IMPACT OF NATIONAL EMERGENCY GRANT ON RURAL MISSISSIPPI

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The University of Southern Mississippi

IMPACT OF NATIONAL EMERGENCY GRANT ON RURAL MISSISSIPPI

by

Shannon Leigh Campbell

A Dissertation
Submitted to the Graduate Studies Office
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

Approved:

August 2007
The University of Southern Mississippi

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ABSTRACT

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by Shannon Leigh Campbell

August 2007

National Emergency Grants account for hundreds of millions of dollars in annual federal aid to adults who become displaced due to extreme economic circumstances like manufacturing plant closures and natural disasters (United States Department of Labor Employment and Training Administration, 2006). This non-experimental research evaluated the effectiveness of National Emergency Grants in transitioning displaced workers back into the workforce using archival data collected in rural south central Mississippi. A culmination of five manufacturing plant closures occurred between late 2000 and early 2003 in Clarke County, Mississippi, and increased unemployment rates to more than double the state and national averages. The National Emergency Grant awarded for this area intensified services to displaced workers in an attempt to quickly rebound employment and recover the employment base.

National Emergency Grants awarded by the United States Department of Labor are not currently reported independently from the general population of displaced workers served by reemployment services. The lack of published National Emergency Grant results leaves a void for determining the efficacy of such grants. This research established a baseline for isolating the impact of National Emergency Grants independently from the general population of displaced workers in rural south central Mississippi in order for these specialized services to be continually refined and improved.
Three performance measures served as the focal point for this study: recovered wages, unemployment duration, and educational gain. A fourth measure, customer satisfaction, provided qualitative information about grant participants’ perceptions of services. Using these performance measures, the Clarke County National Emergency Grant failed to achieve substantial results to justify the $3.2 million investment. An explanation of each research hypothesis will offer a review of results and recommendations for improvements in administration of National Emergency Grants.
ACKNOWLEDGEMENTS

The writer would like to thank the dissertation director, Dr. Cyndi Gaudet, and the other committee members—Dr. Heather Annulis, Dr. David Butler, Dr. Jack Phillips, and Dr. Denise VonHerrmann—for their advice and guidance throughout the duration of this research project. Special thanks also go to Jones County Junior College, Mississippi Department of Employment Security, South Mississippi Planning and Development District, and the State Board for Community and Junior Colleges for their willingness to participate in this study. The writer also acknowledges the contributions of Ms. Pat Holifield and Dr. Patti Phillips. A deepest expression of gratitude goes to Neal Campbell, Hunter Campbell, and Madison Campbell.
TABLE OF CONTENTS

ABSTRACT....................................................................................................................ii

ACKNOWLEDGMENTS..............................................................................................iv

LIST OF ILLUSTRATIONS.........................................................................................vii

LIST OF TABLES........................................................................................................viii

LIST OF DEFINITIONS.................................................................................................ix

CHAPTER

I. INTRODUCTION..........................................................................................1

  Problem Statement
  Justification for Research
  Background
  Research Bias
  Structure of the Research

II. REVIEW OF RELATED LITERATURE.................................................12

  Introduction
  Human Capital Theory
  Social Capital Theory
  Unemployment Theories
  Displaced Worker Services
  State Perspectives
  Program Performance Measures

III. METHODOLOGY.................................................................................44

  Introduction
  Population and Participant Characteristics
  Variables for the Study
  Data Collection Procedures
  Validity and Reliability

v

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LIST OF ILLUSTRATIONS

Figure

1. Service area for National Emergency Grant and Twin Districts Workforce Investment Area.................................................................25
2. 2003 Earnings for full-time wage and salary for U.S. workers.................35
3. National Emergency Grant framework for data collection.........................51
4. Steps for collecting and comparing earnings replacement..........................53
5. Twin Districts Workforce Investment Area displaced worker population.......63
# LIST OF TABLES

Table

1. Annual Average Unemployment as a Percent of Total Employment for National Emergency Grant Service Area.......................................................8
2. Comparison of WIN Job Center Traditional Services to National Emergency Grant Services..................................................................................29
3. Response Variables and Data Collection Methodology.................................................................49
4. Plant Closures and Estimated Number of Displaced Workers Eligible for National Emergency Grant Services...............................................................68
5. Characteristics of National Emergency Grant Participants..............................................................69
6. Cumulative Earnings Before and After Reemployment Services for Displaced Workers .................................................................72
7. Sample of Raw Data Evaluated for Recovered Wages................................................................74
8. Population Means of Recovered Wages Before Services, After Services, and Difference Between Before-and-After Services.................................75
9. Two Independent Mean *t*-test for Recovered Wages...................................................................77
10. Sample of Raw Data Evaluated for Unemployment Duration........................................................79
11. Two-proportions Test for Proportion Employed in First Quarter After Exit..............................................80
12. Two-proportions Test for Proportion Retained Employment in Third Quarter After Exit......................................................81
13. Sample of Raw Data Evaluated for Educational Functioning Level.................................................82
14. Percentage of Clients’ Increases in Educational Functioning Level..............................................84
15. American Customer Satisfaction Index for Mississippi’s Workforce Investment Areas...............................87
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client or Participant</td>
<td>Adult from the National Emergency Grant targeted population</td>
</tr>
<tr>
<td>Customer Satisfaction Rate</td>
<td>Attitudinal survey of the level of satisfaction experienced by clients seeking services (U.S. Department of Labor Employment and Training Administration, 2001)</td>
</tr>
<tr>
<td>Displaced Worker</td>
<td>Worker who has been permanently laid off from employment and face a low probability of being recalled to previous employment (Leigh, 1995)</td>
</tr>
<tr>
<td>Educational Gain</td>
<td>Educational functioning level measuring six educational levels (EFL), where each level generally equates to approximately two grade levels (United States Department of Education Office of Vocational &amp; Adult Education, 2001)</td>
</tr>
<tr>
<td>Employment Retention</td>
<td>The percent of adults employed in the third quarter after exiting from reemployment services from the population of adults also employed in the first quarter after exit (U.S. Department of Labor Employment and Training Administration, 2000)</td>
</tr>
<tr>
<td>Gained Employment</td>
<td>The percent of adults employed in the first quarter after exiting from reemployment services (U.S. Department of Labor Employment and Training Administration, 2000)</td>
</tr>
<tr>
<td>National Emergency Grant</td>
<td>Grant awarded by the United States Department of Labor to provide employment and training assistance to workers affected by major economic dislocations such as plant closures and major disasters (National Emergency Grant, 20 C.F.R. 671, 1999)</td>
</tr>
<tr>
<td>Unemployment Duration</td>
<td>Measured in terms of gained employment and employment retention (U.S. Department of Labor Employment and Training Administration, 2000)</td>
</tr>
</tbody>
</table>
Wages Recovered or Earnings Replacement

The difference between pre-program and post-hire earnings calculated as a percentage as follows:

\[
\text{Earnings replacement Rate} = \left( \frac{\text{pre-program earnings}}{\text{post-hire earnings}} \right) \times 100
\]

(Department of Labor, Employment & Training Administration, 2004)

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CHAPTER I
INTRODUCTION

Between the years 2000 and 2005, Mississippi's workforce was negatively impacted by mass job losses in the manufacturing sector. Major shifts in the United States economy away from manufacturing in favor of the service sector resulted in many Mississippi workers being displaced from employment. The United States (U.S.) Department of Labor is the primary federal agency charged with the responsibility of providing reemployment assistance to states and individuals when mass layoffs occur. This assistance encourages states to support displaced workers with both social and financial services, and the assistance may be intensified when mass layoffs occur. One such example of intensified U.S. Department of Labor services is offered in the form of a program entitled National Emergency Grants. This research will evaluate the impact of a single National Emergency Grant on Clarke County in rural Mississippi to determine the efficacy of the program.

Generally, the U. S. Department of Labor uses performance measures to report the results of its services offered to adults involuntarily displaced from employment (United States Department of Labor Employment & Training Administration, 2004a). However, the U.S. Department of Labor does not segregate the results of National Emergency Grants from traditional services. Interestingly, the lack of segregated program results prevents these grants from being effectively analyzed for their contributions to displaced workers. This quantitative study using historical data will establish a baseline for measuring National Emergency Grants separately from traditional services to determine if these intensified services significantly impact displaced workers.
Problem Statement

National Emergency Grants totaled over $614 million in federal funding between July 1, 2000 and June 30, 2003 (United States General Accounting Office, 2003). Because nearly 7 million U.S. workers lost their jobs between 2000 and 2002, the U.S. Department of Labor chose to fund 155 National Emergency Grant requests from states and local areas to provide re-employment and training assistance (United States General Accounting Office, 2003). Considering that displaced workers already have available to them the traditional employment service benefits and unemployment insurance benefits, National Emergency Grants, like the one operated in Clarke County, Mississippi, offer additional benefits in helping adults rebound. Even further, National Emergency Grants target services to help workers rebound into jobs that pay equal or higher wages than their previous work more quickly than traditional methods. Research is needed to determine if these grants produce results exceeding the results of existing reemployment services.

Among the comprehensive list of performance measures specific to this research are recovered wages, duration of unemployment, educational gain, and customer satisfaction. The scope of this research is consistent with the precepts that the federal government is placing more emphasis on accountability for public sector dollars invested in grants and services. A sense of intensified public scrutiny exists among federal agencies regarding the efficient use of public dollars, and stewards of federal and state grants are increasingly evaluating training and development programs for results of their efforts (Phillips, 1997). This empirical study focuses on a specific scenario that
demonstrates the results of public dollars invested to contribute to the knowledge base of public sector accountability models.

The quantitative characteristics are recovered wages, length of time unemployed, and educational gain. Social scientists typically use hypothesis statements to construct independent and dependent relationships among variables (Creswell, 2003). For this study the null hypothesis is stated as follows: National Emergency Grant services made no significant difference in rural Mississippi as compared to traditional reemployment services offered to displaced workers. Three research hypotheses offer alternative predictions:

H₁: There is a significant difference between Clarke County National Emergency Grant services and WIN (Workforce Investment Network) Center services on the recovered wage.

H₂: There is a significant difference between Clarke County National Emergency Grant services and WIN Center services in decreasing duration of unemployment.

H₃: There is a significant difference between Clarke County National Emergency Grant services and Jones County Junior College Adult Education services in increasing the educational gain.

A fourth qualitative characteristic, customer satisfaction, will be evaluated in relation to former customer satisfaction surveys conducted for the geographic area of the target audience. This qualitative evaluation will offer more a more in-depth glance at adults’ perceptions of services offered by the National Emergency Grant.

In Mississippi, multiple agencies exist to assist displaced workers who suffer job loss. Among the agencies are federally funded Workforce Investment Network Centers,
commonly referred to as WIN Job Centers. For the purpose of this study, two WIN Job Centers, or WIN Centers, will provide a homogenous comparative population of displaced workers. These two WIN Centers are located in Laurel, Mississippi and Meridian, Mississippi. Each contributed data for this research through their oversight organization, Mississippi Department of Employment Security. The two WIN Centers are geographically located in south central Mississippi in the same area as the affected National Emergency Grant area. They provide reemployment services to displaced workers as well as a homogeneous comparative population. For the period beginning in November 2002 and ending in June 2005, the grant offered intensified reemployment services to workers laid off from five manufacturing plants: Burlington Industries, Wells-Lamont, Nazareth-Century, A&B Components, and Dalex.

Many previous studies measured attitudes, wage data, sociological factors, and a host of characteristics revolving around involuntary unemployment. However, recent contributions lack an evaluation of the effectiveness of National Emergency Grant services that reach beyond standard services by the U. S. Department of Labor. The results of this study will offer greater insights for administrators of future National Emergency Grants operated in rural geographic areas.

From a macroeconomic perspective, the efficiency and effectiveness of government policies should closely match the needs of the people they are intended to serve. To this extent, governments are measured by public interests to ensure greater accountability of the public sector (Huther & Shah, 1998). The U.S. Congress declared in 1992 that services provided to adults through the U.S. Department of Labor were to be considered investments in the human capital infrastructure of the nation and specifically

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not as an expense (Phillips & Phillips, 2002). Congress also added that this human
capital infrastructure should be measured by the increased economic independence of
persons served and their reduced reliance on public assistance (Phillips & Phillips, 2002).
When taxpayer funds are used for a public expenditure, the taxpayers and policymakers
deserve to know if state and federal programs achieve their intended outcomes.
However, National Emergency Grants are blended into larger reporting systems and are
not independently evaluated for effectiveness. This study will isolate a National
Emergency Grant to determine the efficacy of the program.

Not only are macroeconomic policies evaluated for net impact, but
microeconomic analyses also help align costs and benefits of taxpayer investments. A
study conducted by the Washington State Workforce Training and Education
Coordinating Board calculated the extent to which services provided to individuals
attributed to desired outcomes for the individuals (Hollenbeck & Huang, 2003). The
results of this study provide a step beyond the net impact for individuals to aggregate the
benefits of all participants and compare the program to the results. The report provides
one such model of capturing the return on investment for public sector expenditures
(Hollenbeck & Huang, 2003), but it lacked a contribution to the body of knowledge
needed to effectively measure National Emergency Grants.

A recent National Emergency Grant administered in south central Mississippi
offers rich information concerning public sector expenditures. This grant was conducted
through a sub-contract from the Mississippi Department of Employment Security
(MDES) to Jones County Junior College (JCJC). Data for this study are available
through electronic databases maintained by MDES and JCJC. Permission has been
granted by both agencies to conduct this research. This study builds upon a fundamental concept that services offered to displaced workers should help place workers back into the workforce at wages equal to or higher than their previous wages as quickly as possible (Parke, 1999).

Justification for Research

With the passage of the Government Performance and Results Act of 1993, federal agencies are increasingly being held accountable for expenditures of public sector programs and initiatives. Many improvements can be made to the entire process of applying for, administering, and evaluating National Emergency Grants. The current avenue for applying for such a grant is a tedious, often a politically motivated process that lacks timely responses critical for displaced workers. Timing is critical to get workers quickly reemployed; additionally, improving the avenues through which wages can be recovered is of great importance. By evaluating a National Emergency Grant in rural Mississippi, this researcher seeks to determine if the results highlight services that had the most significant impact beyond traditional unemployment and re-employment services. Results from this research can be used to better describe how National Emergency Grants impact adults to regain employment and recover their wages.

Lessons learned from this study will offer greater insight for maximizing the types of reemployment services most likely to optimize performance results. The U.S. General Accounting Office (2004) suggests a more systematic response from the U.S. Department of Labor in reducing the response time from its 2003 average of 92 days to its goal of less than 30 days. For displaced workers who suffer uncertain futures, this timing is critical as they cannot afford federal and state governments to delay responses to their needs.
Traditional measures of reporting the effectiveness of training and services focus on the number of people served, the number of services offered, or the number of events held. Such accountability methods fail to reflect the impact of services. In the case of Clarke County, the researcher desires to capture data more reflective of the individual impacted by services by using archival data to contribute to the body of knowledge for public sector accountability for National Emergency Grants.

Background

While the nation as a whole experienced significant manufacturing job loss in 2002, the state of Mississippi was more negatively impacted than many other states (U.S. Department of Labor Bureau of Labor Statistics, 2003). Mississippi’s 2002 manufacturing layoffs reached an eight-year high of 6.8% with an estimated 88,200 adults involuntarily displaced (U.S. Department of Labor Bureau of Labor Statistics, 2003). Beginning in late 2000, a mass-layoff scenario began to unfold in a region centered in and near Clarke County located in rural south central Mississippi. The scenario continued for approximately three years (Dupre, Campbell, & Sumner, 2002). Table 1 provides county unemployment rates reflecting the abnormally high rate for Clarke County compared to Mississippi averages. In 2002, the annual average unemployment rate for Clarke County was reported at 15.7% of total employment, and peaked at a record single-month high of 19.3% (Mississippi Department of Employment Security [MDES], n.d.).

The mass layoffs experienced in the area surrounding Clarke County, Mississippi provide historical data for this non-experimental research as it is rich with data offering greater insights into the ability of a community and the federal government to intensify
services offered through a short-duration demonstration grant. While many learning opportunities exist from the Clarke County study, the objective of this particular research is to evaluate the extent of impact for public sector funds for adults overcoming job loss. Prior to January 2000, Clarke County enjoyed a rural robust economy fueled by a strong manufacturing base in textiles and automobile engine electrical equipment (Dupre, Campbell, & Sumner, 2002).

Table 1

<table>
<thead>
<tr>
<th>County</th>
<th>2004</th>
<th>2003</th>
<th>2002</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarke</td>
<td>7.2%</td>
<td>9.4%</td>
<td>15.7%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Jasper</td>
<td>7.2</td>
<td>6.5</td>
<td>7.4</td>
<td>4.8</td>
</tr>
<tr>
<td>Jones</td>
<td>4.7</td>
<td>4.0</td>
<td>4.2</td>
<td>3.3</td>
</tr>
<tr>
<td>Wayne</td>
<td>7.3</td>
<td>9.5</td>
<td>11.0</td>
<td>7.5</td>
</tr>
<tr>
<td>Mississippi</td>
<td>6.2</td>
<td>6.3</td>
<td>6.8</td>
<td>5.5</td>
</tr>
<tr>
<td>United States</td>
<td>5.5</td>
<td>6.0</td>
<td>5.8</td>
<td>4.7</td>
</tr>
</tbody>
</table>


Of the 5,110 jobs within Clarke County, over 50 percent were classified as manufacturing jobs. In late 2000, the manufacturing jobs began quickly decreasing. A & B Component Parts became the first of five manufacturers to close within a three-year time frame, resulting in the loss of nearly 80 percent of the county’s manufacturing jobs (Dupre,
Campbell, & Sumner, 2002). By law, employers must notify employees in advance when a mass layoff occurs (Worker Adjustment and Retraining Notification Act, 1989). The advance notification helps workers prepare for layoff and allows reemployment service agencies to assist workers in finding new employment.

In the midst of the layoffs, the State of Mississippi opened a temporary job center in the county seat of Quitman. In May 2002, the job center opened and was scheduled to remain open for approximately six months to allow displaced workers easier access to traditional programs offered by Unemployment Insurance, the Employment Service, the Cooperative Extension Service, and Workforce Development. The center was named the WIN Transition Center to reflect its similarity to other WIN Job Centers throughout the state (Dupre, Campbell, & Sumner, 2002).

