Marshall & Ilsley Bank

Marshfield Area Chamber
Of Commerce & Industry's
Marshfield Economic
Development Association

MARSHFIELD AREA
2007
ECONOMIC INDICATORS

4th Quarter 2007
presented
February 29, 2008

Presented by:
Central Wisconsin Economic Research Bureau
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Special Report: Economic Insecurity in the Age of Turbulence

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National and Regional Outlook

From fourth quarter 2006 to fourth quarter 2007 real GDP grew by a healthy 2.5 percent. The industrial production coming out of our nation's factories rose by 1.6 percent over the same period. Meanwhile short term interest rates declined from 4.88 to 3.31 percent. Most alarming, however, was the sharp upward movement in the price level. The consumer price index rose by 4.1 percent over last year. The main culprits for this rise were escalating energy costs, the decline of the dollar in the world's foreign exchange markets, and some say Federal Reserve Policy.

Toward the end of 2007 economic conditions had greatly weakened. Real GDP grew by only 0.6 percent during fourth quarter. In contrast the U.S. Department of Commerce reports that real GDP grew by a healthy 4.9 percent in the third quarter of 2007. Thus a dramatic slow down in activity took place in the fourth quarter. Many economic analysts believe that the first quarter of 2008 will also be weak. Some of the more bearish analysts go as far as to say that the economy will experience negative growth during the first part of 2008. For example, Harvard economist Martin Feldstein indicates that the probability of a recession has reached fifty percent. This is significant in that Feldstein heads the NBER (National Bureau of Economic Research), the organization that ultimately determines the dates for business cycles.

While it is clear that the economy has weakened, it is not yet a sure thing that the U.S. will enter a recession. Federal Reserve Board chairman Ben Bernanke has stated that even though the economic situation has deteriorated the economy may still avoid recession. This does not mean that some segments of the economy are not already hurting. The home construction sectors and related manufacturing sectors have been hit very hard by the problems facing the housing market. Moreover, the U.S. automobile industry is experiencing very hard times as well and for all intents and purposes is in a deep recession.

The major reason that some are more bullish about the prospects of the economy in 2008 centers around the belief that, although the sub prime housing collapse has damaged the economy, the damage may yet be contained. Their belief is predicated on the vast amount of liquidity that is being pumped in the economy by the Federal Reserve. Hopefully the liquidity and the associated decline in interest rates will counter the effects of the sub prime housing market collapse. More liquidity and lower interest rates will allow for lower borrowing costs for businesses and the opportunity for mortgage refinancing by homeowners. Some say that the Federal Reserve has not done enough in this regard and should provide additional liquidity and even lower interest rates to the economy.

Fiscal policy will also play a role in the government's efforts to avoid a recession in an election year. The U.S. Congress and President have enacted a $168 billion stimulus package. The hope is that the recipients will spend the dollars and bolster consumption spending. Critics contend that it will be May before the checks arrive and when they do, people will end up either saving a large portion of the money or spend

the money on foreign made goods, thus stimulating foreign economies, not the U.S. economy. Only time will tell if the economy actually goes into an official recession. But this is a technicality as it really does not matter all that much if the economy contracts by a small percent or increases by a small percent. The reality is that the better part of 2008 will be a difficult period for the U.S. economy. There are fundamental imbalances in the housing market and in our nation's financial system. It will take time for individuals and businesses to clean up their balance sheets. Then and only then will we be on a path to recovery based on sound fundamentals.

TABLE 1

NATIONAL ECONOMIC STATISTICS

	2006 Fourth Quarter	2007 Fourth Quarter	Percent Change
Nominal Gross Domestic Product (Billions)	$13,392.3	$14,080.8	+5.1
Real Gross Domestic Product (Billions of 2000 $)	$11,395.5	$11,677.4	+2.5
Industrial Production (2002 = 100)	112.2	114.0	+1.6
Three Month U.S. Treasury Bill Rate	4.88%	3.31%	-32.1
Consumer Price Index (1982-84 = 100)	201.8	210.0	+4.1

Central Wisconsin

A summary of the Central Wisconsin section of the report follows. The unemployment rates for Wood County, the state of Wisconsin, and the nation rose over the course of the year. However, the rates in Portage County and Marathon County fell over the past twelve months. Likewise total employment was generally higher except for Wood County and Wisconsin. Industrial sector employment rose from 153.7 to 157.3 thousand over the past twelve months and county sales tax collections were mixed. Lastly, business confidence in Central Wisconsin fell because of recent changes in economic conditions, but confidence in future activity levels rebounded.

The unemployment rates in Wood County and the state of Wisconsin rose from December 2006 to December 2007. Wood's unemployment rate inched upward from 4.8 to 4.9 percent, and Wisconsin's unemployment rate expanded from 4.5 to 4.6 percent. The unemployment rate of the United States climbed dramatically from 4.3 to 4.8 percent. Better news comes from Portage and Marathon counties. The unemployment rates in these areas fell to 3.9 percent. Because of this the labor force weighted unemployment rate in Central Wisconsin declined from 4.3 to 4.1 percent from year end 2006 to year end 2007.

The state's survey of households reveals that Wood County and Wisconsin saw employment levels contract from a year ago. Wood County employment declined by 2.1 percent and Wisconsin's employment fell by 0.4 percent. Employment did grow in Portage and Marathon counties by 2.9 and 0.3 percent respectively.

Central Wisconsin's industrial sector employment is estimated by the state through the use of payroll data. The total employment figure rose for the three county area from 153.7 to 157.3 thousand, or 2.3 percent. The only sectors not reporting an increase were manufacturing down 4.1 percent, transportation & utilities down 1.1 percent, and government down 6.2 percent. The other six sectors that comprise the table all registered increases.

County sales tax collections are posted in Table 5. Portage and Marathon counties' sales tax collections reportedly fell by 2.7 and 3.7 percent from last year's figures. Surprisingly Wood County sales tax collections rose by 13.9 percent. This seems a bit strange given the declining employment figures.

Each and every quarter the CWERB interviews area business executives about the state of the economy. This group felt the national economic conditions had greatly deteriorated by December 2007. Local economic conditions were thought to be a bit softer in December compared to September. This group, however, was decidedly more upbeat about the future. When asked to forecast conditions for the next quarter, they felt national economic conditions would improve and likewise for the local economy. They were the most optimistic in terms of appraising their own industry. The survey indicated a modest improvement will take place in their industry.

Figures 1 thru 6 give an overview of Wisconsin's economic performance. The figures give the reader a historical picture of how major economic variables have trended in the state.

TABLE 2

UNEMPLOYMENT IN CENTRAL WISCONSIN

	Unemployment Rate December 2006	Unemployment Rate December 2007	Percent Change
Portage County	4.0%	3.9%	-2.6
City of Stevens Point	4.6%	4.6%	0
Marathon County	4.1%	3.9%	-5.2
Wood County	4.8%	4.9%	+1.8
Central Wisconsin	4.3%	4.1%	-4.7
Wisconsin	4.5%	4.6%	+1.0
United States	4.3%	4.8%	+12.7

TABLE 3

EMPLOYMENT IN CENTRAL WISCONSIN

	Total Employment December 2006 (Thousands)	Total Employment December 2007 (Thousands)	Percent Change
Portage County	40.1	41.3	+2.9
City of Stevens Point	14.7	14.3	-3.0
Marathon County	72.6	72.7	+0.1
Wood County	39.5	38.7	-2.1
Central Wisconsin	152.2	152.6	+0.3
Wisconsin	2,958.7	2,946.7	-0.4
United States	146,080	146,334	+0.2

* Percent change figures reflect data before rounding

TABLE 4

CENTRAL WISCONSIN EMPLOYMENT CHANGE BY SECTOR

	Employment December 2006 (Thousands)	Employment December 2007 (Thousands)	Percent Change
Total Nonfarm	153.7	157.3	+2.3
Total Private	132.0	136.9	+3.7
Construction & Natural Resources	5.3	5.7	+7.2
Manufacturing	28.8	27.6	-4.1
Trade	27.5	28.9	+5.2
Transportation & Utilities	8.4	8.3	-1.1
Financial Activities	10.4	11.4	+9.6
Education & Health Services	21.9	23.6	+7.7
Leisure & Hospitality	11.7	12.6	+7.4
Information & Business Services	17.9	18.8	+4.8
Total Government	21.8	20.5	-6.2

TABLE 5

COUNTY SALES TAX DISTRIBUTION

	Sales Tax 2006 Fourth Quarter (Thousands)	Sales Tax 2007 Fourth Quarter (Thousands)	Percent Change
Portage County	$1,203.2	$1,170.6	-2.7
Marathon County	$2,662.8	$2,565.6	-3.7
Wood County	$1,088.9	$1,239.9	+13.9

* Percent change figures reflect data before rounding

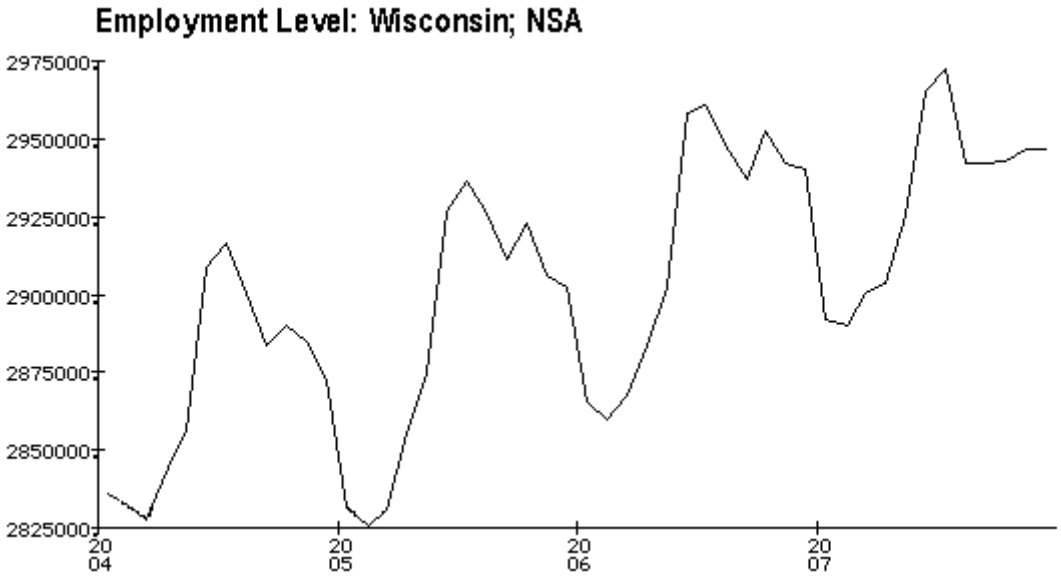
TABLE 6

BUSINESS CONFIDENCE IN CENTRAL WISCONSIN

	Index Value	
	September 2007	**December 2007**
Recent Change in National Economic Conditions	42	37
Recent Change in Local Economic Conditions	50	47
Expected Change in National Economic Conditions	49	53
Expected Change in Local Economic Conditions	50	53
Expected Change in Industry Conditions	51	56

