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U.S. MANUFACTURING UNEMPLOYMENT IN THE RECESSION: THE IMPACT OF OFFSHORING AND UNAUTHORIZED RESIDENT POPULATIONS

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ABSTRACT

Employment in the manufacturing industry has declined. The year 2010 was the first time in over a decade that jobs were added in industry. The manufacturing sector is comprised of establishments engaged in the mechanical or chemical transformation of materials or components into new products. Given the high levels of U.S. manufacturing unemployment since the onset of the most recent recession, it has been argued that the high unemployment rate is due to offshoring and unauthorized residents. This study supports the argument that the high levels of U.S. manufacturing unemployment is due to offshoring and refutes the argument that the high manufacturing unemployment is due to unauthorized resident populations. It explores the relationships between the changes in unemployment in the manufacturing industry, unauthorized resident populations, and offshoring. This study also provides insights on the impact of offshoring and illegal immigration on manufacturing unemployment during the recession.

Keywords: *Manufacturing, Unemployment, Illegal Immigration, Offshoring, Recession, Unauthorized Resident*

1. INTRODUCTION

In the years since the inception of the 2008 U.S. economic recession, there has been an increase in unemployment in the U.S. manufacturing industry. This paper will examine whether that increase is related to changes in the number of jobs offshored or the unauthorized resident population. Over the past few years, the U.S. has increased global production (Hagenbaugh, 2002). Policymakers, economists, researchers, and concerned citizens have focused their attention on the manufacturing industry and the number of jobs outsourced overseas. Some have argued that the high unemployment rate is because many manufacturing jobs have been shipped to other countries (Stokes, 2005). In an effort to compete globally, many U.S. manufacturing firms assessed their operations and found them too costly to continue those operations within the in the U.S. As a result, they sought strategies to operate more efficiently. These strategies included exporting portions of their operations, implementing leaner manufacturing processes, and closing plants and facilities. This paper will examine levels of employment in the U.S. manufacturing industry, offshoring, and estimate changes in illegal immigration numbers since the beginning of the 2008 recession. It will seek to identify a statistically significant relationship between U.S. manufacturing unemployment and offshoring and U.S. manufacturing unemployment and illegal immigration.

A recession is defined as a period of negative economic growth for two consecutive quarters. Rising unemployment is a key characteristic of a recession (Pettinger, 2007). As of 2011, the U.S. has been in a

recession for over four years. Knotek and Terry (2009) indicated that historically unemployment rates rose sharply during recessions and declined at the same rate during the recovery. However, changes in labor market practices, such as increased permanent layoffs and just-in-time employment practices, have led to slower economic recoveries, indicating that there are other factors impacting the U.S. unemployment rate.

According to the U.S. Bureau of Labor Statistics North American Industry Classification System, unemployment in the manufacturing sector increased by 6.3 million jobs between 2007 and 2010. “Establishments in the manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment. Additionally, these establishments may process materials or may contract with other establishments to process their materials for them (Statistics B. O., 2011).”

Over the four year period between 2007 and 2011, the number of unauthorized residents in the U.S. decreased by one million. This decrease, therefore presents the possibility that either fewer unauthorized migrants are entering the U.S. or existing unauthorized residents are increasingly obtaining legal resident status (Hoefler, Rytina, & Baker, 2011). The U.S. Department of Homeland Security defines unauthorized residents as “all foreign-born non-citizens who are not legal residents. Most unauthorized residents either entered the United States without inspection or were admitted temporarily and stayed past the date they were required to leave” (Hoefler, Rytina, & Baker, 2011) .

The terms offshoring and outsourcing are often used interchangeably. Yet, there are some stark differences. Broan and Siegel (2005) define outsourcing as:

“The movement of work that was formerly conducted in-house by employees paid directly by a company to a different company. The different company can be located inside or outside of the United States.”

Thus, outsourcing is paying an external company to do work that was previously conducted internally, regardless of where that contracted company is located. Outsourcing moves work from one company to another. Offshoring, on the other hand, is the movement of work from within the United States to locations outside of the United States. ‘Offshoring’ can occur within the same company and involve movement of work to a different location of that company outside of the United States (Brown & Siegel, 2005).”