On August 20, 2002, the U.S. Department of Labor approved a $3.2 million National Emergency Grant to provide re-employment services to displaced workers from the first four manufacturing plants. Permission was subsequently granted to include the fifth plant after its closure. The MDES, as administrator of this grant, then awarded an exclusive subcontract for operations of the WIN Transition Center to JCJC. The college was given full authority to administer the intent of the grant.

In January 2003, JCJC took over as lead partner in operating the WIN Transition Center and began a comprehensive re-employment, training, education, and counseling program for displaced workers from the five manufacturing plants. Ten full-time employees were hired with varying responsibilities to focus on helping the displaced workers rebound. This staff was also charged with the responsibility of regularly communicating the progress of the grant and services to key stakeholders, local elected
officials, and county planning groups (Dupre, Campbell, & Sumner, 2002). Additional locations of services were also expanded to include a mobile learning lab and additional training facilities.

Since several months had passed between the plant closures and the full implementation of services at the WIN Transition center, many addresses and phone numbers of the targeted audience had changed. Because of privacy concerns, some companies chose not to share names of employees with the college; this issue became the initial challenge for the WIN Transition Center staff (Dupre, Campbell, Sumner, 2002). The college’s WIN Transition Center staff alternatively chose to advertise services, collect names from former workers, and speak at various public events to encourage displaced workers to utilize the services.

Research Bias

One must recognize that the researcher served as the Director of the National Emergency Grant for Clarke County while employed with Jones County Junior College. The bias of the study will be carefully managed by using archival data and non-affiliated reviewers of data collection methods. Both Jones County Junior College and The University of Southern Mississippi will be represented in accomplishing the research objectives. Archival data for educational gain will be provided by Jones County Junior College. MDES will contribute recovered wage, duration of unemployment, and customer satisfaction data.

Structure of Research

This research project will review previous studies and will seek in Chapter 2 to add to the public sector accountability body of knowledge. The reading audience is
targeted at practitioners offering Workforce Investment Act services, policymakers
defining employment and training services, and adults impacted by job loss. To measure
the impact of services, the research will compare performance results of the National
Emergency Grant clients to the Twin Districts Workforce Investment Area population of
displaced workers served at the Laurel and Meridian WIN Job Centers.

The premise for this study seeks to build upon previous contributions of public
sector accountability research. Chapter 3 will describe the statistical methodology for
collecting archival data regarding wage recovery, unemployment duration, educational
gain, and customer satisfaction pertaining to the National Emergency Grant in rural
Mississippi. Chapter 4 will offer conclusions and recommendations based upon the
results of the data gathered and analyzed. Finally, Chapter 5 will offer recommendations
for future research relating to services offered to displaced workers.
CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

National Emergency Grants are influenced by macroeconomic and microeconomic authorities. To determine if these grants make a significant impact beyond traditional services, a review of public sector funding will establish a framework for the present research. Two universally accepted broad principles define the scope of government and its policies impacting economic growth (Schaefer, 2006). The first principle supports the argument that some level of government is necessary to ensure the basic structures of society function smoothly; the second principle somewhat opposes this principle, arguing that excessive government spending removes resources from the private sector and impedes economic growth (Schaefer, 2006). Between these two principles lie robust government philosophies of how much spending leads to the sum of good government (Schaefer, 2006).

A 1998 study suggested that increases in the size of government expenditures as a share of Gross Domestic Product (GDP) have slowed economic growth (Gwartney, Holcombe, & Lawson, 1998). A decrease in ten percent of government expenditures as a share of GDP will produce an increase in the GDP growth rate of about one percent (Gwartney, Holcombe, & Lawson, 1998). The two conflicting roles of government mentioned above shape the macroeconomic policies of the U.S. and lead to the question, “What is the optimal level of government” (Schaefer, 2006)? This question dates back to the birth of Adam Smith’s 1776 publication, The Wealth of Nations, which discussed the proper role of government in facilitating wealth (Schaefer, 2006). During the 1700s,
Smith, the father of one school of thought regarding modern economics, argued that labor—not land or money—was both the source and the final measure of value for a society. Smith also argued that governments should approach economic policy from a hands-off perspective which laid down the ideas of economic liberalism (Cannan, 1904).

Nation’s governments are faced with choices regarding how much taxpayers should collectively allocate to optimize government expenditures such as health, education, and other core services. Many developments in economic theory and practice, from human capital theory to systems of extended national accounts, have attempted to place value on optimizing publicly provided services (Quiggin, 2001). These services provide individuals and societies opportunities to move beyond the basic survival needs of food, clothing, and shelter (Quiggin, 2001). Studies have found that investment in human capital is consistently and significantly related to subsequent economic growth (Quiggin, 2001).

According to Quiggin (2001), the adequacy of public sector services meets the critical role of individual well-being more so than market-sector influences. An economic framework that measures the value of publicly provided services ranges from benchmarking measures, stated preference methods such as voting, and market outcome inferences such as the study of wage premiums (Quiggin, 2001). This framework forms the basis for developing microeconomic policies that seek to optimize public sector accountability in human capital development.

Human Capital Theory

The concept of “human capital” has been very influential in the economic theory of Western education, setting the framework of government policies since the early
1960's (Fitzsimons, 1999). This theory is foundationally grounded in neo-classical economic theory whereby reason and analysis more so than imagination and emotions form modern-day western economic policy. The Classical Age evolved during the late 1600s and early 1700s in European countries and was coined the term Neo-classicism by the English in the late 1600s (Nostrand, 1970). The Classic Age followed the Age of Romanticism and helped establish rules of governance for European societies (Nostrand, 1970).

During the late 1700s a leading economist, David Ricardo, helped establish the theories of classical economics, stressing economic freedom through free trade and free competition (Ricardo, 1821). Ricardo's book, *Principles of Political Economy and Taxation*, defined the conditions that enable a nation's economy to reach its greatest potential. These principles serve as the basis for globalization and free trade among nations. It was the challenging works of John Maynard Keynes in 1936 that led to significant shifts in the theories of government's role in economic affairs (Rusfeld, 1970).

Keynes's scholarly work of *General Theory of Employment, Interest, and Money* (as cited in Rusfeld, 1970) argued convincingly that governments should take special measures to counter economic depressions. His idea defines the level of economic activity as being dependent upon spending of consumers, businesses, and governments. Keynes argued that if business expectations are poor, investment spending will be cut, causing a series of reductions in total spending. The "snowball" effect then causes the economy to move into a depression resulting in loss of jobs. Less spending by consumers expounds the level of economic depression. Keynes urged increased government
spending and “easy” money in the form of low-interest loans to stimulate the economy. The stimulated economy then would invest more and spend more resulting in more jobs.

In the last 20 years, economists have pursued the answer to the general question of what extent of economic growth is driven by the acquisition of human capital (Counting Heads, 2004). Despite building and rebuilding elaborate growth models, they have failed to prove that better education and training significantly raises a country’s long-term growth (Counting Heads, 2004). Recently, however, a Canadian team made a breakthrough finding whereby the measure of actual skills rather than educational qualifications becomes a strong predictor of economic growth. This Canadian team of economists at the University of Ottawa, working with Statistics Canada, found a clever short-cut allowing them to gauge human capital (Counting Heads, 2004).

The Canadian team used the International Adult Literacy Survey, which tested sixteen 65-year-olds in the mid-1990s, to estimate the skills of people in 14 countries entering the workforce at different times between 1960 and 1995 (Counting Heads, 2004). The team identified a clear and significant association between investments in human capital in each period and a country’s subsequent growth and labor productivity. Specifically, a rise of 1% in literacy scores relative to the international average is associated with an eventual 2.5 percent relative rise in labor productivity and a 1.5 percent rise in GDP per head (Counting Heads, 2004). This newly published information will provide a basis for assessing actual skills in addition to educational qualifications for displaced workers.

The W.E. Upjohn Institute, located in Kalamazoo, Michigan, conducted a macroeconomic study defining human capital in the form of earnings capacity (Haveman,
Bershadker, & Schwabish, 2003). Earnings capacity is equal to the annual value of the potential output of the nation’s working-age population. This comprehensive measure of the value of human capital evaluates the potential of full-time, full-year work. According to the W.E. Upjohn Institute, the U.S. actual earnings of working-age people can be compared to potential value to measure the extent to which human capital is utilized. The analysis of human capital reveals detailed patterns for policy-relevant developments (Haveman, Berkshadker, & Schwabish, 2003). James J. Heckman (1999) reports that at current levels of human capital investment, American society under invests in the very young and over invests in mature adults with low skills.

Social Capital Theory

At the heart of most social service agencies lies the conventional wisdom regarding social capital—it’s not what you know, it’s who you know (Woolcock & Narayan, 2000). The basic premise of social capital is that a person’s family, friends, and associates constitute an important asset that enable them to network and act collectively (Woolcock & Narayan, 2000). This concept of social capital encourages citizens to network with others who can support them socially toward their own individual performance goals.

Pierre Bourdieu (as cited in Richardson, 1986) defines social capital as the aggregate of resources linked to a durable network of relationships of mutual acquaintance. He adds that members of a group provide one another with backing of the collectively owned capital within the group (Richardson, 1986). It is a personal asset that provides tangible advantages to those individuals, families or groups that are better connected such as royalty (Schugurensky, 2006). A 2002 study conducted by Michael B.
Aguilera illustrated that social capital programs can be applied across a broad spectrum of race, ethnicity, and gender groups. Programs designed to bring valuable labor market information to individuals and communities with limited access information are likely to be effective in reducing inequality in labor market participation, especially if combined with programs for developing human capital (Aguilera, 2002).

Unemployment Theories

Much research has attempted to define a natural rate of unemployment at which inflation predictably accelerates. In concept, a defined measure of five percent establishes a threshold unemployment rate below which the inflation rate begins to rise (Pollin, 1999). However, the reality of natural rate of unemployment is not a specific value. It is an expression of the idea that, in a capitalist economy, sustaining full employment at decent wages depends on inherent conflicts between workers and capitalists (Pollin, 1999). Achieving 100% employment is generally recognized as unrealistic and contradictory to early studies in employment policy.

Achieving full potential output of the nation’s working population helps reduce unemployment levels to a natural rate of unemployment (Friedman, 1968). Milton Friedman and others argue that there exists a so-called theory of the natural rate of unemployment (Friedman, 1968; Pollin, 1999). They further discourage governments from actively intervening in the economy to promote 100% employment since it would be a futile exercise, whose end would result in higher inflation (Pollin, 1999). Pollin goes on to add that while there is a relationship between unemployment and inflation, extensive econometric research has led to wide variations in what is considered to be the natural rate of unemployment (Pollin, 1999). The natural rate of unemployment further
adds to the question of how much government spending leads to the sum of good governance.

The reality of modern life indicates that both voluntary and involuntary unemployment increasingly marks the careers of most people (Hartenstein & Waugh, 1994). Voluntary separation occurs when a worker chooses to leave employment by his or her own accord. Involuntary unemployment occurs when a worker loses his or her job due to externalities beyond his or her control, such as mass layoffs or natural disasters. This research investigates involuntary unemployment due to mass layoffs in the rural manufacturing sector from the perspective of publicly funded services intended to assist workers in transitioning either out of the workforce or into other occupations.

Displaced Worker Services

International Perspectives

A 2003 Wall Street Journal article stated that the United States was, at the time, experiencing remarkable growth in productivity while at the same time experiencing signs of slow job growth (Ip & Hilsenrath, 2003). Productivity increases were attributed internationally to technological advancements and automation. Slow job growth was described by Thomas Friedman as a part of America's preparing itself for and adjusting to the new globalization system (Friedman, 2000). The U.S. Department of Labor reported in August 2003 the national unemployment rate at a nine-year high of 6.2 percent (U.S. Department of Labor Employment and Training Administration, 2004c). The manufacturing sector of the U.S. economy suffered significantly from June 2000 to September 2003 (Bartik, 2003). Manufacturing employment declined 16 percent while manufacturing output, based on the manufacturing industry production index of the
Board of Governors of the Federal Reserve System, declined proportionally much less at approximately 6 percent (Bartick, 2003).

The governments of most industrialized nations, including that of the U.S., have committed themselves to help defray the adjustment costs borne by displaced workers by providing an arsenal of both active and passive labor market programs (Leigh, 1995). Active labor market programs are intended to shorten the duration of post-displacement unemployment spells and to restore long-run earnings potential. By contrast, passive labor market measures provide income support to prevent unemployed workers and their families from slipping into poverty often referred to as a social safety net. During the 1980s, many industrialized nations began to shift their mixes of public expenditures toward active and away from passive labor market programs (Leigh, 1995). A National Emergency Grant is considered to be an active labor market program primarily focused on education, reemployment, and counseling services.

The U.S. is one of several developed countries that offer displaced worker assistance in both active and passive forms of services. According to Leigh (1995), industrialized countries like Australia, Canada, Germany, Japan, Sweden, and the United Kingdom are learning ways of dealing with long-term employment by linking unemployment insurance benefits to participation in labor market programs. Additionally, Peter J. Kuhn (2002) evaluated ten industrialized countries and revealed that there are two broad styles of national policy relevant to displaced workers. The first style is primarily based upon “after the fact” of displacement. Countries with this approach include the U.S., Canada, the United Kingdom, Australia, and Denmark. A second style has been adopted as a “preventive” approach to reduce the likelihood of a
plant closing and includes services such as job training and retraining. This second style consists of those countries that participate in preventive measures include the Netherlands, Japan, France, Germany, and Belgium (Kuhn, 2002). Kuhn also studied demographic characteristics including age, tenure, gender, and skill level to determine their effects on displaced workers.

Regarding age, a universal pattern in all countries examined in Kuhn’s study is that older workers were less likely to be displaced than younger workers, but when layoffs occurred they fared worse than younger workers after displacement (2002). The effects of tenure were more complex, depending on employment protection legislation among the countries studied. Kuhn also found that the greater the amount of legal protection for job displacement, the less length of jobless durations. In all countries studied by Kuhn, men were more likely to be displaced than women. This reflects a historical tendency for men to work in industries sensitive to cycles, such as manufacturing and construction. Unskilled workers were found to be more likely to be displaced than skilled workers. In all countries except Germany, unskilled workers also were found to experience longer post-displacement joblessness than skilled workers (Kuhn, 2002). Kuhn’s insightful work provides comparable insight into international perspectives of involuntary unemployment.

Developed countries are not the only countries suffering from mass manufacturing job loss in recent years. China lost 16 million manufacturing jobs between 1995 and 2002 as compared to the U.S., which lost 2 million jobs (Carson, 2003). Of the 20 largest international economies studied, China proportionally lost a greater percentage of manufacturing jobs than any other country. The most revealing
argument for this decline in manufacturing jobs internationally is the replacement of labor with automation and more efficient equipment (Carson, 2003). Of the top twenty countries studied by Carson, only five countries experienced an increase in manufacturing jobs during the timeframe between 1995 and 2002. These countries include Mexico, Spain, Canada, Taiwan, and the Philippines. In an October 2003 article, Caroline Baum of the Bloomberg News added that as hard as expendability is on the workers themselves, increased productivity is the way progress is made. The article added that the alternative is not so appealing (Baum, 2003). For these countries, the struggle to offer the most effective and efficient types of public sector services will impact its economies' abilities to recover quickly when mass layoffs occur.

In The World is Flat, published in 2005 by Pulitzer Prize-winner Thomas L. Friedman, the world economy as becoming “flatter” with global competition (Friedman, 2005). Friedman suggests that while many government safety nets will vanish in the “flat” world, some social systems need to be added to better protect workers who lose their jobs particularly due to global trade. These added systems in the U.S. could do a better job than the traditional unemployment insurance system in helping workers address loss of earnings even after they take a new job (Friedman, 2005). These added safety nets that focus on investing in human capital will be taken into consideration in this study as it relates to financial services offered to the target population.

National Perspectives

A brief history of federal programs provides a foundation for how displaced workers are supported through various assistance programs. The federal Workforce Investment Act (WIA) of 1998, still in effect in 2006, replaced previous federal
legislation of the Job Training Partnership Act of 1982 that focused much attention on the economically disadvantaged (Jacobson, LaLonde, & Sullivan 2005). The WIA Act also amended the Wagner-Peyser Act of 1933 by giving more decision-making authority to states and local Workforce Investment Boards and away from heavy-handed federal authority.

The U.S. Department of Labor issues block grants to states in accordance to the guidelines of the Workforce Investment Act of 1998. Even beyond the block grants, the U.S. Department of Labor awarded over $614 million in National Emergency Grants between July 1, 2000 and June 30, 2003 to 46 states and the District of Columbia, Guam, and the Federated States of Micronesia (U.S. General Accounting Office, 2003). This source of funding is intended to inject training programs and job search assistance for displaced workers. As major shifts in economic conditions occur, the availability of specialized grants ideally helps government officials ease the direct negative impact felt by involuntary unemployment.

Federal government expenditures for all employment and training services totaled about $30 billion in 2001 and 2002, serving an estimated 30 million individuals (U.S. General Accounting Office, 2003). During this timeframe, nine federal agencies administered 44 programs with a majority of programs reporting that 75 percent or more of their appropriations were dedicated for employment and training activities (U.S. General Accounting Office, 2003). Federal agencies are required to report the outcome performance measures of expenditures. Typical measures of human capital performance for federally funded programs are generally categorized as one of the following forms (U.S. General Accounting Office, 2003):
1. entered employment
2. retained employment
3. educational/credential attainment
4. wage gain/change
5. other "positive" outcomes
6. customer satisfaction

Among the federal agencies charged with the responsibility of investing in human capital performance, the U.S. Department of Labor is generally considered the primary source of active programs targeted to assist unemployed adults. The WIA Act of 1998 offers assistance to displaced workers with the following objective:

To provide workforce investment activities that increase the employment, retention, and earnings of participants, and increase occupational skill attainment by the participants. This aims to reemploy displaced workers, improve the quality of the workforce and enhance the productivity of the nation’s economy. This program is designed to increase employment, as measured by entry into unsubsidized employment six months after entry into employment, and extent of recovery of prior wage levels. For cross-cutting goals, the program intends to enhance customer satisfaction for participants and for employers. The employment goals will be measured using Unemployment Insurance wage records and customer satisfaction goals measured by sampling.