100 = Substantially Better
50 = Same
0 = Substantially Worse

FIGURE 1


Employment Level: Wisconsin; NSA
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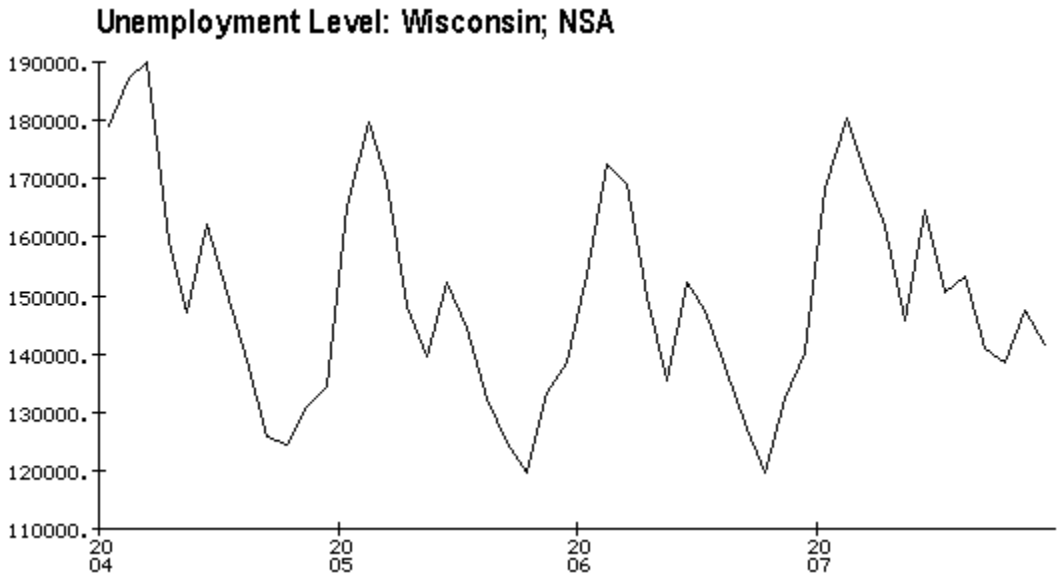
2950000
2925000
2900000
2875000
2850000
2825000
20
04
20
05
20
06
20
07

FIGURE 2


Unemployment Level: Wisconsin; NSA
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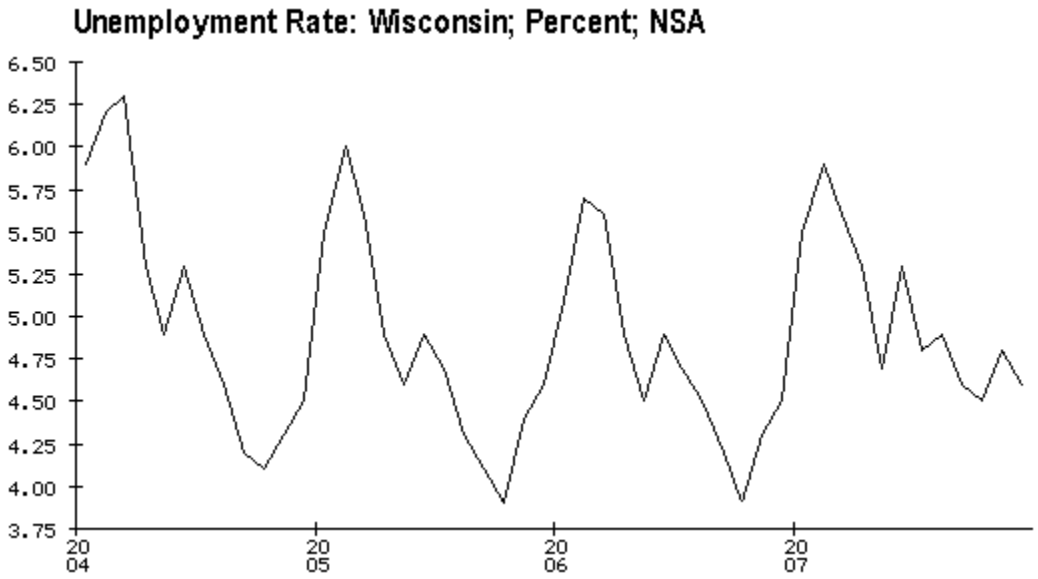
180000.
170000.
160000.
150000.
140000.
130000.
120000.
110000.
2004
2005
2006
2007

FIGURE 3


Unemployment Rate: Wisconsin; Percent; NSA
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6.25
6.00
5.75
5.50
5.25
5.00
4.75
4.50
4.25
4.00
3.75
2004
2005
2006
2007

FIGURE 4

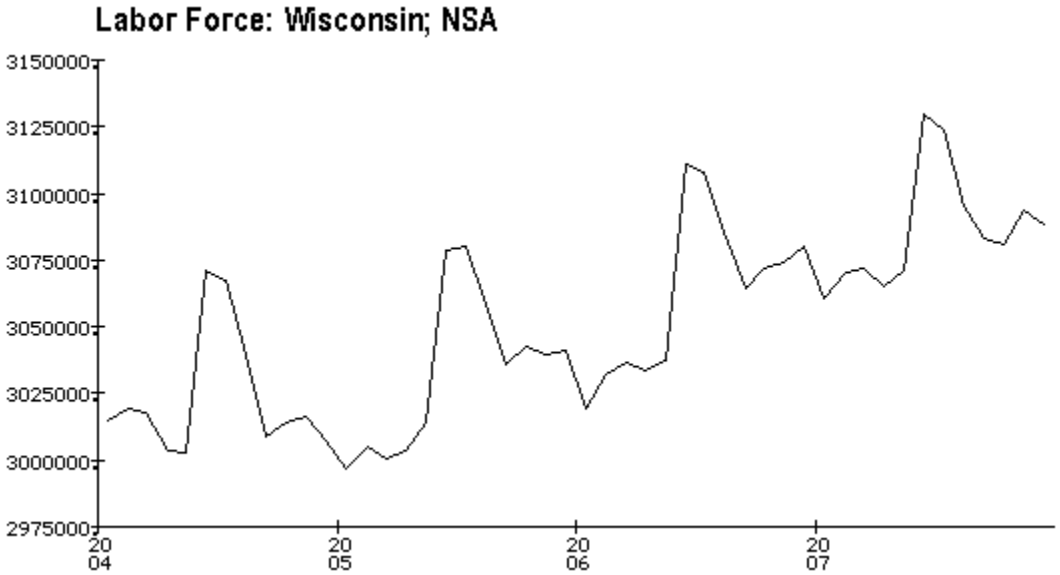
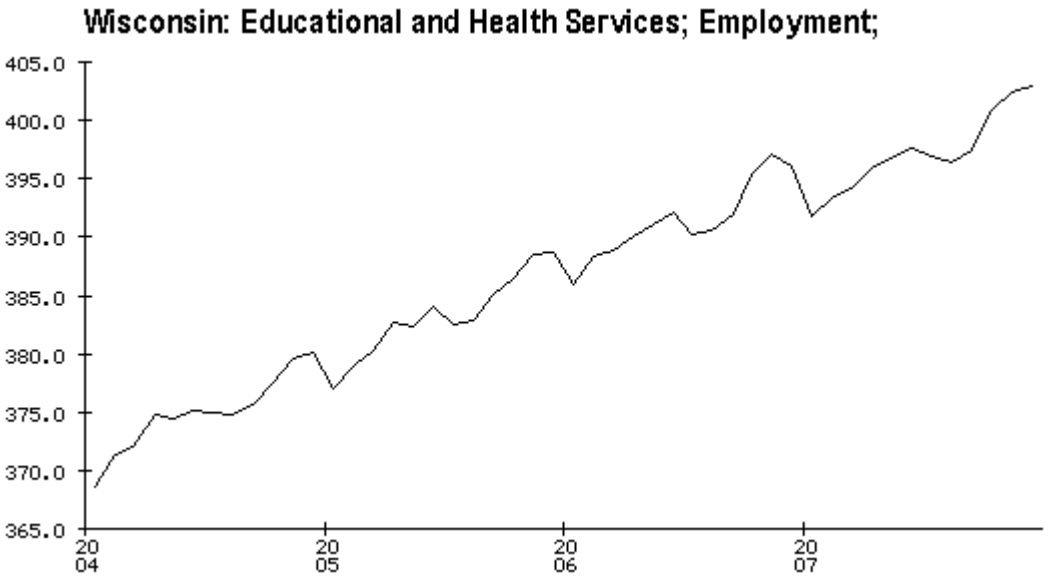

Labor Force: Wisconsin; NSA
3150000
3125000
3100000
3075000
3050000
3025000
3000000
2975000
2004
2005
2006
2007

FIGURE 5


Wisconsin: Manufacturing; Average Weekly Earnings; Dollars; NSA
720.
710.
700.
690.
680.
670.
660.
650.
640.
630.
2004
2005
2006
2007

FIGURE 6


Wisconsin: Educational and Health Services; Employment;
405.0
400.0
395.0
390.0
385.0
380.0
375.0
370.0
365.0
2004
2005
2006
2007

Marshfield

A summary of this section of the report is as follows. Industrial sector employment fell by 0.6 percent from last year; the retailer confidence index for Marshfield indicates modest improvement will take place in the retail sector; help wanted advertising has improved; public assistance claims and unemployment claims declined from fourth quarter 2006 levels; residential construction permits were very low in late 2007; nonresidential construction was at about the same level as a year ago; and lastly, Clark County's economy expanded over the past twelve months.

