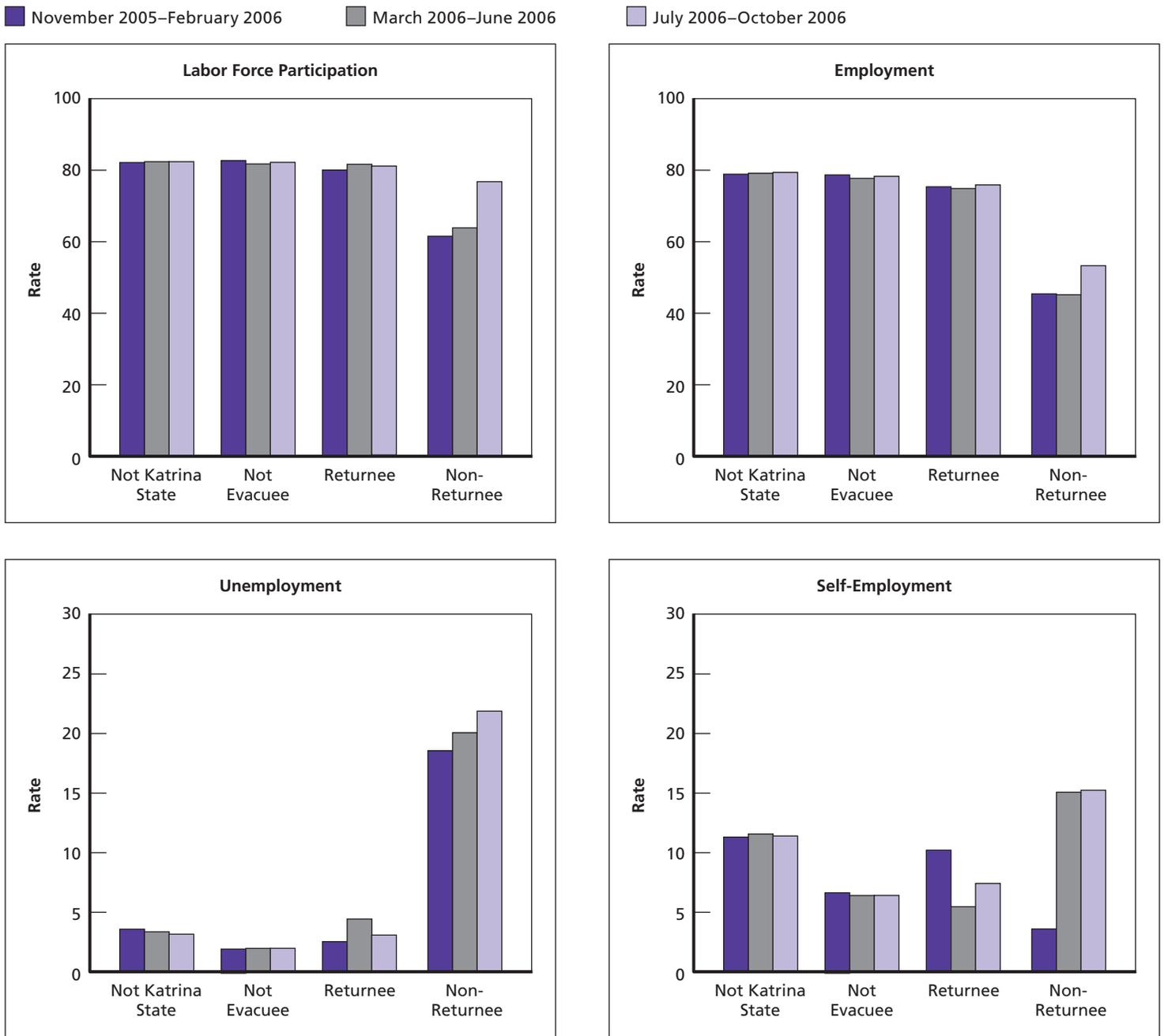
According to the CPS, 84 percent of evacuees returned to their home state within one year after Katrina, although not always to the same address. Those evacuees who did not return within a year were more likely to be female, younger, unmarried, African-American, and without a college degree, characteristics generally associated with lower labor force participation and higher unemployment rates. When examining differences in labor market outcomes between evacuees who returned; evacuees who did not return; nonevacuees from Alabama, Florida, Louisiana, and Mississippi; and individuals in other states, the researchers' analytical meth-

