

# UM&A MIMM

Fall-Winter 2006 Vol. 04

(Memorandum of Industry Momentum and Economics)

*This publication will address economic and industry performance important to Utah and Intermountain businesses, as well as specific industries and sectors of significance to UM&A. We will attempt to include as many national and regional indicators as needed to convey need-to-know information that can assist us in business development and on-going projects. When applicable, we will also wave our own flags of achievement.*

In addition to our regular attention to macro-economic issues as they play in the region of our operations, this edition focuses on national and regional trends in the manufacturing sector. —Dean C. Dinas, Research Director, United Mergers & Acquisitions, LLC

## Economic Overview

As expected, the national slowdown in residential construction markets combined with sticky energy costs to reduce the growth pace of *Gross Domestic Product* — the value of goods and services produced within our borders — in the third quarter, according to “final” estimates released by the U.S. Department of Commerce. Real *GDP* increased at an annual rate of 2.0 percent, after increasing 2.6 percent the previous quarter; the slower pace was due to:

- Acceleration in imports (with its substitution/displacement effects)
- Decelerations in inventory investment
- Residential investment decreases
- Consumer spending for services, and state/local government spending decreases

The components of the increase in *GDP* included personal consumption expenditures, exports, equipment and computer software, non-residential structures, and state/local government spending. Continuing demand for updated technology contributed 0.07 percent to *GDP* growth (after contributing 0.04 percent last quarter), while motor vehicle manufacturing output accounted for 0.76 percent (after subtracting 0.31 percent last quarter). The increase in consumer consumption was boosted by *durable goods* (8.4 percent vs. decrease of 0.1 percent in 2Q); *non-durables* increased 1.6 percent compared with 1.4 percent in 2Q. Notably, *Real Disposable Personal Income* increased 3.7 percent during the quarter, following an increase of 1.7 percent in 2Q, and *Personal Saving* remained close to -0.5 percent. The real change in *business inventories* subtracted 0.10 percent from 3Q *GDP*, following an increase of 0.44 percent in 2Q. However this swing is relatively insignificant, as the indicator has see-sawed as much as 2.25 percent between quarters over the past year. More notable is the *Price Index for Gross Domestic Purchases*, which measures prices paid by U.S. residents; it increased 2.2 percent during 3Q, compared with 4.0 percent in 2Q. Since food and energy prices [which are subtracted to obtain a “core” reading] held steady, this index yields a core 2.2 percent increase during 3Q vs. 2.9 percent last quarter. Residential construction, an indicator of demand across several industries, fell at an 18 percent annual rate in the third quarter, compared with an 11.1 percent decline during the previous quarter. <http://www.bea.gov/bea/dn/home/gdp.htm> More about this effect follows below.

From the Federal Reserve Board’s perspective, at its December meeting, the Open Market Committee decided to maintain its target for short-term interest rates (A.K.A. Federal Funds Rate) level at 5.25 percent. This is the fourth consecutive time they have taken no action in response to economic indicators, or to preempt a trend. Their neutral position acknowledges two main challenges: 1) a slowdown in economic growth (cascade effects

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of slackening residential construction), with statements like “the economy seems likely to expand at a moderate pace,” and 2) price inflation in the supply-chain (lingering effects from energy input prices earlier in the year), with statements like “the Committee judges that some inflation risks remain, and the high level of resource utilization has the potential to sustain inflation pressures.” Concurrently, the defiant convergence between long- and short term interest rates has led to what analysts call an “inverted yield curve.” This conundrum —as described by former Fed Chairman Alan Greenspan— for the FOMC is how to influence global markets’ perception of the balance between economic growth and price inflation, which is reflected in demand for 1) the long-term bond and 2) equity securities.

A look at the Fed’s November “Industrial Production and Capacity Utilization” monthly report [see the attached extract] shows *manufacturing capacity* through October remained above 80 percent (since 2006 spring); this is considered to be close to optimal. *Manufacturing production* increased 0.3 percent (after two consecutive months of declines); it is up 3.4 percent year-on-year. The sector overall was significantly boosted by a jump in motor vehicle and parts production, but, notably, other segments were unchanged. Year-on-year, *manufacturing capacity growth* is up 2.7 index points. For the month, *output at mines and utilities* was down 0.2 percent and .01 percent, respectively; year-on-year it is up 6.6 percent and 3.9 percent, respectively. We should not be surprised that the Fed is waiting for early next year [and is likely to skip a chance at adjusting interest rates at its next FOMC meeting in January] to evaluate this shift’s effect on *final product* inventories before deciding to apply the brakes.

On the employment scene, the U.S. Bureau of Labor Statistics’ *Employment Situation* report for October revealed [non-farm] unemployment rates declined again, to 4.4 percent. This was a decline of 0.5 percent from last year’s unemployment rate of 4.9 percent, and represented official levels dropping from 7.4 million to 6.7 million. About 1.5 million persons were “marginally” attached to the labor force in October; this number was unchanged from last year. (We select October, rather than September’s quarter-end report due to the seasonality effect.) Non-farm job growth continued in several service-providing industries, but it declined in the manufacturing and construction sectors. While the non-farm sector generated 93,000 jobs in October, this reflects a declining trend which began in August (+230,000) and continued in September (+148,000), and needs to be taken in context of a generally-accepted minimum of 125,000 job gains monthly to sustain our economic recovery. Over the month, employment grew appreciably in *professional and business services* (43,000), *health care* (23,000) and *hospitality & leisure* (27,000). The *mining* sector continued its gains with 5,000, and has generated 54,000 jobs over the last 12 months. The *manufacturing and construction* sectors lost 39,000 and 26,000 jobs, respectively. Within manufacturing, plastics and rubber products lost 14,000 jobs, mostly due to strike activity; motor vehicles and parts employment declined by 15,000. The construction total was depressed by losses in *residential special trade contractors* (-31,000) In the *retail* sector, general merchandise stores lost 11,000 jobs; since its most recent peak in August 2005, employment in this segment has declined by over 100,00 jobs.

