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JOBS AND SMALL BUSINESSES

Job creation and loss in the federally designated Delta region
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Acknowledgements

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About the Douglas C. Greene Center for Innovation & Entrepreneurship

The **Douglas C. Greene Center for Innovation and Entrepreneurship** at Southeast Missouri State University supports the University's strategic priority to advance the region's economic appeal and strength by leading in the development of an increasingly entrepreneurial economy that inspires and encourages individuals to adopt a culture of creativity, innovation, and entrepreneurship. The Center stimulates entrepreneurial growth and development that improves the quality of lives, communities, and businesses in Southeast Missouri and beyond through the delivery of a nationally-recognized set of academic, co-curricular, and outreach services programs.

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Jobs and Small Businesses

Job creation and loss in the federally designated Delta region: 1992-2009

Executive Summary

Most people believe that the key to economic recovery will come in the form of newly created jobs. Naturally, then, everyone is asking: where will the new jobs come from? This report looks closely at the establishment dynamics that have created and eliminated jobs in the last eighteen years in the 252 counties and parishes served by the Delta Regional Authority. The results underscore the importance of entrepreneurship and small business development in the region.

The economy of the 252 counties and parishes that make up the eight-state, federally designated Delta region continues to suffer, along with the states in the region, through a sluggish economic recovery from the recessions in 2000-01 and 2007-09. This region has faced significant economic challenges in the past, but the impact of the most recent recessions has been markedly troubling and sustained. The considerable loss of jobs and confounding effects of the collapse of the financial and real estate markets has led to extensive losses of local government revenues and personal savings. The comprehensive nature of these events, and the resulting slow recovery, has left many people searching for answers to get the economy back on track and people back to work.

According to the Southern Growth Policies Board, Southern states lost one-and-a-half million jobs from June 2008 to June 2010. According to the 2010 National Establishment Time Series Database (NETS), total employment in the counties and parishes that make up the Delta region, peaked in 2001. The region continued to shed jobs until 2005 when minor job increases were experienced for a couple years. The effects of another national recession, beginning in 2007, however, eliminated a significant number of jobs in 2008 and 2009. Although some job growth has been experienced in recent years, recovery is still sluggish. All the while, little is known about the specific dynamics of establishments that created and eliminated jobs.



Employment statistics are typically used as the leading indicator of the nature of the Delta economy. However, traditional government job counts don't tell us much about the underlying dynamics of job creation. Information on openings and closings, expansions and contractions, and interstate movements by employer "establishments" in the region has not been as readily available – until now.

This report analyzes data from the 2010 National Establishment Time-Series (NETS) database generated from the Dun & Bradstreet Marketing Information file, to assess some of the key trends driving employment. The NETS database utilizes annual "snapshots" taken each January of over 40 million establishments throughout the country. The unique qualities of the NETS database allowed the examination of how jobs have been created and lost in the Delta region in the eighteen-year period of 1992 – 2009.

This report analyzes the three basic elements of job creation:

- new establishment openings,
- existing establishment expansion, and
- relocation of establishments from another state.

It also analyzes the three basic elements of job loss:

- establishment closings,
- establishment contraction, and
- establishment relocation to another state.

NETS data identifies each establishment in one of three sector classifications: Noncommercial, Nonresident, and Resident. According to the Edward Lowe Foundation, resident establishments have more influence on job creation than establishments headquartered outside of the state.¹

1. More information on YourEconomy, a web-based database containing limited NETS data, can be found at <http://youreconomy.org/index.lasso>.



TABLE 1.1
Share of Overall Jobs by Sector in the Delta Region
1992-2009

Sector	1992	Share*	2009	Share*
Noncommercial	785,278	18.9%	910,287	18.6%
Nonresident	966,452	23.3%	958,092	19.6%
Resident	2,393,300	57.8%	3,030,490	61.8%
Total	4,145,030	100.0%	4,898,869	100.0%

Source: 2010 National Establishment Time-Series Database

* Percentage of total jobs.

As indicated in Table 1.1, in the eighteen-year period from 1992-2009, the share of jobs provided by noncommercial establishments in the Delta region declined from 18.9% to 18.6%. The sector created an additional 125,009 jobs, or 16% of the total additional jobs created by all sectors. The share of jobs provided

by non-resident establishments declined significantly from 23.3% in 1992 to 19.6% in 2009. The sector eliminated 8,360 jobs, and was the only sector that did not create additional jobs during the period studied. The share of jobs provided by resident establishments increased from 57.8% in 1992 to 61.8% in 2009. The sector created an additional 637,190 jobs, or 84% of the total additional jobs created by all sectors.

TABLE 1.2
Resident Establishment Dynamics in the Delta Region
Cumulative, 1992-2009

Opening	30.3%	+ 4,034,839
Closing	30.5%	- 4,065,746
Expansion	19.7%	+ 2,622,684
Contraction	14.6%	- 1,943,396
In Relocation	2.4%	+ 322,874
Out Relocation	2.5%	- 331,576
TOTAL		+639,679

In order to better understand the job dynamics of resident establishments in the Delta region, specific sources of job creation and job loss were analyzed. As Table 1.2 illustrates, job creation drivers accounted for 52.4% of the dynamics, while job loss drivers accounted for 47.6%. The result was the creation of 644,517 additional jobs. Establishments opening and closing accounted for over 60% of the dynamics impacting jobs,

followed by those expanding and contracting with over 34%. Establishment relocations had little impact on overall job dynamics accounting for less than 5% of the flux in employment.

The data in this report clearly depict the impact of establishment dynamics on job creation and elimination in the Delta region in the eighteen years from 1992-2009. And, they describe two divergent paths of recovery from the 1990-91 and 2000-01 national recessions that occurred just before and during the period analyzed. The findings of the analysis may provide insights to policymakers leading efforts to continue to recover from the devastating recession during 2007-09.