Table 7 represents the state's employment estimates that are based on a survey of establishments. Total nonfarm employment contracted by 200 positions or by 0.6 from a year ago. Construction & natural resources and government employment contracted the most, by 12.3 percent and 21.5 percent respectively. The other seven sectors in Table 7 experienced growth. Even manufacturing, which has seen tough times, grew by an estimated 200 jobs or 2.9 percent. The information & business services sector improved the most, adding 400 jobs over the past twelve months.

Table 8 gives the CWERB survey results of local merchants. When asked about total sales compared to last year they thought matters were slightly ahead of last year's pace. However, store traffic was thought to be somewhat lower. When asked to forecast expected sales and traffic three months from now, they indicated that sales and traffic would be slightly improved over 2007 levels.

Help wanted advertising in Table 9 shows that it improved a bit from last year's mark. Meanwhile the U.S. figure declined rather sharply. Even though newspaper advertising only accounts for a small part of the total amount of jobs available, economists still believe it to be a reliable predictor of future labor market activity and of the future direction of unemployment rates.

The data in Tables 10 and 11 give us some sense as to the level of local family financial distress. Table 10 shows that public assistance on a monthly average fell from 82 to 66 over the past twelve months. Over the same period Table 11 shows that the number of new unemployment claims contracted by 3.4 percent. Similarly, total unemployment claims declined by 4.8 percent in Wood County.

Residential construction activity in Table 12 shows that alteration activity outpaced home construction. The number of new permits fell from just 6 to 4 and their estimated value fell from $2.2 to $1.3 million over the year. However, the number of residential alteration permits climbed from 13 to 17 or nearly 31 percent. The associated value of this activity increased from $174.7 to $246.7 thousand or by 41.2 percent over the year.

Nonresidential construction saw 3 projects taking place in fourth quarter 2007. The estimated value was $545 thousand. The number of business alteration permits reached 30 in fourth quarter 2007. These alteration projects were valued at $2.3

million. In sum, it appears there was little overall change in nonresidential activity between 2006 and 2007.

Tables 14 and 15 present Clark County economic statistics. Total nonfarm employment grew by 6.8 percent or 700 jobs since fourth quarter 2006. Except for financial activities, leisure & hospitality, and government, all other sectors registered gains in their employment totals. Clark County's unemployment rate fell from 5.9 to 5.4 percent and the total number of people employed expanded from 16,965 to 17,189 or by 1.3 percent since fourth quarter 2006.

TABLE 7

WOOD COUNTY EMPLOYMENT CHANGE BY SECTOR

	Employment December 2006 (Thousands)	Employment December 2007 (Thousands)	Percent Change
Total Nonfarm	44.7	44.5	-0.6
Total Private	37.7	38.9	+3.1
Construction & Natural Resources	1.5	1.3	-12.3
Manufacturing	5.7	5.9	+2.9
Trade	6.9	7.2	+4.8
Transportation & Utilities	3.7	4.0	+7.1
Financial Activities	1.1	1.1	+4.5
Education & Health Services	10.8	11.0	+2.2
Leisure & Hospitality	3.0	3.0	+1.2
Information & Business Services	4.9	5.3	+7.7
Total Government	7.1	5.6	-21.5

TABLE 8

RETAILER CONFIDENCE IN MARSHFIELD*

	Index Value	
	September 2007	December 2007
Total Sales Compared to Previous Year	54	55
Store Traffic Compared to Previous Year	42	48
Expected Sales Three Months From Now	58	53
Expected Store Traffic Three Months From Now	54	53

100 = Substantially Better
50 = Same
0 = Substantially Worse

* Data collected by UW Marshfield-Wood County

TABLE 9

HELP WANTED ADVERTISING IN MARSHFIELD

	Index Value	
	2006	**2007**
Marshfield (December) 1980=100	77	87
U.S. (November) 1987=100	30	21

TABLE 10

PUBLIC ASSISTANCE CLAIMS IN WOOD COUNTY

	2006 Fourth Quarter (Monthly Avg.)	**2007 Fourth Quarter (Monthly Avg.)**	**Percent Change**
Total Caseload	82	66	-19.5

TABLE 11

UNEMPLOYMENT CLAIMS IN WOOD COUNTY

	2006 Fourth Quarter (Weekly Avg.)	2007 Fourth Quarter (Weekly Avg.)	Percent Change
New Claims	325	314	-3.4
Total Claims	1349	1284	-4.8

TABLE 12

RESIDENTIAL CONSTRUCTION IN MARSHFIELD AREA*

	2006 Fourth Quarter	2007 Fourth Quarter	Percent Change
Residential Permits Issued	6	4	-33.3
Estimated Value of New Homes	$2,155.0 (thousands)	$1,295.5 (thousands)	-39.9
Number of Housing Units	9	12	+33.3
Residential Alteration Permits Issued	13	17	+30.8
Estimated Value of Alterations	$174.7 (thousands)	$246.7 (thousands)	+41.2

* Data collected by UW Marshfield-Wood County

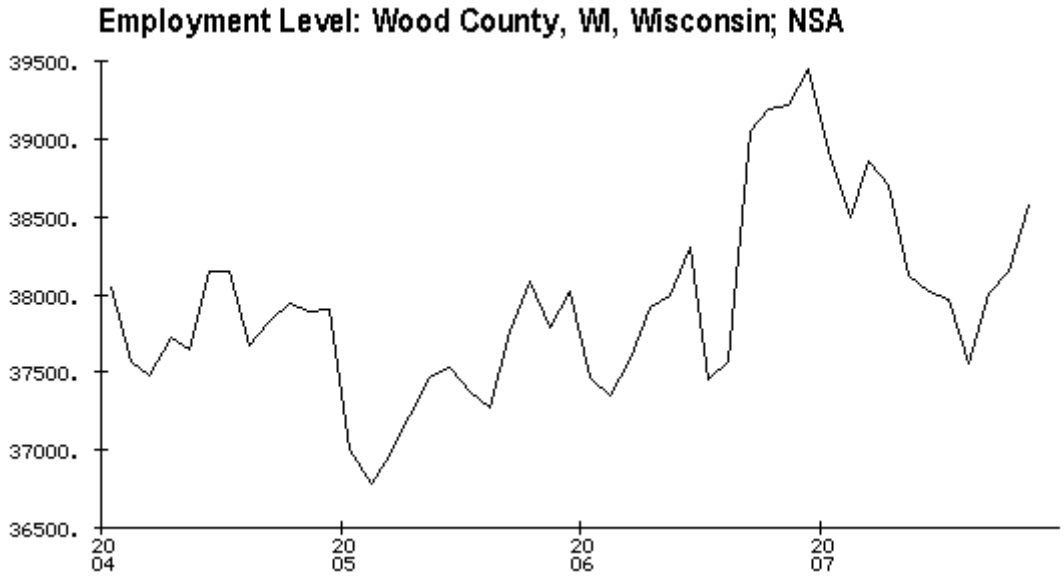
TABLE 13

NONRESIDENTIAL CONSTRUCTION IN MARSHFIELD AREA*

	2006 Fourth Quarter	2007 Fourth Quarter
Number of Permits Issued	4	3
Estimated Value of New Structures	$695.0 (thousands)	$545.0 (thousands)
Number of Business Alteration Permits	23	30
Estimated Value of Business Alterations	$2,202.0 (thousands)	$2,334.4 (thousands)

* Data collected by UW Marshfield-Wood County

FIGURE 7


Employment Level: Wood County, WI, Wisconsin; NSA
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39000.
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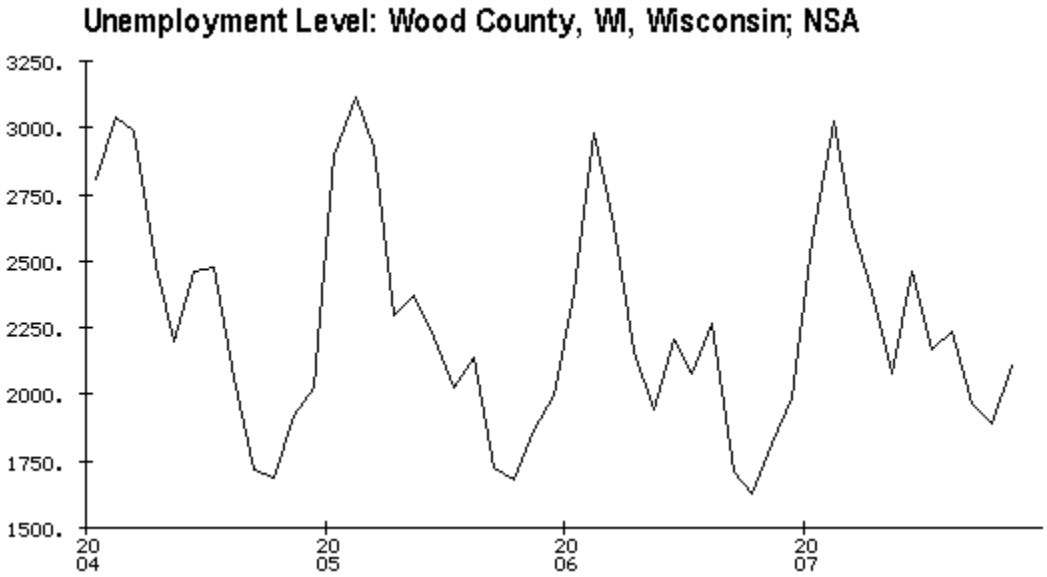
37500.
37000.
36500.
2004
2005
2006
2007