The purpose of this paper is to examine the changes in unemployment in the U.S. manufacturing industry in relation to the levels of illegal immigration and offshoring. The paper will also identify any statistically significant relationships between the three variables. This study will test two null hypotheses. The first is that there is no correlation between U.S. manufacturing unemployment and illegal immigration. The second is that there is no correlation between U.S. manufacturing unemployment and offshoring.

2. LITERATURE REVIEW

The idea that unemployment rises based on increases in offshoring and illegal immigration is one that has been explored in prior research. Baily and Lawrence (2004) explained that trade had an effect on the loss of manufacturing jobs in the United States. Over the period 2000 through 2003, the manufacturing

industry lost 2.8 million jobs, making it the largest contributor to the change of the employment picture. The study indicated that the manufacturing share of United States employment was declining because the demand for goods had not increased rapidly enough to offset the growth in the sector. As a result, the demand for manufacturing workers declined. When the recession began in 2007, unemployment in the manufacturing industry was 4.3%. The unemployment rate increased to 10.6% in 2010 and actually peaked at 13% in January 2010 (United States Bureau of Labor Statistics, 2011).

Due to the high costs of labor, many U.S. firms chose to outsource the production of some of their labor intensive components. Often, these jobs were performed by unskilled workers. According to Keuschnigg and Ribi (2009), outsourcing reduces the demand for low-skilled workers, which translates into lower wages and higher unemployment. Companies have been offshoring their manufacturing jobs for some time. More recently, companies have been offshoring even their service jobs to such nations as China and India (Blackman, 2009). Merino and Rodriguez (2007), using Spanish manufacturing firms' data, assessed why these firms outsource business services. According to the study, wages play a major role in a firm's decision to outsource a service. Business services included areas such as legal, advising, tax, information technology, advertising, and cleaning services. Firms included in the sample that paid a wage premium externalized services intensive in low-skilled activities. Transaction costs also impacted a firm's decision to outsource. According to Merino and Rodriguez (2007), "the more contracts firms engage in with external service providers, the more likely it is that the firms will externalize other activities".

According to prior research, it is admittedly difficult to obtain accurate data of the number of jobs offshored. Otterman (2004) states that no one knows how many service jobs have been offshored, because there is no requirement for U.S. companies to maintain such statistics. Some economists argue that it is also difficult to quantify if offshoring leads to the creation of jobs elsewhere in the economy. It has been estimated that 400,000 service jobs have been lost to offshoring since 2000, with an approximate job loss of 12,000 to 15,000 per month. Other estimates say up to 20,000 jobs a month are being offshored in addition to the two million manufacturing jobs that are estimated to have been offshored since 1983. It is predicted that these numbers will rise. One consulting firm, McKinsey & Company predicts that white-collar offshoring will increase by 30 percent to 40 percent over the next five years (Farrell, 2006). By 2015, another consulting firm, Forrester, predicts that approximately 3.3 million service jobs will be offshored, including 1.7 million "back office" jobs such as payroll processing and accounting, and 473,000 information technology jobs (Otterman, 2004).

Prior studies have shown that immigration bears little or no impact on the U.S. unemployment rate and there is little evidence that immigration is economically more favorable than illegal immigration. In fact, illegal immigrants tend to arrive in the U.S. when the economy is booming, relative to the state of the Mexican and Central American economies, from which most illegal immigrants migrate (Hanson, 2007). Moreover, prior studies have found an inverse relationship between offshoring and U.S. unemployment (Keuschnigg & Ribi, 2009) and no relationship between illegal immigration and unemployment (Hanson, 2007). Hollifield and Hunt (2006) state that initially this relationship between immigration and unemployment was inverse, but in more recent years, that relationship has broken down. Temporary legal immigrants cannot easily move between jobs, thus making it difficult for them to impact the U.S. economy (Hanson, 2007).

