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Growth in Software Continues to Fuel Utah's High Tech Sector

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This article summarizes the results of a survey done in 1992 by the Bureau of Economic and Business Research (BEBR) of high tech companies located throughout Utah. Since 1986, BEBR has surveyed high tech companies, identifying industry trends and reporting on issues and challenges facing these firms as they conduct business in Utah.[1 2]

By the end of 1992, BEBR identified 464 high tech companies in Utah employing 42,340 people. The reported sales of these companies totaled $7.48 billion, with R&D spending of $588 million (Exhibit 1).

Exhibit 1
Trends in Utah's High Technology Sector
1991 and 1992

	1991	1992
Number of Companies	496	464
Employment	41,525	42,340
R&D Spending	$563,113,235	$588,075,144
Sales	$6,719,206,958	$7,482,082,628

Source: Bureau of Economic and Business Research, David Eccles School of Business, University of Utah, unpublished data (1993).

Utah's high tech sector includes many of the state's largest employers, and represents 30 percent of all manufacturing employment in the state. Employment in software companies is not included in this percentage. Software companies are classified as Business Services.

Reflecting the overall composition of Utah's business community, the high tech sector is characterized by many small companies (firms with fewer than 100 employees), a nominal number of companies employing fewer than 1,000 people, and a handful of large firms (Exhibit 2).

Exhibit 2
Major High Tech Employers in Utah
1992

Year Founded	Company	1986 Emp.	1990 Emp.	1992 Emp.	Product Description
1957	Thiokol Corporation	8,000	6,900	6,000	Solid propulsion systems, ordnance and composite products.
1976	WordPerfect Corporation	360	2,200	4,500	Office automation software.
1989	Morton Automotive Products Group	0	700	2,500	Automobile air bags.
1912	Hercules Aerospace Group	5,000	3,300	2,100	High energy solid propellants used in aerospace applications.
1983	Novell, Inc.	380	1,200	1,400	Network systems software products.
1956	ParaMax[1]	na	1,650	1,200	Communication systems for DoD and other government agencies.
1980	Iomega	760	900	1,150	High performance, removable, mass storage products for computer systems.
1968	Evans & Sutherland	950	1,300	1,100	Special purpose computers used for graphics and simulation applications.

Note: Employment totals have been rounded.
[1] Formerly the Government Systems Divisions of Unisys.
Source: Bureau of Economic and Business Research, David Eccles School of Business, University of Utah, unpublished data (1993).

Important structural changes in the high tech sector have occurred over the past seven years. Though total employment has shown little fluctuation, the state's technology sector has undergone striking changes in sectoral employment concentrations and subtle changes in spatial concentration.

Based on information collected in 1987 by BEBR, employment in the high tech sector totaled 37,732 in 1986. Comparatively, high tech employment reached 42,480 in 1990; a gain of 13 percent in four years. However, 1991 and 1992 proved difficult for many of Utah's high tech companies. For the first time since 1987, the number of high tech firms doing business in Utah dropped in 1991 with a corresponding dip in employment. A slight rebound in 1992 did not offset losses which occurred in the previous year, and employment lagged behind the peak experienced in 1990. (Exhibit 3).

Slow growth in 1991 and 1992 stemmed from three factors: (1) the consolidation of non-Utah headquartered branch operations to non-Utah facilities; (2) slow job growth and reductions in some of Utah's medium-size high tech firms; and (3) employment declines at two of the state's largest high tech defense employers.

Exhibit 3
Employment and Business Formation
Utah's High Technology Sector
selected years

	1986	1987	1988	1989	1990	1991	1992
Number of Companies	463	480	496	531	531	496	464
Total Employment	37,732	39,745	40,494	41,010	42,480	41,525	42,340

Source: Bureau of Economic and Business Research, David Eccles School of Business, University of Utah, unpublished data (1993).

Branch Consolidations

In Spring 1992, SIGNETICS, a manufacturer of integrated computer circuits, announced the closing of its facility in Utah County. Activities were transferred to a non-Utah location. Strand Electro Controls, a manufacturer of lighting control systems, and Sanyo/ICON, a computer equipment manufacturer also moved operations to non-Utah locations. The combined losses from these three firms totaled 1,500 jobs.

Sluggish National Economy

Secondly, a sluggish national economy forced many of Utah's medium-sized high tech employers (firms with 500 to 2,000 employees) to scale back in 1991. Among these were Eaton-Kenway, Evans and Sutherland, National Semiconductor, Hercules Composite Products Group, ParaMax (formerly a division of Unisys), Unisys and Varian Power Grid and X-Ray Products. Combined job losses totaled nearly 2,000 from 1990 to 1992.

Declining Aerospace Sector

The final and most serious setback occurred in the defense-related aerospace sector. In 1986, nearly 38 percent of all high tech employment was concentrated in the aerospace sector primarily at Hercules Aerospace Company and Thiokol Corporation. For each year between 1986 and 1988, aerospace-based employment exceeded 14,000, reflecting large defense contracts and NASA research contracts being performed by Utah companies including Hercules Aerospace Company, Thiokol Corporation, Unisys, Williams International, and Litton.

Beginning in 1989, cuts in defense expenditures took their toll and employment in the aerospace sector began to decline. By 1992, aerospace employment was 9,343; a loss of 5,132 jobs in six years. Over half of these jobs have been lost since 1990.