FIGURE 8


Unemployment Level: Wood County, WI, Wisconsin; NSA
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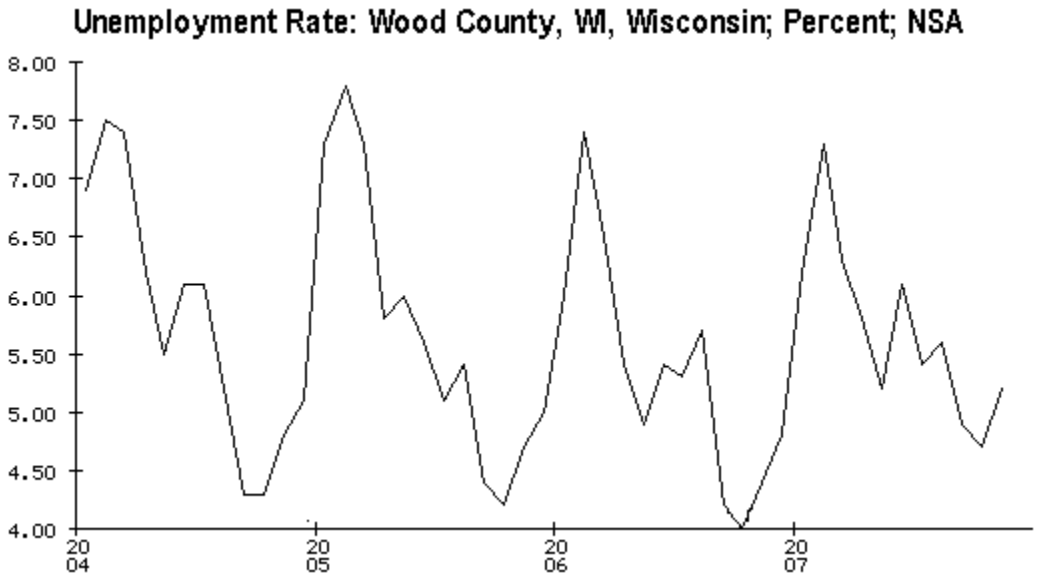
1500.
2004
2005
2006
2007

FIGURE 9


Unemployment Rate: Wood County, WI, Wisconsin; Percent; NSA
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7.00
6.50
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5.50
5.00
4.50
4.00
2004
2005
2006
2007

FIGURE 10

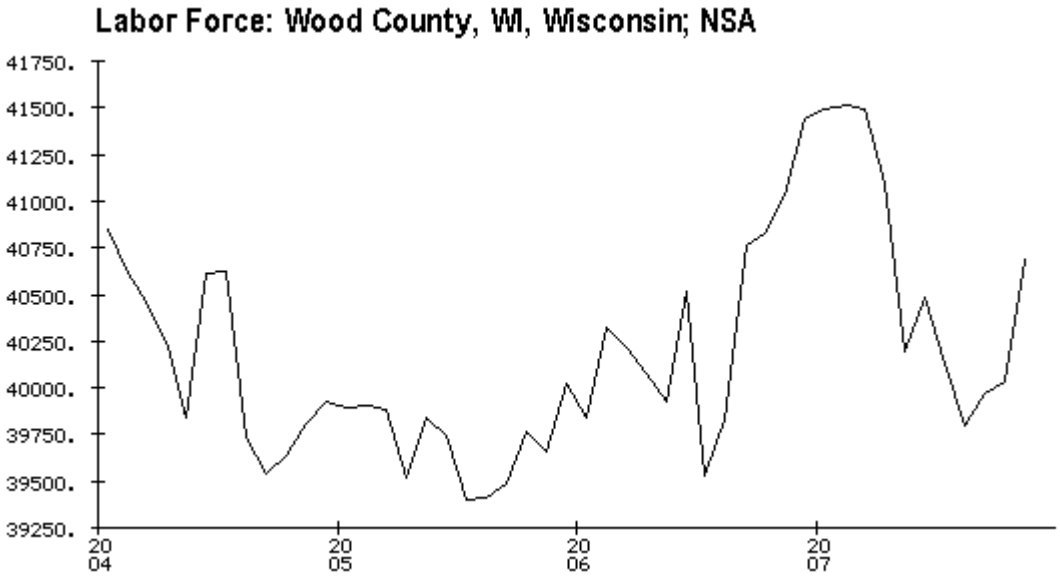

Labor Force: Wood County, WI, Wisconsin; NSA
41750.
41500.
41250.
41000.
40750.
40500.
40250.
40000.
39750.
39500.
39250.
2004
2005
2006
2007

TABLE 14

CLARK COUNTY EMPLOYMENT BY SECTOR

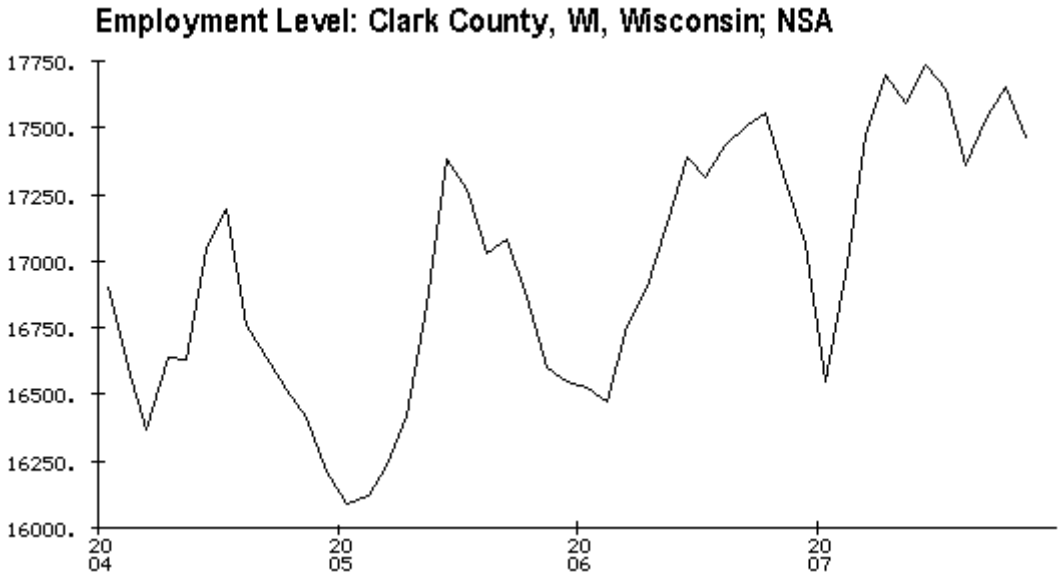
	December 2006	December 2007	Percent Change
Total Nonfarm	10.6	11.3	+6.8
Total Private	8.6	9.3	+7.7
Construction & Natural Resources	0.6	0.6	+3.2
Manufacturing	2.9	3.1	+8.2
Trade	1.5	1.7	+11.3
Transportation & Utilities	0.5	0.6	+22.6
Financial Activities	0.3	0.3	-9.3
Education & Health Services	1.3	1.6	+20.6
Leisure & Hospitality	0.7	0.6	-21.0
Information & Business Services	0.8	0.8	+3.9
Total Government	2.1	2.1	-2.1

TABLE 15

CLARK COUNTY EMPLOYMENT STATISTICS

	December 2006	December 2007	Percent Change
Unemployment Rate	5.9%	5.4%	-8.9
Total Employed	16,965	17,189	+1.3
Total Unemployed	1,061	974	-8.2
Labor Force	18,026	18,163	+0.8

FIGURE 11


Employment Level: Clark County, WI, Wisconsin; NSA
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17500.
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17000.
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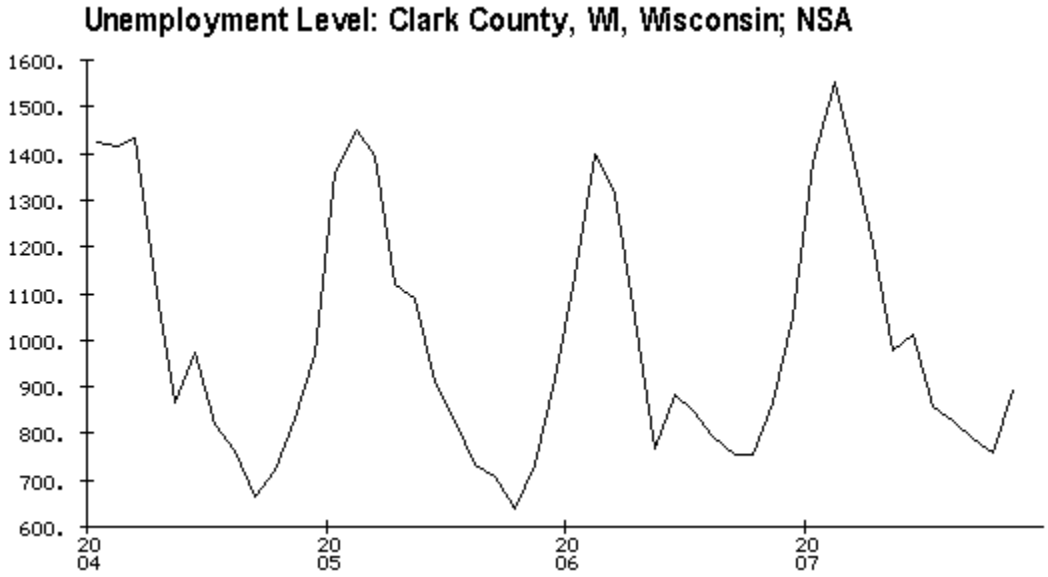
16500.
16250.
16000.
2004
2005
2006
2007

FIGURE 12


Unemployment Level: Clark County, WI, Wisconsin; NSA
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1300.
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1100.
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900.
800.
700.
600.
2004
2005
2006
2007