3. STUDY MOTIVATION

The economic downturn beginning in 2007 encouraged many researchers to analyze the change in the way the U.S. conducts business. It has been argued that the increased global production and the changing workforce in the manufacturing industry led to job losses in the United States. According to Borjas (2001), prior studies have sought to understand the impact of unauthorized residents on the U.S. economy. Consistent with prior studies, the motivation of this study is to determine whether illegal immigration and offshoring have an impact on the levels of unemployment in the U.S. manufacturing industry. Stated differently, this study seeks to determine the correlation between the changes in unemployment, changes of illegal immigration, and “offshored” manufacturing.

4. METHODOLOGY & DATA COLLECTION

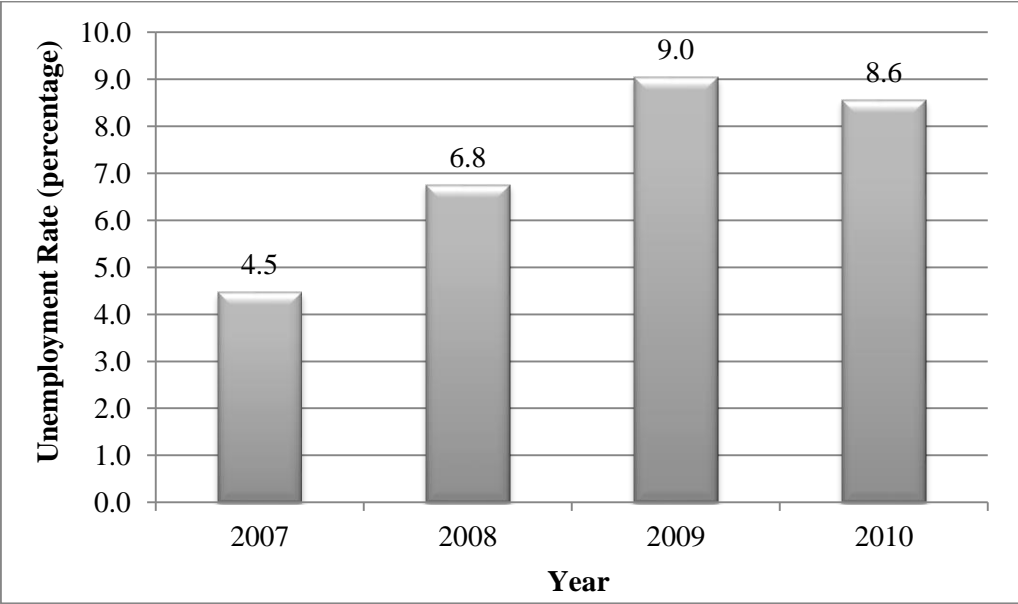
This study assesses the impact of manufacturing job offshoring and unauthorized residents population estimates on the U.S. unemployment rate. To examine the possibility of a statistically significant relationship existing between the variables a set of Pearson correlations was conducted with all three variables between 2007 and 2010. The variables included in the test were U.S. manufacturing unemployment rates, offshoring estimates, and illegal immigration estimates. Offshoring estimates were generated by the Bureau of Labor Statistics (U.S. Bureau of Labor Statistics, 2011).

For this study, statistical information was obtained relating to the manufacturing industry and unemployment rates from the U.S. Department of Labor’s Bureau of Labor Statistics (DLB), which collects, processes, and analyzes labor economics and statistics. The DLB tracks mass layoff statistics for establishments that employ 50 or more workers and have at least 50 initial claims for unemployment insurance (Brown and Siegel, 2005). In 2004, the Bureau of Labor Statistics began tracking job loss associated with the movement of work from the U.S. to other countries by month, state, and industry.

Illegal immigration estimates were obtained from the Pew Hispanic Center based on the March Supplement of the Current Population Surveys of 2007 through 2010. Offshoring statistics were obtained from the DLB. This data focuses on offshoring-related separations due to movement of work actions out of the country, whether that movement was within the same company or a different company (U.S. Bureau of Labor Statistics, 2011). The sample includes unemployment rates for the manufacturing sector of the U.S. economy only. Unemployment rates are calculated by dividing the number of unemployed by the total labor force. The labor force includes workers 16 years old and over, earning a private wage or salary. Also included in the sample data are estimated illegal immigration figures for the U.S..