The U.S. Department of Commerce reported the following measures of corporate profitability for the third quarter:

- *Profits from current production* (corporate profits with inventory valuation and capital consumption adjustments) increased \$61.5 billion, versus \$22.7 billion in 2Q; this was nearly 31 percent rise over last year’s 3Q level (depressed by several hurricanes during 2005 season).
- *Domestic profits of financial corporations* decreased \$9.1 billion (0.5 percent) in 3Q, in contrast to an increase of \$41.7 billion (18.4 percent) in 2Q; *Domestic profits in non-financial sectors* increased \$75.8 billion, versus a decrease of \$32.8 billion in 2Q.

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## National and Utah Manufacturing Trends

Recent data from the manufacturing sector suggest broad segments of contraction, as indicated anecdotally above. The Institute for Supply Management (formerly National Association of Purchasing Managers) has a long-standing *Index of Manufacturing Activity*—also called the *PMI*— which registered 49.5 in November, just below its bellwether level of 50.0, for the first time in 42 months. A reading above 50.0 indicates the manufacturing economy is generally expanding; during the current economic recovery, this index has reached a high of 57.3 as recently as April, and has been on a steady decline since July. The only component of the *PMI* which rose was New Export Orders, which is tied to the U.S. Dollar's weakness. If this downward trend continues, it could reflect a ripple effect from the housing market's slowdown. <http://www.ism.ws/about/mediaroom/newsreleasedetail.cfm?ItemNumber=15697&navItemNumber=12942> (see the reference above).

The Federal Reserve Bank of Chicago's *National Activity Index*—also called the *CFNAI*— came in at -0.26 in November, continuing a steady decline since August. On the down-side, an index less than -.70 indicates an economic recession is underway. All of the Index's component indicators made negative contributions; however, it is notable that a reading below zero portends little [price] inflation pressure over the next year. Production-related components of the *CFNAI* made a negative contribution of -.04 in November, after contributing -.23 in October; a trend has yet to establish itself in this component. [http://www.chicagofed.org/economic\\_research\\_and\\_data/cfnai.cfm](http://www.chicagofed.org/economic_research_and_data/cfnai.cfm)

## Productivity and Costs

Among those indicators watched as harbingers of price inflation, productivity has particular significance for the manufacturing sector. Advances in productivity have been mentioned in context of the technology investments of the 1990s, which continue to bear fruit today. The ability to increase output with the same or less input also contributes to increases in national income/*GDP*. Typically, our economy has been the recipient of more output of goods and services over time due to efficiencies in production, while keeping labor inputs under control. Industries and firms differ in their productivity measures and performance, and domestic *outsourcing/offshoring* has had recent widespread impacts on business productivity here; if productivity of the production lost to offshoring is substantially higher than domestic operations, some competitors gain an advantage by their engagement of such operations. Offshoring and outsourcing have continued to exceed their potential for greater impacts in manufacturing. The U.S. Bureau of Labor Statistics estimates productivity improvements of 1.5% per year to *output per hour* between 1973-1995, and this is before the major expansions of technology to such partners as India and China.

During the third quarter of 2006, *output per hour* of all non-farm businesses rose 0.2 percent, reflecting increases in output and hours of 2.3 percent and 2.1 percent, respectively. This represents a 1.4 percent increase year-on-year, *the smallest gain in non-farm productivity since second quarter 1997!!!* In the *manufacturing sector*, however, the same productivity measure rose 6.7 percent, as *output increased* 5.1 percent, while *hours decreased* 1.6 percent (seasonally-adjusted). This was *the largest quarterly productivity gain since third quarter 2003— 8.6 percent—* (when economic growth temporarily slowed). Within the manufacturing sector, *durable goods* productivity increased 9.0 percent, but *nondurables* rose only 3.1 percent.

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Relative labor costs also registered contrasting performance between the economy overall and within the manufacturing sector. While unit labor costs in *total non-farm* rose 2.3 percent during the quarter, they had dropped 2.4 percent the previous quarter. The *manufacturing sector* continued its downward trend: unit labor costs fell 4.1 percent, following a decline of 8.3 percent last quarter. Unit labor costs slid 4.5 percent in *durable goods* industries, and 3.5 percent in *nondurables* during the quarter; they had tumbled 8.7 percent and 9.0 percent, respectively during the second quarter.

## Utah Notes

Utah's 3,800 manufacturing businesses employed over 120,000 workers as of the third quarter 2006. This ranks second to retail trade (140,000), and represents over 12 percent of the State's private industry employment, and 15 percent of its payroll. Utah's manufacturing sector collectively contributed about \$10 billion to *Gross State Product* in 2006, accounting for about 11 percent of earnings. The largest share of this contribution —over \$3 billion— was generated by *primary metal processing* and *computer/electronic components*. In terms of Utah's \$6 billion total exports, manufacturers contributed over 87 percent in 2006. While Utah's *non-farm* employment continued to grow [at a 5.0 percent seasonally-adjusted year-on-year] through the third quarter, the *manufacturing* component's growth slowed from 3.6 percent last quarter, to 3.1 percent [seasonally-adjusted year-on-year].

Over the period 2002-2005 — representing the most recent [full-year] economic cycle — Utah's *manufacturing sector* contribution to Gross State Product held steady at nearly 11 percent, which ranked second in the Intermountain Region after Idaho's 12.6 percent. By comparison with other related industries, most recently *construction's* contribution peaked at 5.8 percent, and *wholesale trade* reached 5.1 percent. Within Utah's manufacturing sector, *durables* increased its share from 68 percent to 72 percent, similar to Idaho's; Arizona's *durables* sector led the Intermountain Region during the cycle, holding nearly an 87 percent share of the manufacturing contribution.

In terms of statewide *employment*, between mid-years 2003-2006, manufacturing saw an increase of 9.3 percent, compared to mining (46.3), construction (41.2) and professional/technical/scientific services (22.1). Total major private industry sectors saw employment growth of 14.2 percent. During this period, manufacturing's 17.8 percent *payroll* increase ranked last; total private industry's payroll grew 27.1 percent. Still, the total manufacturing payroll led Utah in 2006, surpassing \$1.2 billion, compared with the health care, retail trade and construction sectors, whose payrolls averaged about \$800 million each. Within manufacturing employment, during 2006 transportation equipment (14,500) led, followed by food processing (13,400), fabricated metals (12,100), and computer/electronic components (11,100). Transportation equipment also had the largest share of *payroll* (\$199 million), compared with computer/electronic components (\$147 million), fabricated metals (\$111 million), and food processing (\$105 million). Manufacturing led the state in average monthly wages, at \$3,300. By far the highest average monthly wages could be found in *petroleum/coal products* (\$6,300), but they also ranked very low in total employment, just exceeding 1,000. Transportation equipment —also the largest employment sub-sector of manufacturing— followed with an average monthly wage of nearly \$4,600; computer/electronic components ranked third, at \$4,400, while food processing lagged at \$2,600.