The U.S. Department of Labor seeks both active and passive programs focused on achieving full employment. Active labor market programs include job search assistance
and retraining in job skills to enable workers to qualify for new jobs (Leigh, 1995). In contrast, passive labor market programs provide financial support to displaced and unemployed workers to prevent them from slipping into poverty (Leigh, 1995). These passive programs or social safety nets consist of payments to individuals in the form of unemployment insurance, food stamps, Medicaid, and possibly Medicare. Friedman argues that America needs to rethink what constitutes a safety net to include support for Internet access if workers are to remain competitive (Friedman, 2000). The U.S., along with most industrialized nations, shares similar commitments to assisting workers who lose their jobs (Leigh, 1995). In the mid-1980s, member nations of the Organization for Economic Cooperation and Development (OECD) redirected public policy toward more active labor market programs away from passive programs (Leigh, 1995).

Nationwide indications anticipate more job loss in manufacturing as less-skilled jobs are outsourced to less developed nations like China and India (Friedman, 2005). The impact of free trade was initially felt mainly by the manufacturing sector, but is beginning to emerge in the services industry as well (Kletzer, 2005). The highly visible nature of job loss weakens the popular support of economists' views of globalization as beneficial to an economy as a whole (Kletzer, 2005). As economies shift, federal agencies are challenged with implementing policies that quickly realign the workforce into new sectors. States must serve the ground-level function of customizing and tailoring services to meet the needs of individuals.

National Emergency Grants. National Emergency Grants apply when a mass layoff occurs within a concentrated geographic region in a short amount of time, causing the unemployment rate for that region to significantly rise above state and national
averages (U.S. Department of Labor National Emergency Grant, n.d.). The U.S. Department of Labor may choose to offer special services to further intensify services for a finite amount of time. The criteria are flexible in identifying the service agency that is allowed to administer the grant. Some communities choose to operate the grant through their respective employment service agency. Others choose to operate the grant through a partnering agency, such as a local community college.

*Clarke County National Emergency Grant.* In the case of Clarke County, the U.S. Department of Labor chose to intensify efforts through just such a grant awarded to the MDES and sub-contracted to JCJC.

![Map of service area for National Emergency Grant and Twin Districts Workforce Area](image)

*Figure 1.* Service area for National Emergency Grant and Twin Districts Workforce Area.

*Note:* Mississippi map provided by Mississippi State University, Research and Curriculum Unit.
As visually represented in Figure 1, Clarke County is centrally located in the Twin Districts Workforce Investment Area. The college is central to the Twin Districts Workforce Investment Area from which the comparison group will be derived. The geographic area includes workers employed in Clarke, Jasper, and Wayne counties. However, commuters lived in surrounding counties, including Jones and Lauderdale counties.

Through the Twin Districts Workforce Investment Area policies, displaced workers are served with a combination of active and passive employment services. A subset within the displaced worker population includes trade-affected workers. The primary difference in services offered to trade-affected workers is the extension of unemployment insurance benefits—that is, additional payments of unemployment compensation. This research compares the difference between trade-affected workers and National Emergency Grant participants allows for a more homogeneous evaluation.

State Perspectives

The broad responsibilities for each state’s WIA funds lie in the office of the governor, who oversees a state advisory board (Mississippi Development Authority Workforce Investment Act, n.d.). This board assists in developing an overall state plan to administer the WIA funds according to the general federal guidelines, and the plan can be customized to reflect the employment trends for the state. Within the scope of the state plan, adults and displaced workers are offered a combination of active and passive programs intended to help them rebound quickly into new employment. Participants may qualify for training assistance if their skills and knowledge base is limited and prevents them from finding a new job within a reasonable amount of time.
Among the services offered by the state plan, WIA participants may qualify for training and education assistance. These adults choose from a list of eligible training providers consisting of both publicly and privately owned institutions (Mississippi Development Authority, WIA). Examples of publicly funded institutions include the community and junior colleges. Examples of privately funded training providers include truck driving schools, cosmetology schools, and private colleges. All training providers must report the results of their training services in accordance with WIA performance measures.

The Workforce Investment Network of Mississippi is a network of social service, educational, and governmental agencies that implement the services defined by the state advisory board. This network serves as a clearinghouse of social support and education services to aid displaced workers, unemployed adults, underemployed adults, and at-risk youth in upgrading their skills and overcoming disadvantages that prevent them from being success, productive citizens. For displaced workers a sense of urgency is felt by state agencies to help get adults back into the workforce as quickly as possible. Among the partners of the Workforce Investment Network (WIN) of Mississippi are as follows:

1. Mississippi Development Authority,
2. Mississippi Department of Employment Security,
3. Mississippi State Board for Community and Junior Colleges,
4. Mississippi Department of Education,
5. Mississippi Department of Rehabilitation Services, and
The most important goal of the partnership among these agencies is to improve services to customers by offering a seamless approach to a full array of options (Social Policy Research Associates, 2004).

**Workforce Investment Network Operations**

The Workforce Investment Act created central locations called one-stop resource centers for job seekers and employers (Woodbury, 2000). These one-stop centers integrated many services of the partnering agencies identified in the Workforce Investment Act. For Mississippi, one-stop resource centers are called WIN Job Centers where WIN is an acronym for *Workforce Investment Network*. Aligned with the intent of the Workforce Investment Act, the focus of the National Emergency Grant is to offer its services geographically convenient to the displaced workers. The grant allowed for a temporary transition center to be opened in downtown Quitman, Mississippi. The center remained open throughout the duration of the grant. This location was among the intended benefits of the boosted “convenience” services. Additionally, the grant funded the renovation of a mobile learning lab capable of serving Wayne and Jasper counties.

**WIN Job Center Clients**

Mississippi WIN Job Centers are charged with the responsibility of nurturing the economy through the maximization of the state’s human capital investment. This responsibility provides assistance to three categories of clients or customers: adults, older youth, and displaced workers. Table 2 offers a comparison between Twin Districts traditional displaced worker services and those offered through the intensified services of the National Emergency Grant.
The additional services specifically targeted individuals that might have the greatest difficulty transitioning. Financial incentives were also added to encourage participation in grant services and activities of the grant in the form of travel reimbursement for training and training certification reimbursements for professional credentialing. Other financial incentives offered supplies for displaced workers needed to attend training.

Table 2.

**Comparison of Twin Districts Traditional Services to National Emergency Grant Services**

<table>
<thead>
<tr>
<th>Traditional services</th>
<th>Additional services offered by the National Emergency Grant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Eligibility determination</td>
<td>1. Educational assessments</td>
</tr>
<tr>
<td>2. Employability assessments</td>
<td>2. Temporary, centrally-located facility</td>
</tr>
<tr>
<td>3. Job search assistance</td>
<td>3. Mobile learning lab for remote areas</td>
</tr>
<tr>
<td>4. Facsimile and copier service</td>
<td>4. Development of area Job Fairs</td>
</tr>
<tr>
<td>5. Internet and telephone access</td>
<td>5. Development of career-specific marketing materials</td>
</tr>
<tr>
<td>6. Resume development</td>
<td>6. Direct community support</td>
</tr>
<tr>
<td>7. Service performance monitoring of</td>
<td></td>
</tr>
<tr>
<td>educational partners</td>
<td></td>
</tr>
<tr>
<td><strong>Intensive:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Comprehensive skill assessments</td>
<td>1. “Coaching” services to encourage active participation in</td>
</tr>
<tr>
<td>2. Comprehensive knowledge assessments</td>
<td>services and events</td>
</tr>
<tr>
<td>3. Individual employment plans</td>
<td>2. Additional short-term workshops offered like computer</td>
</tr>
<tr>
<td>4. Individual and group counseling</td>
<td>skills and welding</td>
</tr>
<tr>
<td>5. Case management</td>
<td></td>
</tr>
<tr>
<td>6. Referrals to other services</td>
<td></td>
</tr>
<tr>
<td><strong>Training:</strong></td>
<td></td>
</tr>
<tr>
<td>1. College tuition assistance</td>
<td>1. Gas cards for travel to and from training</td>
</tr>
<tr>
<td>2. On-the-job training</td>
<td>2. Reimbursement of certification tests</td>
</tr>
<tr>
<td>3. Customized training</td>
<td>3. Individual supplies needed for training</td>
</tr>
<tr>
<td>4. Training for special populations</td>
<td></td>
</tr>
</tbody>
</table>

The supplies included basic hand tools and personal protective clothing considered to be minimum ownership requirements for occupations such as welding. The displaced workers were rewarded permanent ownership of supplies if they successfully completed all training. These supplies helped ease the financial transition into new occupations.

Program Performance Measures

**Recovered Wages**

Not long ago America had the highest paid low-skilled workers in the world, particularly in the steel, automotive, and apparel industries (Gray & Herr, 1998). As low wage jobs continue to shift to countries abundant in low-wage better-educated workers, American employers will have to constantly rethink their strategies for investing in the human capital component of their businesses. Empirical literature measures economic losses incurred by displaced workers in terms of length of post-layoff spells of unemployment and reduction in wages upon reemployment (Leigh, 1995). Studies from six different sources agree on a key finding that workers with the longest tenure on the job from which they were displaced suffered the greatest subsequent wage loss (Leigh, 1995). While one goal of the National Emergency Grant is to help displaced workers recover as much of their previous wages as possible, national performance measures reported by Department of Labor indicated that in 2003 wages after being hired into new employment equaled 90.6% of previous wages (Department of Labor Employment & Training Administration, 2004c).

For Mississippi, the state replaced wage rate for 2003 was 96.9 percent (Department of Labor Employment & Training Administration, 2004). Other research
relating to job displacement indicates that job loss has long-term effects on subsequent wages for a variety of reasons (Jacobson, LaLonde, & Sullivan, 2005). Employees may have firm-specific skills that are less valuable to other employers. Employees may also be hired into entry-level positions because these jobs are often easier to find than tenured positions for which they may be qualified (Jacobson, LaLonde, & Sullivan, 2005). Along these lines, Henry S. Farber analyzed data from the Displaced Workers Survey administered by the U.S. Department of Labor over a period of 1981-2003 (Farber, 2005). Farber found that earnings decline as much as 17 percent less on average in displaced workers’ new jobs than they would have had they not been displaced (Farber, 2005).

Another study conducted on the long-term effects of job displacement revealed that on average earnings and wages typically fall by as much as 12 to 25 percent in the year after job loss (Stevens, 1995). The study also estimated that earnings and wages remain reduced by approximately nine percent six or more years after job loss. Stevens goes on to add that multiple job losses are responsible for much of the wage loss persistence. The estimated long-term earnings losses for younger workers were more apparent in the first three years following displacement than for more mature workers (Kletzer & Fairlie, 2003). However, earnings losses for young workers were short-lived considerably after five years.

Unemployment Duration

The timing of social and educational services in combination with the sequence of such services becomes critical in remediation for displaced workers. Unemployment duration refers to the amount of time an individual remains unemployed, generally
measured in terms of weeks unemployed (Valletta, 2002). Congress offers unemployment insurance benefits to reduce the financial hardships associated with unemployment (Valletta, 2002). Unemployment duration is an excellent predictor of whether a worker will find a job the subsequent month (Abraham & Shimmer, 2001). From 1976 to 2000, the probability at any given point during unemployment of a person finding a job the subsequent month is a decreasing function of duration (Abraham & Shimmer, 2001). Simply stated, the longer a person is unemployed the less likely he or she is in finding employment.

The U.S. Department of Labor Bureau of Labor Statistics publishes national trends for average weeks of unemployment through the Current Population Survey (U.S. Department of Labor Bureau of Labor Statistics & U.S. Department of Commerce Census Bureau, 1994; Valletta, 2002). The longer displaced workers are unemployed the more difficulty they have in getting a job (Hurst & Shepard, 1986). Duration of unemployment can also be directly impacted by the level and length of unemployment insurance benefits (Katz & Meyer, 1988).

Unemployment insurance is intended to reduce hardship by providing labor force members with partial wage replacement during periods of involuntary unemployment (O’Leary, Speigelman, & Kline, 1993). However, unemployment insurance may prolong spells of unemployment. Evidence from a field experiment conducted in Illinois in 1984 suggested that offering unemployment insurance claimants a modest cash bonus for rapid reemployment would increase the speed of return to work and reduce program costs (O’Leary, Speigelman, & Kline, 1993). Evidence from a similar 1988 Washington State experiment indicated that reemployment bonuses do change job seeking behavior if the
bonus equates to about six times the weekly benefit amount (O’Leary, Speigelman, & Kline, 1993).

A study conducted by John A. Challenger encourages companies to implement high-quality outplacement services to assist discharged workers with mental health and counseling support plus tailored coaching in job finding skills (Challenger, 2005). Investing in outplacement services allows companies to significantly cut the total costs of a downsizing action by reducing overlooked costs such as unemployment insurance and litigation (Challenger, 2005). Preemptive action that provides workers assistance not only after they have been laid off, but also whenever they feel their job may be at risk, helps minimize job relocation costs for the company and the worker (Sperling, 2005).

A 1989 worker displacement study revealed that advanced notice of layoffs resulted in the avoidance of about 4.2 million weeks without work between 1979 and 1984 in the U.S. (Love & Terrance, 1989). This study supports the general intent of the 1989 Worker Adjustment and Retraining Notification (WARN) Act providing that employers of 100 or more workers must give at least 60 days' advance notice of a plant closing or mass layoff to affected workers and to state government officials (United States Department of Labor History, n.d.). The WARN Act, along with previous research, created compelling arguments for policies seeking to reduce length of unemployment, yet no previous research reveals the extent to which policies like National Emergency Grants reduced unemployment duration.

A major shortcoming in measuring unemployment duration for this study is external influences on the number of weeks NEG clients received unemployment compensation (United States Department of Labor Unemployment Insurance, n.d.). The
clients could have potentially received income support beyond the general limit of 26 weeks compensation, particularly if they were enrolled in training (Federal Unemployment Tax Act, 1939; Trade Act, 2002; United States General Accounting Office, 2006). The NEG clients could have received up to a maximum of 104 weeks of financial support, while the comparison group may have only qualified for 26 weeks. This extreme difference may have skewed the expected length of unemployment for this study, thus requiring an alternative indicator of unemployment duration.

A variety of different measures of unemployment duration at the national level are available on a monthly basis (Valletta, 2002). Two alternative performance measures tracked by the U.S. Department of Labor from Unemployment Insurance wages are the percentage of adults employed in the first quarter after exiting participation in WIA services and the percentage of those same adults still employed in the third quarter after exit (U.S. Department of Labor Employment and Training Administration, 2000). A specific strategic goal of the U.S. Department of Labor is to increase the employment, retention, and earnings replacement of individuals registered under the WIA dislocated worker program (U.S. Department of Labor, 2003). The U.S. Department of Labor measures percentage of adults still employed during the third quarter after exit as an indication of employment retention stability (U.S. Department of Labor Employment and Training Administration, 2000). For this non-experimental study using archival data, Unemployment Insurance wage records will be extracted to compare the National Emergency Grant clients to other displaced workers in the same region.
Educational Gain

The Community College Research Center reports that adults who receive at least one additional year of post-secondary education are more likely to earn a higher wage than for those who have only a high school diploma as shown in Figure 2 (Bailey, Kienzl, & Marcotte, 2004).

Figure 2. 2003 Earnings for full-time wage and salary for U.S. workers. From “Unemployment rate, 2003 annual average earnings” reported by the U.S. Department of Labor Bureau of Labor Statistics, March 2003.

The State of Mississippi estimates annual income increases with educational gain as an average of $15,600 for a person with no high school diploma, $22,500 for a high school diploma, $30,500 for a community college degree, and $40,400 for a four-year college graduate (Public Education Forum of Mississippi & Mississippi Economic Council, 2003). In the U.S., federal workforce education policy seeks to accomplish two basic missions: develop the workforce and promote individual opportunity (Gray & Herr, 1998). An estimated one in three job applicants lacks the basic skills necessary to perform the jobs sought in 2000 (Lynch, 2005).
Encouraging displaced workers to seek additional training can potentially help recover their wages if practice follows the generally accepted principals of higher education equals higher pay. Some studies, however, dispute that a higher wage can be expected for populations of displaced adults who receive additional training (Stern, Root, & Hills, n.d.). While conflicting studies return differing results, a recent study conducted on displaced workers in the State of Washington indicated that displaced workers can benefit from a variety of employment and training services, particularly those who complete community college courses around the time of their job loss (Jacobson, LaLonde, & Sullivan, 2005).

In a similar study performed on a television plant closing in Missouri, employees were surveyed at the time of plant closure to assess attitudes and training needs as well as to gather contact information for making future contacts with them (Knapp & Harms, 2002). After having interviewed displaced workers over a period of months and having performed assessments on the workers, researchers found that there were no noticeable improvements in the probability that workers who received training interventions as opposed to those who did not receive any type of training would rebound into gainful employment (Knapp & Harms, 2002). The study also revealed:

“Even in an era of strong local and national economic growth, many displaced workers experience prolonged joblessness, significant and long-lasting income declines, and a deep-felt disaffection from established economic and political arrangements” (p. 608).

The television plant closing led to several education programs being set up for workers. The research found that although the education programs benefited some workers, there
was no evidence that they were widely successful (Knapp & Harms, 2002). Although these might discourage education providers, the fact remains that more and more jobs are relying on more than a high school education (McCabe, 2000). Business and industry estimate that 80 percent of the 21st century workforce will need some postsecondary education (McCabe, 2000).

Follow-up counseling services help employees recognize their mixed emotions and encouraged short-term and long-term action plans. One of the more successful strategies includes communicating regularly with displaced workers and keeping them focused on short-term goals of job-hunting (Wessel, 2003). In addition, successful short-term intensive services offer resume writing, interviewing skills, and using the Internet to job search. For those jobless workers who need something more, some may choose to attend adult education classes and then enroll in college (Wessel, 2003).

A timely educational and skill assessment helps adult identify gaps in knowledge, skills, and abilities. For those adults who choose to participate in training, the accountability and credibility of local training institutions must ensure under-prepared workers are not enrolled in courses for which they are not prepared (McCabe, 2000). Recommendations from a 1995 study performed by Dixie L. Simmons suggested that worker retraining programs be designed to include career counseling and entry assessment evaluations.

Simmons also suggested the implementation of strong basic skills components with multiple entry and exit points (Simmons, 1995). Applied science and computer courses appeared to have helped students rapidly achieve their goals (Simmons, 1995). Simmons revealed that displaced workers who are most likely to persist toward their
goals are those who are enrolled full-time and are training for high-paying occupations (Simmons, 1995). Ting studied the likelihood of reemployment for displaced workers who received either basic skills training, job skill training, or on-the-job training (Ting, 1991). Contrary to Simmons study, Ting’s study concluded that those who received basic skills training were most effective for increasing the reemployment probability.