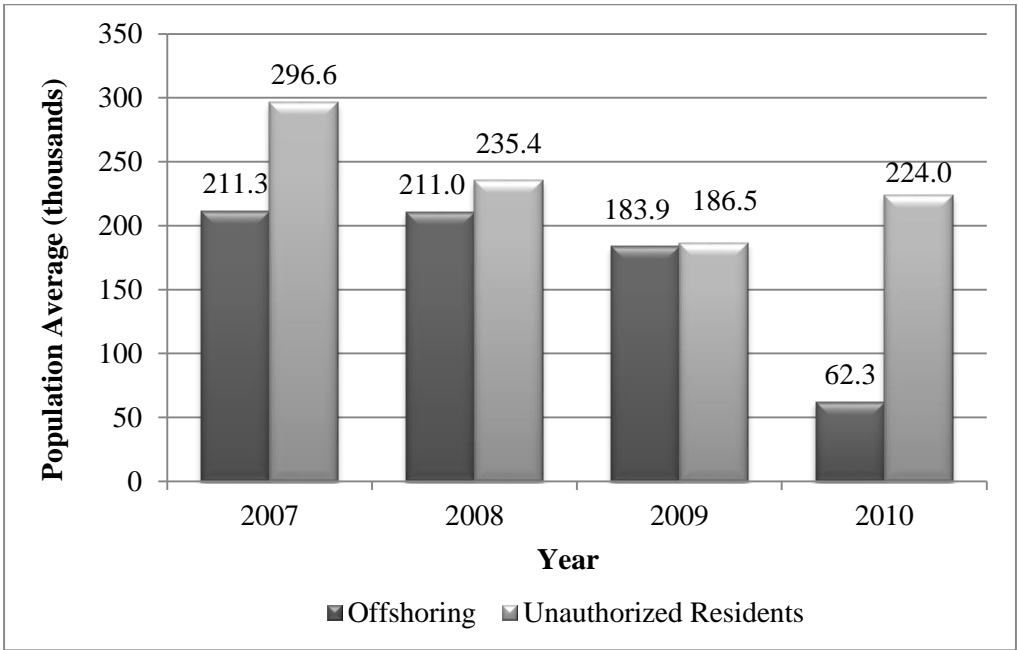
Figures 1 and 2 illustrate the averages for manufacturing unemployment, offshoring, and unauthorized resident populations from 2007 through 2010. Table 2 included in the Appendix depicts the U.S. manufacturing unemployment rates, offshoring, and unauthorized residency by state for the year 2010.

Figure 1
U.S. Manufacturing Unemployment Averages, 2007 – 2010



Between 2007 and 2008 unemployment rates in the manufacturing industry increased 51% from 4.5% to 6.8% and then increased 32% from 6.8% to 9% between 2008 and 2009. Between 2009 and 2010, manufacturing unemployment decreased to 8.6% (United States Bureau of Labor Statistics, 2011).

Figure 2
Offshoring and Unauthorized Resident Population Averages, 2007 – 2010



In 2007, approximately 211,300 jobs were moved offshore. That number decreased .01% between 2007 and 2008. Between 2008 and 2009, the number of jobs offshored decreased to 15%, declining from 211,000 to approximately 183,900. Offshoring decreased most sharply between 2009 and 2010 by 66% (United States Bureau of Labor Statistics, 2011).

The estimated unauthorized resident population decreased by about 21% between 2007 and 2008. The number of unauthorized residents continued to decrease steadily by another 21% between 2008 and 2009. Between 2009 and 2010, however, it is estimated that unauthorized resident population in the U.S. increased by 20% (Passel & Cohn, 2011).

5. HYPOTHESIS

The results of the study are expected to answer the following questions:

1. Does the loss of manufacturing jobs due to offshoring have an impact on the U.S. manufacturing unemployment rate?
2. Do changes in unauthorized resident population have an effect on unemployment rates within the U.S. manufacturing industry?

In response to the questions posed above, the following null hypotheses were constructed to test for these relationships:

H₀₁: There is a non-significant relationship between U.S. manufacturing unemployment and illegal immigration.