In the high-technology segments of manufacturing, during 2006, *aerospace products* ranked first in employment (7,700), followed by *medical equipment/supplies* (7,400), *navigational/measuring/electromedical products* (3,300), *semiconductor/electronic components* (3,000), and *communications equipment* (3,000). Compared with the peak of our last economic cycle in 2000, the first three segments have recovered, while communications equipment has gained 34 percent, and semiconductor/electronic components has lost 24

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percent. Of all the high-technology manufacturing segments, *computers/peripheral equipment* lost the most jobs (-83 percent), shrinking from 3,500 to 600 by mid-year 2006.

During the period 2003-2006, manufacturing registered a decline in its relative share of *total non-farm employment* in Utah's major metropolitan areas. Comparing manufacturing employment among these MSAs, during the period 2003-2006, Logan led in relative participation with about a 17 percent share, but also gave up nearly two percentage points, the most of any metro area. Utah's smallest manufacturing center is in St. George, where it represents about 7 percent of total private sector employment. However, St. George is the only MSA where manufacturing's share increased since 2003. St. George gained about 1,000 manufacturing jobs during this period (40 percent), but this is still just 7 percent of total non-farm employment there. In terms of magnitude, about 25 percent of the State's manufacturing work force (55,000) resides in the Salt Lake MSA, but its share of the MSA's total non-farm labor is less than 10 percent, similar to Provo's. Logan's manufacturing sector is the MSA's largest non-farm employer, despite holding steady at about 8,000 since 2003. It is notable that Logan's total non-farm employment has been growing at 12 percent since 2003, and that St. George is expected to have surpassed Logan when 2006 final data are reported.

## Outlooks

While the U.S. Commerce Department's final estimates of third quarter national economic performance fall notably below those of earlier periods in 2006, forecasts for 2007 *GDP growth* are decidedly upbeat. Most economists now believe the elements dampening the last two quarters were [evanescently] limited to manufacturing and residential construction, and some corrections in business inventories. Consequently, a "cautiously optimistic" consensus for 2007 includes better consumer sentiment, rising factory orders, a rebound in the housing market (albeit not to previously irrationally-exuberant levels), and moderating price inflation.

The National Association of Manufacturers, which has input to many economic consensus forums, has its own perspectives on the sector's outlook for 2007. We summarize their conclusions here.

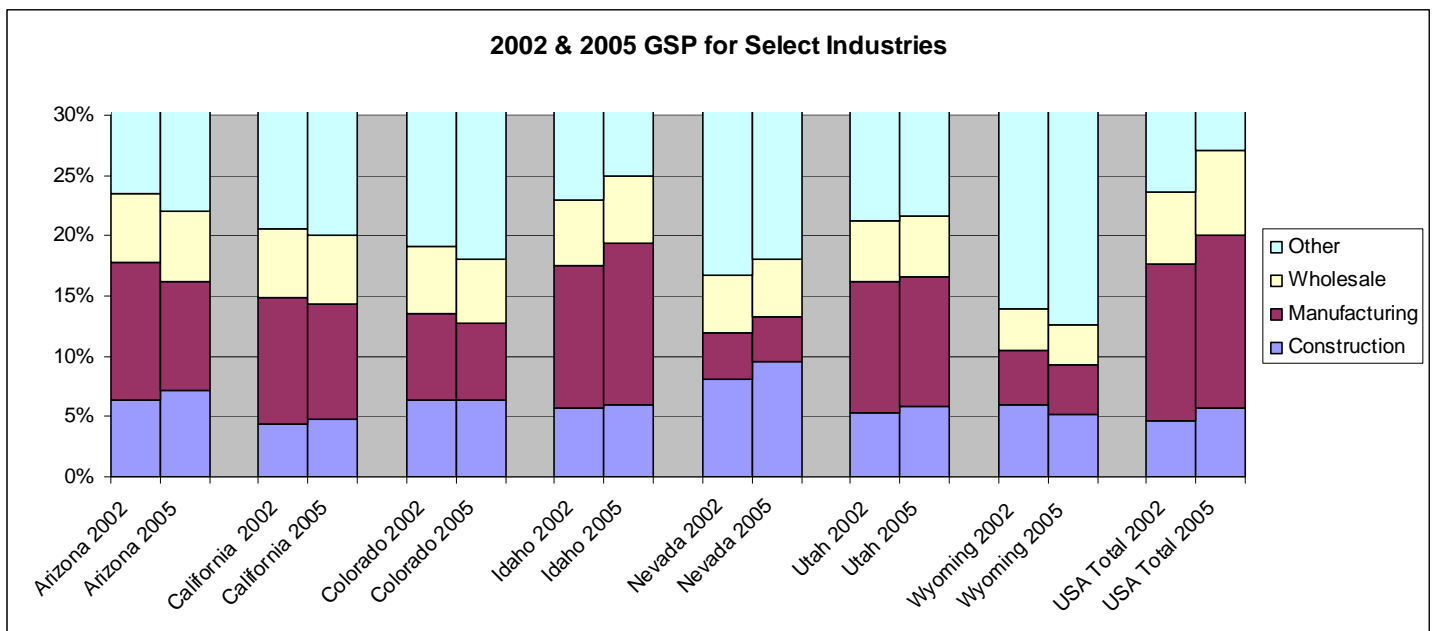
- Residential construction's lagging growth will have a significant negative effect on some manufacturing sub-sectors, like *wood products, nonmetallic minerals and textile-derived products*. These inputs are projected to show slow-to-no growth in 2007.
- Automobile and light truck production is expected to come to a standstill, due to anticipated *anemic consumer spending*.
- Recently proven increases in exports and business investment will propel growth of 14 percent in *computer and electronics production*, and 6 percent in *machinery manufacturing*.
- Overall, *manufacturing production* [excluding housing and motor vehicle sectors] is expected to increase 2.4 percent in 2007-2008, about the same pace as *GDP*. This is slower than the 3.5 percent expansion from 2004-2006, but is considered more consistent with general economic growth projections during the period ahead. (see our Consensus table)
- As the economy's growth slows, it is expected to generate 1.3 million net new jobs in 2007, vs. 1.7 estimated in 2006. The *unemployment rate* is forecast to increase slightly to 5 percent in 2007. Manufacturing employment is expected to shed 100,000 jobs, down from 14.2 million in 2006.
- While slower economic growth reduces job creation, it also improves overall *productivity*; expectations are for this metric to increase by 2.2 percent, a notable decline from productivity gains earlier in this economic expansion. Looking ahead, wages will consequently increase faster, since hourly compensation is forecast to rise 4.7 percent, and price inflation is expected to notch up 2.5 percent.