ods accounted for observed differences in the composition of each group, such as differences in gender, age, marital status, race, and education. The result of these analyses is a set of predicted labor market outcomes, shown in the figure, for individuals in four groups: those in states unaffected by Katrina (as a comparison group), the nonevacuees in the Katrina-affected states, and the two subgroups of evacuees—those who returned within a year and those who did not. The predictions are made for the three consecutive four-month intervals following Katrina that are covered by the CPS data. Any differences in the labor market indicators shown in the figure cannot be explained by differences across the four groups in their observed characteristics.

The resulting analyses provide several insights into the differential effects associated with displacement and return.

- **Those who evacuated fared worse than those who stayed in terms of their labor market outcomes, at least in the short term.** Tracing labor market indicators in the year after the hurricane shows that evacuees (returnees and nonreturnees combined) had lower rates of labor force participation and employment and higher rates of unemployment than those who were in the Katrina-affected states but did not evacuate. However, within a year after the hurricane, the labor market indicators for evacuees converged toward the levels experienced by their counterparts who stayed, with small differences that were not statistically significant. Yet this convergence, evident even after controlling for demographic differences in the composition of evacuees and nonevacuees, best describes the experience only of returnees, as shown in the first three panels of the figure. At the same time, there is some evidence indicating that returnees to Louisiana and Mississippi had less favorable labor market outcomes than returnees to Florida and Alabama, compared with nonevacuees.
- **Evacuees who did not return were more disadvantaged in the labor market immediately after and one year after Katrina than evacuees who returned.** Even after controlling for demographic characteristics and other factors associated with labor market outcomes, evacuees who did not return to Katrina-affected states faced substantially worse labor market outcomes than those who stayed or returned after a period of absence. For example, as seen in the third panel of the figure, the unemployment rate for nonreturnees exceeds by 15 percentage points the rate of those who stayed or returned, even nearly a year after the hurricane. There was some improvement in labor force participation and employment rates over time for nonreturnees, but they did not reach parity with their counterparts who never evacuated or returned, even after a year had passed.

**Predicted Probability of Labor Force Participation, Employment, Unemployment, and Self-Employment over Time, by Evacuee Status**



SOURCE: Authors' calculations based on multivariate logistic regression model using monthly CPS data from November 2005–October 2006.

**Self-Employment Played a Role in Economic Recovery**

The RAND analysis further suggests a role for self-employment as part of postdisaster economic recovery. A natural disaster may pull workers into self-employment by offering new opportunities for entrepreneurship, or it may be a push factor if self-employment is seen as a second-best option for workers displaced from the wage and salary

sector. Self-employment rates may also rise in the short term if small businesses are more likely to recover quickly. Although the analysis could not distinguish between these different mechanisms, at the aggregate level, self-employment rates in Louisiana and Mississippi were higher than pre-disaster levels up to one year after the storm. In addition, as seen in the fourth panel of the figure, returnees were initially more likely to be self-employed, but after one year, their

self-employment rate was only slightly above that for non-evacuees. Nonreturnees, again controlling for observed characteristics, initially had low rates of self-employment, but by four months after the storm, they had the highest rates of self-employment, which persisted up to one year after the storm. Perhaps the reliance on self-employment, especially among nonreturnees, occurred because of poor job prospects in the wage and salary sector or because of increased opportunities for new businesses following the hurricane and displacement.

### **Implications for Future Disasters**

Although the aggregate detrimental labor market effects of natural disasters may be short-lived, these results from

Hurricane Katrina demonstrate that some groups may face more severe and sustained consequences. With major events like Katrina, the implications of displacement are especially important to consider. Following the hurricane, those evacuated from their residences, even temporarily, were harder hit in terms of their labor market outcomes, and especially hard hit were evacuees who up to one year later had yet to return to the state where they lived before Katrina. This suggests a need to consider special assistance for those displaced, especially for those who do not return soon after the disaster. At the same time, these results indicate that self-employment may be one avenue for economic recovery, at least in the short run, as individuals seek to regain their economic livelihood. ■

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