H₀₂: There is a non-significant correlation between U.S. manufacturing unemployment and offshoring.

A set of Pearson coefficients were computed to determine whether there was a statistically significant relationship between the loss of manufacturing jobs in the U.S. and number of layoffs in the U.S. due to jobs that were moved out of the country. We also test the relationship of either of these areas and the annual national unemployment rate.

A set of Pearson correlations (Table 1) were computed to determine whether there are any significant relationships between the variables, U.S. manufacturing unemployment, offshoring, and illegal immigration and whether any statistically significant relationships exists between the three variables. All correlations are calculated at the 0.05 significance level. The correlation between unemployment and offshoring is 0.156, indicating that there is a correlation. The correlation between unauthorized resident population and manufacturing unemployment is 0.119, indicating no correlation at the 0.05 level. The correlation between offshoring and unauthorized resident population is 0.406, which is non-significant at the 0.05 significance level.

Table 1
Correlation Between U.S. Manufacturing Unemployment, Offshoring, and Unauthorized Residency, 2007 - 2010

		Unemployment	Offshoring	Unauthorized Residents
Unemployment	Pearson Correlation	1	.156*	.119
	Sig. (2-tailed)	.000	.025	.090
	N	204	204	204
Offshoring	Pearson Correlation	.156*	1	.406**
	Sig. (2-tailed)	.025	.000	.000
	N	204	204	204
Unauthorized Residents	Pearson Correlation	.119	.406**	1
	Sig. (2-tailed)	.090	.000	.000
	N	204	204	204

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

The manufacturing industry has changed dramatically over the last decade. As the industry changed, firms sought strategies to compete globally. Some firms began offshoring, shipping all or portions of their business overseas. Economists, as well as other researchers, argued that the shipping of manufacturing jobs overseas resulted in a high national unemployment rate. The testing results above indicate that there is a statistically significant relationship between the national unemployment rate and the number of manufacturing jobs lost or moved out of the country.

6. INTERPRETATION OF RESULTS

The correlation between state unemployment and offshoring is 0.156. This is significant at the 0.05 level. The null hypothesis that there is no significant relationship between the national unemployment rate and the number of manufacturing jobs lost due to offshore outsourcing is rejected. Although this relationship is not strong with a coefficient of determination of only around 2.4%, it suggests the existence of a number of other factors may influence the relationship between these variables, such as mass layoffs or factory closures. The correlation between manufacturing unemployment and illegal immigration is 0.119; which is not significant at the 0.05 level. The null hypothesis is not rejected. Only 1.4% of the variance in unemployment is explained by the number of illegal immigrants, indicating a weak relationship between the two variables.

7. FUTURE RESEARCH

The DLB is now collecting data on employees applying for assistance through the Trade Adjustment Assistance program. The program, in conjunction with state and local agencies provides assistance to American workers who lost their jobs due to international trade or offshoring. As more data becomes available regarding the number of workers displaced because their jobs were shipped out of the country, additional analysis should be performed to further assess the impact of the jobs lost in all industries on the U.S. unemployment rate.

8. LIMITATIONS

This study was conducted using manufacturing industry offshoring data provided by the U.S. Department of Labor's Bureau of Labor statistics. The Bureau of Labor Statistics does not track or maintain the comprehensive number of manufacturing jobs lost due to an organization shipping its production or portion of services overseas. The data analyzed for this study only considers the total number of manufacturing jobs lost and mass layoffs due to relocation of work out of the United States. Therefore, the results are limited to manufacturing jobs lost overall, not solely because positions were shipped overseas.

The figures for unauthorized resident populations were obtained from the Pew Research Center, and are based on augmented March Supplements to the Current Population Survey (CPS). The CPS is conducted by the Bureau of the Census and the Bureau of Labor Statistics. For the seven states with unauthorized resident estimates that were less than 10,000, the statistic given in the Pew Research Reports was "<10" in thousands. In this paper's statistical analysis, those figures were rounded up to 10,000. This impacts the research because if any state had only 1500 unauthorized residents, the source data for Figure 2 may greatly overestimate the actual figures. All other estimates are in the exact terms given by Pew Research Center.