- The *energy* component of our Consumer Price Index (“CPI”) is not expected to change significantly — absent supply shocks from the usual sources— so the chances of a ripple effect in other “core” components have diminished. Hence, the outlook is for an increase of smaller magnitude: 2.5 percent vs. 2.9 percent.
- Presuming the economy will slow its growth pace, and price inflation will moderate, the consensus is overwhelmingly toward a stable *federal funds rate* at least through mid-2007; by year-end, the expectation is for a 50 basis-point reduction, all economic drivers considered at this time.

The economic outlook for Utah in 2007 is somewhat brighter than that of the nation. A combination of rising home values, average wages, business in-migration and the State’s massive \$1.6 billion budget surplus is expected to sustain job growth of 4.7 percent, vs. just 1.1 percent nationally. While this is slower than Utah’s meteoric pace of 5.2 percent estimated for 2006, it remains one of the top five in the nation. The only perceived obstacle to surpassing this employment expansion is the *tight labor market*; rapid economic expansion has brought Utah’s unemployment rate down to nearly 3 percent (vs. a national rate of 4.8). This has spawned labor shortages in skilled construction trades, manufacturing specialties, and professional/scientific/technical disciplines; these occupational groups are considered key to sustaining long-term business in-migration and concomitant economic development.

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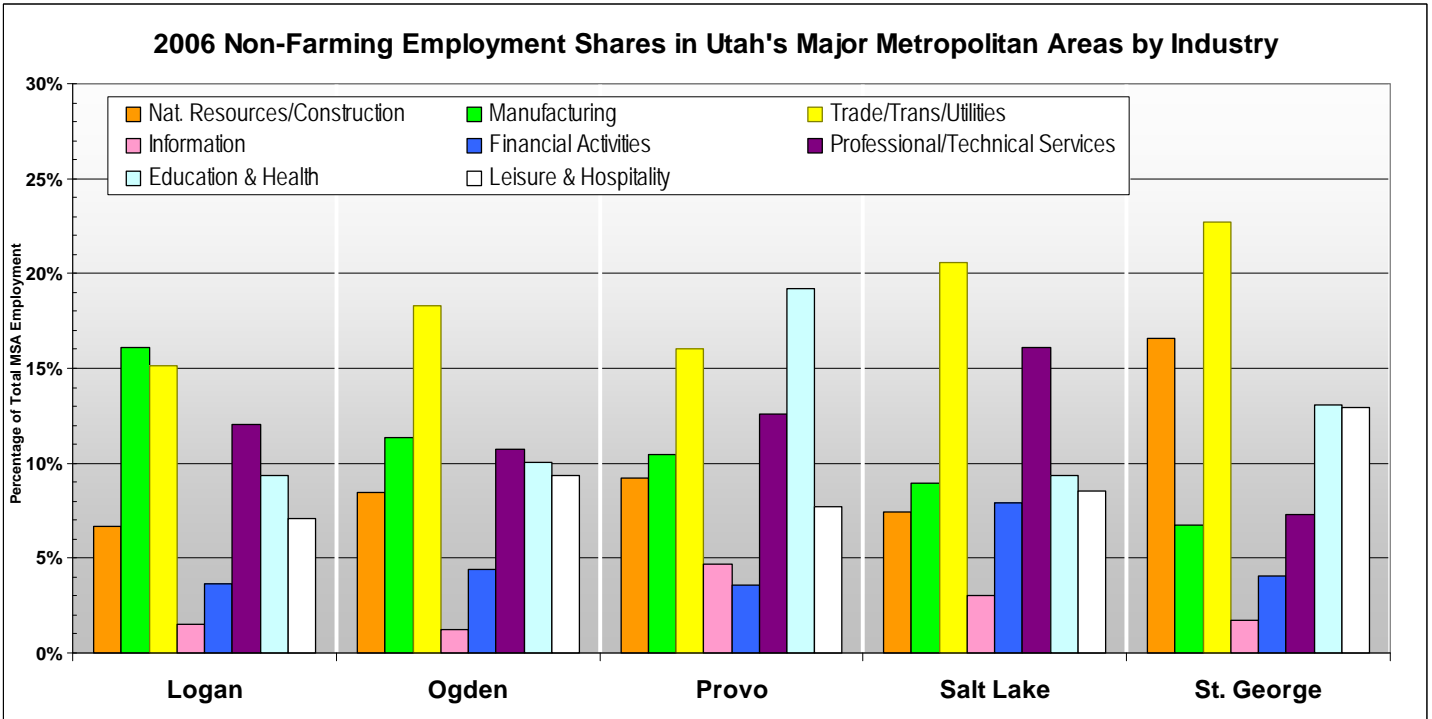
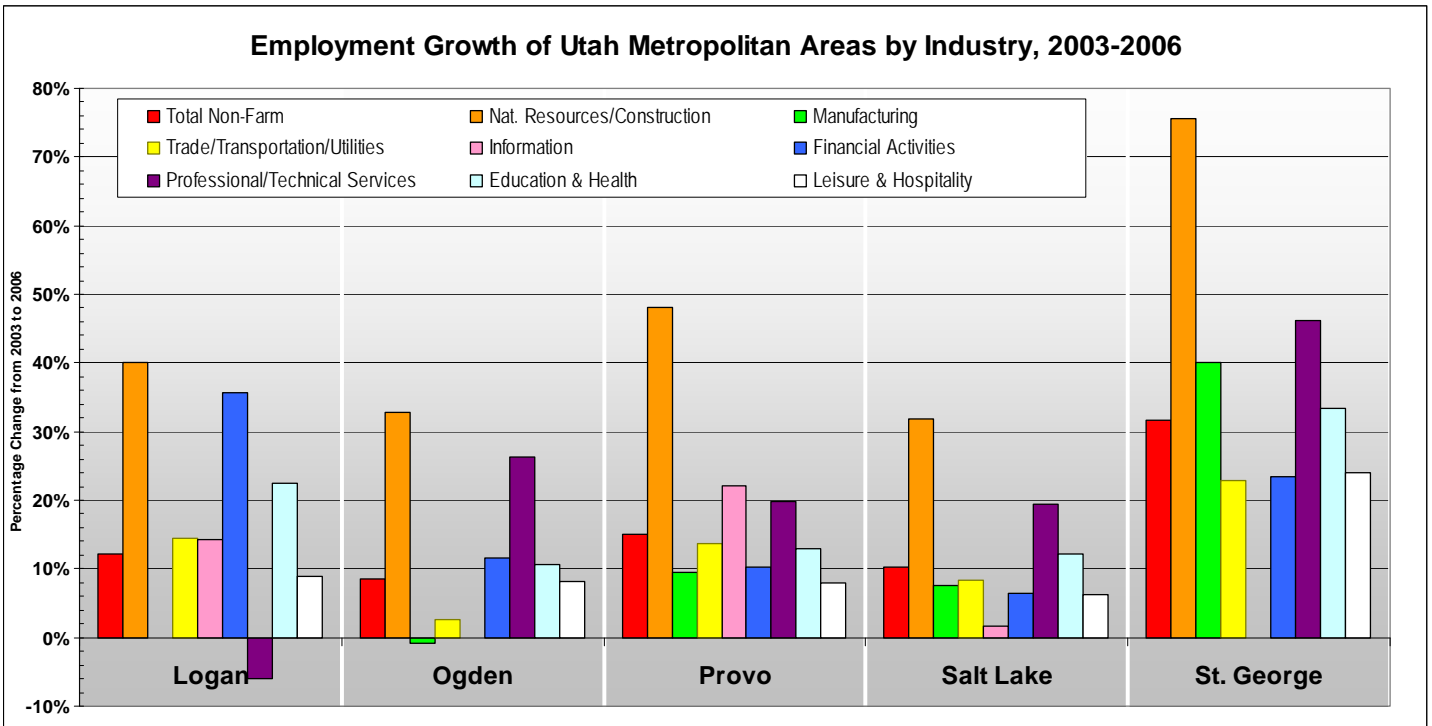