Establishment Openings and Closings

Establishments that opened and closed accounted for nearly 61% of the total job flux in the region. In the years between 1992 and 2001, the startup of new firms generated 484,443 more jobs than were eliminated by firm closings. During 2001-09, however, establishment closings eliminated 632,500 more jobs than were created by firm openings. During the years following the recession in 2001, startup businesses created an average of nearly four fewer jobs than in the previous ten years, following the recession in 1990-91. While the number of annual startups increased over 62%, the total number of jobs created by these establishments declined nearly 45%. Compounding the impact of smaller startup establishments was the number of firm closings per year which increased 40%.

Establishment Expansions and Contractions

Existing establishments that expanded or contracted accounted for slightly over 34% of the job flux in the region, and all of the additional net jobs – 679,288. In the years between 1992 and 2000, the expansion of existing firms generated 460,546 more jobs than were eliminated by firm contractions. During 2002-09, however, the rate of job creation slowed substantially as expansions accounted for only 218,742 additional jobs. In the years following the recession in 2001, establishment expansions created an average of over two fewer jobs than in the previous eight years, following the recession in 1990-91. While the number of annual expansions increased over nearly 11%, the total number of jobs created by these establishments declined by over 18%. Compounding the impact of smaller existing business expansions was the average number of firm contractions which increased by over 20% per year in the second half of the eighteen-year period.

Establishment Migration

Establishments that relocated into the region from another state, or out of the region into another state, only accounted for slightly less than 5% of the job flux in the region. From 1992 - 2009, a total of 322,874 jobs were created due to firm relocations into one of the counties or parishes in a state in the Delta region. During the same period 331,576 jobs were eliminated by firm relocations to another state. The net impact on employment in the Delta region was a loss of 8,702 jobs.



Establishment Sector and Size

A growing share of the total jobs in the Delta region is being provided by locally-owned or resident establishments. The share of total jobs by resident establishments increased from 57.8% in 1992 to 61.8% in 2009. The share of total jobs provided by nonresident establishments, or those not headquartered in the region, decreased from 23.3% in 1992 to 19.6% in 2009. The share of total jobs provided by noncommercial establishments, made up of various government and nonprofit organizations, decreased slightly from 18.9% in 1992 to 18.6% in 2009.

In fact, resident establishments created 84% of the net additional jobs during the period. The importance of these locally-owned establishments was striking during the difficult economic years following the recession in 2001, when resident establishments created 58,287 additional jobs. During this same period, nonresident establishments eliminated 286,054 jobs and noncommercial establishments eliminated 81,848.

A growing share of the jobs provided by resident employers in the Delta region shifted to small establishments. The portion of total jobs provided in the Delta region by self-employer establishments increased from 2.4% to 8.8%. This represents an increase of over 400% and the addition of 211,913 jobs during the period. The second largest increase was found in Stage 1 establishments, or those with 2-9 employees. These establishments increased from 28.3% in 1992 to 33.0% in 2009, an increase of 320,898 jobs. At the beginning of 2010, establishments with fewer than 9 employees were providing 42% of the total jobs in the Delta region.

Small establishments in the Delta region had a substantial impact on jobs created during the period. The report analyzed the cumulative resident job gains and losses from all sources of establishment dynamics (open/close, expansion/contraction, and in migration/out migration) according to firm size. Establishments with nine or fewer employees were responsible for over 91% of the net job creation since 1992. The remaining 9% of net job gains came from establishments with 10-99 employees. Larger establishments with 100 or more employees eliminated over 216,000 jobs, since 1992.

Closing

The findings in this report clearly suggest that the Delta region has become increasingly dependent upon locally-owned, small businesses to provide jobs. The findings also illustrate that the region did not recover, in terms of job creation, from the recession in 2001 in the same



way it recovered from the 1990-91 recession. The establishment dynamics data utilized in the study suggest that the region has developed an entrepreneurship problem, as startup firms and existing small firm expansions were unable to create more jobs than those being lost by firm closings and contractions, especially by larger firms.

Overall, the findings in the report indicate that:

- The primary dynamics of job flux throughout the eighteen-year period was establishment openings and closings—61%. During 2002-09 the total number of jobs eliminated by establishment closings exceeded jobs created by new firm openings by over 555,308, and the average number of jobs per new establishment fell by nearly four.
- Existing establishment expansions and contractions accounted for 34% of the total job flux, and all of the total net additional jobs—679,000. Job growth related to establishment expansions declined during 2002-09 when the average number of jobs per expansion fell by over two.
- The Delta region is becoming a region of increasingly local, smaller firms. Establishments with 9 or fewer employees provided nearly 42% of all jobs at the beginning of 2010. Since 1992, locally-owned establishments with 9 or fewer employees have created over 91% of net new jobs.
- Despite the investments made to attract establishments from other states, a net loss of over 8,700 jobs resulted from interstate firm relocation. In the difficult years following the 2001 recession, local establishments in the region created over 58,000 new jobs while nonresident and noncommercial establishments eliminated nearly 368,000.

As a result of these findings, the following recommendations are made:

- From 1992-2009 new and existing small businesses with 9 or fewer employees created nearly all of the net new jobs in the Delta region. The focus of public and private stakeholder efforts and incentives in the region should be on creating an infrastructure that systematically increases the number of qualified and inspired entrepreneurs, and accelerating new venture startup and expansion of existing small businesses.



- While the annual number of new establishments created increased throughout the period, the average number of jobs created by each establishment, declined. The entrepreneurial infrastructure needed in the region must support the continued growth of startup business creation, especially those that are technology-based and have potential to create jobs, and the innovation and expansion of existing small businesses.
- As noted in the findings of this report, widely supported firm attraction strategies and investments have produced very few additional jobs in the Delta region. The politics of attempting to attract large numbers of jobs in a single establishment is understandable, but the findings in this report suggest that the use of the limited resources available to support business development should be redirected to efforts that support local innovators, entrepreneurs and small business owners.

Introduction

One must go back to 1945 to find a time when so many jobs had been eliminated so rapidly in the United States. Compared to all prior recessions since the end of World War II, the 2007-09 recession ranks worst in terms of the number of jobs lost (over eight million), and second-worst in the percentage decline (6 percent).² Considering the broadest unemployment measure, U6, overall unemployment reached an extremely high level in mid-2009 —nearly one in five workers—and the number of hours worked per week have steadily decreased.³ Combined with the rapidly falling employment-to-population ratio, the U.S. employment situation resulting from the 2008-09 recession had not looked so bleak in decades.⁴ Compounding this dreary picture, many forecasters see a long and slow recovery from this decline—and, given that the last two employment recoveries were much longer than the postwar average, they could be right.⁵

Most believe that the key to economic recovery will come in the form of newly created jobs. Naturally, then, everyone is asking: where will the new jobs come from?