9. CONCLUSION

Manufacturing firms have taken various measures to operate more efficiently to enable them to compete on a global level, including offshoring. Additionally, over the last few years, the national unemployment rate has risen. It has been argued that the immigration population has replaced these workers. This study examined the impact of offshoring and illegal immigration on manufacturing unemployment during the period 2007 through 2010. The tests performed identified a significant correlation between offshoring and manufacturing unemployment. The null hypothesis that there is a non-significant relationship between manufacturing unemployment and offshoring is rejected. This study infers that changes in offshoring may cause changes to U.S. manufacturing unemployment rates. As a result, companies should assess how offshoring will impact their operations as well as the national economy. Increased and continuous offshoring could ultimately affect the rate of the decline of U.S. unemployment rates. This research also suggests that other factors in conjunction with changes in offshoring may influence the increase or decrease of U.S. manufacturing unemployment rates.

Consistent with prior studies, this study did not identify a significant correlation between unemployment rates and illegal immigration at the 0.05 significance level. The null hypothesis that there is a non-significant relationship between manufacturing unemployment and illegal immigration is not rejected. There is no significant relationship at the 0.05 significance level. The results of the research suggest that illegal immigration does not impact U.S. manufacturing unemployment rates. As U.S. manufacturing firms seek to compete globally, it is important that they assess how moving jobs out of the country will impact company operations and the national economy.

10. BIOGRAPHIES

Tyechia V. Paul earned her MBA at Morgan State University in 2006. Currently, she is a graduate student in the Ph.D. program at Hampton University in the field of management. Ms. Paul works as an IT Instructor/E-Learning Specialist for DLA Piper LLP.

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11. REFERENCES

- Baily, M. N. & Lawrence, R. Z. (2004). What Happened to the Great U.S. Job Machine? The Role of Trade and Electronic Offshoring. *Brookings Papers on Economic Activity*, 2, 211-284.
- Blackman, S. (2009, May 19). *Should You Offshore Your Services?* Retrieved 30 July, 2011, from BNet.com: http://www.bnet.com/blog/mba/should-you-offshore-your-services/698?tag=mantle_skin;content.
- Borjas, G. J. (2001). Does Immigration Grease the Wheels of the Labor Market?, *Brookings Papers on Economic Activity*, 1, 69-133.
- Brown, S. P., & Siegel, L. B. (2005). Mass layoff data indicate outsourcing and offshoring work. *Monthly Labor Review*, 3-10.
- Farrell, D. (2006, March 22). *Don't be Afraid of Offshoring*. Retrieved April 30, 2012, from McKinsey Global Institute: http://www.mckinsey.com/Insights/MGI/In_the_news/Dont_be_afraid_of_offshoring
- Hagenbaugh, B. (2002 December 12). *USA Today*. Retrieved from: http://www.usatoday.com/money/economy/2002-12-12-manufacture_x.htm.
- Hanson, G. H. (2007). *The Economic Logic of Illegal Immigration*. New York: Council on Foreign Relations, Inc.
- Hoefler, M., Rytina, N., & Baker, B. C. (2011, February). *Estimates of Unauthorized Immigrant Population Residing in the United States: January 2010*. Retrieved July 30, 2011, from DHS.gov: http://www.dhs.gov/xlibrary/assets/statistics/publications/ois_ill_pe_2010.pdf
- Hollifield, J. F. and Hunt, V. F. "Immigrants, Markets, and Rights: The U.S. as an Emerging Migration State." Paper prepared for presentation at the Migration Ethnicity Meeting (MEM) at IZA in Bonn, Germany, May 13-16, 2006.
- Isidore, C. (2008, December 1). *It's Official: Recession Since Dec. '07*. Retrieved July 30, 2011, from CNNMoney.com: <http://money.cnn.com/2008/12/01/news/economy/recession/index.htm>
- Keuschnigg, C., & Ribi, E. (2009). Outsourcing, Unemployment, and Welfare Policy. *Journal of International Economics*, 168-176.
- Knotek, E., & Terry, S. (2009). How Will Unemployment Fare following the Recession?. *Federal Reserve Bank Of Kansas City Economic Review*, 94(3), 7-35.
- Merino, F., & Rodríguez, D. (2007). Business services outsourcing by manufacturing firms. *Industrial and Corporate Change*, 16:6, 1147-1173.