## Capacity Utilization in Manufacturing, Mining & Utilities: a selected Snapshot

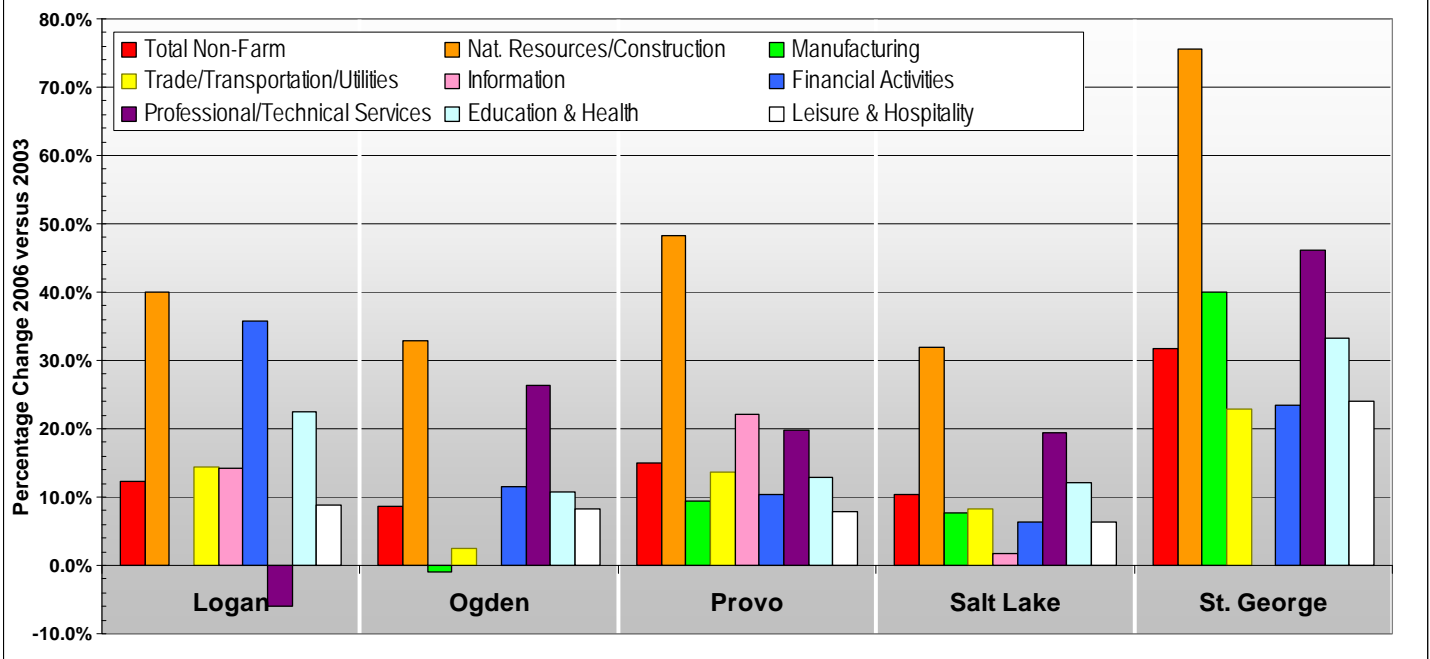
(percent of capacity, seasonally adjusted)