2. Floyd Norris, "The Jobs News Gets Worse", NEW YORK TIMES, Oct. 3, 2009, at <http://www.nytimes.com/2009/10/04/weekinreview/04norris.html>.

3. The U6 indicator captures the total number of unemployed workers (which is what is usually reported as the standard unemployment figure), plus "all marginally attached workers, plus total employed part time for economic reasons." That is, U6 includes people who have stopped looking for work and those who have had to find part-time work instead. See Bureau of Labor Statistics, "The Employment Situation—September 2009," Oct. 2, 2009, Table A-12, at <http://www.bls.gov/news.release/pdf/empst.pdf>.

4. See, Stangler and Litton, "Where Will Jobs Come From", Kauffman Foundation, November 2009, at http://www.kauffman.org/uploadedfiles/where_will_the_jobs_come_from.pdf.

5. See John Haltiwanger, Ron Jarmin, and Javier Miranda, "Jobs Created from Business Startups in the United States," Kauffman Foundation, January 2009, at http://www.kauffman.org/uploadedFiles/BDS_Jobs_Created_011209b.pdf.



One approach to address this important question is to analyze the source of job creation during past employment recoveries. During the period from 1990-2009 three economic recessions were experienced in the United States. The first was from July, 1990 to March, 1991; the second recession was from March, 2001 to November, 2001; and the third was from December, 2007 to June, 2009. After each of the first two of these events, job recoveries were experienced that provided 7-10 years of additional economic growth. Although macroeconomic characteristics are dynamic and unique to a given period of time, it seems to be prudent, as we search for solutions to accelerate employment, to look closely at past job recoveries to determine if we can gain insights into sources of possible future employment growth.

The focus of this report is to analyze job creation in the 252 mostly-rural counties and parishes that make up the eight-state federally designated Delta region⁶ (DRA). The counties and parishes served by the DRA comprise the most economically distressed area of the country. The disparities between the DRA region and the nation as a whole are stark. As defined by the Economic Development Administration, virtually all the counties and parishes in the region are distressed. According to the Bureau of Labor Statistics, when unemployment spiked across the nation in November 2010, the number of those out of jobs in rural counties was twice that of the national average.

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This report examines these six elements and discusses the impact of each on overall employment in the Delta region during the years between 1992 and 2009.

6. The Delta Regional Authority works to improve life for the 10 million people who reside in the 252 Delta counties and parishes in parts of eight states. Led by the Delta Regional Authority Board comprised of the Federal Co-Chairman, appointed by the President and confirmed by the U.S. Senate, and the governors of the eight states, the Delta Regional Authority fosters partnerships throughout the region as it works to improve the Delta economy. See <http://www.dra.gov/>.

Methodology and Data

The most closely watched, and widely reported, economic indicators are monthly estimates of nonfarm employment. These estimates are compiled by the U.S. Bureau of Labor Statistics (BLS) and state labor departments from surveys and statistical models that are annually revised based on unemployment insurance tax filings. These nonfarm payroll numbers provide an indispensable snapshot of total employment in major industrial sectors, but offer little insight into how jobs have been created, destroyed, or moved from one location to another⁷. These data also exclude both agricultural workers and small business owners who are not covered by unemployment insurance.

To provide a broader and deeper picture of job creation dynamics in the Delta region, the data used in this report are from the 2010 National Establishment Time-Series (NETS)⁸. The NETS database is a longitudinal database created by Walls & Associates in Oakland, California, using Dun and Bradstreet's Market Identifier (DMI) files. These files contain information on more than 100 variables related to firm demographics, operations, and performance. Under contract with D&B, Walls and Associates obtains annual updates of DMI files, and using DUNS numbers (the unique number D&B assigns to every establishment⁹), creates a time-series that tracks business performance and job creation.

Unlike many traditional data sets that rely solely on sampling and use a small subset of data to draw inferences about a larger population, NETS covers nearly every organization that has operated in the United States over the past two decades, including sole proprietors, small privately-owned firms, farms, nonprofit organizations, and public sector establishments, such as post offices and public schools. Because there are no confidentiality constraints with NETS, individual establishments can be identified and tracked over time.¹⁰

Researchers at the University of California, Berkeley published the first paper using NETS in 2004. Since then, more than 60 other studies have been released through peer reviewed

7. J. Scott Moody, "Enterprising NY", Empire Center, Oct. 25, 2010, at <http://www.empirecenter.org/Documents/PDF/Enterprising%20NY%20102510%20Final.pdf>.

8. The NETS Data is time-series data assembled by Walls & Associates and Dun and Bradstreet. Dun and Bradstreet gathers annual information from all establishments or firms operating in the United States. In its data collection process, Dun and Bradstreet assigns a unique identification number, referred to as a DUNS number, to each establishment as a means of tracking the establishment. Walls & Associates uses the DUNS number to link the Dun and Bradstreet cross-sections into a longitudinal file for each establishment.

9. The NETS database is derived from tracking each establishment created by any organization in all locations. Therefore, different establishments can occupy the same location. For example, an organization at a single location could represent two different activities—such as a single organization with both a distribution and retail establishment under the same roof. This provides an unprecedented level of geographic and industry classification.

10. Gary Kunkle, "Business Establishment Employment Data: NETS versus ES-202". See at <http://www.youreconomy.org/pages/insights/NETSvsES-202.pdf?session=YEplus:42F947501890320BEEVWU2411678>.



journals, in-house publications, and conference papers. Although NETS is gaining acceptance, researchers point out that it is still a relatively new resource with a unique outlook on the economy. This may explain the scrutiny and testing subjected to NETS by various academic teams. The tests of the data's accuracy compared against alternative sources have indicated that, although the NETS database has a few limitations, it provides an alternative to traditional federal data — and a number of distinct advantages.