The goal of the education and training component of the National Emergency Grant was to help individuals achieve higher levels of educational gain. The partners of the Workforce Investment Network of Mississippi universally accepted performance measures for educational gain. These existing measures and definitions for different aspects of educational gain will be used for this research.

The first performance measure is educational gain and is measured as an *educational functioning level* (U.S. Department of Education Office of Vocational & Adult Education [USEDVAE], 2001). There are six educational functioning levels (EFL), and each level roughly equates to two grade levels. Those who are basic skills deficient will have to increase one or more EFLs to achieve a positive outcome on the literacy and numeric gains measure (USEDVAE, 2001). However, this does not mean that every person has to increase the equivalent of two grade levels to be counted as a positive outcome in the measure. Under a normal distribution of pre-test scores, most participants' scores will place the individuals in a range where they have completed some of the skills in that particular EFL. Therefore, for a majority of participants, a positive outcome is not likely to require the equivalent of completing two full grade levels (USEDVAE, 2001).
A second performance measure for educational gain is the percentage of adults who successfully pass the General Education Diploma, more commonly referred to as the GED exam. Paul Hassen, reporting for the American Council on Education in 2004, revealed the average U.S. passing rate for the GED exam was 70.6 percent of all candidates. More than 34 million adults in the United States over the age of 18, or 16 percent of the adult population, did not complete their high school education (Hassen, 2004). Mississippi has the highest percentage of adults without a diploma (Hassen, 2004). This research will compare the percentage of adults served by the National Emergency Grant who successfully passed the GED exam versus adults served by Jones County Junior College Adult Basic Education program.

The final performance measure for educational gain is the percentage of participants who successfully complete post-secondary education. As indicated in Figure 2, advanced levels of post-secondary education increase the likelihood of earning higher wages (Public Education Forum of Mississippi & Mississippi Economic Council, 2003). The percentage of National Emergency Grant participants who successfully completed post-secondary training will be compared to the percentage of Adult Basic Education adults not served by the grant.

The U.S. Department of Labor emphasizes the importance of higher levels educational goals and supports displaced workers who qualify for training assistance (United States Department of Labor Employment & Training Administration, 2000). It recognizes as a core performance measure the attainment of a recognized credential relating to the achievement of educational skills (United States Department of Labor Employment & Training Administration, 2000).
Customer Satisfaction

Delving into the perceptions, feelings, and attitudes of displaced workers will help better understand the motivations for how displaced adults seek and receive services offered by varying state and local support agencies. There is a general sense of urgency for displaced workers to stabilize their job situations and to minimize the negative impact of their layoff. In a qualitative study conducted in 2000, 35 white female displaced workers between the ages of 35 to 65 were interviewed and tracked over a period of two years to better understand their perceptions from their native point of view (Lankford-Rice, 2000). This study is similar in nature to this research in that it involved rural counties in Alabama that were impacted by mass manufacturing layoffs.

The Lankford-Rice study estimated approximately one half of the participants came from Jackson County, Alabama, the single largest concentration of a textile closure in the month of January 1996 (Lankford-Rice, 2000). The other half came from Dekalb County, Alabama, the largest concentration of a textile closure in February 1996. Results of the Lankford-Rice study suggested that the North Alabama Skills Center must address two basic premises in order to be successful in providing services to these adults: concerns about leaving their “family” of co-workers and lack of self-confidence (Lankford-Rice 2000). Building confidence can help displaced workers to overcome an emotional roller coaster that they experience with the loss of their jobs (Amundson & Borgen, 1982).

The emotional roller coaster was first coined by behavioral psychologists Amundson & Borgen (1982) when they created an Emotional Roller Coaster model to better understand the dynamics of unemployment and its effects on people and their
families. This model graphically described the emotional highs and lows that individuals experience prior to, during, and after becoming unemployed. The model was further expanded on at least two other occasions by Lopez (1983) to include the argument that corporate failure presents a unique set of emotional factors not experienced by adults who lose their jobs by being fired for poor performance or low productivity. In the case of plant closings, individuals may experience delayed emotional reactions (Lopez, 1983).

The Emotional Roller Coaster model also encapsulated the frustrations, dampened hope, and low self-esteem that adults experience when their job searches extend for long periods of time (Hurst & Shepard, 1986). The longer individuals are unemployed, the greater the chance of emotional frustration and eventual apathy toward the job market (Hurst & Shepard, 1986). Hurst and Shepard went on to add that long-term unemployment, two to three years, creates individuals who wait for someone to actively find a job for them or become really uncommitted to working. The dynamics of unemployment create challenges for career counselors in developing appropriate interventions, including understanding the clients' perspectives, assisting in resolving conflicts related to the loss, developing realistic and specific goals, and helping understand burnout strategies (Hurst & Shepard, 1986). Because the emotional behavior becomes more withdrawn and negative over time with the lack of employment opportunities, early interventions are critical to getting adults reemployed.

A 2004 study by Rocha and Strand explored how labor market trends and current employment assistance policies affect reemployment opportunities and emotional well-being for female apparel workers. The study followed the displaced workers for six months after they were displaced from their jobs (Rocha & Strand, 2004). Depression
was strongly correlated with continued financial instability, satisfaction with spouse, and children’s behavior problems. Social support systems were analyzed to identify which families were most at risk following a plant closure (Rocha & Strand, 2004).

In 1996, the U.S. Department of Labor adopted a goal of informing the employment and training system's 'stakeholders' of the availability of materials, training and technical assistance. This goal was intended to help improve the quality of Labor's services and to increase its customers' satisfaction (U.S. Department of Labor Employment & Training Administration, 1997). A specific measurable goal was adopted that at least seventy-five percent of customers would rate the services they received as very helpful or extremely helpful (U.S. Department of Labor Employment & Training Administration, 1997). An October 2001 technical report issued by U.S. Department of Labor revised customer satisfaction procedures to include the use of the American Customer Satisfaction Index developed by the Stephen M. Ross School of Business (U.S. Department of Employment & Training Administration, 2001).

The American Customer Satisfaction Index (ASCI) is calculated from the combined score of three specific customer satisfaction questions Stephen M. Ross School of Business, 2005). The derived index score is reported by individual states and compiled into one overall performance result for U.S. Department of Labor (United States Department of Labor Employment & Training Administration, 2004, October). The ASCI was last performed in Mississippi in 2003. It will serve as the basis for analysis in Chapter 3 for the target region being studied.

Chapter 3 will focus on specific methodologies measuring the impact of services and further defining the differences between services offered by the grant. Chapter 4 will
offer conclusions and recommendations based upon the results of the data gathered and analyzed. Finally, Chapter 5 will offer recommendations for future research relating to services offered to displaced workers.
CHAPTER III
METHODOLOGY

Introduction

The U.S. leads the world in the quantity and sophistication of program evaluation for unemployment research (Leigh, 1995). Two areas in which the U.S. leads are its willingness to fund limited-duration demonstration projects and the sophistication of evaluation for these projects (Leigh, 1995). In the context of limited-duration demonstration projects, a U.S. Department of Labor National Emergency Grant targets displaced workers who have experienced mass layoffs resulting from plant closures or natural disasters. However, no research has been conducted isolating the impact of National Emergency Grants from other reemployment services.

This research evaluated the impact of a single National Emergency Grant on Clarke County in rural Mississippi to determine the efficacy of the program. The grant offered a greater number of services than traditional services during the timeframe between 2002 and 2005. Historical data were extracted from staff files, electronic databases, and student records. To determine if the National Emergency Grant impacted Clarke County, Mississippi, a research framework was designed comparing displaced workers served by the grant to displaced workers served by traditional WIN Center reemployment services. The research hypothesis was defined as follows:

Ho: National Emergency Grant services made no significant difference in rural Mississippi as compared to WIN Center services offered to trade-affected displaced workers.

Alternative hypotheses offered predictions stated as follows:
H₁: There is a significant difference between Clarke County National Emergency Grant services and WIN Job Center services on recovered wages.

H₂: There is a significant difference between Clarke County National Emergency Grant services and WIN Center services in decreasing duration of unemployment.

H₃: There is a significant difference between Clarke County National Emergency Grant services and Jones County Junior College Adult Education services in increasing the educational attainment.

In addition to recovered wages, duration of unemployment, and educational attainment, customer service satisfaction was evaluated within the scope of available archival data to identify how well displaced workers were satisfied of the services they received.

Customer satisfaction was measured as an index score or rating of the level of perceived satisfaction experienced by displaced workers who sought reemployment services.

Services offered by the National Emergency Grant versus the WIN Center help distinguish differences between the two groups of displaced workers. National Emergency Grant services (see Table 2) are offered in addition to traditional services and can be customized depending upon the needs of the recipients. Both the WIN Center and the National Emergency Grant services are divided into three categories: core, intensive, and training (Workforce Investment Act, 1998). Under the tiered services, displaced workers can qualify for training services only after they have completed core and intensive services (O’Leary, Straits, & Wandner, 2004). Core services include basic assistance to help individuals obtain new employment. Intensive services generally involve career counseling, job skill assessments, and some short-term training. Training services offer individuals the opportunity to purchase training from an eligible training
The National Emergency Grant typically categorizes services in the same manner, but it includes more direct involvement from staff with displaced workers, increases the amount of training for displaced workers tailored toward jobs in the area, and offers increased supportive services to those enrolled in training.

### Table 2

**Comparison of WIN Center Traditional Services to National Emergency Grant Services**

<table>
<thead>
<tr>
<th>Traditional services</th>
<th>Additional services offered by the National Emergency Grant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core:</strong></td>
<td></td>
</tr>
<tr>
<td>8. Eligibility determination</td>
<td>7. Educational assessments</td>
</tr>
<tr>
<td>9. Employability assessments</td>
<td>8. Temporary, centrally-located facility</td>
</tr>
<tr>
<td>10. Job search assistance</td>
<td>9. Mobile learning lab for remote areas</td>
</tr>
<tr>
<td>11. Facsimile and copier service</td>
<td>10. Development of area Job Fairs</td>
</tr>
<tr>
<td>12. Internet and telephone access</td>
<td>11. Development of career-specific marketing materials</td>
</tr>
<tr>
<td>13. Resume development</td>
<td>12. Direct community support</td>
</tr>
<tr>
<td>14. Service performance monitoring of educational partners</td>
<td></td>
</tr>
<tr>
<td><strong>Intensive:</strong></td>
<td></td>
</tr>
<tr>
<td>7. Comprehensive skill assessments</td>
<td>3. “Coaching” services to encourage active participation in services and events</td>
</tr>
<tr>
<td>8. Comprehensive knowledge assessments</td>
<td>4. Additional short-term workshops offered like computer skills and welding</td>
</tr>
<tr>
<td>9. Individual employment plans</td>
<td></td>
</tr>
<tr>
<td>10. Individual and group counseling</td>
<td></td>
</tr>
<tr>
<td>11. Case management</td>
<td></td>
</tr>
<tr>
<td>12. Referrals to other services</td>
<td></td>
</tr>
<tr>
<td><strong>Training:</strong></td>
<td></td>
</tr>
<tr>
<td>5. College tuition assistance</td>
<td>4. Gas cards for travel to and from training</td>
</tr>
<tr>
<td>6. On-the-job training</td>
<td>5. Reimbursement of certification tests</td>
</tr>
<tr>
<td>7. Customized training</td>
<td></td>
</tr>
<tr>
<td>8. Training for special populations</td>
<td></td>
</tr>
</tbody>
</table>

To measure the impact of the National Emergency Grant as compared to the WIN Center services, this non-experimental research followed a process of collecting and

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analyzing historical records on displaced workers from the two groups. By definition, non-experimental research is a systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred (Kerlinger & Lee, 2000). Research advocates contend that the application of scientific methodology for non-experimental analysis is useful to bring every rational explanation into view of a phenomena assessing the extent to which the postulated relationships actually occurred (Kerlinger & Lee, 2000; Locke, Spirduso, & Silverman, 2000; Shadish, Cook, & Campbell, 2002). The Clarke County National Emergency Grant provided a logical series of events rich in observations and experiences to assess the relationships of public sector services and displaced worker benefits.

Population and Participant Characteristics

The population for this study was displaced workers from five manufacturing plants eligible to receive National Emergency Grant services in rural Mississippi between 2002 and 2005. This audience was selected to evaluate the effectiveness of a National Emergency Grant in a rural geographic region in transitioning displaced workers back into the workforce. The number of workers displaced from the five eligible manufacturing plants was originally compiled by the National Emergency Grant staff, and these client lists aided in estimating the number of displaced workers. This researcher evaluated staff records to further narrow the client list by removing duplicated records in cases where displaced workers were laid off from more than one qualifying company. The demographic data, such as male versus female, offered additional qualitative information regarding other potential influences on the research results.
Information about National Emergency Grant clients was obtained from two databases. The MDES database tracks wage data and dates of service participation, which aided in analyzing recovered wages and duration of unemployment. The second database, maintained by the State Board for Community and Junior Colleges, tracks Adult Education class results. Data from the Adult Education database was extracted to evaluate educational attainment. Individual client records provided insight into the demographic characteristics of the participants, such as gender, race, age, and education. Previous studies support the influence of demographic patterns on displaced workers (Kuhn, 2002; Leigh, 1995). A universal pattern in all countries examined in Kuhn’s study is that older workers fare worse than younger workers after displacement from jobs (Kuhn, 2002). Descriptive statistics were used to estimate client characteristics to build upon previous demographic research (Leigh, 1995).

Variables for the Study

Three response variables described in Table 3 provide robust indicators of acceptable performance levels for service providers (O’Leary, Straits, & Wandner, 2004). These variables will guide this investigator through empirical observations (Yin, 2003a). Response variables predefined by the U.S. Department of Labor include recovered wages, duration of unemployment expressed in terms of gained employment and retained employment, and increased educational attainment (U.S. General Accounting Office, 2003). These variables were included because of the numerous empirical studies that measured impact, and the previous research served as the foundation for guiding this study (Farber, 2005; Gray and Herr, 1998; Leigh, 1995; Jacobson, LaLonde, and Sullivan, 2005; Kuhn, 2002).
### Table 3

**Response Variables and Data Collection Methodology**

<table>
<thead>
<tr>
<th>Response variable</th>
<th>Unit of analysis</th>
<th>Type of measure</th>
<th>Statistics used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of wage</td>
<td>Continuous variable</td>
<td>T-test on treatment and comparison group means at posttest</td>
<td></td>
</tr>
<tr>
<td>Recovered wage rate</td>
<td>Recovered per individual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment percent</td>
<td>Dichotomous (Yes/No)</td>
<td>Two proportions test</td>
<td></td>
</tr>
<tr>
<td>Duration of unemployment</td>
<td>Employment percent retention</td>
<td>Dichotomous (Yes/No)</td>
<td>Two proportions test</td>
</tr>
<tr>
<td>Individuals who</td>
<td>Individuals who completed G.E.D.</td>
<td>Dichotomous (Yes/No)</td>
<td>Two proportions test</td>
</tr>
<tr>
<td>completed G.E.D.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of levels gained in educational advancement</td>
<td>Categorical: Ordinal data</td>
<td>Goodness of fit for Poisson distribution</td>
<td></td>
</tr>
<tr>
<td>Educational attainment</td>
<td>Individuals who completed post-secondary education</td>
<td>Dichotomous (Yes/No)</td>
<td>Two proportions test</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The research variables are consistent with nationally reported indices published by the U.S. Department of Labor (U.S. Department of Labor Bureau of Labor Statistics and U.S. Department of Commerce Census Bureau, 1994; U. S. Department of Labor Employment and Training Administration, 2004b). The system-wide use of common employment outcome variables empowers displaced workers to make well-informed decisions regarding the quality of services, and aligns reporting methods among service providers toward common performance measures (O'Leary, Straits, & Wandner, 2004). The statistical tests chosen for analyses were two-sample $t$-test, two proportions test, and goodness of fit for Poisson distribution. The two sample $t$-test is commonly used to compare two population means based on independent samples from the two populations.
or groups (Elliott & Woodward, 2006). The two proportions test analyzes the significance level of differences between population percentages. The goodness of fit test is similar to the two proportions test but takes into consideration results expressed in categories.

Data Collection Procedures

This study builds upon a fundamental concept that services offered to displaced workers should help get workers back into the workforce at wages equal to their previous wages as quickly as possible (Parke, 1999). Figure 3 establishes the framework for evaluating the impact of the National Emergency Grant to the impact of traditional reemployment services. Data for this study were obtained from databases maintained by MDES and JCJC. Permission was granted by both agencies to conduct this research.

Recovered Wages

According to previous research, differences between pre-displacement earnings and post-displacement earnings are compared to assess the magnitude of financial losses for displaced workers (De La Rica, 1995). The loss of earnings or financial instability was strongly correlated with depression (Rocha & Strand, 2004). One of the goals of the National Emergency Grant was to assist displaced workers in rebounding into jobs that paid equal to or better than the job from which they were displaced. Empirical literature provides a foundation for measuring economic losses incurred by displaced workers in terms of a reduction in wages upon reemployment (Leigh, 1995). According to Leigh (1995), the long-term effects of job displacement yields decreased earnings. Wages typically fall by as much as 12 to 25 percent in the year after job loss (Stevens, 1995).
Earnings replacement analysis will be used in this study to evaluate participant wages prior to and following grant program participation. *Earnings replacement* is the nationally reported performance measure for the U. S. Department of Labor, and it compares wages earned before and after receipt of reemployment services. Figure 4 describes a five-step process for calculating earnings replacement. It involves the
identification of specific timeframes in which wage data is collected and compared (U.S. Department of Labor Employment and Training Administration, 2004b).

Earnings replacement rate, a continuous variable, was measured using a parametric $t$-test for independent means and tested for normality of distribution and homogeneity of variance (Cone and Foster, 1993). Parametric statistics involve assumptions that the underlying distribution of scores in the population is normal and data from different subjects are independent (Cone and Foster, 1993). The assumption of normality and equal variances was tested to determine statistical strength of generalized results.

Step 1, indicated in Figure 4, for calculating earnings replacement was to list the date of the participant's enrollment in services. The enrollment date is often different from the last day of employment and is critical for program evaluation. The enrollment date is the first day of participation in Workforce Investment Act services. For consistency, the operational definition defined by the U.S. Department of Labor first requires an official entry and exit date of services (U.S. Department of Labor Employment and Training Administration, 2004b).