FIGURE 13

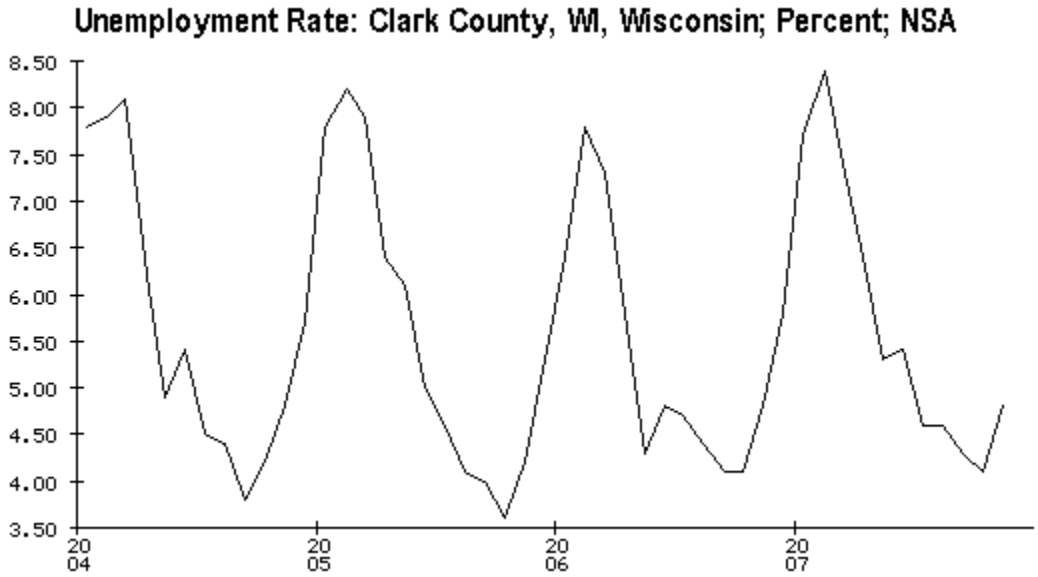
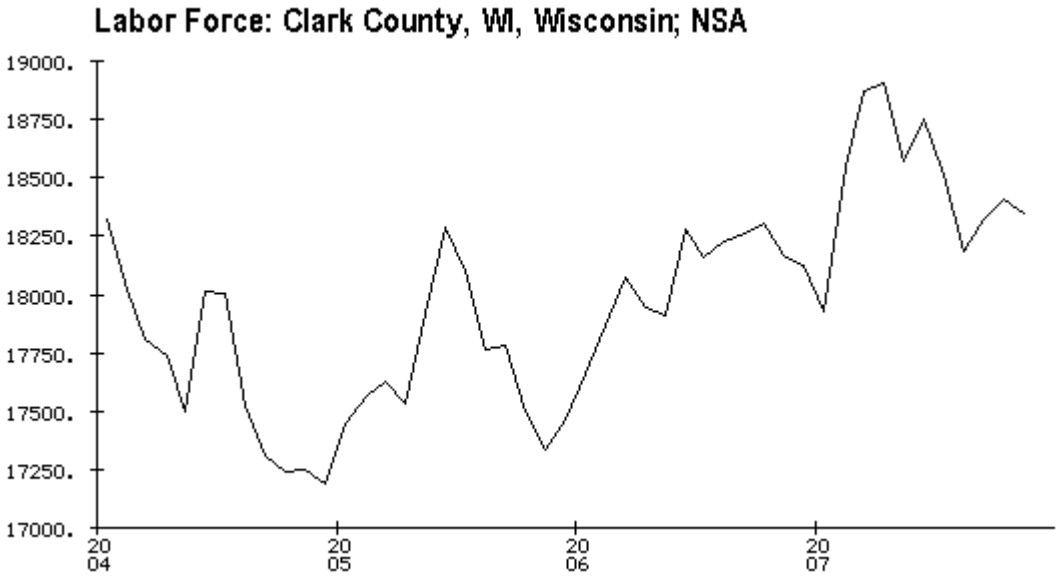

Unemployment Rate: Clark County, WI, Wisconsin; Percent; NSA
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
2004
2005
2006
2007

FIGURE 14


Labor Force: Clark County, WI, Wisconsin; NSA
19000.
18750.
18500.
18250.
18000.
17750.
17500.
17250.
17000.
2004
2005
2006
2007

Economic Insecurity in the Age of Turbulence

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Randy F. Cray, Ph.D., Professor of Economics and
Director, Central Wisconsin Economic Research Bureau
Patrick J. Rathsack, Research Assistant
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INTRODUCTION

With spring rapidly approaching, many people's thoughts turn to the outdoor activities that are forgone during the long winter months. Fishing, kayaking, and canoeing enthusiasts look forward to spending time on the Wisconsin River, a great resource for recreation. Experienced navigators of the river, however, are cautious in pursuing these activities. The image of a gently flowing river often masks strong and dangerous undertows that can capsize and pull boats underwater, which is especially pronounced near dam sites. The safe enjoyment of these activities requires that participants not be fooled by appearances.

Similarly in economics, things are not always as they appear. Relying solely on aggregate measures of economic performance can give observers a misleading and incomplete picture of the economy. Economists, for example, have recorded a dramatic decrease in macroeconomic volatility over the last two decades. Variability in real output growth and inflation has declined significantly since the mid-1980s. Recessions "have become less frequent and less severe" (Bernanke, 2004). Macroeconomists have designated this phenomenon "the Great Moderation." Yet, the stable macroeconomic conditions of the last twenty years have obscured a great deal of economic turbulence at the microeconomic level. There is substantial evidence to suggest that both businesses and households have experienced greater volatility over the same time period. The rate of job creation and destruction and of hires and separations (known as churn) has increased significantly. Today, for example, "[i]n any given quarter, about one in *twenty* establishments opens or goes out of business, and one in *thirteen* jobs begins or ends" (Brown, Haltiwanger, and Lane, 2006, 10).

This paper focuses on the increased economic insecurity faced by households and businesses at the microeconomic level. It begins by examining the economic evidence of this increase in volatility. Then, the paper discusses the likely causes for as well as the economic implications of this change in volatility. Finally, the paper briefly introduces a couple of policy options to help people deal with its negative effects.

ECONOMIC EVIDENCE

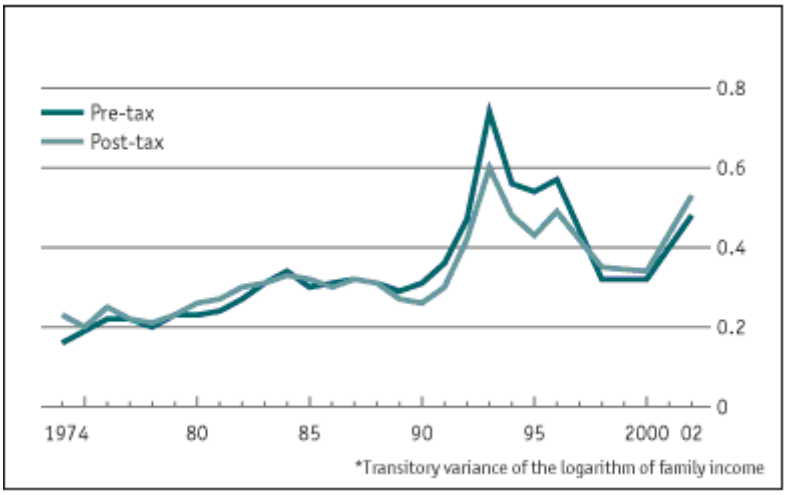
Since the mid-1990s, labor economists Robert A. Moffitt and Peter Gottschalk (1994; 2002) have attempted to gauge shifting levels of economic insecurity by analyzing changes in the variability of annual household income. These authors have relied on an

[1] The author wishes to thank Kevin Neuman and Elizabeth Martin for their input.

extended longitudinal data series known as the Michigan Panel Series of Income Dynamics (PSID). The PSID is a "longitudinal survey that has followed a sample of households from the civilian non-institutional population of the United States since 1968. Approximately 5,000 households were interviewed in the initial year of the survey and have been interviewed annually…" (Moffitt and Gottschalk, 2002, 69). By adding the children of the original sample to the survey, the PSID now includes over 7,000 families. On an annual basis, each household reports its yearly earnings for the previous year. From this data, Moffitt and Gottschalk have been able to measure changes in earnings instability faced by sample families. In doing so, the authors carefully separated "permanent" from "transitory" (or short term) movements in earnings.

"Skill-biased technical change" is an important cause of shifting wage patterns. "If new technologies tend to increase the productivity of highly skilled workers relatively more than that of less-skilled workers – a phenomenon that economists have dubbed 'skill-biased technical change' then market forces will cause the real wages of skilled workers to increase relatively faster" (Bernanke, 2007, 4). Yet, such changes do not fully capture the volatility of household earnings. "An increase in the price of 'skill,' for example, which is presumably determined by gradual movements in demand, implies that permanent earnings are affected; there is no reason to expect that such a price increase would cause wages to fluctuate more from year to year, nor is the fluctuation in the stock of skills likely to increase" (Gottschalk, Moffitt, Katz, and Dickens, 1994, 220). In assessing economic insecurity, these economists focused on calculating the "transitory variance in earnings" which measures short-term fluctuations in income. Unlike changes in permanent incomes, these short-term fluctuations are more unpredictable and therefore are an important cause of economic insecurity.

Figure 1
Fluctuation of Income around its Overall Trend Path*



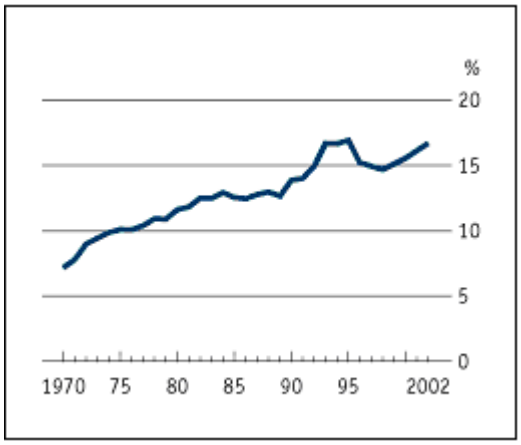
Source: Economist Print Edition, January 4, 2007

As shown above, the authors found that the transitory variance of family income increased slowly, starting in the late 1970s through the 1980s. It peaked in the early 1990s before beginning to decline in the mid-1990s. Recently, Jacob Hacker, a political

scientist from Yale University, has updated Moffitt and Gottschalk's analysis, adopting the same methodology and also relying on data from PSID. Hacker has found that earnings instability has been on the rise since the year 2000.

According to Jacob Hacker, the above figure fails to fully account for the increase in uncertainty that families face. In his recent book, The Great Risk Shift, Hacker finds that typical households experience much larger declines in incomes than they had in previous periods. "In the early 1970s the typical income loss was a bit more than 25 percent of prior income; by the late 1990s it was around 40 percent. For a family earning $42,000 (the median income for U.S. households in 1999), a 40 percent loss would mean an income drop of almost $17,000. And remember, this is the median drop: Half of families whose incomes dropped experienced even larger declines" (Hacker, 2006, 31). Using data from PSID, the figure below shows "what the chance of experiencing a 50 percent or greater family income drop is for an average person each year. The probability of a 50 percent or greater drop for an average person was just 7 percent in the 1970s. It's risen dramatically since, and while (like income volatility) it fell in the strong economy of the 1990s, it has recently spiked to record levels" (Hacker, 2006, 31-32).