A study by Neumark, Zhang and Wall,¹¹ in 2005, assessed the reliability of the NETS data on a number of dimensions and found it to be a reliable data source. The authors cited the following additional assets of the NETS data: (1) it covers nearly all establishments (both small and large) rather than only a small sample; (2) it is a commercial data set without confidentiality restrictions; (3) it tracks physical establishment relocations; (4) it includes changes in employment at a given establishment over time; and (5) it identifies business startups (“openings”) and business deaths (“closings”).

NETS data illustrates a dynamic journey of how businesses evolve through time as opposed to traditional research and data sources that only provide still measurements or short-term trends.¹² These data were used to follow all establishments in the DRA region, both private and public, over the life of the establishment. With this unique information, the data provide an opportunity to track business openings, closings, contractions, expansions and physical movements at the industry level, and the impact these establishment dynamics have on jobs.

Findings

NETS data identifies each establishment in one of three sector classifications; Noncommercial, Nonresident, and Resident. Noncommercial establishments are educational institutions, government agencies, and other nonprofit organizations. Nonresident establishments are located in the area, but are headquartered in a different state. Resident establishments are stand-alone businesses in the area or businesses with headquarters in the same state.

11. Neumark, D., Zhang, J., and Wall, B., “Are Businesses Fleeing the State? Interstate Business Relocation and Employment Change in California,” *California Economic Policy*, Vol. 1 (4), (October 2005).

12. More information and background on NETS, including other academic research making use of the database, can be found at <http://www.youreconomy.org/nets/index.lasso?region=Walls>.

According to the Edward Lowe Foundation, resident establishments have more influence on job creation than establishments headquartered outside of the state.¹³

TABLE 1.1
Share of Overall Jobs by Sector in the Delta Region
1992-2009

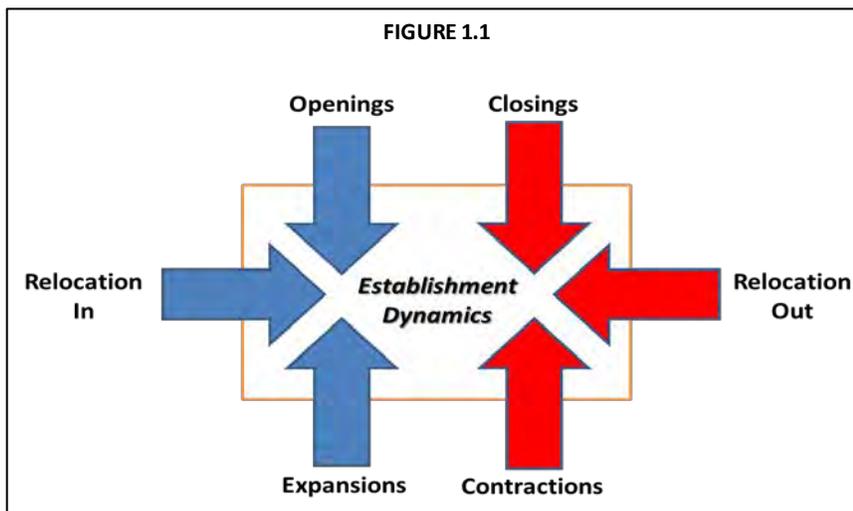
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Source: 2010 National Establishment Time-Series Database
* Percentage of total jobs.

As indicated in Table 1.1, in the eighteen-year period from 1992-2009, the share of jobs provided by noncommercial establishments in the region declined from 18.9% to 18.6%. The sector created an additional 125,009 jobs, or 16% of the total additional jobs created by all sectors. The share of jobs provided by non-

resident establishments declined significantly from 23.3% in 1992 to 19.6% in 2009. The sector eliminated 8,360 jobs, and was the only sector that did not create additional jobs during the period studied. The share of jobs provided by resident establishments increased from 57.8% in 1992 to 61.8% in 2009. The sector created an additional 637,190 jobs, or 84% of the total additional jobs created by all sectors.

Given that resident establishments were responsible for creating the overwhelming majority of additional jobs in the Delta region during the eighteen-year period of the study, the focus of the analysis of establishment dynamics will not include noncommercial and nonresident establishments.



What traditional jobs numbers do not adequately illuminate is the underlying dynamics in job creation and job elimination. Changes in jobs created and jobs eliminated occur during periods of economic growth and economic decline, in all industries. As illustrated in Figure 1.1, establishments are constantly being opened,

expanded, and relocating. These dynamics create new jobs. However, establishments also regularly eliminate jobs from closing, contracting, and relocating out of a region.

13. More information on YourEconomy, a web-based database containing limited NETS data, can be found at <http://youreconomy.org/index.lasso>.



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In order to better understand these job dynamics, specific sources of job creation and job loss were analyzed. Table 1.2 demonstrates job creation drivers accounted for 52.4% of the dynamics, while job loss drivers accounted for 47.6%. The result was the creation of 644,517 additional jobs. Establishments opening and closing accounted for over 60% of the dynamics impacting jobs, followed by those expanding and contracting

with over 34%. Establishment relocations had little impact on job dynamics at less than 5%.

Existing firms that expanded were responsible for creating 679,288 more jobs than those eliminated by contractions. This dynamic was the only positive overall source of additional jobs in the Delta region during the period. Startup businesses created 26,069 fewer jobs than those eliminated by establishment closings. Despite considerable investments and strategic efforts to create jobs by attracting firms from other states, 8,702 more jobs were eliminated by firms relocating to another state than those created by firms attracted into a Delta region state. Since the region analyzed included multiple states, the job impacts of establishment relocations from one DRA state to another are included.