Step 2 for calculating earnings replacement requires the calculation of the individual's earning prior to enrollment. Gross wages earned during three calendar quarters, or nine months, were tallied. Step 3 required to calculate earning replacement was the summation of gross wages earned after exiting reemployment services and was recorded as post-program earnings. Individuals' enrollment dates established the point of measure for pre- and post-earnings data available from a robust database maintained by Mississippi Department of Employment Security. Earnings rate for each individual was
based upon the cumulative monthly gross wages for the individual. Step 4 in the systematic process for collecting and comparing earnings replacement for individuals for this study was the comparison of the difference between pre-program and post-hire earnings and was calculated as a percentage:

\[
\text{Earnings replacement rate} = \frac{\text{(pre-program earnings)}}{\text{(post-hire earnings)}} \times 100
\]

**Figure 4.** Steps for collecting and comparing earnings replacement.

Finally, Step 5 compared the National Emergency Grant data to WIN Center data to determine if the population means were equal. Additionally, the means of the two data sets were comparable to U.S. Department of Labor national performance results for earnings replacement to ensure the potential comparison to state and national indices (U.S. Department of Labor Employment and Training Administration, 2004c). The
National Emergency Grant recovered wages were measured and statistically compared the WIN Center wages.

*Unemployment Duration*

The second variable for this study was to determine the duration of employment. Duration of unemployment was used in this study because of the availability of archival data indicating the percentages of displaced workers employed after exiting from grant services or reemployment services. Previous research affirms the longer displaced workers are unemployed, the more difficulty they have in getting a job (Hurst and Shepard, 1986). The longer displaced workers are unemployed, the more difficulty they have in getting a job (Hurst and Sheppard, 1986). Additionally, unemployment duration is an excellent predictor of whether a worker will find a job (Abraham and Shimmer, 2001). The operational performance measures identified by the U.S. Department of Labor for evaluating employment duration involves two variables: entered employment and employment retention.

Unemployment duration for this study was determined from archival data by the percentage of adults working in the first quarter after exiting grant services. Employment retention was determined from archival data by the percentage of workers employed in the third quarter after exiting services among those employed in the first quarter. This researcher used the names and Social Security numbers of the target populations to determine the percentage of clients employed in the first quarter after exit from services. The names were also used to determine the percentage of clients still employed in the third quarter after exiting services. Data analysis included the conversion of raw data received from MDES databases indicated by the actual amount of gross wages earned in
the first and third quarters after exit. Data was converted to simple binary numbers to allow statistical analysis between the two research groups. The binary numbers were defined as a 1 representing adults who were employed, and a 0 representing adults who were not employed.

The binary numbers were tallied for each population to establish a percentage of adults employed in the first quarter after exiting WIN Center services. This percentage represented entered employment rate. From the group of adults employed in the first quarter after exit, a second percentage was calculated to determine those still employed in the third quarter. This second calculation represented employment retention rate. The test of two proportions allowed statistical comparisons between the two populations of National Emergency Grant clients and the WIN Center clients. The null hypothesis test assumed no difference in proportions existed. The alternative hypothesis for unemployment duration assumed that a significant difference existed between the two populations.

Educational attainment

The third and final variable used to analyze the impact of the National Emergency Grant on rural Mississippi is educational attainment. The U.S. Department of Labor recognizes education attainment as a core performance measure, defined as “attainment of recognized credential relating to achievement of educational skills” (U.S. Department of Labor Employment and Training Administration, 2000). The U.S. Department of Labor emphasizes the importance of higher levels educational goals and supports displaced workers who qualify for training assistance (United States Department of Labor Employment and Training Administration, 2000). National Emergency Grant
participants who sought short-term training and education services were evaluated by one of three methods: educational gain, earned General Education Diploma or G.E.D., or earned college degree/professional certificate.

The first measure for educational attainment, educational gain, is calculated as an "educational functioning level" (U.S. Department of Education Office of Vocational and Adult Education, 2001). Six educational functioning levels (EFL) roughly equate each level to two grade levels. National Emergency Grant clients participating in education services set individual goals of increasing their EFLs to achieve a positive outcome and demonstrate incremental successes (U.S. Department of Education Office of Vocational and Adult Education, 2001).

The EFL, an ordinal data set, was compared for statistical significance between the National Emergency Grant participants and the non-participants. The null hypothesis stated there was no difference between proportions of categories of ordinal data for the two populations. The proportion of adults who achieved higher skills of educational attainment was statistically compared between the National Emergency Grant participants and the non-participants using the Mann-Whitney U test of proportions.

The second measure of educational attainment, earned G.E.D., is a simple measure of the number of adults who received their diplomas. For this study, the National Emergency Grant allowed adults to take the G.E.D. exam as a part of the grant services. The study calculated the percentage of G.E.D. awarded to grant clients as opposed to WIN Center clients. The raw data made available by Jones County Junior College listed for each client the date the G.E.D. was earned. The date was converted to a dichotomous measure of yes for each G.E.D. earned or a no for each G.E.D. not earned.
for both populations. A percentage score was calculated representing the percentage of adults who earned the G.E.D. A test of two-proportions evaluated the significance in differences between the National Emergency Grant clients and the non-grant participants.

The final measure of educational attainment evaluated percentage of National Emergency Grant clients who earned a college degree or professional certificate. This study evaluated the percentage of National Emergency Grant degree completers to the population of non-grant participants. The test of two proportions was used to calculate the difference between the two groups. The grant offered tuition assistance, reimbursements for testing fees, and gas cards for adults who attended college degree programs. These benefits were greater than those of traditional reemployment services.

The State of Mississippi estimates annual income increases with educational gain with an average of $15,600 for a person with no high school diploma, $22,500 for one with a high school diploma, and $30,500 for a person with a community college degree (Public Education Forum of Mississippi and Mississippi Economic Council, 2003). The goal of the education and training component of the National Emergency Grant was to help individuals achieve higher levels of educational gain. Services were designed and offered to accomplish the grant’s goals.

Customer Satisfaction Rate

Delving into the perceptions, feelings, and attitudes of displaced workers helped better understand the motivations for how displaced adults seek and receive services offered by varying state and local support agencies. There was a general sense of urgency for displaced workers to stabilize their job situations and to minimize the negative impact of their layoffs. Customer satisfaction has been identified by the U.S.
Department of Labor as an important performance measure relating to the perceptions and attitudes of displaced workers toward reemployment services. U.S Department of Labor gathers qualitative results of how well reemployment services were received by displaced adults using the American Customer Satisfaction Index (Stephen M. Ross School of Business, 2005). The American Customer Satisfaction Index (ASCI), calculated from the combined score of three specific questions, is a weighted average calculated from the following:

1. Utilizing a scale of 1 to 10 where 1 means “very dissatisfied” and 10 means “very satisfied” what is your overall satisfaction with the services provided from your local WIN Job Center?

2. Considering all of the expectations you may have had about the services, to what extent have the services met your expectations? 1 now means “Falls Short of Your Expectations” and 10 means “Exceeds Your Expectations”.

3. Now think of the ideal program for the people in your circumstances. How well do you think the services you received compare with the ideal set of services? 1 now means “Not Very Close to the Ideal” and 10 means “Very Close to the Ideal” (p. 6).

ASCI has been used by twenty-nine agencies of the federal government and by many Fortune 500 companies (U.S. Department of Labor Employment and Training Administration, 2001). The predictive ability of ACSI is derived from its use of a cause-and-effect econometric model that links customers’ evaluations of their experiences with products and services to their overall satisfaction (Stephen M. Ross School of Business, 2005). A simplified guide for standardizing the ACSI methodology is made available by the U.S. Department of Labor for an annual survey administered by each state. As part of the U.S. Department of Labor’s requirements, a minimum of five hundred randomly selected participants are contacted (U.S. Department of Labor Employment and Training Administration, 2001).
The score generated by ACSI is linked in turn to key behavioral consequences of satisfaction – customer retention. The formula defined by ACSI is as follows:

\[
\text{Weighted Index} = \left\{\left[\left(Q_1(W_1) + Q_2(W_2) + Q_3(W_3)\right) - 1\right] \times 11.11\right\}
\]

Where

- \(Q_1\) = raw score on question #1
- \(Q_2\) = raw score on question #2
- \(Q_3\) = raw score on question #3
- \(W_1\) = weight for question #1 = 0.388343298
- \(W_2\) = weight for question #2 = 0.329345318
- \(W_3\) = weight for question #3 = 0.282311484

Telephone interviews are conducted within sixty to ninety days after participants exit services. Authors Gubriam and Holstein (2001) suggest the use of telephone interview methodology over in-person interviewing as an accepted qualitative survey approach for increasing interviewer uniformity, standardization of questions, and cost efficiency (Gubriam and Holstein, 2001). Telephone interviewing also reduces interviewer effects by controlling situational variables (Gubriam and Holstein, 2001).

Results published by MDES in the *Mississippi's 2003 Customer Satisfaction Survey* report are the only known source of objective information for customer satisfaction for the National Emergency Grant. This target audience was integrated into a larger audience of displaced workers for south central Mississippi representing the Twin District's Workforce Investment Area (Parisi, Gill, Grice, and Beaulieu, 2003; U.S. Department of Labor Employment and Training Administration, 2004c). The researcher reviewed the results of the former study to determine if National Emergency Grant clients were included and if National Emergency Grant participants were isolated within the study (Parisi, Gill, Grice, and Beaulieu, 2003). Participants were not separately isolated.
from other randomly selected displaced workers. Therefore, the researcher can only conclude the results of the region. These results will be discussed in Chapter 4.

The 2003 Customer Satisfaction Survey does, however, allow for reflection on the previous work of Amundson and Borgen establishing an Emotional Roller Coaster Model (1982). The model described the emotional highs and lows individuals experience prior to, during, and after becoming unemployed (Amundson and Borgen, 1982). The Roller Coaster Model encapsulated periods of time when emotional changes such as frustration, dampened hope, and low self-esteem occur. The ACSI survey instrument is a method of identifying adults' feelings or perceptions during their time of unemployment. Their sensitivity toward WIN Center services can be gauged by the instrument as a means of improving services for clients. The services should assist and not frustrate displaced workers as they seek to overcome unemployment.

Validity and Reliability

This research is dependent upon historical files that could have been influenced by non-related events that occurred concurrently. Retrieving data from historical records often includes combining information from multiple databases to examine research questions (Shadish, Cook, and Campbell, 2002). Data stored in electronic databases has several advantages (Shadish, Cook, and Campbell, 2002). First, it is efficient. It makes use of data already collected in previous research. However, secondary analysis requires assumptions to be made about what data to combine. Data collected by other sources not associated with the intended research often does not provide detailed explanations regarding problems that may have occurred with the original data collection.
Internal Validity

One way to control internal validity for this research involves careful selection of a comparison group similar in characteristics to the National Emergency Grant clients. Concurrent events can cause threats to internal validity if they occur between the beginning and ending of treatment, and other non-related events could have occurred independently from the conditions of this study (Shadish, Cook, and Campbell, 2002). Threats to internal validity of historical data can be reduced by selecting groups from the same general location and by ensuring that the schedule for testing is the same in both groups. These threats are important to be presented as a characteristic of claims about causal knowledge, not as the property of the method (Shadish, Cook, and Campbell, 2002).

The research aligned National Emergency Grant clients to the displaced worker population of the Twin Districts Workforce Investment Area. More specifically, within the Twin Districts service area, two WIN Centers offered a geographically comparative audience who experienced similar economic conditions (see Figure 1). The WIN Centers were located in the towns of Laurel and Meridian, Mississippi, and served displaced workers from other companies deemed by U.S. Department of Labor as non-eligible for grant services. The grant was awarded to a particular group of workers from manufacturing closures directly impacted by shifts in international trade; these plants were Burlington Industries, Wells-Lamont, Nazareth-Century, A&B Components, and Dalex.
The National Emergency Grant clients were a subset of the larger population of displaced workers in the Twin Districts Workforce Investment Area served by the Laurel and Meridian WIN Centers. The Venn diagram in Figure 2 indicates the subsets of displaced workers in the region of south central Mississippi. Venn diagrams are useful aids in describing the relationship of demographic groups (Walliman, 2001). The National Emergency Grant target audience encompasses a geographic region surrounding Clarke County, Mississippi. This region is served by the Twin Districts Workforce Investment Area, fiscal agency of the Department of Labor Workforce Investment Act.
The Twin Districts Workforce Investment Area serves a twenty-four county region, among which includes the Laurel and Meridian WIN Centers. Within the Laurel and Meridian WIN Center service area, the National Emergency Grant allowed an additional temporary service center to be opened. National Emergency Grant clients were allowed to receive services from the temporary location and from two existing Adult Education Centers operated by JCJC. Therefore, internal validity is stronger when comparing only this region of Mississippi rather than displaced workers from the entire state.

The eligible grant participants were extracted from the general population of displaced workers using archival records from the Laurel and Meridian WIN Centers. Eligible grant participants were then statistically compared to non-eligible displaced workers for a significant difference in wages, duration of unemployment, and educational...
attainment. The three research variables were quantified using standard measures of central tendency and variability to examine the relationships between the two independent populations (Kerlinger & Lee, 2000). The differences between the National Emergency Grant and WIN Center averages were statistically evaluated to identify if the difference reflected a real difference or merely a consequence of the many relatively small differences arisen by chance (Kerlinger & Lee, 2000).

Construct Validity

Construct validity for this study was established by relying on variables operationally defined by the U.S. Department of Labor and the U.S. Department of Education. Construct validity is defined as the degree to which inferences are warranted from the observed operations included in a study to the constructs that these instances might represent (Shadish, Cook, & Campbell, 2002). Construct validity increases with well-defined units of measure and methods for assessing them.

Statistical Conclusion Validity

Statistical conclusion validity concerns two related statistical inferences that affect causal inferences: whether the cause and effect covary and how strongly they covary (Shadish, Cook, & Campbell, 2002). These two inferences can result in a Type I error, that is incorrectly concluding that cause and effect covary when they do not, or a Type II error, incorrectly concluding that cause and effect do not covary when they do (Shadish, Cook, & Campbell, 2002; Hair, Anderson, Tatham, & Black, 1998). The most widely used method of addressing whether cause and effect covary is null hypothesis testing and was the methodology used for this study (Shadish, Cook, & Campbell, 2002).
Following a tradition first suggested by R.A. Fisher (as cited in Shadish, Cook, & Campbell, 2002), it is customary to describe a statement of probability as statistically significant if \( p < .05 \) or as non-significant otherwise. The review of related literature consistently reveals previous studies followed a \( p \)-value < .05, and thus was used for this study. A t-test between the population means of the National Emergency Grant clients and the WIN Center clients was stated in the null hypothesis with a value of zero defining the population means as having no difference in value. Such an assignment of no difference in means allows the data analysis to provide clear evidence to support or reject the significance in difference between means for the National Emergency Grant and the WIN Center clients (Walliman, 2001).

*External Validity*

This study seeks to determine if a significant difference exists between services offered by a National Emergency Grant in rural Mississippi as compared to traditional re-employment services. The scope of this study can generalize only to the period of time, the setting, the people, the treatments, and the outcomes related to the Clarke County National Emergency Grant. A study conducted by Campbell and Stanley (as cited in Shadish, Cook, & Campbell, 2002) posed the question of generalization: To what populations, settings, treatment variables, and measurement variables can this effect be generalized? Practicing scientists routinely make causal generalizations in their research using five related principles: surface similarity, ruling out of irrelevancies, making discriminations, causal explanation, and interpolation/extrapolation (Shadish, Cook, & Campbell, 2002).
The presentation of the summary of data analysis is provided in Chapter 4 for each recovered wages, duration of unemployment, and educational attainment. The discussion of results and recommendations for future research will be followed in Chapter 5 to answer the research hypothesis of the efficacy of a National Emergency Grant on rural Mississippi.
CHAPTER IV

RESULTS

Results of data analysis presented in this chapter provide evidence for the three research hypotheses tested. Chapter 4 is structured in sections summarizing the results of each research hypothesis statement. The chapter begins with a chronologic review of the manufacturing plant closures and the demographics of the affected workers. Each hypothesis statement is statistically evaluated to determine the efficacy of the National Emergency Grant in rural Mississippi. The Clarke County National Emergency Grant offered a greater number of reemployment services than traditional services offered through WIN Job Centers for displaced workers from November 2002 to June 2005. Historical data extracted from JCJC Adult Education files and MDES electronic database allowed the researcher the ability to quantify and test the difference between population means. Each research variable was comparatively analyzed between the National Emergency Grant and the Laurel and Meridian WIN Centers. Data analysis was performed using Minitab, version 14, release 2005.

Population and Participant Characteristics

The study defined the research population as those displaced workers eligible for National Emergency Grant Services. The MDES electronic database revealed the number of adults affected by the closing of each manufacturing plant. The National Emergency Grant population for this study was 2,001 employees, including ninety-one adults who were displaced from more than one of the affected plants. Table 4 summarizes the number of workers displaced from each manufacturing plant. Nearly
half of those displaced from employment were from Burlington Industries, accounting for 900 (45 percent) workers.

Table 4

<table>
<thead>
<tr>
<th>Date of plant closure</th>
<th>County of plant location</th>
<th>Name of Company</th>
<th>Number Displaced</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2000</td>
<td>Clarke</td>
<td>A&amp;B Components</td>
<td>347</td>
</tr>
<tr>
<td>March 2001</td>
<td>Clarke</td>
<td>Nazareth-Century (Quitman Knitting Mill)</td>
<td>474</td>
</tr>
<tr>
<td>April 2002</td>
<td>Clarke</td>
<td>Burlington</td>
<td>900</td>
</tr>
<tr>
<td>May 2002</td>
<td>Wayne</td>
<td>Wells-Lamont</td>
<td>115</td>
</tr>
<tr>
<td>December 2003</td>
<td>Jasper</td>
<td>Dalex</td>
<td>165</td>
</tr>
</tbody>
</table>

**TOTAL** 2,001  
**NON-DUPLICATED TOTAL** 1,910

*Note.* Headcount was gathered from company databases, follow-up phone calls, and conversations with former plant personnel compiled by the WIN Transition Center staff in Quitman, Mississippi. Two companies refused to disclose actual headcount information, so estimates were developed by the staff.