<u>Industry Group</u>	2005 Oct	2006 May	June	July	August	Sept	Oct
Manufacturing (NAICS identifiable)	79.1	80.2	80.8	80.9	81.2	80.8	80.4
Durables Group	79.1	79.6	80.3	80.3	80.8	80.2	79.8
Nonmetallic Minerals	82.5	82.6	82.7	82.3	81.6	80.0	80.1
Fabricated Metal prod	76.3	77.3	77.7	78.4	78.8	78.5	78.5
Machinery	82.5	83.4	83.9	87.5	87.8	87.3	87.5
Computer&Electronic	77.1	78.2	79.3	79.9	80.9	81.8	82.5
Transportation Equip	78.0	77.1	78.8	76.5	77.4	76.5	74.9
Aero&misc	69.7	75.9	76.6	77.6	78.0	78.3	79.1
Nondurables Group	79.2	81.2	81.6	81.9	81.8	81.7	81.2
Food processing	82.7	83.7	83.4	84.1	83.9	84.1	83.8
Bever&Tobacco prod	77.8	75.8	76.2	76.5	75.0	74.9	74.7
Textile product mills	86.3	81.0	80.8	81.4	80.3	79.7	78.4
Printing&Support	77.1	80.1	80.7	80.5	80.3	80.4	81.4
Petroleum&Coal prod	83.6	90.0	92.6	91.6	92.6	93.7	90.4
Chemical products	72.7	76.4	76.8	77.2	77.5	77.3	77.0
Mining	79.6	90.3	91.2	91.2	90.6	91.1	91.8
Oil&Gas Extraction	76.5	88.2	89.9	90.1	89.8	90.5	91.5
Mining non-Oil&Gas	83.6	92.3	89.6	90.0	86.3	86.9	87.0
Coal Mining	85.0	97.0	91.9	94.5	92.3	91.3	89.5
Metal Mining	77.3	78.7	74.6	81.4	77.9	79.8	80.7
Stone&Earth Minerals	85.4	95.4	96.1	90.1	84.9	86.1	87.9
Utilities	86.2	86.3	88.7	88.9	88.9	84.8	88.2
Electric	89.3	88.7	90.7	90.9	90.7	86	90.2
Natural Gas	72.1	75.3	79.5	79.4	80.3	78.2	78.7

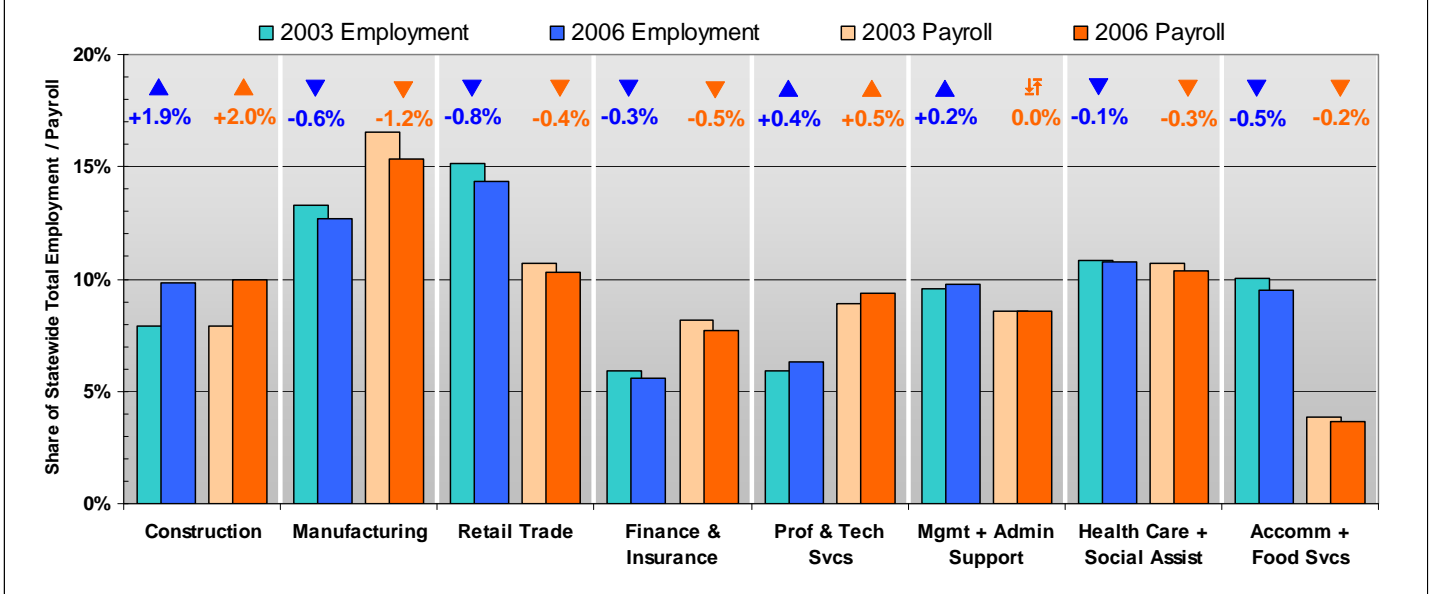
Source: Federal Reserve Board Statistical Release G-17