Establishment Openings and Closings

	Opened	Closed	Net Change
Total DRA	4,034,839	4,065,746	(30,907)
Mississippi DRA	669,404	610,022	59,382
Kentucky DRA	192,346	170,825	21,521
Missouri DRA	209,856	213,171	(3,315)
Illinois DRA	101,770	108,294	(6,524)
Alabama DRA	136,240	143,574	(7,334)
Louisiana DRA	1,517,524	1,526,255	(8,731)
Arkansas DRA	581,442	601,057	(19,615)
Tennessee DRA	626,257	692,548	(66,291)

Source: 2010 National Establishment Time-Series Database

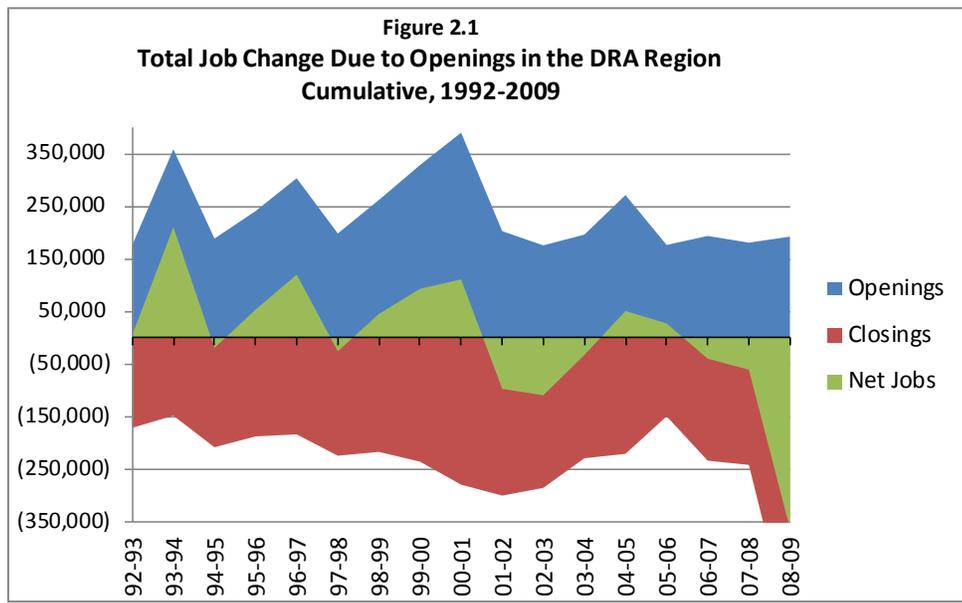
Establishment openings and closings create and eliminate a significant number of jobs in the DRA region. This dynamic accounted for 60.8% of the total job flux. The NETS database and this report consider an establishment opening to be the creation of new establishments or firms in one of the counties or parishes of the DRA region. The creation of these establishments generates a positive change in the number of firms in the region, and an increase in the total



number of jobs.¹⁴

Establishment closings refer to the elimination of existing establishments or firms, which decrease in the number of firms, and elimination of jobs.¹⁵ Table 2.1 identifies the cumulative number of jobs created by firm openings¹⁶, jobs eliminated by firm closings, and the net number of jobs created by this establishment dynamic throughout the Delta and in each state of the region.

A total of 964,199 new establishments were created. The opening of these firms created a total of 4,034,839 additional jobs during the period. There were 590,238 establishments closed. These closings resulted in the elimination of 4,065,746 jobs. The counties in Mississippi’s designated Delta region created the highest number of net jobs from the startup dynamic. Kentucky also created net positive jobs from this dynamic. All other states in the Delta region lost more jobs to establishment closings than they created with establishment openings.



These data point to a growing problem in the region. New establishments are not creating enough jobs to keep pace with those lost by closures. As illustrated in Figure 2.1, a troubling trend occurred following the national recession in 2001.

14. The number of new jobs generated by a firm opening equals the number of employees in the year after a firm was established (the first year employee information is available/recorded for the new firm in the NETS Data). For example, in a firm that was created in 1992 (birth year = 1992), the number of jobs generated by the firm creation is the number of employees at that firm in 1993. It is important to note that NETS data does not reflect the number of employees at a firm in the year it was first created. By using single-year intervals to analyze firm openings and closings, we are able to overcome this data limitation.

15. The number of job losses associated with a firm closing equals the number of employees in the year the firm was closed (the last year the firm was in operation in the NETS data). For example, in a firm that was shut down in 1992 (death year = 1992), the number of jobs eliminated by the firm closure is the number of employees at the firm in 1992.

16. It is worth noting that the total impact of startup firms should not be solely evaluated by counting initial establishment jobs. The NETS database reclassifies the organization as an existing organization in the years after the opening year. A more accurate measure of the impact of startup firms would require continued tracking as a startup throughout the life of the venture.



TABLE 2.2
Average Jobs Per Resident Establishment Opening in the Delta Region

Cumulative, 1992-2001 and 2002-2009

Year	New Firm Openings	Jobs Created	Average Jobs Per Opening
1992-2001	367,591	2,387,719	6.50
2002-2009	596,608	1,647,120	2.76

Source: 2010 National Establishment Time-Series Database

During the 10 years following the national recession of 1990-91, the net number of jobs created by establishment openings versus closings was 632,500. As indicated in Table 2.2, 367,591 new establishments opened, or an average of 63,759 firms per year. These establishments created 2,387,719 jobs, an average of 6.5 jobs per startup. In the 8 years following the 2001 recession there were 596,608 new establishments opened, or an average of 74,576 firms per year. These establishments created 1,647,120 jobs, an average of less than 3 jobs per startup.

These data illustrate that in the years following the 2001 recession, each startup business created an average of nearly 4 fewer jobs than in the previous nine years, following the recession in 1990-91. While the number of annual startups increased over 62%, the total number of jobs created by these establishments declined nearly 45%.

TABLE 2.3
Average Jobs Per Resident Establishment Closing in the Delta Region

Cumulative, 1992-2001 and 2002-2009

Year	Existing Firm Closings	Jobs Eliminated	Average Jobs Per Closing
1992-2001	223,030	1,755,219	7.87
2002-2009	367,208	2,310,527	6.29

Source: 2010 National Establishment Time-Series Database

Based on the declining average number of jobs created by startup establishments in the second half of the observation period, one could assume or hope that the average number of jobs eliminated also declined. As indicated in Table 2.3, from 1992-2001, 223,030 establishments closed, or an average of 22,303 firms per year. These establishments eliminated 1,755,219 jobs, an average of nearly 8 jobs per closing. From 2002-09, 367,208 establishments closed, or an average of 79,651 firms per year. These establishments eliminated 2,310,527 jobs, an average of slightly over 6 jobs per closing.