Nazareth-Century Mills created the second largest layoff of 474 (24 percent) workers, and A&B Components reported the third largest layoff of 347 (17 percent). Dalex and Wells-Lamont affected 165 (8 percent) and 115 (6 percent), respectively. The findings revealed that of the 1,910 eligible, 36 percent (N=695) displaced workers voluntarily chose to enroll in National Emergency Grant services. Though it is unclear from the empirical data why almost two out of three (64 percent) of eligible adults chose not to
enroll in services, common reasons include immediate reemployment in new jobs, retirements, private business startups, and deaths.

In addition to understanding the numbers of employees from each manufacturing plant, demographic analysis compared the two populations. Gender, race, age, and highest level of education were determined between the two populations (see Table 5).

Table 5

| Characteristics of National Emergency Grant Clients Compared to WIN Center Clients |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Characteristics Category        | Number of NEG clients (n=695)   | Percent of NEG clients          | Number of WIN Center clients (n=2286) | Percent of WIN Center clients |
| Gender                          | Male                            | 187                            | 27                              | 1258                          | 55                             |
|                                 | Female                          | 508                            | 73                              | 1028                          | 45                             |
| Race                            | Black                           | 453                            | 65                              | 1175                          | 51                             |
|                                 | White                           | 229                            | 33                              | 1085                          | 47                             |
|                                 | Other                           | 15                             | 2                               | 52                            | 23                             |
| Age                             | 18-25                           | 60                             | 9                               | 463                           | 20                             |
|                                 | 26-35                           | 149                            | 21                              | 642                           | 28                             |
|                                 | 36-45                           | 217                            | 31                              | 591                           | 13                             |
|                                 | 45+                             | 269                            | 39                              | 589                           | 26                             |
| Highest level of education completed | Grades 01-12                 | 151                            | 22                              | 394                           | 17                             |
|                                 | Grades 13-15                    | 150                            | 22                              | 465                           | 21                             |
|                                 | Bachelor degree                 | 11                             | 1                               | 123                           | 5                              |
|                                 | Beyond bachelor's              | 1                              | 0                               | 11                            | 0                              |
|                                 | High school diploma            | 355                            | 51                              | 1207                          | 53                             |
|                                 | Attained GED                    | 27                             | 4                               | 86                            | 4                              |

Note. Data extracted with permission from calendar year 2003 and 2004 BASH electronic database administered by the Mississippi Department of Employment Security.

Note. Tallied results of race category indicated that some clients entered more than one ethnicity.

For those 695 clients who enrolled in National Emergency Grant services, 508 (73 percent) were females as opposed to only 45 percent (N = 1,208) of the WIN Center...
clients. The two-proportion confidence interval and test procedures were used to make inferences about the difference between the two population proportions (Minitab, 2005). Three out of four (N=508) National Emergency Grant clients were female while less than half of WIN Center clients were female. The difference between National Emergency Grant females was 28 percent greater than the population of WIN Center clients. This increase is significant between the range of 24 and 32 percent (p < .000), which indicates the potential for relevant influences on research results. Likewise, the percent of males is significantly less for the National Emergency Grant clients (p < .000).

Sixty-five percent (N=453) of National Emergency Grant clients served were identified as blacks compared to 51 percent (N=1,175) of WIN Center clients. The difference between 65 percent and 51 percent equated to 13 percent more National Emergency Grant black clients than WIN Center clients. This increase is significant between the range of 9.7 percent and 17.9 percent (p < .000). Likewise, the percent of whites is significantly less for the National Emergency Grant clients (p < .000) between 10.5 and 18.6 percent. The actual difference between the two populations’ percentages of whites was observed at 14.5 percent. The race category of "other" indicated no significant difference between the National Emergency Grant and WIN Center clients, with only two percent of each population falling in this category. The ratio of black to white clients could have an influence on research results.

A greater percentage of adults ages forty-five and older was reflected in the National Emergency Grant clients than in the WIN Center clients, 39 percent (N=269) to 26 percent (N=589), respectively. The difference of 13 percent is significant between 8.9 percent and 17 percent (p < .000). The older adult population of the National Emergency
Grant could have an effect on conclusions concerning the research variables recovered wages, unemployment duration, and educational attainment.

Among the education categories, the number of adults who lacked a high school diploma or G.E.D. was 22 percent (N=151) of the grant clients and 17 percent (N=394) of the WIN Center clients. The percentage difference of 5 percent between the two groups was statistically significant between the 95 percent confidence interval of 1.1 and 7.9 percent (p < .010). This indicates that a greater number of National Emergency Grant clients without a high school diploma or G.E.D. could have an effect on the research variables. Completion of education beyond high school was indicated by 23 percent (N=162) of National Emergency Grant clients and 26 percent (N=599) of WIN Center clients. The between-group difference of three percent was not significant (p < .118). At least half of the clients in both groups earned a high school diploma, as indicated by 51 percent (N=355) of National Emergency Grant clients and 53 percent (N=1,207) of WIN Center clients. This two percent difference is significant between the 95 percent confidence interval of -6 and 2.5 percent (p < .043), which means there is no influence of the category of high school graduates on the research variables. Those who held a G.E.D. at the time of enrollment in services were 27 (4 percent) for grant clients and 86 (4 percent) for WIN Center clients indicating no significant difference in G.E.D. percentages between the two groups (p < .883).

Comparison of Recovered Wages

The first research hypotheses states a significant difference exists on recovered wages between Clarke County National Emergency Grant services and WIN Center services. Is there a difference between the means of the National Emergency Grant
clients and the WIN Center clients? A difference between means must distinguish itself as either a real difference or merely a consequence of many relatively small differences that could have arisen by chance (Kerlinger and Lee, 2000). To answer this question, a grand total of all wages earned prior to program enrollment was compared to the grand total of all wages earned after exiting the program.

An initial calculation was made in the grand total of all wages earned during a period of nine months before versus nine months after National Emergency Grant services (see Table 6). The before-service wages for all clients’ combined wages were only 48 percent of the wages earned after receiving National Emergency Grant services. For WIN Center clients, the cumulative wages earned before receiving reemployment services were nearly the same as wages earned after clients were exited from services. The before-service wages for WIN Center clients were 97 percent of those earned wages after exiting from services (see Table 6).

Table 6

<table>
<thead>
<tr>
<th></th>
<th>National Emergency Grant clients</th>
<th>WIN Center clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative wages for 9 months prior to program enrollment</td>
<td>$2,937,311</td>
<td>$21,021,378</td>
</tr>
<tr>
<td>Cumulative wages for 9 months after program exit</td>
<td>$6,078,646</td>
<td>$21,567,764</td>
</tr>
<tr>
<td>Percent earnings before receiving reemployment services</td>
<td>48%</td>
<td>97%</td>
</tr>
</tbody>
</table>

Comparing the percentages between National Emergency Grant clients and WIN Center clients indicated a 49 percent difference. The actual calculated difference of
49.14 percent between the two populations is significant, with a 95 percent confidence between the range of 49.18 and 49.10 percent ($p < .000$), which indicates the wages earned by National Emergency Grant clients recovered a significant percentage of wages compared to WIN Center clients.

**Pre-enrollment wages**

Three additional calculations were made to further examine the significance between population means for the National Emergency Grant and WIN Center clients. The first calculation assessed the difference in population means for individual clients' wages prior to enrolling in grant or reemployment services. Within the region, both groups would have experienced similar economic conditions prior to being laid off from employment. MDES provided gross wage data for each client for the nine-month period of time prior to the client's enrollment in services, and a sample of the gross wages is provided in Table 7. A complete list of recovered wage data is provided in Appendix A for National Emergency Grant clients and Appendix B for WIN Center clients.

National Emergency Grant Client 1 earned no wages in the nine months prior to enrolling, Client 2 earned no wages, and Client 3 earned $3,423 in gross wages and continues through the representative population of the 695 clients. Each client represents an adult displaced from one of the five manufacturing plants eligible for National Emergency Grant services. Client 1 represents the first client record documented in the MDES database, capturing actual wages earned for a period of nine months prior to the date of enrolling in National Emergency Grant services. Table 7 further includes a sample of WIN Center clients in which Client 1 earned no gross wages, Client 2 earned $15,526, and Client 3 earned no wages and continues through the representative
population of 2286 clients. National Emergency Grant clients’ gross wages ranged from $0 to $33,828 earned in three quarters prior to enrolling in services.

Table 7

<table>
<thead>
<tr>
<th>Target audience</th>
<th>Client</th>
<th>Gross wages for 3 quarters prior to enrollment</th>
<th>Gross wages for 3 quarters after program exit</th>
<th>Difference between post-program and pre-program participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Emergency Grant clients</td>
<td>1</td>
<td>0</td>
<td>4703</td>
<td>4703</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3423</td>
<td>11544</td>
<td>8121</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4553</td>
<td>4729</td>
<td>176</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1914</td>
<td>1876</td>
<td>-38</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>0</td>
<td>7943</td>
<td>7943</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>7058</td>
<td>3865</td>
<td>-3193</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>7540</td>
<td>0</td>
<td>-7540</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>0</td>
<td>18274</td>
<td>18274</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>7852</td>
<td>4154</td>
<td>-3698</td>
</tr>
<tr>
<td></td>
<td>695</td>
<td>0</td>
<td>25397</td>
<td>25397</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>7702</td>
<td>7702</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>15526</td>
<td>17666</td>
<td>2140</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>0</td>
<td>7480</td>
<td>7480</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>7419</td>
<td>8374</td>
<td>955</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>66279</td>
<td>144</td>
<td>-66135</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>22272</td>
<td>26928</td>
<td>4656</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>8286</td>
<td>6856</td>
<td>-1430</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>220</td>
<td>7618</td>
<td>7398</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>40197</td>
<td>0</td>
<td>-40197</td>
</tr>
<tr>
<td></td>
<td>695</td>
<td>0</td>
<td>25397</td>
<td>25397</td>
</tr>
<tr>
<td></td>
<td>695</td>
<td>0</td>
<td>25397</td>
<td>25397</td>
</tr>
</tbody>
</table>

For WIN Center clients, gross wages ranged from $0 to $98,596 prior to enrolling in services. This range, or variation, in wages needed further analysis to determine if the variation was significant.
One method of analyzing variation involves the measure of standard deviation.

Table 8 indicates the mean and standard deviation of wages earned before enrolling in services. For NEG clients, the average gross wages earned during a period of nine months prior to enrolling was $4,226 compared to WIN Center client wages of $9,196.

Table 8

*Population Means of Recovered Wages Before Services, After Services, and Difference-Between Before-and-After Services*

<table>
<thead>
<tr>
<th>Timeframe (9 months gross wages)</th>
<th>Group</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before enrolling in services</td>
<td>NEG clients(^a)</td>
<td>$4,226</td>
<td>5313</td>
<td>201.5</td>
</tr>
<tr>
<td></td>
<td>WIN Center clients(^b)</td>
<td>9.196</td>
<td>8778</td>
<td>183.6</td>
</tr>
<tr>
<td>After exiting from services</td>
<td>NEG clients(^a)</td>
<td>$8,746</td>
<td>8014</td>
<td>304.0</td>
</tr>
<tr>
<td></td>
<td>WIN Center clients(^b)</td>
<td>9,435</td>
<td>9386</td>
<td>196.3</td>
</tr>
<tr>
<td>Difference between wages before and wages after services</td>
<td>NEG clients(^a)</td>
<td>$4,520</td>
<td>8665</td>
<td>328.7</td>
</tr>
<tr>
<td></td>
<td>WIN Center clients(^b)</td>
<td>239</td>
<td>10219</td>
<td>213.7</td>
</tr>
</tbody>
</table>

\(^aN=695\)

\(^bN=2296\)

WIN Center clients were making significantly higher wages in the category of *before-program enrollment* than NEG clients, $9,196 versus $4,226. The difference of $4,970 between mean wages is statistically significant between $4,435 and $5,504 (p < .000) (See Table 9).

*Post-program wages*

MDES provided gross wages earned for three quarters (9 months) after each client exited from services for both the National Emergency Grant and the WIN Center populations. As indicated in Table 7, National Emergency Grant Client 1 earned $4,703
in gross wages in the nine months after exiting services, Client 2 earned no wages, and
Client 3 earned $11,544 in gross wages as representative of the 695 clients. After-exit
wages of National Emergency Grant clients ranged from $0 to $69,605. This range in
wages needed to be analyzed to determine if the change was significant between the two
populations. For WIN Center participants, Client 1 earned $7,702 in gross wages after
exiting services, Client 2 earned $17,666, and Client 3 earned $7,480 in wages as
representative of the 2286 clients. The total range of wages earned after exiting services
for the WIN Center clients was $0 to $81,067 for three quarters of time. This range was
compared to National Emergency Grant clients for significance.

National Emergency Grant clients earned, on average, $8,746 gross wages during
the nine months following grant services (see Table 8). WIN Center clients earned, on
average, $9,435 in gross wages following services. The average difference of $688 in
gross wages between the two groups is not significant between the range of -1,398 and 21
(p < .057) (see Table 9).

**Difference in pre- and post-program wages**

The final calculation for wages assessed the difference between pre-program and
post-program wages for each client. The research hypotheses stated a significant
difference exists for recovered wages between Clarke County National Emergency Grant
services and WIN Center services. To answer the research hypothesis that National
Emergency Grant clients earned more wages, the calculation for each client was made to
determine the difference between pre- and post-program wages. According to Table 7,
Client 1 earned no wages prior to enrolling in grant services and received $4,703 gross
wages during the three quarters after exiting from grant services.
Table 9

Two Independent Mean t-test for Recovered Wages

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean difference</th>
<th>Std. error difference</th>
<th>95% Confidence interval of the difference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wages before</strong></td>
<td>-18.2</td>
<td>1922</td>
<td>.000</td>
<td>-4969</td>
<td>272.6</td>
<td>Lower: -5504, Upper: -4435</td>
</tr>
<tr>
<td><strong>Wages after</strong></td>
<td>-1.90</td>
<td>1324</td>
<td>.057</td>
<td>-688</td>
<td>361.9</td>
<td>Lower: -1398, Upper: 21</td>
</tr>
<tr>
<td><strong>Difference in wages before-and-after</strong></td>
<td>10.9</td>
<td>1333</td>
<td>.000</td>
<td>4281</td>
<td>392.0</td>
<td>Lower: 3512, Upper: 5050</td>
</tr>
</tbody>
</table>

*Note.* Levene’s Test for equal variances indicated that variances were not equal for any of the three variables (wages before, wages after, or difference in wages before-and-after). Therefore the t-test for equal variances not assumed was chosen. From “Surviving Your Dissertation: A Comprehensive Guide to Content and Process,” by Kjell Erik Rudestam and Rae R. Newton (2001).

*p<.05.

The difference between pre- and post-grant services was $4,703. The difference was calculated for all 695 National Emergency Grant clients, yielding a mean of $4,520. This indicates that, on average, the National Emergency Grant clients earned $4,520 more after grant services (See Table 8).

Table 7 indicates that Client 1 earned no wages before services, $7,702 after services, and a difference of $7,702. Client 2 earned $2,140 more after exiting from services, and Client 3 earned $7,480 more after services. On average, WIN Center clients earned $239 more after exiting services, as indicated in Table 8. The comparison between National Emergency Grant clients’ wages versus WIN Center clients’ wages was the difference between $4,520 and $239, respectively. This difference of $4,281 is significant between the range of $3,512 and $5,050 (p < .000) (See Table 9).
Results of Unemployment Duration

The second research hypothesis stated there was a significant difference between Clarke County National Emergency Grant services and WIN Center services in decreasing duration of unemployment. Two core measures are central to the U.S. Department of Labor in reporting unemployment duration: *entered employment* and *retained employment*. Entered employment rate is calculated as a percentage of adult employed in the first quarter after exiting services. Retained employment rate is calculated as a percentage of adults still employed in the third quarter after exit among those employed in the first quarter (United States Department of Labor, 2003). These two performance measures were used to compare the efficacy of the NEG services using archival data provided by the Mississippi Department of Employment Security. The first phase of analysis focused on adults employed in the first quarter after exit.

Wage data introduced in Table 7 indicated the dollar amount an adult earned wages in three calendar quarters before enrolling in reemployment services and wages earned in three quarters after exiting from reemployment services. The same wage data for each adult was applied to the research variable of entered employment and retained employment. A sample of the data is shown in Table 10. From the total National Emergency Grant population of 695 clients, 69.8 percent (N=485) were employed in the first quarter after exit.
Table 10

*Sample of Raw Wage Data Evaluated for Unemployment Duration*

<table>
<thead>
<tr>
<th>Target audience</th>
<th>Client</th>
<th>First quarter after program exit</th>
<th>Converted to binary value</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Emergency Grant clients</td>
<td>1</td>
<td>1688</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3848</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1501</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>2329</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>695</td>
<td>7175</td>
<td>1</td>
</tr>
<tr>
<td>WIN Center clients</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>6041</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>5280</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>85</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>8499</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>3242</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2286</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

For each client, wage data was converted from a dollar value to one of two binary numbers: a 1 represented an individual employed in the first quarter after exit and a 0 represented an individual not employed.

The WIN Center client group indicated 1,631 (71.3 percent) of the total population employed in the first quarter after exit. The percentages were evaluated to determine if the proportions between the two populations were significant. A two-proportion statistical test was used to test the difference between proportions. Table 11 summarizes the results of the two-proportion test with a null hypothesis stating the population proportions are equal.
### Table 1

<table>
<thead>
<tr>
<th>Client group</th>
<th>f</th>
<th>Percent employed</th>
<th>Percent not employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEG clients&lt;sup&gt;a&lt;/sup&gt;</td>
<td>485</td>
<td>69.8</td>
<td>30.2</td>
</tr>
<tr>
<td>WIN Center clients&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1631</td>
<td>71.3</td>
<td>28.7</td>
</tr>
</tbody>
</table>

<sup>a</sup>N = 695  
<sup>b</sup>N = 2296

The two-proportion test resulted in a Z-value of -0.79 within a 95 percent confidence interval of -0.054 and 0.023 (p < .430). The p-value is greater than the defined alpha value of .05, resulting in a failure to reject the null hypothesis. There was no significant difference between 69.8 percent (N=485) of NEG clients employed in the first quarter compared to 71.3 percent (N=1,631) of WIN Center clients.