Otterman, S. (2004, February 20). *Trade: Outsourcing Jobs*. Retrieved July 30, 2011, from CFR.org: <http://www.cfr.org/pakistan/trade-outsourcing-jobs/p7749#p4>.

Passel, J. S., & Cohn, D. (2009). *A Portrait of Unauthorized Immigrants in the United States*. Washington, DC: Pew Research Center.

Passel, J. S., & Cohn, D. (2010). *U.S. Unauthorized Immigration Flows Are Down Sharply Since Mid-Decade*. Washington, DC: Pew Research Center.

Passel, J. S., & Cohn, D. (2011). *Unauthorized Immigrant Population: National and State Trends, 2010*. Washington, DC: Pew Research Center.

Pettinger, T. (2007, September 11). *What Does It Mean To Be In A Recession?* Retrieved July 30, 2011, from EconomicsHelp.org: <http://econ.economicshelp.org/2007/09/what-does-it-mean-to-be-in-recession.html>.

Statistics, B. O. (2011, July 31). (Unadj.) *Unemployment Rate - Manufacturing Industry, Private Wage and Salary Workers*. Washington, DC, U.S.A.

Stokes, B. (2005). *Outsourcing Jobs: U.S. Dilemma*. New York Foreign Policy Association. Retrieved from <http://www.unf.edu/~dschwam/gd/outourcing.pdf>

United States Bureau of Labor Statistics. (2011, August 31). (Unadj.) *State Unemployment Rate - Manufacturing Industry, Private Wage and Salary Workers*. Washington, DC, U.S.A.

United States Bureau of Labor Statistics. (2011, September 23). *Mass Layoff Statistics Program – Extended mass layoff separations associated with out-of-country movement of work*. Washington, DC, U.S.A.

APPENDIX

Table 2
U.S. Manufacturing Unemployment, Offshoring, and Unauthorized Residency, 2010

State	Unemployment	Offshoring	Unauthorized Residents
Alabama	9.1	0	120
Alaska	7.9	0	10
Arizona	9.6	198	400
Arkansas	7.9	0	55
California	12.5	376	2550
Colorado	8.9	0	180
Connecticut	9	0	120
Delaware	8.5	0	25
District of Columbia	9.6	0	25
Florida	12	0	825
Georgia	10.4	315	425
Hawaii	6.3	0	40
Idaho	9.7	0	35
Illinois	9.2	263	525
Indiana	9.5	620	110
Iowa	6.1	65	75
Kansas	6.8	160	65
Kentucky	10.3	161	80
Louisiana	7.7	0	65
Maine	7.5	0	10
Maryland	7.4	0	275
Massachusetts	8.3	371	160
Michigan	11.1	0	150
Minnesota	6.9	0	85
Mississippi	10.2	0	45
Missouri	9.6	192	55
Montana	7.4	0	10
Nebraska	4.3	0	45
Nevada	14.9	0	190
New Hampshire	5.6	0	15
New Jersey	9.1	153	550
New Mexico	8.6	0	85
New York	8.2	0	625
North Carolina	9.8	87	325
North Dakota	3.8	0	10

State	Unemployment	Offshoring	Unauthorized Residents
Ohio	9.5	0	100
Oklahoma	6.8	0	75
Oregon	10.6	0	160
Pennsylvania	8.5	0	160
Rhode Island	11.5	0	30
South Carolina	10.9	0	55
South Dakota	4.7	0	10
Tennessee	9.4	213	140
Texas	8.3	0	1650
Utah	7.5	0	110
Vermont	5.8	0	10
Virginia	6.6	2	210
Washington	9.3	0	230
West Virginia	9.7	0	10
Wisconsin	7.5	0	100
Wyoming	6.4	0	10