Unfortunately, these data illustrate the average number of firm closings per year increased nearly 65% in the years following the 2001 recession. Although there was a decrease of nearly 20% in the average jobs eliminated per closing, the dramatic increase in the number of establishments closing each year resulted in over 555,308 additional job losses when comparing the two periods.



The differences between the outcomes from 1992-2001 and those from 2002-09 are troubling. There is a clear indication that despite a considerable increase in the number of new establishments, because these establishments provided significantly fewer jobs, and the rate of establishment closing increased considerably, this dynamic did not produce positive results for the region.

Industry Sector Dynamics

Table 2.4 provides a summary of the change in total jobs in the Delta region due to establishment openings and closings from 1993-2008, by industry. The data are ranked by the total change per industry. New establishments opened in the administrative support service industries created 452,432 jobs during the period, with only 175,040 jobs eliminated in the industry due to establishment closings. The net gain of 277,392 jobs created in the sector makes up nearly 43% of all net jobs gains from openings versus closings during the period. Jobs created by manufacturing startups were not nearly able to keep pace with those lost by closings. The net loss of 223,078 jobs in the industry makes up 66% of all job losses from closings versus openings during the period.

**TABLE 2.4**
Job Change Due to Resident Establishment Openings and Closings in the Delta Region by Industry Sector
 Cumulative, Ranked by Total Change, 1993*-2008

Industry	Openings	Closings	Change	Retention**
				Rate
Administrative, Support, Waste Management	452,432	175,040	277,392	61.3%
Accommodation and Food Services	312,125	222,953	89,172	28.6%
Other Services (except Public Services)	240,565	175,212	65,353	27.2%
Healthcare & Social Assistance	387,899	335,729	52,170	13.4%
Arts, Entertainment and recreation	96,182	57,567	38,615	40.1%
Professional, Scientific and Technical Services	228,307	190,444	37,863	16.6%
Public Services	180,772	144,362	36,410	20.1%
Real Estate and rental and Leasing	103,309	80,958	22,351	21.6%
Retail Trade	389,111	374,282	14,829	3.8%
Construction	215,736	201,359	14,377	6.7%
Information	64,658	61,541	3,117	4.8%
Management of Companies & Enterprises	4,471	3,944	527	11.8%
Utilities	17,185	21,679	(4,494)	(26.2%)
Finance and Insurance	145,982	151,398	(5,416)	(3.7%)
Transportation and Warehousing	136,016	148,745	(12,729)	(9.4%)
Agriculture, Forestry, Fishing and Hunting	46,541	59,974	(13,433)	(28.9%)
Mining, Quarrying and Oil and Gas Extraction	27,266	46,620	(19,354)	(71.0%)
Wholesale Trade	126,790	149,810	(23,020)	(18.2%)
Educational Services	106,287	144,165	(37,878)	(35.6%)
Manufacturing	331,313	554,391	(223,078)	(67.3%)

Source: 2009 National Establishment Time-Series Database

Industry-level data for counties was only available for 1993-2008

** Calculated by dividing the net job change by the number of jobs created.

Estimates of job changes by industry sector are based on a Lowe Foundation's proprietary statistical methodology to classify jobs. As a result, the sum of numbers in this table does not exactly equal the statewide totals.

Establishment Expansions and Contractions

This report also analyzes existing establishment expansion and contraction. Establishment expansion involves the addition of at least one employee to an existing firm. The expansion of these firms generates an increase in total employment. Establishment contraction involves the elimination of employees from existing establishments. The contraction of these firms generates a decrease in total employment.¹⁷

Table 3.1 identifies the cumulative number of jobs created by establishment expansions, jobs eliminated by contractions, and the net number of jobs created by this establishment dynamic. A net total of 679,288 jobs were created due to firm expansions. Although Louisiana created

17. Neumark, Shang and Wall (November, 2005) in "Employment Dynamics and Business Relocation: New Evidence from the National Establishment Time Series," argues that due to rounding of employment numbers in the NETS data, single year intervals may be too short to accurately measure firm expansion and contraction. Thus, the numbers measured at the single year intervals cited here are most likely more conservative (under-estimates) than the actual expansion and contraction of DRA Region firms over these single year intervals.



TABLE 3.1
Job Change Due to Resident Establishment
Expansion and Contraction in the Delta Region
 Cumulative, 1992-2009

	Expanded	Contracted	Net Change
Total DRA	2,622,684	1,943,396	679,288
Louisiana DRA	944,986	732,641	212,345
Tennessee DRA	474,113	322,153	151,960
Arkansas DRA	408,060	305,664	102,396
Mississippi DRA	359,668	269,424	90,244
Missouri DRA	155,968	107,568	48,400
Kentucky DRA	126,996	90,092	39,967
Illinois DRA	68,632	50,278	18,354
Alabama DRA	84,261	65,639	18,622

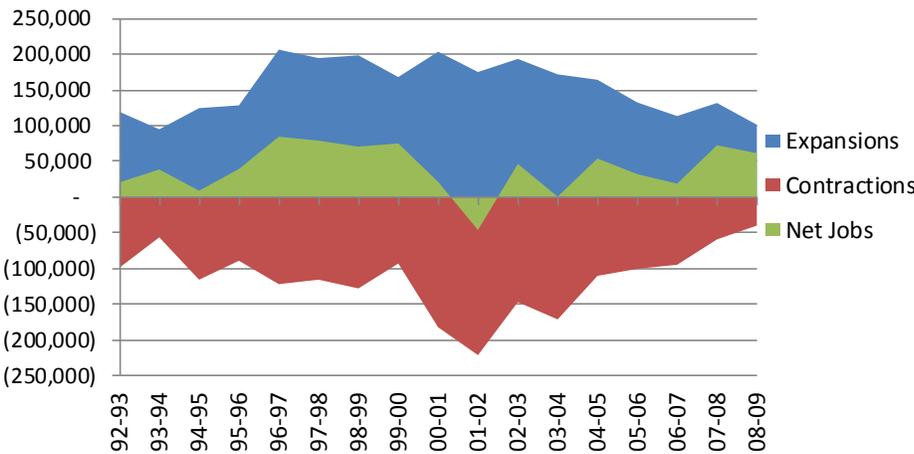
Source: 2010 National Establishment Time-Series Database

the largest number of net jobs, it also retained the smallest proportion of those jobs (22.4%). Establishment expansions in Tennessee created the highest rate of net job retention (32.1%) during the period.