The second performance measure, *retained employment*, was converted from a dollar wage value to a binary number similar to *entered employment*. *Retained employment* goes one step further to evaluate the percentage of adults who were still employed in the third quarter after exiting services. From the 485 National Emergency Grant clients employed in the first quarter after exit, 92.6 percent (N=449) were still employed in the third quarter after exit. Among the 1,631 WIN Center clients employed in the first quarter after exit, 86 percent (N=1,403) were still employed in the third quarter. Table 12 summarizes the percentages of both populations employed in the third quarter, and it indicates the between group difference of 6.6 percent.
Table 12

Two-proportions test for proportion retained employment in third quarter after exit

<table>
<thead>
<tr>
<th>Client group</th>
<th>F</th>
<th>Percent employed</th>
<th>Percent not employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEG clients&lt;sup&gt;a&lt;/sup&gt;</td>
<td>449</td>
<td>92.6</td>
<td>7.4</td>
</tr>
<tr>
<td>WIN Center clients&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1403</td>
<td>86.0</td>
<td>14.0</td>
</tr>
</tbody>
</table>

<sup>a</sup>N = 485

<sup>b</sup>N = 1631

The test of two proportions resulted in a Z-value = 4.47 within a 95% confidence interval of 3.7 and 9.4 (p < .000). The p-value is less than the defined value of .05 resulting in the rejection of the null hypothesis. Therefore, 92.6 percent (N=416) of NEG clients employed in the third quarter is significant compared to the 86 percent (N=1,207) of WIN Center clients.

Results of Educational Gain

The third research hypothesis stated there was a significant difference in increasing the educational gain of National Emergency Grant clients from the general population of adult education students served by JCJC. Grant participants who sought short-term training and education services were evaluated by one of three methods: educational gain, earned General Education Diploma or G.E.D., or earned college degree. These three methods were also available for the comparison group.

Educational Functioning Level

Educational gain is measured as an “educational functioning level” (U.S. Department of Education Office of Vocational and Adult Education [USEDVAE], 2001). EFL measurement method involves an ordinal data set to be compared for statistical significance between the NEG participants and the WIN Center clients. A sample of the
data set extracted from the State Board for Community and Junior College database for Adult Education is provided in Table 13.

Table 13

Sample of Raw Data Evaluated for Educational Functioning Level

<table>
<thead>
<tr>
<th>NEG population(^a)</th>
<th>Non-NEG population(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning skill level</td>
<td>Ending skill level</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

\(^aN = 125\)

\(^bN = 2420\)

There are six educational functioning levels (EFL), categorized as numeric numbers one through five. Each level roughly equates to two grade levels, with one representing the lowest functioning level and five representing the highest functioning level. Each line item in Table 13 represents the beginning skill level, the ending skill level, and the number of levels increased during services. For the National Emergency Grant clients, the first participant initially scored on a Level 2 and concluded services on a functioning Level 3. The gain in skill level was 1 categorical step increase. The beginning level for the first non-National Emergency Grant client record was a Level 4 and made two incremental step increases in the final assessment at Level 6. Functioning levels for the National Emergency Grant participants were compared to the JCJC Adult
Education population to determine if a significant difference was made for the grant clients. Individual scores were tallied according to the appropriate categories, and each level was calculated into a percentage of adults who achieved an increase in skill level from 0, meaning no increase in skills occurred, to 5, meaning the highest level of increase occurred (see Table 14).

Eighteen percent (N=125) of National Emergency Grant clients sought adult education services of the total population of 695. As shown in Table 14, approximately one-half (49.6 percent) of National Emergency Grant clients did not increase any skill levels. For the JCJC Adult Education population, 1,471 of the total 2,420 assessed showed no gain in skill level, representing 60.8 percent of the population.

A gain of one skill level was achieved by 26.4 percent (N=33) of National Emergency Grant clients versus 20.9 percent (N=506) for Adult Education clients. Two levels of skill increase was achieved for 20.0 percent (N=25) of National Emergency Grant clients and 14.0 percent (N=340) for Adult Education clients. Three levels of skill increase were achieved for 4 percent (N=5) of grant clients and for 3.6 percent (N=87) of Adult Education clients. The difference between the two populations was analyzed using the Mann-Whitney U test to determine if the National Emergency Grant made a significant difference in educational attainment compared to the Adult Education population.

The Mann-Whitney U test was chosen because it evaluates the locations of one set of scores relative to the locations of the other set of scores. If the U value is not significant, then the rankings of one set of scores are similar to the rankings of the other set of scores.
<table>
<thead>
<tr>
<th>Increase in skill level</th>
<th>f</th>
<th>NEG clients(^a)</th>
<th>WIN Center clients(^b)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>f</td>
<td>62</td>
<td>1471</td>
<td>1533</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td>49.6%</td>
<td>60.8%</td>
<td>60.2%</td>
</tr>
<tr>
<td>Std. Residual</td>
<td></td>
<td>-1.5</td>
<td>.3</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>f</td>
<td>33</td>
<td>506</td>
<td>539</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td>26.4%</td>
<td>20.9%</td>
<td>21.2%</td>
</tr>
<tr>
<td>Std. Residual</td>
<td></td>
<td>1.3</td>
<td>-.3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>f</td>
<td>25</td>
<td>340</td>
<td>365</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td>20.0%</td>
<td>14.0%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Std. Residual</td>
<td></td>
<td>1.7</td>
<td>-.4</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>f</td>
<td>5</td>
<td>87</td>
<td>92</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td>4.0%</td>
<td>3.6%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Std. Residual</td>
<td></td>
<td>.2</td>
<td>-.1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>f</td>
<td>0</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td>0%</td>
<td>.5%</td>
<td>.5%</td>
</tr>
<tr>
<td>Std. Residual</td>
<td></td>
<td>-.8</td>
<td>.2</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>f</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td>0%</td>
<td>.2%</td>
<td>.2%</td>
</tr>
<tr>
<td>Std. Residual</td>
<td></td>
<td>-.4</td>
<td>.1</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)N = 125  
\(^b\)N = 2420

A Z score of zero indicates that the two distributions are identical. The Mann-Whitney U test was calculated for the two populations and resulted in a Z-score of -2.380 (p < .017). This p-value is less than the criterion value of .05 and is indicative of a
significant difference in educational attainment between the two populations. The mean rank score (MR=1407) for NEG clients is greater than the mean rank score (MR=1266) of WIN Center clients, indicating the NEG clients' scores that overall the National Emergency Grant clients achieved more levels of education than the WIN Center clients.

*College Degree Completed*

The second educational measure was a statistical proportions test comparing the percent of National Emergency Grant clients who completed college-level degrees to the percent of Adult Education students who completed college-level degrees. The null hypothesis for this assessment represented no difference between the two populations of students with p-value < .05. The alternative hypothesis stated a significant difference existed between the two groups. One hundred twenty-five National Emergency Grant clients enrolled in Adult Education classes, among which 26 (20.8 percent) chose to enroll in college courses. Only 4 clients of the 26 (15.4 percent) graduated with degrees. A total of 2,420 adults enrolled in JCJC Adult Education during the timeframe of the grant. Of these adults, 452 chose to enroll in college courses, with 17.9 percent (N=81) graduating with degrees.

The difference of 2.5 percent between the 15.4 percent (N=26) of National Emergency Grant college graduates versus 17.9 percent (N=81) of Adult Education college graduates was evaluated to determine if the difference was significant. With only four clients completing college degrees in the National Emergency Grant population, the quantity was too small to sufficiently calculate the statistical significance.
G.E.D. Completed

The final educational assessment was to determine the proportion of adults who successfully completed the GED exam. The null hypothesis stated no difference existed between National Emergency Grant clients and the Adult Education students. The alternative hypothesis stated a significant difference existed. Again, the grant population was 125 students, and the total Adult Education population was 2,420 students. A total of 425 adults (17.6 percent) of Adult Education students passed the GED exam while the National Emergency Grant clients experienced 23 completers (18.1 percent). The difference of .5 percent between National Emergency Grant percentage and the Adult Education percentage was not significant within the 95% confidence interval of -6.6 percent and 7.8 percent (p < .886), thus failing to reject the null hypothesis.

Results of Customer Satisfaction

The U.S. Department of Labor's adoption of a goal to help improve the quality of their program services and to increase their customers' satisfaction led to use of the American Customer Satisfaction Index developed by the Stephen M. Ross School of Business (U.S. Department of Labor Employment and Training Administration, 2001). The state of Mississippi conducted the survey in program years 2002 and 2003, but discontinued the survey in 2004. The survey was administered randomly by phone to households throughout the state. Of critical importance to the administration of the ACSI is the time frame for conducting the telephone survey. Specific instructions require surveys to be conducted within sixty to ninety days after participants exit services (U.S. Department of Labor Employment and Training Administration, 2001).
Results from Mississippi’s 2003 Customer Satisfaction Survey provided the only known source of objective information for customer satisfaction for the National Emergency Grant. Grant clients were surveyed as part of the larger population of displaced workers for south central Mississippi for the Twin District’s Workforce Investment Area (Parisi, Gill, Grice, & Beaulieu, 2002; U.S. Department of Labor, Employment & Training Administration, 2004c). Although the limitations of this report prevents the researcher from extracting specific NEG results, it is useful in providing a reflection of customer satisfaction for the Twin District’s Workforce Investment Region among which included the targeted region. Table 15 summarizes the results of the 2003 survey.

Table 15

<table>
<thead>
<tr>
<th>Workforce Investment Area</th>
<th>Overall satisfaction</th>
<th>Met expectations</th>
<th>Compared with ideal</th>
<th>Weighted index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hinds County</td>
<td>7.7</td>
<td>7.5</td>
<td>7.7</td>
<td>73.4</td>
</tr>
<tr>
<td>Delta</td>
<td>7.8</td>
<td>7.6</td>
<td>7.5</td>
<td>73.6</td>
</tr>
<tr>
<td>Gulf Coast</td>
<td>7.9</td>
<td>7.9</td>
<td>7.9</td>
<td>76.5</td>
</tr>
<tr>
<td>Southcentral</td>
<td>7.4</td>
<td>7.2</td>
<td>7.2</td>
<td>70.0</td>
</tr>
<tr>
<td>MS Partnership</td>
<td>7.7</td>
<td>7.5</td>
<td>7.5</td>
<td>73.0</td>
</tr>
<tr>
<td>Twin Districts</td>
<td>7.0</td>
<td>6.8</td>
<td>6.9</td>
<td>65.7</td>
</tr>
<tr>
<td>State average</td>
<td>7.4</td>
<td>7.3</td>
<td>7.3</td>
<td>70.3</td>
</tr>
</tbody>
</table>

The state’s average score was 70.3, while the Twin Districts region scored the lowest of all regions with a score of 65.7 (Parisi, Gill, Grice, & Beaulieu, 2003). The lower-than-average score for Twin Districts is representative of nineteen counties in south-central Mississippi including the NEG region.
Evidence of the three research hypotheses were tested to determine if the National Emergency Grant had a significant impact on displaced workers in rural Mississippi. The grant was intended to help displaced workers rebound into employment as quickly as possible at wages equal to or higher than those lost. Chapter 5 will summarize findings and offer discussion for further studies.
CHAPTER V
SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary

National Emergency Grants account for hundreds of millions of dollars in annual federal aid to adults who become displaced due to extreme economic circumstances like manufacturing plant closures and natural disasters. This quantitative study using historical data evaluated the efficacy of a National Emergency Grant in transitioning displaced workers back into the workforce using a case study from rural, south central Mississippi. A culmination of five manufacturing plant closures occurred between late 2000 and early 2003 in Clarke County, Mississippi, and sent unemployment rates skyrocketing to more than double the state and national averages. The National Emergency Grant awarded for this area intensified services to displaced workers in an attempt to quickly rebound employment and recover the employment base.

National Emergency Grants awarded by the U.S. Department of Labor are not currently tracked independently from other displaced worker performance measures. Three performance measures served as the focal point for this study: recovered wages, unemployment duration and educational gain. A fourth measure, customer satisfaction, provided qualitative information concerning displaced workers' perceptions of services. This research established a baseline for isolating the impact of National Emergency Grants independently from the general population of displaced workers in rural south central Mississippi in order for these specialized services to be continually refined and improved. It is the recommendation of this researcher that National Emergency Grants
be tracked independently from other displaced worker services given the significant
investment in federal funding and resources allocated to them.

Since displaced workers had pre-existing services available to them through
traditional reemployment services, greater insight was needed to determine the efficacy
of a National Emergency Grant like the one operated in Clarke County, Mississippi. This
research sought to determine if the Clarke County National Emergency Grant offered
additional benefits in helping displaced workers rebound. The Clarke County National
Emergency Grant targeted services intended to target career paths for displaced workers
that offered wages equal to or higher than wages paid for previous work. The services
also sought to help displaced workers rebound as quickly as possible into new jobs. This
empirical study focused on a specific scenario that demonstrated the results of public
dollars invested to contribute to the knowledge base of public sector accountability.

The quantitative characteristics evaluated were recovered wages, unemployment
duration, and educational gain. The null hypothesis stated that National Emergency
Grant services made no significant difference in rural Mississippi as compared to
traditional reemployment services offered to displaced workers. Three research
hypotheses offered alternative predictions:

H_1: There was a significant difference between Clarke County National Emergency

Grant services on the recovered wage and WIN (Workforce Investment Network)

Center services.

H_2: There was a significant difference between Clarke County National Emergency

Grant services and WIN Center services in decreasing duration of unemployment.
H3: There was a significant difference between Clarke County National Emergency
Grant services and Jones County Junior College Adult Education services in
increasing the educational gain.

A fourth qualitative characteristic, customer satisfaction, was evaluated in relation to
former customer satisfaction surveys conducted for the geographic area of the target
audience. This qualitative evaluation provided a more in-depth review of adults' percep-
tions of services offered by the National Emergency Grant. Traditional measures
of reporting grant activities included locally-defined measures such as number of people
served, number of services offered, or number of events held. Such accountability
methods failed to reflect the impact of services specifically tied to core performance
measures defined by the U.S. Department of Labor. Public sector funding is tied directly
to accountability for how well expenditures meet their intended use (Government
Performance and Results Act, 1993). Continual improvement in the methodology of
reporting grants can enhance the delivery of services and assist displaced workers in
rebounding into new jobs.

Although Congress declared in 1992 that services provided to adults through the
U.S. Department of Labor were considered investments in the human capital
infrastructure of the nation and specifically not as an expense, public expenditures
deserve to know if state and federal programs achieve their intended outcomes. National
Emergency Grants measure the success of the grant based on program outcomes, such as
number of workshops conducted, number of clients served, and number of services
provided. According to these program outcomes, the Clarke County National Emergency
Grant achieved its goals.
This research project evaluated the Clarke County grant using the U.S.
Department of Labor’s performance measures for individuals being served—recovered
wages, duration of unemployment, and educational gain. Using these performance
measures, the Clarke County National Emergency Grant failed to achieve substantial
results to justify the $3.2 million investment. A review of each research hypothesis will
offer an explanation of results and recommendations for improvements in administration
of National Emergency Grants.

Results

Conclusion for Recovered Wages

The first research hypothesis stated a significant difference existed on recovered
wages between Clarke County National Emergency Grant services and WIN Center
services. The broad evaluation of total wages earned prior to enrolling in reemployment
services as opposed to wages earned after exiting from reemployment services led to the
initial acceptance of the hypothesis. The Clarke County National Emergency Grant
services appeared to more significantly improve the recovered wages of displaced
workers than the WIN Center services. The initial evaluation of National Emergency
Grant clients compared to WIN Center clients revealed disproportionate percentages of
recovered wages, 207 percent and 103 percent respectively. A similar annual report
published by the U.S. Department of Labor indicated 2003 recovered wages for displaced
workers were 90.6 percent of previous wages (U.S. Department of Labor Employment
and Training Administration, 2004). For Mississippi, the state reported the wage
replacement rate in 2003 as 96.9 percent of previous wages. The disproportionate results
indicated from archival wage records led to further examination of the wage data.

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Three additional wage hypotheses were analyzed to further examine the likelihood that National Emergency Grant services resulted in a significant difference in recovered wages compared to WIN Center services. The more in-depth analysis sought to determine if wages for displaced workers were similar between the two groups before enrolling in services. The hypothesis stated that no difference existed in wages. Statistical analysis, however, revealed a significant difference existed between the two populations prior to enrolling in services. National Emergency Grant clients' mean wages were $4,226 as opposed to WIN Center clients' mean wages of $9,126. This difference could have influenced the results of the study because a main assumption for the research assumed that both populations' mean wages were equal prior to enrolling in reemployment services.

The second wage hypothesis stated no difference existed in average wages after exiting from reemployment services between the National Emergency Grant clients and WIN Center clients. Results of the analysis failed to reject the hypothesis, affirming that no significant difference existed in wages after exiting reemployment services. This result implies that both groups earned approximately the same wages after exiting from reemployment services regardless of whether they received National Emergency Grant services or traditional reemployment services.

The final wage hypothesis stated no difference existed between the National Emergency Grant clients and WIN Center clients when evaluating the change in individuals' wages. The analysis revealed a significant difference between the two populations existed. This difference implies that National Emergency Grant clients experienced a greater percentage of recovered wages after receiving reemployment
services. It is unclear if the additional services offered by the National Emergency Grant were directly responsible for the rebounded wage recovery. Further research is needed to isolate reasons for differences in wages between the two populations.

Although the National Emergency Grant appeared to have rebounded wages for displaced workers, no significant difference occurred in the post-exit wages. Generalizing the impact of this research to U.S. Department of Labor performance measures is limited to a narrow window of time because of a recent change in the operational definition of recovered wages. A 2006 General Accounting Office identified changes in the common performance measures (U.S. General Accounting Office, 2006). The past measure calculated earnings in the second and third quarters after exit divided by the earnings in the second and third quarters prior to dislocation. The new definition called average earnings sought to increase the comparability of outcome information throughout the U.S. and make it easier for agencies to collect results (U.S. General Accounting Office, 2006). The operational definition for average earnings is the total earnings in the second and third quarters after exit divided by the number of exiting participants. Future National Emergency Grant research must consider the most current operational definition of core performance measures at the time of the grant services. Other studies conducted on the long-term effects of job displacement also revealed average earnings to be less in the year after job loss (Farber, 2005; Jacobson, Lalonde, and Sullivan, 2005; Stevens, 1995).