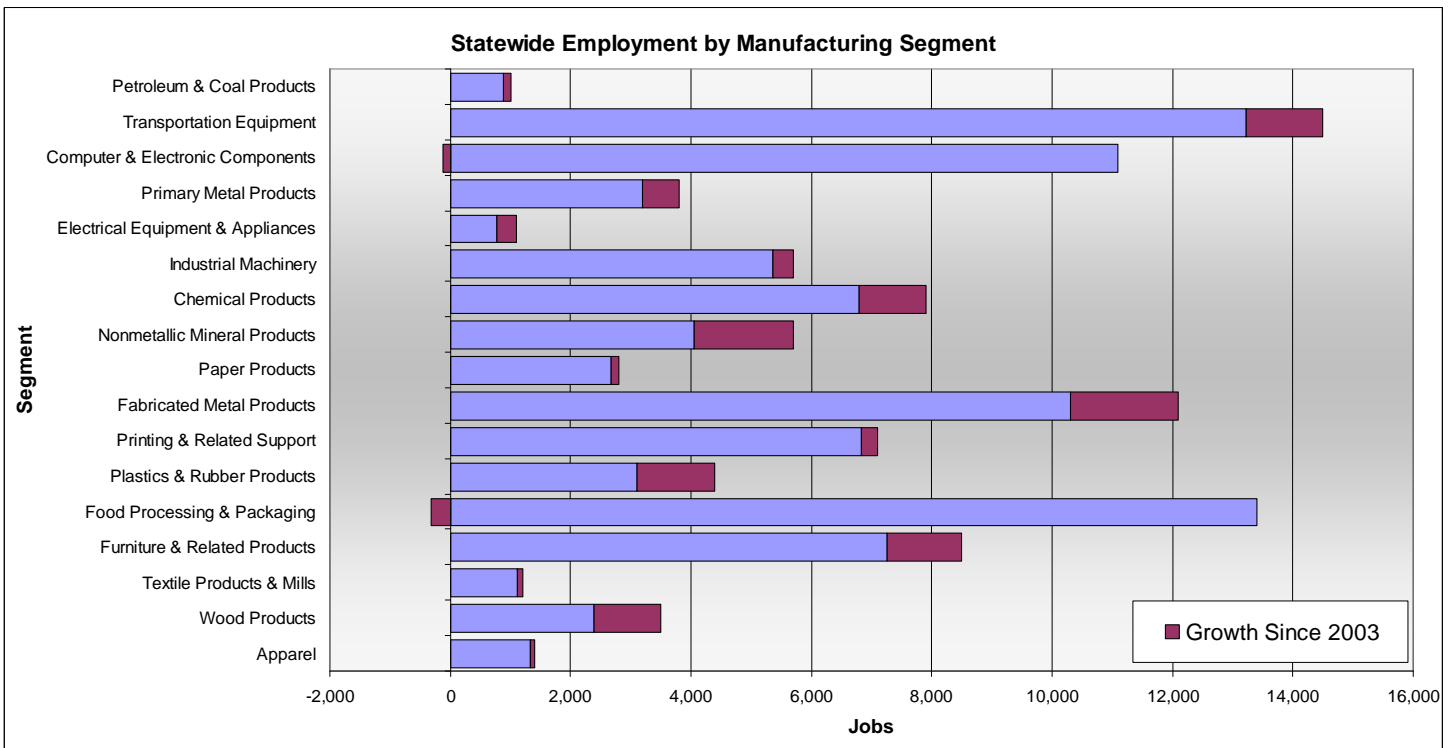
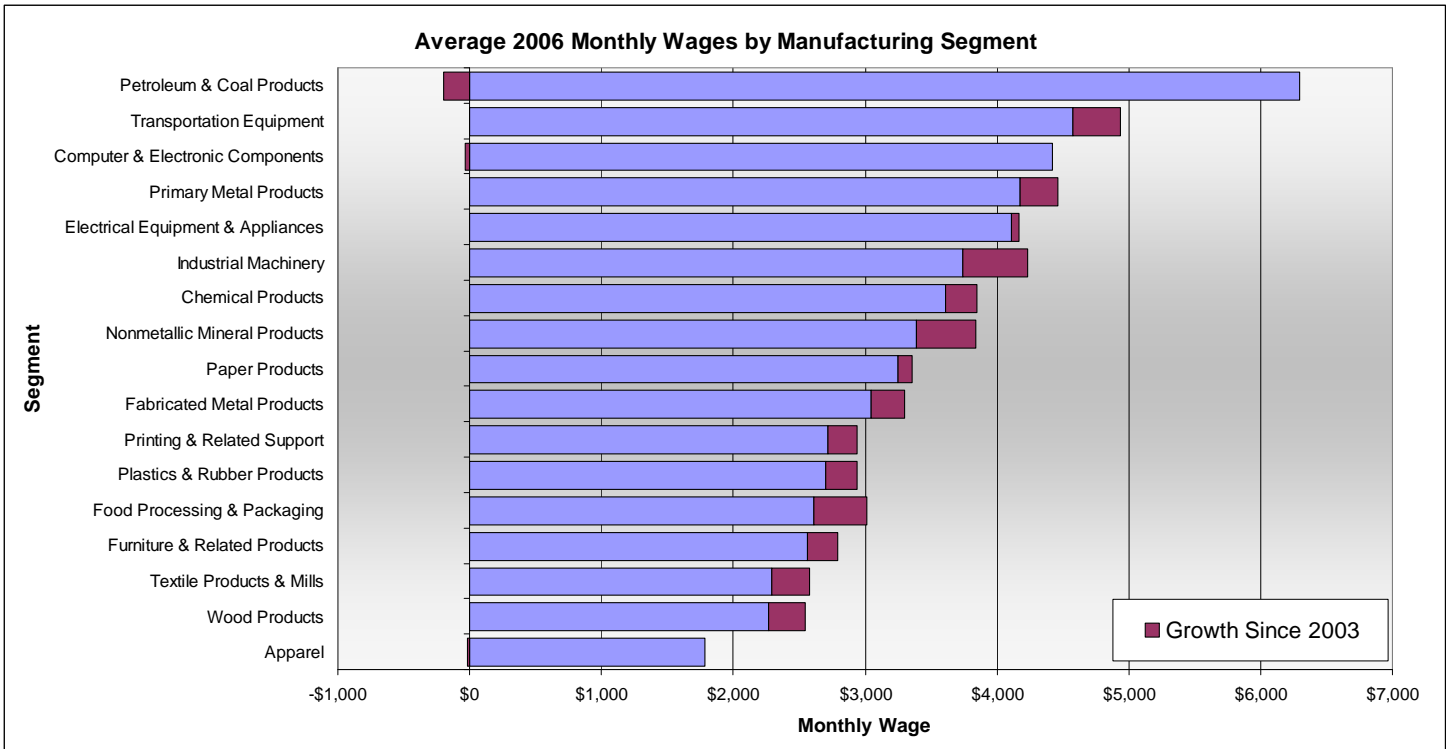


### Employment Trends in Utah's Major Metropolitan Areas



### Statewide Shares of Total Utah Employment & Payroll for Select Industries





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## Manufacturing Sub-Sector Labor Costs in context 3Q 2006

(percent change from corresponding quarter of previous year)