During the eighteen-year period, 321,065 establishments expanded in the Delta region. The expansion of these firms created a total of 2,622,684 additional jobs. There were 258,166 firms that contracted during

the period. These contractions resulted in the elimination of 1,943,396 jobs. On the surface the net increase of 679,288 appears rather positive.

Figure 3.1
Total Job Change Due to Expansions in the DRA Region
 Cumulative, 1992-2009



As illustrated in Figure 3.1, the net jobs created by establishment expansions declined following the national recession in 2001. During 1992-2001, the number of jobs created by establishment expansions versus contractions was 460,546.

As indicated in Table 3.2, there were 152,448 establishment expansions, or an average of 15,245 firms per year. These establishments created 1,438,697 jobs, an average of nearly 9.5 jobs per expansion. In the 8 years following the 2001 recession, only 218,742 additional jobs were created by establishment expansions versus contractions. During this period 168,617 establishments expanded, or an average of 21,077 firms per year. These establishments created 1,183,987 jobs, an average of just above 7 jobs per expansion.



TABLE 3.2
Job Change Due to Resident Establishment Expansions in the Delta Region
 Cumulative, 1992-2001 and 2002-2009

Year	Number of Firm Expansions	Number of Jobs Created	Average Jobs Per Expansion
1992-2001	152,448	1,438,697	9.44
2002-2009	168,617	1,183,987	7.02

Source: 2010 National Establishment Time-Series Database

These data illustrate that in the years following the 2001 recession, establishment expansions created an average of nearly two and half fewer jobs than in the previous ten years, following the recession in 1990-91. While the number of annual expansions had increased over 10%, the total number of jobs

created by these establishments declined by over 25%.

As indicated in Table 3.3, from 1992-2001, 117,468 establishments contracted, or an average of 11,747 firms per year. These establishments eliminated 978,151 jobs, an average of over 8 jobs per contraction. In the 8 years following the 2001 recession, 140,698 establishments contracted, or an average of 17,587 firms per year. These establishments eliminated 965,245 jobs, an average of nearly 7 jobs per contraction.

TABLE 3.3
Job Change Due to Resident Establishment Contractions in the Delta Region
 Cumulative, 1992-2001 and 2002-2009

Year	Number of Firm Contractions	Number of Jobs Eliminated	Average Jobs Per Contraction
1992-2001	117,468	978,151	8.33
2002-2009	140,698	965,245	6.86

Source: 2010 National Establishment Time-Series Database

This establishment dynamic was the only one of the three that generated additional net jobs—over 679,000 during the eighteen-year period. However, the impact of establishment expansions would have been considerably greater except for the declining years from 2001-09. While there was a considerable

increase in the number of establishments that expanded each year, because these establishments generated fewer jobs, and the rate of establishment contractions increased, the net result of this dynamic declined by over 52% in the second half of the period.

Industry Sector Dynamics

Table 3.4 provides a summary of the change in total jobs due to establishment expansions and contractions from 1993-2008, by industry. The data are ranked by the total change per industry. Establishment expansions in the healthcare industry created 231,894 jobs during the period, with only 150,992 jobs eliminated in the industry due to establishment contractions. The net gain of 80,901 jobs makes up slightly over 12% of all net jobs gains from expansions versus contractions during the period.



The manufacturing sector lost 28,472 more jobs due to contractions than expansions. Jobs created by expansion of establishments in the public services sector (local, state, and federal government) were the most likely to be eliminated by contraction. Although fewer in total, jobs created through expansion in management, utilities, and agriculture were retained at a high rate.

TABLE 3.4
Job Change Due to Resident Establishment Expansions and Contractions in the Delta Region by Industry Sector
Cumulative, Ranked by Total Change, 1993*-2008

Industry	Expansions	Contractions	Change	Retention** Rate
Healthcare & Social Assistance	231,894	150,992	80,901	35%
Transportation and Warehousing	128,704	78,762	49,942	39%
Arts, Entertainment and recreation	81,119	34,726	46,393	57%
Real Estate and rental and Leasing	82,955	37,042	45,913	55%
Administrative, Support, Waste Management	138,403	92,773	45,630	33%
Construction	166,355	121,494	44,861	27%
Management of Companies & Enterprises	46,686	1,839	44,847	96%
Professional, Scientific and Technical Services	131,511	87,644	43,868	33%
Information	71,568	33,175	38,393	54%
Agriculture, Forestry, Fishing and Hunting	61,283	24,208	37,075	60%
Retail Trade	171,278	135,660	35,618	21%
Mining, Quarrying and Oil and Gas Extraction	58,199	24,459	33,740	58%
Finance and Insurance	113,817	80,655	33,162	29%
Utilities	54,238	21,233	33,005	61%
Wholesale Trade	108,879	75,928	32,951	30%
Accommodation and Food Services	112,593	95,677	16,916	15%
Educational Services	122,872	122,384	488	0%
Other Services (except Public Services)	126,962	142,530	(15,568)	(12%)
Public Services	103,943	126,582	(22,639)	(-22%)
Manufacturing	288,629	317,101	(28,472)	(-10%)

Source: 2009 National Establishment Time-Series Database

*Industry-level data for counties was only available for 1993-2008

** Calculated by dividing the net job change by the number of jobs created.

Estimates of job changes by industry sector are based on a Lowe Foundation's proprietary statistical methodology to classify jobs. As a result, the sum of numbers in this table does not exactly equal the statewide totals.