Figure 2
Changes of Average Worker Facing a 50% or Greater Drop in Income over Time



Source: Economist Print Edition, November 25, 2006

A number of economists directly tie much of the rising income instability to increased volatility of firm performance during the same time period. Diego Comin, Erica Groshen, and Bess Rabin point to studies showing "that the volatility of firm-level performance, whether measured by the profit-to-sales ratio or the growth rate of sales, employment, or sales per worker, has experienced a prominent upward trend since at least 1970" (Comin, et. al., 2006, 1). Using the PSID, they examined wage volatility for workers who did not change jobs. This was done to isolate effects of changing firm performance on transitory variance of wages by eliminating the effects of wage fluctuations that result from changing jobs. "Using firm data from COMPUSTAT, [they] find rising volatility of firms' mean wages that mirrors the rise in volatility of firm performance and robust evidence that when firms experience more turbulence they pay

more volatile wages" (Comin, et. al., 2006, 32). In fact, the authors find that the rise in firm turbulence accounts for 60 percent of the rise in wage volatility.

Without the availability of reliable panel data, it is difficult to definitively determine the degree of economic turbulence experienced by Wisconsin households. Changes in overall employment, as reported monthly by the Bureau of Labor statistics, can be misleading. These "numbers, which are typically about net changes in hundreds of thousands of jobs, are just the tip of the employment iceberg, since literally millions of workers will have changed jobs over that period. Even though the numbers signal important changes in the level of economic activity, they're a little like reporting changes in the level of a lake, without information about the rivers that flow into and out of the lake" (Brown, Haltiwanger, and Lane, 2006, 11). Despite this problem, there are a number of indicators that suggest that households in Wisconsin and our local area are experiencing greater economic insecurity today. According to a study by the *Wisconsin Taxpayer Alliance*, "[f]rom 1999 to 2005, Wisconsin's median household income fell 2.2% from $45,667 to $44,650 while the national median rose 13.8% from $40,696 to $46,326. "Wisconsin ranked 50th in the nation in household income growth during the period" (www.wistax.org). Though these numbers do not directly measure volatility per se, they do indicate increasing distress for middle income families.

Historically, a higher percentage of Wisconsin families have both parents in the workforce than the nation as a whole. The *Wisconsin Taxpayer Alliance* attributed much of the decline in median household income to a recent drop in the number of workers per household. "In 2000 both spouses worked in 59.5% of married couple families in Wisconsin, 8.2 percentage points above the national average of 51.3%. Over the next five years, Wisconsin's percentage fell to 58.8%, while the U.S. share rose to 52.1%, shrinking the difference to 6.7 points" (www.wistax.org). Even though the reasons for such high workforce participation rates are difficult to pinpoint, having both parents in the labor force can be a form of private risk-sharing. "The analogy here might be a stock portfolio. Rather than holding a single stock (the husband's earnings), the modern family holds two stocks (the husband's and wife's earnings) - and holding two stocks is never more risky than holding one" (Hacker, 2006, 91). In the fall of 2006, the *Wall Street Journal* published an article listing a number of interesting observations based on the *Census Bureau's American Community Survey*. According to this survey, 83.8% of all children under the age of six in Portage County have both parents in the workforce, the highest of any county in the United States (Lovely, 2006, D1). "The county, in the middle of the state, also has a high percentage of its adults in the work force (74.1%, compared with a national average of 65.4%). While the county's median family income is a bit higher than the national average, the population's educational level is a bit below average" (Lovely, 2006, D1). If the risk-sharing hypothesis is accurate, central Wisconsin households perceive their economic environment to be highly insecure.

Other measures strongly indicate that economic insecurity has increased for the citizens of Wood County. Instead of relying solely on aggregate employment figures (i.e. the level of the lake), this paper uses data collected by *Wisconsin's Department of*

Workforce Development to break down employment by industrial sector (i.e. the rivers that flow into and out of the lake). These figures are helpful in assessing changes in the composition of employment over time for Wood County. Variation in the composition of employment among industries may be evidence of economic turbulence as laborers are compelled to shift between sectors. Tables 1 and 2, seen below, compare Wood County employment figures for two time periods, from 1997-2001 and 2002-2006. Table 1 shows that Wood County experienced a 2.3% decline in total employment from 1997 to 2001 despite the rapid economic growth occurring at the national level. This decrease was largely attributable to the poor performance of the manufacturing sector which posted a 10.6% decline in employment. (We strongly suspect that the very sharp changes in the employment figures for the Public Administration and Education & Health Service sectors reflect a geographic code change in Wood County that spanned from 1994 to 1998.)

Table 1
Wood County Employment: 1997-2001

	Avg. Emp.	5-Year % Δ	% of Total	5-Year Δ in % of Total
All Industries	43,469	-2.3%	-	-
Construction	1,640	1.7%	3.8%	0.2%
Education and Health Services	12,929	24.6%	29.7%	6.4%
Financial Activities	999	-5.3%	2.3%	-0.1%
Information	953	37.3%	2.2%	0.6%
Leisure and Hospitality	2,712	-8.5%	6.2%	-0.4%
Manufacturing	8,755	-10.6%	20.1%	-1.9%
Natural Resources	482	-3.4%	1.1%	0.0%
Other Services	1,271	-4.1%	2.9%	-0.1%
Professional and Business Services	1,638	12.4%	3.8%	0.5%
Public Administration	1,810	-59.8%	4.2%	-6.0%
Trade, Transportation, and Utilities	10,281	0.5%	23.7%	0.7%

Source: Wisconsin Department of Workforce Development

The numbers for years 2002 to 2006 in Table 2 show continued weakness in the manufacturing sector as employment fell by a staggering 17.4%. Much of this decline was concentrated in paper and wood product manufacturing areas which experienced reductions in employment of over 2000 jobs (Hodek, 2007, 5). The dramatic declines in manufacturing employment appear to be structural given that much of the job loss occurred during periods of economic expansion. By contrast, total employment in Education & Health Services grew impressively, increasing by 7.3%. "Wood County is home to a booming healthcare cluster, because the county is home to the Marshfield Clinic, one of the largest multi-specialty group practices in the United States. Wood County also has two hospitals and numerous residential care facilities" (Hodek, 2007, 5). During this time period, the Education & Health Services sector's share of total employment increased by 2.1% while Manufacturing's share fell by 3.4%. These striking shifts in the composition of employment during a relatively short time period indicate significant economic turbulence. Given the very different skill sets of occupations in these two industrial sectors, it is difficult to imagine that the expansion of health care absorbed much of the dislocation caused by the decline in manufacturing.

Table 2
Wood County Employment Data: 2002-2006

	Avg. Emp.	5-Year % Δ	% of Total	5-Year Δ in % of Total
All Industries	43,898	0.7%	-	-
Construction	1,690	5.3%	3.8%	0.2%
Education and Health Services	14,806	7.3%	33.7%	2.1%
Financial Activities	1,121	3.1%	2.6%	0.1%
Information	1,175	11.6%	2.7%	0.3%
Leisure and Hospitality	2,746	3.6%	6.3%	0.2%
Manufacturing	6,704	-17.4%	15.3%	-3.4%
Natural Resources	517	0.4%	1.2%	0.0%
Other Services	1,126	-0.6%	2.6%	0.0%
Professional and Business Services	2,023	13.7%	4.6%	0.5%
Public Administration	2,259	20.9%	5.1%	0.9%
Trade, Transportation, and Utilities	9,731	-2.4%	22.2%	-0.7%

Source: Wisconsin Department of Workforce Development

Wood County wage and payroll data by industrial sector is provided in Tables 3 and 4 for the same time periods. These figures are useful in assessing the likely fluctuations in income workers experienced in the Wood County area. All the wage and payroll figures are calculated in 1997 dollars to capture changes in purchasing power over time. For the period 1997 to 2001, the average annual real wage for all industries increased by 7.7%. (This means that the purchasing power of the average wage increased by 7.7% over this time period.) The sharp increase in real wages in the Education & Health Services sector more than compensated for the 2.7% decline in the Manufacturing sector. In 2001, wages in Manufacturing accounted for 24.9% of all Wood County payroll dollars, a decline of 5.2% from 1997.

Table 3
Wood County Wage and Payroll Data: 1997-2001

	Wages*		Payroll*	
	Avg. Annual	5-Year % Δ	% of Total	5-Year Δ in % of Total
All Industries	$30,024	7.7%	-	-
Construction	$33,838	9.7%	4.3%	0.2%
Education and Health Services	$37,562	11.5%	37.2%	9.0%
Financial Activities	$23,679	6.1%	1.8%	-0.1%
Information	$28,950	-2.3%	2.1%	0.5%
Leisure and Hospitality	$8,228	6.7%	1.7%	-0.1%
Manufacturing	$37,062	-2.7%	24.9%	-5.2%
Natural Resources	$27,037	-3.0%	1.0%	-0.1%
Other Services	$13,927	10.0%	1.4%	0.0%
Professional and Business Services	$36,364	9.0%	4.6%	0.6%
Public Administration	$26,213	10.6%	3.6%	-5.0%
Trade, Transportation, and Utilities	$22,196	5.5%	17.5%	0.1%

*Wage and Payroll figures presented in 1997 dollars
Source: Wisconsin Department of Workforce Development

The figures for years 2002 to 2006 in Table 4 show that the purchasing power of the average worker remained unchanged. Deflating wages to 1997 dollars, average annual

wages increased by only 0.8%. This measure alone doesn't reveal much because few workers can be considered average. The decline in real wages in manufacturing accelerated to 4.5% during this period. Additionally, manufacturing's share of total payroll fell by 5.2%, reflecting declines in both real wages and employment. Average real wages in the Education & Health Services sector continued to climb, increasing by 3.9% over the period.

Table 4
Wood County Wage and Payroll Data: 2002-2006

	Wages*		Payroll*	
	Avg. Annual	5-Year % Δ	% of Total	5-Year Δ in % of Total
All Industries	$30,973	0.8%	-	-
Construction	$34,550	-2.4%	4.3%	0.1%
Education and Health Services	$39,655	3.9%	43.2%	3.9%
Financial Activities	S	S	2.1%	0.1%
Information	$29,332	S	2.5%	0.4%
Leisure and Hospitality	$7,968	-2.9%	1.6%	0.0%
Manufacturing	$37,019	-4.5%	18.3%	-5.2%
Natural Resources	$27,070	6.7%	1.0%	0.1%
Other Services	$15,557	12.1%	1.3%	0.1%
Professional and Business Services	$31,558	-7.9%	4.7%	0.1%
Public Administration	$25,498	-0.9%	4.2%	0.6%
Trade, Transportation, and Utilities	$23,477	2.9%	16.8%	-0.2%

*Wage and Payroll figures presented in 1997 dollars
S= Suppressed data (not available)
Source: Wisconsin Department of Workforce Development

Analysis of the two time periods reveals a steep decline in manufacturing. Workers in this sector faced a significant amount of dislocation with a sharp fall in both jobs and real wages. Much of the rise in economic insecurity can be attributed to the importance of the manufacturing sector to both the state and regional economies. Wisconsin is second only to Indiana in terms of annual manufacturing payroll calculated on a per capita basis (www.statemaster.com). A rapid secular decline in manufacturing employment disproportionately impacts Wisconsin and helps to explain the state's poor performance in terms of income growth over the last several years.