Conclusion for Duration of Unemployment

This research adopted the U.S. Department of Labor core performance measures for duration of unemployment tracked from Unemployment Insurance archival records:
entered employment and employment retention. The percentage of adults employed in the first quarter after exiting participation in WIA services is referred to as entered employment while employment retention represents the percentage of those same adults still employed in the third quarter after exit (U.S. Department of Labor Employment and Training Administration, 2000). Measuring unemployment duration with these two core measures allowed the research to remain consistent with Labor's goal of increasing the employment, retention, and earnings replacement of individuals registered under the WIA dislocated worker program (U.S. Department of Labor, 2003). Labor defines the percentage of adults still employed during the third quarter after exit as employment retention (U.S. Department of Labor Employment and Training Administration, 2000).

This non-experimental archival study extracted Unemployment Insurance wage records and compared the National Emergency Grant clients to other displaced workers in the same region.

Entered employment was compared between National Emergency Grant clients and WIN Center clients. The results indicated a slim margin of only 1.5 percent more WIN Center clients employed in the first quarter than National Emergency Grant clients, and thus no significant difference existed between the two groups. Additional research is therefore needed to establish associations between specific grant services most likely to have impacted the percentage of adults working in the first quarter after exit. The U.S. Department of Labor Employment and Training Administration reported Mississippi's statewide percentage entered employment to be 76.6 percent for 2004, whereas this research indicated National Emergency Grant clients and WIN Center clients averaged,
69.8 percent and 71.3 percent respectively (U.S. Department of Labor Employment and Training Administration, 2004c).

Contrasting the two groups with the statewide average expounds the likelihood of external influences negatively impacting the region in south central Mississippi during 2002-2004. The grant guidelines allowed flexible decisions for administrators. The legislative guidelines allowed customer support services to be administered to a greater extent than the Clarke County grant administrators chose to permit. Such services could have offset the cost of employment relocation, reimbursed personal attire needed for job interviews, and direct reemployment expenses pre-approved by the grant director (Workforce Investment Act, 1998). Further research for National Emergency Grants should expand on the degree to which customer support services impact core measures like entered employment.

A second measure for unemployment duration was extracted from the population of adults employed in the first quarter to evaluate the percentage retained employment in the third quarter after exit. In the third quarter, 92.6 percent of National Emergency Grant clients were still employed compared to 86 percent of WIN Center clients. This difference of 6.2 percent is a substantial increase for the National Emergency Grant clients. The 2004 statewide average for Mississippi was 87 percent (United States Department of Labor Employment and Training Administration, 2004). Further research may offer explanation for specific grant services, such as training services or peer support services, having the greatest effect on employment retention.

The operational definition of retention rate was changed in 2006 by the U.S. Department of Labor (U.S. General Accounting Office, 2006). The old definition only
considered adults still employed in the third quarter after exit. However, the new
definition considers in its calculation the percentage in both the second and third quarters
after exit (U.S. General Accounting Office, 2006). Revisions in core measures are not
uncommon to federal agencies and therefore must be appropriately reflected in future
research.

Future National Emergency Grant research may offer greater insight regarding the
number of weeks unemployed and the likelihood of reemployment as a performance
indicator of unemployment duration. Unemployment duration is sometimes measured by
the U.S. Department of Labor as the number of weeks an individual remains unemployed
(Valletta, 2002). Displaced workers from both populations were eligible to receive
unemployment insurance compensation income support for 26 weeks after being
terminated from employment (Trade Act, 2002).

National Emergency Grant clients were eligible to receive additional financial
support up to a maximum of 104 weeks if they were enrolled in training. The extreme
difference between financial allowances of unemployment insurance compensation could
have potentially skewed the expected number of weeks unemployed for this study. For
this reason, this study did not measure duration of unemployment in terms of weeks
unemployed. Unemployment Insurance is intended to reduce hardship by providing labor
force members with partial wage replacement during periods of involuntary
unemployment (O'Leary, Speigelman, & Kline, 1993). However, Unemployment
Insurance may prolong spells of unemployment.

Evidence from a field experiment conducted in Illinois in 1984 suggested that
offering unemployment insurance claimants a modest cash bonus for rapid reemployment
would increase the speed of return to work and reduce program costs (O’Leary, Speigelman, & Kline, 1993). Future National Emergency Grants may offer cash bonuses for rapid reemployment and decrease the duration of unemployment for displaced workers. Careful design of program evaluation for reemployment bonuses will be needed to aid in determining the most cost effective means of providing services while minimizing costs.

Conclusion for Educational Attainment

This study sought to determine if National Emergency Grant services significantly impact educational attainment for displaced workers as compared to adult education students served by Jones County Junior College. Both populations were tested before and after educational services were administered. Appendix C contains individual records for National Emergency Grant clients who participated in adult education services. Appendix D contains all records of adult education students served by the college. The evaluation of post-test scores revealed that the services offered to National Emergency Grant clients had a greater positive impact than services offered to WIN Center clients from the same region. The null hypothesis stated there was no difference between the National Emergency Grant clients and the JCJC Adult Education students. The null hypothesis was rejected.

The National Emergency Grant clients received customer support services in the form of gas cards to offset the cost of transportation to and from class. They also were offered reimbursement for successful completion of national exams such as the G.E.D. exam. Customized classes were taught for clients, including welding, how to start a business, computer software applications, and nurse aid training. Those classes were
taught at no expense to the student and addressed job requirements in the region. The combination of supportive services and customized classes could have contributed to this noteworthy difference in the grant performance results.

These results align with previous research results which contend that an estimated one in three job applicants lacks the basic skills necessary to perform the jobs sought in 2000 (Lynch, 2005). The Community College Research Center reports that adults who receive at least one additional year of post-secondary education are more likely to earn a higher wage than for those who have only a high school diploma (Bailey, Kienzl, and Marcotte, 2004). The State of Mississippi estimates that annual income increases with educational attainment from an average of $15,600 for a person with no high school diploma, $22,500 for a person with a high school diploma, $30,500 for a person with a community college degree, and $40,400 for a four-year college graduate (Public Education Forum of Mississippi and Mississippi Economic Council, 2003). Increasing the educational level of National Emergency Grant clients prepared them for better job opportunities.

The goal of the education and training component of the National Emergency Grant was to help individuals achieve higher levels of educational attainment. The partners of the Workforce Investment Network of Mississippi universally accepted performance measures for educational attainment. The first performance measure is educational gain and is measured as an educational functioning level (U.S. Department of Education Office of Vocational and Adult Education [USEDVAE], 2001). Six educational functioning levels (EFL) divide progressive steps among the spectrum of learning objectives, and each level roughly equates to two grade levels. The U.S.
Department of Labor recognizes as a core performance measure the “attainment of recognized credential relating to achievement of educational skills” (United States Department of Labor Employment and Training Administration, 2000).

This research project did not seek to isolate the effect of higher education levels on wage increases. While this is an important issue, the restrictions of access to data prevented the researcher from directly associating wage data with educational data. Empirical research differs greatly on the effects of education on wages for displaced worker populations (Bailey, Kienzl, & Marcotte, 2004; Knapp & Harms, 2002; Public Education Forum of Mississippi and Mississippi Economic Council, 2003; Stern, Root, & Hills, n.d.).

Conclusion for Customer Satisfaction

The Emotional Roller Coaster model was developed to better understand the dynamics of unemployment and its effects on people and their families (Amundson and Borgen, 1982). The model graphically described the emotional highs and lows that individuals experience prior to, during, and after becoming unemployed. The National Emergency Grant administrative staff employed Peer Support Workers to help support displaced workers and help them build confidence to overcome extreme highs and lows associated with the loss of their job (Dupre, Campbell, & Sumner, 2002).

Results from Mississippi’s 2003 Customer Satisfaction Survey provided the only known source of objective information for customer satisfaction for the National Emergency Grant. Although the limitations of the 2003 report prevent the researcher from extracting specific National Emergency Grant results, the report offers useful insight for customer satisfaction for the Twin District’s Workforce Investment Region,
among which included the targeted region. The state’s average score was 70.3, while the Twin Districts region scored the lowest customer satisfaction rating of all regions with a score of 65.7 (Parisi, Gill, Grice, & Beaulieu, 2003). The Twin Districts’ region represents nineteen counties in south central Mississippi, including the National Emergency Grant region. Proportionally, all WIN Job Centers in the Twin Districts region reflected the need for significant improvement.

For future National Emergency Grant research, the customer satisfaction index needs to be conducted sixty to ninety days following exit of services as outlined in the ACSI guidelines. This index will offer a reflection of customers’ perceptions and help tie the Emotional Roller Coaster model to reportable performance measures. The Clarke County National Emergency Grant was not required to conduct a customer satisfaction survey. The administrative staff was required only to report the number of people served, the number of services offered, or the number of events conducted. Such accountability methods failed to reflect the impact of services for the individuals receiving services, particularly relating to emotional needs. In the case of Clarke County, the researcher desired to capture data more reflective individual outcomes using archival data. The intent, therefore, was to integrate the results into the body of knowledge for public sector accountability for National Emergency Grants.

Recommendations

Recommendations for practice and future research are presented based upon the researcher’s experience from this empirical study of the National Emergency Grant for Clarke County, Mississippi. These recommendations offer assistance to National
Emergency Grant practitioners and policymakers in maximizing services offered by such grants.

Recommendations for Practice

Tailor National Emergency Grant services to demographic characteristics of displaced workers. The Clarke County National Emergency Grant did not customize services for unique demographic attributes of the eligible displaced workers. However, previous research from multiple studies indicates that workers with the longest tenure on the job from which they were displaced suffered the greatest subsequent wage loss (Leigh, 1995). Grouping displaced workers into similar demographics support groups may help build on the concept of social capital theory. The basic premise of social capital is that a person's family, friends, and associates constitute an important asset that enables them to network and act collectively (Woolcock & Narayan, 2000). Hosting group meetings and networking opportunities may offer greater insights for customized services for future grant administrators.

A structure of social support services was not customized for Clarke County National Emergency Grant clients. Yet previous studies indicate universal patterns in all countries examined in Peter J. Kuhn's study in which older workers fare worse than younger workers after displacement from jobs (2002). In all countries studied by Kuhn, men are more likely to be displaced than women. This reflects a historical tendency for men to work in industries sensitive to cycles, such as manufacturing and construction. Social capital networks are an important contributor to how services should be structured to deliver valuable labor market information to individuals and communities with limited access information (Aguilera, 2002). National Emergency Grant staff for future grants
should, at a minimum, be trained to understand how to demonstrate sensitivity toward unique characteristics of demographic groups of displaced workers.

The demographic characteristics of the Clarke County National Emergency Grant clients revealed a disproportionately greater number of black females than the WIN Center clients. The potential influence on this demographic inconsistency may confound results of the study. Women earn on the average seventy cents to every dollar earned by men (Gray & Herr, 1998). Women are just as likely to experience some joblessness as men but transition into employment less quickly (Kuhn, 2002). For blacks, yearly earnings tend to lag behind whites (Gray & Herr, 1998). For these reasons, National Emergency Grant services should identify its demographics populations and tailor services to categories of workers at greatest risk.

**Align National Emergency Grant performance measures to displaced worker performance measures rather than program performance measures.** The efficiency and effectiveness of the Clarke County National Emergency Grants was tracked according to the most basic levels of program evaluation: the number of people served, the number of services offered, and the number of events sponsored. These outcomes, while useful in describing activities associated with the grant, lacked performance measures directly reflecting the needs of the people they served. To this extent, National Emergency Grant administrators should be encouraged to measure more in-depth performance outcomes.

The purpose for conducting performance outcomes ties directly back to public sector accountability models. A sense of intensified public scrutiny exists among federal agencies regarding the efficient use of public dollars, and stewards of federal and state
Grants are increasingly evaluating training and development programs for results of their efforts (Phillips, 1997). This empirical study focused on a specific scenario that demonstrated the results of public dollars invested to contribute to the knowledge base of public sector accountability models. For National Emergency Grants, administrators should be encouraged to measure recovered wages, entered employment, retained employment, educational attainment, and customer satisfaction. These adult-focused performance measures are not a current requirement for the U.S. Department of Labor. As a result, program goals do not necessarily focus heavily on these outcome measures.

**Maximize National Emergency Grant services specifically identified as customer support services.** Displaced workers are faced with a loss of income if they are unable to find new employment quickly. Customer support services for the Clarke County National Emergency Grant provided financial assistance through three methods: transportation assistance in the form of gas cards for adults who attended training, supplies purchased for each client required as a part of training for new occupations, and reimbursement expenses for certification exams directly associated with professional credentialing. Other types of financial customer support could have included professional attire required for interviewing for new jobs, relocation assistance, and healthcare tax credits. Further research is needed to determine which additional customer support services could relieve displaced workers of financial and emotional stress while they search for employment.

**Educate employers to the cost of worker displacement.** Previous research encourages companies experiencing a plant closure to offer outplacement services to their workers to minimize costs of the closure. Investing in outplacement services allows
companies to significantly cut the total costs of a downsizing action by reducing overlooked costs such as Unemployment Insurance and litigation (Challenger, 2005).

Preemptive action providing workers assistance, not only after they have been laid off but also whenever they feel their job may be at risk, helps minimize job relocation costs for the company and the worker (Sperling, 2005).

The Clarke County National Emergency Grant did not exist at the time of the first four manufacturing plant closures. The grant was approved and was offering services at the time of the fifth plant closure. The National Emergency Grant staff was allowed to conduct in-depth employment interviews for the employees of the fifth plant and thus was able to offer earlier reemployment counseling and training services. As a result of the lessons learned from the National Emergency Grant, the Twin Districts Workforce Investment Area advisory board chose to permanently employ at each WIN Job Center an education counselor to better assess and advise adults who were displaced from employment. The counselor offers companies advice on minimizing cost of worker displacement by encouraging them to allow counseling services prior to actual employee terminations.

Automate the application process for National Emergency Grants to decrease approval and implementation time frames. The U.S. General Accounting Office (2004) suggests a more systematic response from the U.S. Department of Labor in reducing the response time from its 2003 average of 92 days to its goal of less than 30 days. For displaced workers who suffer uncertain futures, this timing is critical as they cannot afford for federal and state governments to delay responses to their needs. The U.S. Department of Labor Bureau of Labor Statistics publishes national trends for

The longer displaced workers are unemployed, the more difficulty they have in getting a job (Hurst & Shepard, 1986). The Emotional Roller Coaster model also encapsulated the frustrations, dampened hope, and low self-esteem that adults experience when their job searches extend for long periods of time (Hurst & Shepard, 1986). The longer individuals are unemployed, the greater the chance of emotional frustration and eventual apathy toward the job market (Hurst & Shepard, 1986). The application process for National Emergency Grants can be automated based upon pre-defined criteria to allow a more timely response to notifications of mass layoffs.

**Recommendations for Future Research**

**Evaluate impact of newly enacted legislative allowances for National Emergency Grant services.** Legislation is enacted with each new legislative session, attempting to further refine eligibility of services offered by National Emergency Grants to eligible workers who lose their jobs as a result of mass manufacturing layoffs and natural disasters. In 2004, criteria for services were extended to allow a health insurance tax credit. Research is needed to evaluate the effectiveness of recent additions of the health insurance tax credit to determine the impact of the services on displaced workers. National Emergency Grant legislation has become more flexible in offering supportive services for child care assistance and emergency medical assistance. These services need more in-depth analysis to determine which have the most significant impact helping displaced workers rebound into employment.
Evaluate National Emergency Grants enacted by natural disasters. This research project investigated mass job loss resulting from manufacturing layoffs. Further research is needed to determine the efficacy of National Emergency Grant services for displaced workers in geographic areas impacted by a natural disaster. The impact of such research will broaden reemployment literature for displaced workers impacted by events such as floods and hurricanes.

A major difference in disaster-related National Emergency Grants involves the use of funding for temporary public employment assistance. Public service assistance allows displaced workers to seek employment with state and local government projects performing demolition, cleaning, repair, renovation and reconstruction of damaged and destroyed structures, facilities, and lands located within the disaster area (National Emergency Grant, 1999). Disaster-related National Emergency Grants can also authorize services for disaster projects that provide food, clothing, shelter, and other humanitarian assistance for disaster victims.

In Mississippi, Hurricane Katrina devastated the employment opportunities along the Gulf Coast, and the state was awarded a fifty million dollar National Emergency Grant. Most of the funds were targeted toward public service employment compensation to help employees of small town governments get back to work quickly. Public service employment is an optional supportive service not included in the Clarke County National Emergency Grant. Additional research is needed to contribute to the body of knowledge of grant effectiveness for administrators and policymakers of future National Emergency Grant grants.
Investigate reasons for eligible grant recipients choosing not enroll in services. The Clarke County National Emergency Grant enrolled only 695 clients of the eligible 1,910. Common reasons for not enrolling included immediate reemployment in new jobs, retirement, private business startups, and deaths. Each of these reasons suggests the opportunity for further evaluation to better understand how two-thirds of the population fared economically without supportive services.

Evaluate demographic characteristics on recovered wages, unemployment duration, and educational attainment. A third area of further research relates to demographic analyses of National Emergency Grant clients. This research did not seek to isolate the impact of the National Emergency Grant on varying demographic characteristics. The administrators of such grants may purposefully choose to develop customized services targeting specific demographic groups such as older workers. Research data is needed to determine if customized services positively or negatively impact demographic groups more so than traditional services. Having a more in-depth analysis of the impact of a National Emergency Grant on demographic characteristics may allow policymakers and practitioners to maximize the impact of the services.
APPENDIX A

RECOVERED WAGE DATA FOR NATIONAL EMERGENCY GRANT CLIENTS

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## APPENDIX B

### RECOVERED WAGE DATA FOR WIN CENTER CLIENTS

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| 2283          | 5185                             | 6727                     | 1542                                                  |
| 2284          | 33673                            | 19701                    | -13972                                                |
| 2285          | 10015                            | 1190                     | -8825                                                 |
| 2286          | 10264                            | 0                        | -10264                                                |
**APPENDIX C**

**INCREASE IN EDUCATION FUNCTIONING LEVEL FOR NATIONAL EMERGENCY GRANT CLIENTS**

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## APPENDIX D

### INCREASE IN EDUCATION FUNCTIONING LEVEL FOR NON-NATIONAL EMERGENCY GRANT CLIENTS

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through

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| 2415 | 4 | 4 | 25 | 0 |
| 2416 | 5 | 6 | 37 | 1 |
| 2417 | 2 | 2 | 37 | 0 |
| 2418 | 4 | 4 | 10 | 0 |
| 2419 | 4 | 6 | 39 | 2 |
| 2420 | 2 | 2 | 15 | 0 |
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