Establishment Migration

Establishments regularly move in and out of states in the DRA region, to and from other states, taking their jobs with them. As indicated in Table 4.1, a total of 322,874 jobs were created due to firm relocations. 331,576 jobs were eliminated by firm relocations to another state. The net impact on employment was a loss of 8,702 jobs. Two states in the DRA region fared much better than the others. Jobs created resulting from establishment migration into Arkansas and



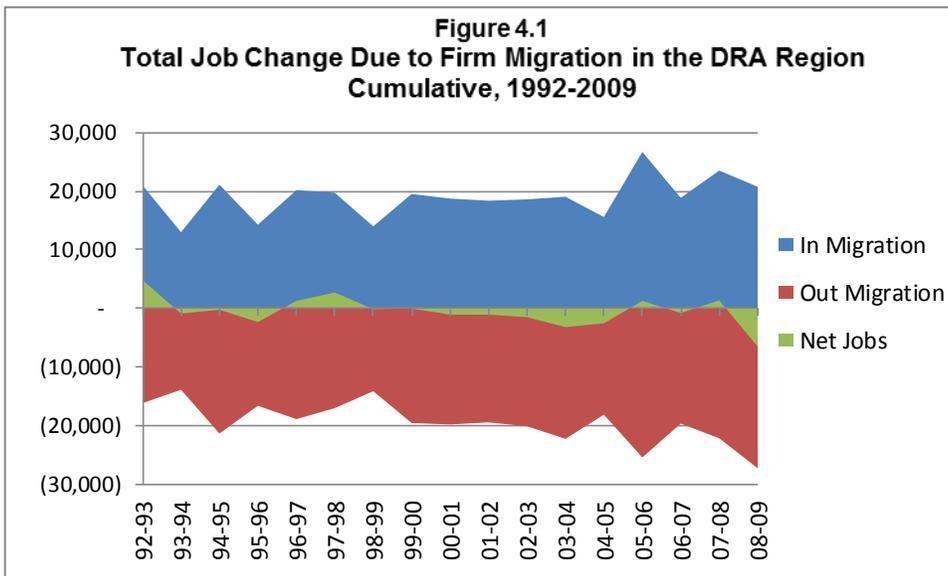
TABLE 4.1
Job Change Due to Resident Establishment Interstate Migration in the Delta Region
 Cumulative, 1992-2009

	In Migration	Out Migration	Net Change
Total DRA	322,874	331,576	(8,702)
Mississippi DRA	68,022	59,642	8,380
Arkansas DRA	41,130	32,936	8,194
Illinois DRA	11,647	8,998	2,649
Missouri DRA	12,522	11,033	1,489
Kentucky DRA	12,153	12,948	(795)
Tennessee DRA	36,153	38,441	(2,288)
Alabama DRA	6,129	11,680	(5,551)
Louisiana DRA	135,118	155,898	(20,780)

Source: 2010 National Establishment Time-Series Database

Mississippi accounted for 80% of the net jobs created by migrations for the entire DRA region. Job migration out of Louisiana accounted for 72% of the total job losses due to out-migration in the region. A sizeable number of the jobs lost in Louisiana parishes (8,616) were lost in the three years immediately following Hurricane Katrina in 2005.

Figure 4.1 provides an illustration of the annual job changes due to firms relocating.



Job losses due to out-migration of establishments have increased since the 2000-01 national recession. This is consistent with the findings related to the other establishment dynamics. The Delta region's economy did not fully recover after the 2000-01 recession.

Establishment Sector and Size

A growing share of the total jobs in the Delta region is being provided by locally-owned or resident establishments. As shown in Table 5.1, the share of total jobs provided by resident establishments increased from 57.8% in 1992 to 61.8% in 2009. During these years resident establishments created 637,190 additional jobs. During the difficult economic years following the 2000-01 recession, resident establishments still created 58,287 additional jobs.



TABLE 5.1
Share of Overall Jobs by Sector in the Delta Region
1992, 2001, and 2009

Sector	1992	Share*	2001	Share*	2009	Share*
Noncommercial	785,278	18.9%	992,135	19.0%	910,287	18.6%
Nonresident	966,452	23.3%	1,244,146	23.9%	958,092	19.6%
Resident	2,393,300	57.8%	2,972,203	57.1%	3,030,490	61.8%
Total	4,145,030	100.0%	5,208,484	100.0%	4,898,869	100.0%

Source: 2010 National Establishment Time-Series Database

* Percentage of total jobs.

The share of total jobs provided by nonresident establishments decreased from 23.3% in 1992 to 19.6%

in 2009. During these years nonresident establishments eliminated a net of 8,360 jobs. However, during the challenging years following the 2000-01 recession, nonresident establishments eliminated 286,054 jobs.

TABLE 5.2
Jobs Provided by Resident Establishments by Firm Size in the Delta Region
Cumulative, 1992-2009

Number of Jobs	1992	Share*	2001	Share*	2009	Share*
Self Employed (1)	56,292	2.4%	93,558	3.1%	268,105	8.8%
Stage 1 (2-9)	678,040	28.3%	873,159	29.4%	998,938	33.0%
Stage 2 (10-99)	933,782	39.0%	1,128,113	38.0%	1,058,506	35.0%
Stage 3 (100-499)	406,578	17.0%	488,389	16.4%	398,585	13.1%
Stage 4 (500+)	318,608	13.3%	388,984	13.1%	306,356	10.1%

Source: 2010 National Establishment Time-Series Database

* Percentage of total resident jobs. This excludes jobs provided by nonresident and noncommercial establishments.

As shown in Table 5.2, a growing share of the jobs provided by resident employers in the Delta

region shifted to smaller establishments. The portion of total jobs provided by self-employer establishments increased from 2.4% to 8.8%. This represents an increase of 211,913 jobs during the period. The second largest increase was found in Stage 1 establishments, or those with 2-9 employees. These establishments increased from 28.3% in 1992 to 33.0% of the total resident jobs in 2009, an increase of 320,898 jobs.

The most dramatic change during the period was the increase in the number of jobs provided by self-employer establishments. From 1992-2009, there was an increase of over 400% in the number of resident self-employed jobs. Striking is the increase between 2001 and 2009. There was a clear shift in employment from Stage 1-4 firms to self-employed, as the region struggled after the national recession in 2001. The share of total jobs provided by all establishments with nine or fewer workers increased from just over 30% to nearly 42% of the total in 2009.