Though not discussed in this paper, the appendix provides employment, payroll and wage data for the same time periods for both Portage and Marathon County as well.

CREATIVE DESTRUCTION AND ECONOMIC TURBULENCE

Economic insecurity, to a great degree, is a byproduct of the workings of a rapidly growing, well-functioning market economy. In market-oriented economies, competitive forces drive firms to create new products and develop new technological processes to attain and maintain an edge on their rivals. Businesses that fail to innovate often shrink or are driven from the market. These competitive pressures constantly act to disrupt the economic status quo, requiring an unending shuffling and reshuffling of economic resources. "Turbulence can result from new, more productive firms replacing old, less

productive ones, even within the same industry. This process, which Joseph Schumpeter called 'creative destruction' means that jobs get reallocated from one set of firms to another and accounts for a large fraction of aggregate (industry) productivity growth" (Brown, Haltiwanger, and Lane, 2006, 4). Despite its disruptive nature, the process of creative destruction has been responsible for improving the standards of living of citizens residing in highly developed market economies. As Nobel Prize winner Edmund Phelps describes:

> The main benefit of an innovative economy is commonly said to be a higher level of productivity – and thus higher hourly wages and a higher quality of life. There is a huge element of truth in this belief, no matter how many tens of qualifications might be in order. Much of the rise in productivity since the 1920s can be traced to commercial products and business methods developed and launched in the U.S. and kindred economies. (These include household appliances, sound movies, frozen food, pasteurized orange juice, television, semiconductor chips, the Internet browser, the redesign of cinemas and recent retailing methods.) There were often engineering tasks along the way, yet business entrepreneurs were the drivers (Phelps, 2006, A14).

Both the revival in productivity growth since the early 1990s and the rise in economic insecurity appear to be related. Important structural changes in the economy over the last 25 years have been largely responsible for creating an increasingly dynamic and competitive economy. The unleashing of competitive forces has spurred higher rates of creative destruction that simultaneously fuel economic growth and increase volatility. The following represent a few highly interrelated factors that account for rising productivity and concomitant increases in economic turbulence.

- Globalization
  By the late 1970s, the United States faced fierce competition from abroad. The revival of European and Japanese economies from the devastation of World War II and the expansion of trade with less-developed nations increased competitive pressures on American businesses. The significant fall in global transportation costs with the introduction of container shipping also dramatically expanded the geographical extent of the market.

- Capital Formation
  Higher rates of investment spending since the early 1990s accounted for the increasing use of capital in production, including labor-saving technologies. Automation has both increased productivity and displaced workers, especially in the manufacturing sector.

- Technological Change
  Advances in communication and information technologies made possible the implementation of new supply chain methods by facilitating coordination among businesses and their suppliers. These technologies allowed

businesses to lower costs by outsourcing non-core activities to specialized, independent firms. The internet sparked increased competition in many arenas by dramatically reducing customer search costs and by extending the geographical reach of firms. New technologies in steel production and electricity generation dramatically reduced the minimum efficient scale of production, leading to lower costs.

- Decline in Unionization
  Along with the decline in manufacturing came a fall in union membership. In 1977, 23.8% of all wage and salary workers were union members. By 2005, union participation had fallen to 13.7% of the labor force (www.trinity.edu/bhirsh/unionstats). The decline in unions had the effect of increasing both labor market flexibility and wage volatility.

- Deregulation
  Extensive deregulation in telecommunications, airlines, railroads, trucking, energy, financial and other industries exposed a significant portion of the economy to competition. "In 1977 fully regulated industries produced 17 percent of the U.S. Gross National Product. By 1988 this figure had been reduced to 6.6 percent" (Viscusi, et. al, 2000, 306). Competitive forces freed up economic resources for alternative uses by reducing many of the inefficiencies that arose during regulation.

- Changes in Corporate Governance
  The decades of the 1980s and 1990s witnessed a tremendous amount of business restructuring. In the 1980s, hostile takeover activity reduced excess capacity in mature industries and spurred a return to specialization by disassembling poorly performing conglomerates. In the 1990s, changes in executive compensation promoted "voluntary" restructuring of businesses. The use of stock options and other pay-for-performance schemes were successful in aligning managerial and shareholder interest. Active monitoring by large institutional shareholders and private equity firms also reinforced these trends (Holmstrom and Kaplan, 2001).

While stimulating economic growth, the combined effects of these factors forced changes in the employment relationship, subjecting employees to greater economic risk. The variance of pay both within and across firms has increased as human resource practices have adapted to this new environment (Lazear and Shaw, 2007, 27). "Gain-sharing" and "pay-for-performance" schemes have been replacing fixed salaries with regards to compensation. Many of the institutional protections that traditionally shielded workers from volatility have disappeared. Companies are increasingly replacing "defined-benefit" pensions with riskier "defined-contribution" 401(k) plans. "Since 2000 the proportion of employers offering health coverage to their workers has fallen by nearly ten percentage points, and the proportion of employers that finance the full cost of coverage – once the norm – has plummeted from 29 percent to 17 percent for individual health insurance and from 11 percent to 6 percent for family health

premiums" (Hacker, 2006, 139). This sea change in the sharing of risk between employers and their workers has prompted a number of public policy proposals. The next section briefly looks at two such proposals.

PUBLIC POLICY OPTIONS

In a speech from last year, Chairman of the Federal Reserve Ben Bernanke argued that new policy options need to be consistent with principles held by a majority of Americans. These principles include "that economic *opportunity* should be as widely distributed and as equal as possible; that economic *outcomes* need not be equal but should be linked to the contributions each person makes to the economy; and that people should receive some *insurance* against the most adverse economic outcomes, especially arising from events largely outside the person's control" (Bernanke, 2007). In addition, policymakers need to consider the effects of these proposals on overall economic activity. With regard to providing insurance against economic volatility, the challenge for public policy is to provide greater security for workers without unduly diminishing the competitive forces that drive economic growth. In other words, how can we insulate workers from the vagaries of a market economy without slaying the goose that lays the golden eggs? Nobel-prize winning economist Michael Spence summarizes these concerns:

> Institutions and policies that retard the movement of people and resources will also retard growth, a fact that is true in advanced as well as developing economies. Such policies may nevertheless be justified on the ground of protecting people from the full effect of market forces. But such protections are best if they are transitory and not permanent, and generally it is better to protect people and incomes rather than jobs and firms. The latter approach impedes the competitive responses of firms in the private sector and, in the context of the global economy, becomes very expensive (Spence, 2007, A19).

New economic realities call for a rethinking of existing social insurance programs that are designed to shield workers from the full brunt of economic fluctuations. "Traditionally, unemployment was 'cyclical': workers lost their jobs when production contracted and were then re-employed in lines of work similar to their previous employment when production re-expanded. Today, however, unemployment is increasingly likely to be 'structural' – persistent, perhaps even permanent, and ending only when workers accept a new job that often implies major cuts in pay, hours, or both" (Hacker, 2006, 68). Unemployment insurance programs created during the New Deal were developed to help workers deal with temporary downturns in economic activity. These programs are not designed to help workers cope with the more difficult challenges arising from structural unemployment.

Labor economist Jeffrey Kling has proposed reforms to existing unemployment insurance programs to address the challenges of permanent dislocation and falling compensation. In his revenue-neutral proposal, Kling calls for a combination of "wage

loss insurance" and "temporary earnings replacement accounts" to replace the current system. According to Kling, wage-loss insurance is designed to "augment the hourly wages of individuals who take jobs that pay a lower wage than was paid at their previous jobs. The reform proposal could reduce by half the share of laid-off workers who experience very large drops in wages at new jobs – from 14 percent to 7 percent" (Kling, 2006, 1). Unlike compensation under traditional unemployment insurance which is received while unemployed, wage insurance provides incentives for dislocated workers to take new jobs at lower pay. The policy enhances labor market flexibility by providing incentives to take jobs that offer important on-the-job training to gain the critical skills to adapt to new economic realities. The temporary earnings replacement accounts "would be structured to provide workers with the same ability to maintain living standards during unemployment as does the current UI system, while providing a mechanism through which workers could accumulate savings prior to unemployment and could borrow against future earnings" (Kling, 2006, 1).

The principle of equal economic *opportunity* singled out by Bernanke can inform change in another critical area in dealing with economic security: education. The level of educational attainment is a decisive factor in determining the level of economic insecurity. "Volatility is indeed higher for less educated Americans than for more educated Americans – slightly more than twice as high" (Hacker, 2006, 27). Greater access to educational opportunities at all stages of life is necessary for workers to update their skills to meet the shifting demands of employers. "Yet the fundamental way most people prepare to be productive citizens has not changed much. . . . Despite their longer life spans, most people stop formal education early on in life, much as they did a hundred years ago" (Rajan and Zingales, 2003, 303-04). According to David Wessel, the current education system is failing to adequately meet the growing demand for more educated workers. "The shortage is evident from this fact: Employers are paying the typical four-year college graduate [without graduate school] 75% more than they pay high-school grads. Twenty-five years ago, they were paying 40% more" (Wessel, 2007, A2). Unfavorable demographic trends combined with the leveling off of average years of schooling means that skill shortages are likely to get worse.