		<u>Unit Labor Costs</u>	
		Durables	NonDurables
2004	1st Qtr	-1.8	1.6
	2nd Qtr	-1.3	0.2
	3rd Qtr	1.9	0.9
	4th Qtr	-0.5	0.9
2005	1st Qtr	1.3	1.5
	2nd Qtr	-0.3	2.8
	3rd Qtr	-1.9	3.2
	4th Qtr	-4.0	3.0
2006	1st Qtr	0.3	4.0
	2nd Qtr	-1.7	1.0
	3rd Qtr	-3.0	-1.1

(percent change from previous quarter @annual rate)

		<u>Unit Labor Costs</u>	
		Durables	NonDurables
2004	1st Qtr	-12.7	-0.8
	2nd Qtr	5.3	-3.2
	3rd Qtr	7.6	3.5
	4th Qtr	-1.0	4.3
2005	1st Qtr	-6.3	1.5
	2nd Qtr	-1.2	2.0
	3rd Qtr	0.9	5.2
	4th Qtr	-9.0	3.3
2006	1st Qtr	11.6	5.4
	2nd Qtr	-8.7	-9.0
	3rd Qtr	-4.5	-3.5

Source: U.S. Department of Labor/Bureau of Labor Statistics: "Productivity and Costs"

**Technology Employment in Utah, by major sub-sector**

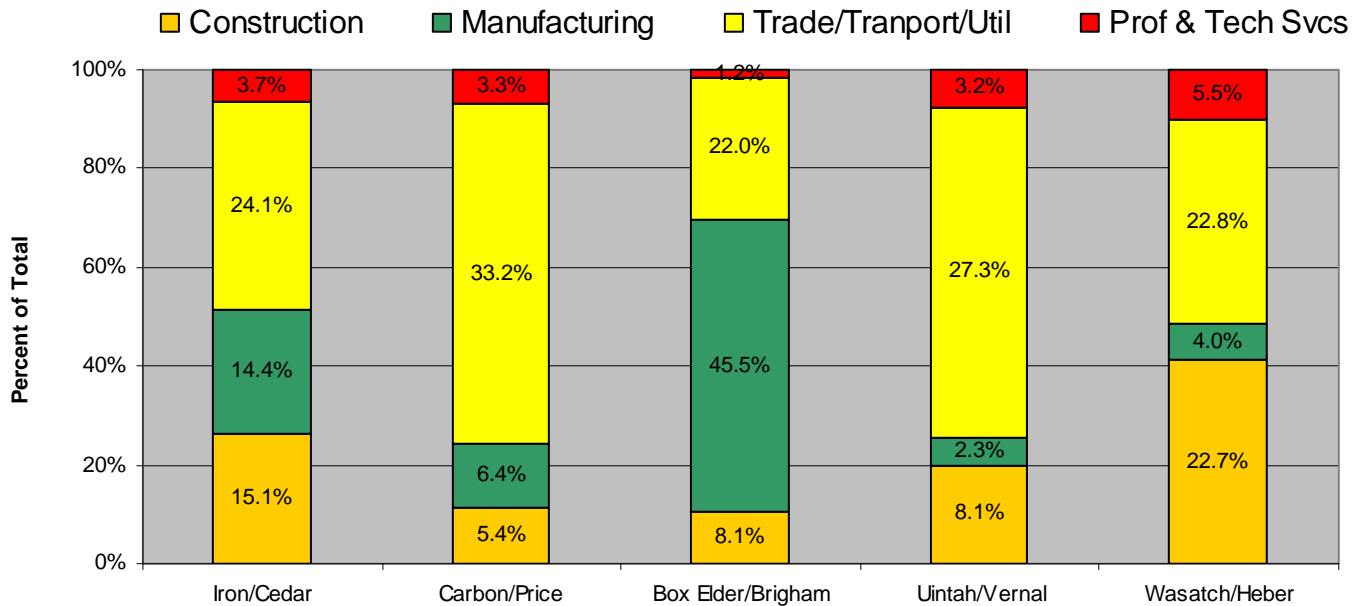
2001-  
2005

(Average Employment Levels)

<u>Sector</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>%Change 2001- 2005</u>	<u>%Change 2004- 2005</u>
Optical Instrument & Lens Manufacturing	169	158	154	140	178	5.3%	27.1%
Computers & Peripheral Equipment	3,036	1,540	1,260	736	688	-77.3%	-6.5%
Communications Equipment	2,392	2,370	2,432	2,641	2,819	17.9%	6.7%
Semiconductor & Electronic Components	4,161	3,315	2,888	3,143	2,983	-28.3%	-5.1%
Navigational, Measuring & Electromedical Products	3,231	3,109	3,182	3,109	3,191	-1.2%	2.6%
Carbon & Graphite Products	368	341	324	423	443	20.4%	4.7%
Aerospace Products & Parts	7,164	6,634	6,314	6,493	7,170	0.1%	10.4%
Medical Equipment & Supplies	7,490	7,575	7,593	7,716	7,741	3.4%	0.3%
Software	5,304	4,845	4,751	4,733	5,098	-3.9%	7.7%
Motion Picture & Video Production	2,618	2,478	2,346	1,929	2,142	-18.2%	11.0%
Wireless Telecommunication Carriers	96	90	79	85	127	32.3%	49.4%
Satellite Communications	99	119	82	81	71	-28.3%	-12.3%
Internet Service Providers	3,224	3,016	2,974	3,148	3,550	10.1%	12.8%
Engineering Services	5,748	5,579	5,849	6,079	6,500	13.1%	6.9%
Testing Laboratories	1,206	1,152	1,173	1,179	1,131	-6.2%	-4.1%
Computer Systems Design	12,319	10,521	10,796	10,941	12,197	-1.0%	11.5%
Scientific Research	3,377	3,815	3,639	3,595	3,780	11.9%	5.1%
<b>Total Technology-related Employment</b>	<b>62,002</b>	<b>56,657</b>	<b>55,836</b>	<b>56,171</b>	<b>59,809</b>	<b>-3.5%</b>	<b>6.5%</b>

Source: Utah Department of Workforce Services, 2006 input to Governor's Economic Report

## Q2 2006 Micropolitan Employment Distribution



## Q2 2006 Micropolitan Business Population