University of Chicago economists Raghuram Rajan and Luigi Zingales believe "there may be reason to rethink the entire structure of higher education, a system designed at a time when students typically left the university for a career with one employer. We need more modular degrees and lifelong admission to a university (at least for the general programs) – so that the student can pick and choose what she wants and when she needs it" (Rajan and Zingales, 2003, 304). Technical and community colleges currently offer workers opportunities for improving their skills but four year schools need to be more creative in providing more flexible course offerings. In terms of providing financial support, job retraining initiatives are often inadequate and are only eligible to workers that already have suffered dislocation. Gene Sperling (2005) recommends that the government provide "preemptive retraining assistance" that would be available to workers before they lose their jobs. Such assistance can come in the form of a Flexible Education Account that gives workers a credit to cover a portion of their retraining expenses. The Flexible Education Account "recognizes that what most workers need is

a great deal of new education or training in a concentrated period – a few times in any given decade or more in many cases. The Flexible Education Account gives workers a larger credit when they need training, but gives them the power to concentrate or spread out their resources over a decade as they see fit – not only if they are laid off, but also when they sense their jobs are at risk or simply want a promotion or job change" (Sperling, 2005, 74).

CONCLUSION

The economic landscape today is very different than it was twenty five years ago. The largest employer in America today is Wal-Mart, not General Motors. "The largest owner of passenger jets is not United Airlines, or any other major carrier, but the aircraft leasing arm of General Electric. American automakers have spun-off their in-house parts subsidiaries and outsourced the design and manufacture of entire automotive sub-systems to first tier suppliers" (Sturgeon, 2002, 454). Technology experts Andrew McAfee and Erik Brynjolfsson do not expect the rate of change to decline any time soon. They write, "because every industry will become even more IT-intensive over the next decade, we expect competition to become even more Schumpeterian" (McAfee and Brynjolfsson, 2007, R10). Such forecasts promise both high rates of economic growth and greater insecurity.

The crafting of the right type of policy to address economic insecurity is critically important. As stated above, policies need to "protect people and incomes rather than jobs and firms." Trade protection and industry subsidies harm consumers and can have long-term negative effects on economic growth by diminishing competitive pressures for change. It is crucial to get the balance right. Policies should cushion the blow of job dislocation and provide workers the skills to adapt to rapidly changing economic realities. In the absence of such responses, citizens will continue to have difficulty in adjusting to change. The alternative approach of protectionism is likely to result in economic stagnation that presents its own array of pathologies. Neither of these options is particularly appealing.

APPENDIX

Table 5
Marathon County Employment: 1997-2001

	Avg. Emp.	5-Year % Δ	% of Total	5-Year Δ in % of Total
All Industries	67,087	6.5%	-	-
Construction	2,800	1.6%	4.2%	-0.2%
Education and Health Services	9,263	2.7%	13.8%	-0.5%
Financial Activities	4,745	3.6%	7.1%	-0.2%
Information	838	8.8%	1.2%	0.0%
Leisure and Hospitality	4,939	10.7%	7.4%	0.3%
Manufacturing	18,300	2.9%	27.3%	-1.0%
Natural Resources	735	7.1%	1.1%	0.0%
Other Services	2,092	15.1%	3.1%	0.2%
Professional and Business Services	3,707	-4.9%	5.5%	-0.7%
Public Administration	2,160	1.8%	3.2%	-0.1%
Trade, Transportation, and Utilities	17,508	15.9%	26.1%	2.1%

Source: Wisconsin Department of Workforce Development

Table 6
Marathon County Employment: 2002-2006

	Avg. Emp.	5-Year % Δ	% of Total	5-Year Δ in % of Total
All Industries	70,670	4.8%	-	-
Construction	3,168	16.3%	4.5%	0.4%
Education and Health Services	11,810	20.3%	16.7%	2.2%
Financial Activities	5,907	24.2%	8.4%	1.3%
Information	861	-16.4%	1.2%	-0.3%
Leisure and Hospitality	5,348	10.5%	7.6%	0.4%
Manufacturing	18,237	1.1%	25.8%	-0.9%
Natural Resources	868	20.1%	1.2%	0.2%
Other Services	1,997	-3.2%	2.8%	-0.2%
Professional and Business Services	4,081	18.1%	5.8%	0.7%
Public Administration	1,790	-18.3%	2.5%	-0.7%
Trade, Transportation, and Utilities	16,603	-6.8%	23.5%	-2.9%

Source: Wisconsin Department of Workforce Development

Table 7
Marathon County Wage and Payroll Data: 1997-2001

	Wages*		Payroll*	
	Avg. Annual	5-Year % Δ	% of Total	5-Year Δ in % of Total
All Industries	$26,731	1.8%	-	-
Construction	$33,693	5.7%	5.3%	0.0%
Education and Health Services	$31,093	2.0%	16.1%	-0.6%
Financial Activities	$36,909	11.2%	9.8%	0.6%
Information	$27,632	S	1.3%	0.0%
Leisure and Hospitality	$8,219	1.2%	2.3%	0.1%
Manufacturing	$31,457	-1.4%	32.1%	-2.2%
Natural Resources	$16,474	10.0%	0.7%	0.1%
Other Services	$15,081	-0.5%	1.8%	0.1%
Professional and Business Services	$29,519	11.8%	6.1%	-0.1%
Public Administration	$25,394	6.3%	3.1%	0.0%
Trade, Transportation, and Utilities	$22,185	3.7%	21.7%	2.1%

*Wage and Payroll figures presented in 1997 dollars
S= Suppressed (not available)
Source: Wisconsin Department of Workforce Development

Table 8
Marathon County Wage and Payroll Data: 2002-2006

	Wages*		Payroll*	
	Avg. Annual	5-Year % Δ	% of Total	5-Year Δ in % of Total
All Industries	$27,551	1.4%	-	-
Construction	$34,247	4.7%	5.6%	0.7%
Education and Health Services	$32,111	1.7%	19.5%	2.6%
Financial Activities	$34,936	-5.5%	10.6%	1.0%
Information	$34,588	S	1.5%	-0.1%
Leisure and Hospitality	$8,766	3.2%	2.4%	0.2%
Manufacturing	$32,129	0.8%	30.1%	-1.3%
Natural Resources	$17,802	7.6%	0.8%	0.1%
Other Services	$13,895	-9.5%	1.4%	-0.3%
Professional and Business Services	$28,956	1.0%	6.1%	0.7%
Public Administration	$24,918	-2.4%	2.3%	-0.8%
Trade, Transportation, and Utilities	$23,154	0.0%	19.7%	-2.8%

*Wage and Payroll figures presented in 1997 dollars
S= Suppressed (not available)
Source: Wisconsin Department of Workforce Development

Table 9
Portage County Employment: 1997-2001

	Avg. Emp.	5-Year % Δ	% of Total	5-Year Δ in % of Total
All Industries	31,556	5.1%	-	-
Construction	989	-0.1%	3.1%	-0.2%
Education and Health Services	5,428	16.7%	17.2%	1.7%
Financial Activities	3,712	-3.5%	11.8%	-1.1%
Information	305	11.7%	1.0%	0.1%
Leisure and Hospitality	2,955	-1.4%	9.4%	-0.6%
Manufacturing	5,878	-4.7%	18.6%	-1.9%
Natural Resources	678	1.8%	2.1%	-0.1%
Other Services	1,315	30.2%	4.2%	0.8%
Professional and Business Services	1,463	8.1%	4.6%	0.1%
Public Administration	1,342	3.2%	4.3%	-0.1%
Trade, Transportation, and Utilities	7,491	10.9%	23.7%	1.2%

Source: Wisconsin Department of Workforce Development

Table 10
Portage County Employment: 2002-2006

	Avg. Emp.	5-Year % Δ	% of Total	5-Year Δ in % of Total
All Industries	32,603	3.4%	-	-
Construction	1,038	2.6%	3.2%	0.0%
Education and Health Services	5,567	1.7%	17.1%	-0.3%
Financial Activities	4,363	12.8%	13.4%	1.1%
Information	279	15.3%	0.9%	0.1%
Leisure and Hospitality	3,383	6.1%	10.4%	0.3%
Manufacturing	4,620	-17.4%	14.2%	-3.6%
Natural Resources	623	3.8%	1.9%	0.0%
Other Services	1,485	10.0%	4.6%	0.3%
Professional and Business Services	1,946	34.4%	6.0%	1.4%
Public Administration	1,442	5.8%	4.4%	0.1%
Trade, Transportation, and Utilities	7,857	6.4%	24.1%	0.7%

Source: Wisconsin Department of Workforce Development

Table 11
Portage County Wage and Payroll Data: 1997-2001

	Wages*		Payroll*	
	Avg. Annual	5-Year % Δ	% of Total	5-Year Δ in % of Total
All Industries	$26,373	6.7%	-	-
Construction	$27,789	-3.0%	3.3%	-0.5%
Education and Health Services	$31,130	0.4%	20.3%	0.9%
Financial Activities	$35,518	12.8%	15.8%	-0.5%
Information	$28,525	S	1.0%	0.1%
Leisure and Hospitality	$7,773	4.6%	2.8%	-0.2%
Manufacturing	$30,243	0.0%	21.4%	-3.8%
Natural Resources	$23,925	7.9%	1.9%	0.0%
Other Services	$14,856	-2.3%	2.3%	0.3%
Professional and Business Services	$24,555	4.9%	4.3%	0.0%
Public Administration	$24,890	10.0%	4.0%	0.0%
Trade, Transportation, and Utilities	$25,280	20.7%	22.8%	3.7%

*Wage and Payroll figures presented in 1997 dollars
S= Suppressed (not available)
Source: Wisconsin Department of Workforce Development

Table 12
Portage County Wage and Payroll Data: 2002-2006

	Wages*		Payroll*	
	Avg. Annual	5-Year % Δ	% of Total	5-Year Δ in % of Total
All Industries	$25,402	-0.9%	-	-
Construction	$31,724	10.9%	4.0%	0.4%
Education and Health Services	$30,505	-4.4%	20.5%	-1.1%
Financial Activities	$38,686	9.0%	20.4%	3.4%
Information	$26,474	S	0.9%	0.1%
Leisure and Hospitality	$7,657	4.6%	3.1%	0.2%
Manufacturing	$31,059	-0.2%	17.3%	-4.2%
Natural Resources	$23,199	-7.1%	1.7%	-0.1%
Other Services	$13,362	-11.8%	2.4%	-0.1%
Professional and Business Services	$25,492	-0.3%	6.0%	1.4%
Public Administration	$24,143	-0.9%	4.2%	0.1%
Trade, Transportation, and Utilities	$20,519	-3.9%	19.5%	0.0%

*Wage and Payroll figures presented in 1997 dollars
S= Suppressed (not available)
Source: Wisconsin Department of Workforce Development

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