Not all the news in the high tech sector is negative. Big employment gains have been realized at many companies, especially software development firms and medical companies. Exhibit 4 shows those firms which have added 200 or more new positions since 1986.

Change in Sectoral Employment Concentrations

While employment fluctuations have been minor, changes in employment concentrations have been significant. In 1986 employment in

Exhibit 4
High Tech "Gainers"
1986 to 1992

Company	1986 Emp.	1992 Emp.	Net Gain	Research Sector
WordPerfect Corporation	360	4,500	4,140	Software
Morton International Automotive Products Division	0	2,500	2,500	Automotive Products
Novell, Inc.	372	1,400	1,028	Software
Hercules Composite Products	0	500	500	Composite Materials
Iomega Corporation	760	1,150	390	Computer Components
Dynix, Inc.	63	400	337	Software
Merit Medical	0	300	300	Medical Instruments
Ballard Medical	175	465	290	Medical Supplies
Davol Specialty Access Products	50	325	275	Medical Devices
Fresenius U.S.A., Inc. (formerly Delmed)	145	400	255	Pharmaceuticals
Utah Medical Products	110	360	250	Medical Devices
OEC Diasonics, Inc.	70	313	243	Medical Equipment
GTE Health Systems	90	300	210	Software
3M Health Information Systems	100	300	200	Software

Note: Figures presented here reflect Utah-based employment only.
Source: Bureau of Economic and Business Research, David Eccles School of Business, University of Utah, unpublished data (1993).

the aerospace sector accounted for 38 percent of all high tech employment. Hercules Aerospace Company and Morton-Thiokol were the largest employers in the aerospace sector and in the high tech industry as a whole. Electronic component manufacturers ranked second with 5,741 people; less than half the number reported in aerospace. The software development sector ranked third. (Exhibit 5).

In 1987, a shift in concentration started when the software sector moved into second place. Aerospace employment dipped slightly in response to declining Prime Contract Awards (PCAs), but still had the largest concentration of high tech jobs. In 1988, a minor rebound in PCAs coincided with an increase in aerospace jobs.

Economic conditions, i.e., intense foreign competition and recessionary pressures at home, created problems for Utah's electronics sector which reported employment declines

Exhibit 5
Employment Trends in
Utah's High Technology Sector
Selected Years

Research Sector	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**
Aerospace Components	14,475	14,022	14,286	12,897	11,954	10,562	9,343
Analytical/ Measuring Devices	440	462	470	515	549	536	536
Automotive Products	3	3	3	276	733	2,058	2,712
Biomedical/Medical Products	3,671	3,882	4,302	4,292	4,543	3,724	4,209
Chemicals	421	395	377	398	420	372	367
Communication Products	2,810	2,666	2,611	2,600	2,418	2,278	2,200
Composite Materials	158	156	323	370	1,424	905	782
Computer Equipment and Peripherals	2,293	3,070	2,725	2,848	2,989	3,159	3,442
Electronic Equipment and Components	5,741	6,097	5,902	6,092	5,857	5,301	4,576
Equipment/Machinery	1,488	1,455	1,560	1,582	1,619	1,632	1,777
Lasers/Optics	281	290	274	317	300	288	300
Pharmaceuticals	203	358	379	391	399	440	509
Agricultural Products	228	316	200	218	139	96	86
Robotics	52	49	60	66	68	49	60
Software Systems	5,219	6,249	6,776	7,780	8,666	9,665	11,032
Other	249	275	246	368	402	460	409
Total Employment	**37,732**	**39,745**	**40,494**	**41,010**	**42,480**	**41,525**	**42,340**

Source: Bureau of Economic and Business Research, David Eccles School of Business, University of Utah, unpublished data (1993).

each year beginning in 1989. By the end of 1992, electronics was still Utah's third largest high tech sector, but employed only slightly more people than the medical/biomedical sector.

More critical has been the downward adjustment in aerospace-related employment; a trend which began in 1989 and has continued unabated. The employment drop in 1989 occurred in part when Hercules Aerospace began reporting employment in its aerospace group separate from that of its composite group. However, this revised reporting policy only partially accounts for job losses in this sector. Declining defense contracts were, and continue to be, a more influential contributor.

On the face, there appears to be a strong relationship between aerospace manufacturing in Utah and federal defense expenditures in the form of PCAs. Since 1988, the dollar volume of PCAs awarded to and performed by Utah firms has been declining. In response, Utah's aerospace manufacturers have scaled back. By year-end 1992, employment in the aerospace sector dropped to 9,343; a loss of 5,132 jobs in six years.

Software Pushes Aerospace Out of First Place

In direct contrast to the declining aerospace sector, software companies have provided a major impetus for employment growth in the state's high tech sector. In 1986, software companies in Utah employed 5,308 people, primarily concentrated in two software companies, Novell, Inc. and WordPerfect Corporation. By year-end 1992, employment in this sector reached 11,032, an increase of approximately 5,700 jobs. The rapid growth of both Novell and WordPerfect, which now account for 53 percent of all software employment, helped software displace aerospace as the largest high tech sector in Utah, both in employment and number of businesses.

Similarly as impressive has been the advent of Utah's automotive products sector with the formation of Morton International Automotive Safety Products, an automobile airbag manufacturer. Established as a separate entity from Morton Thiokol in 1989, this company employed fewer than 300 people three years ago. By year-end 1992, Morton's work force reached approximately 2,500.

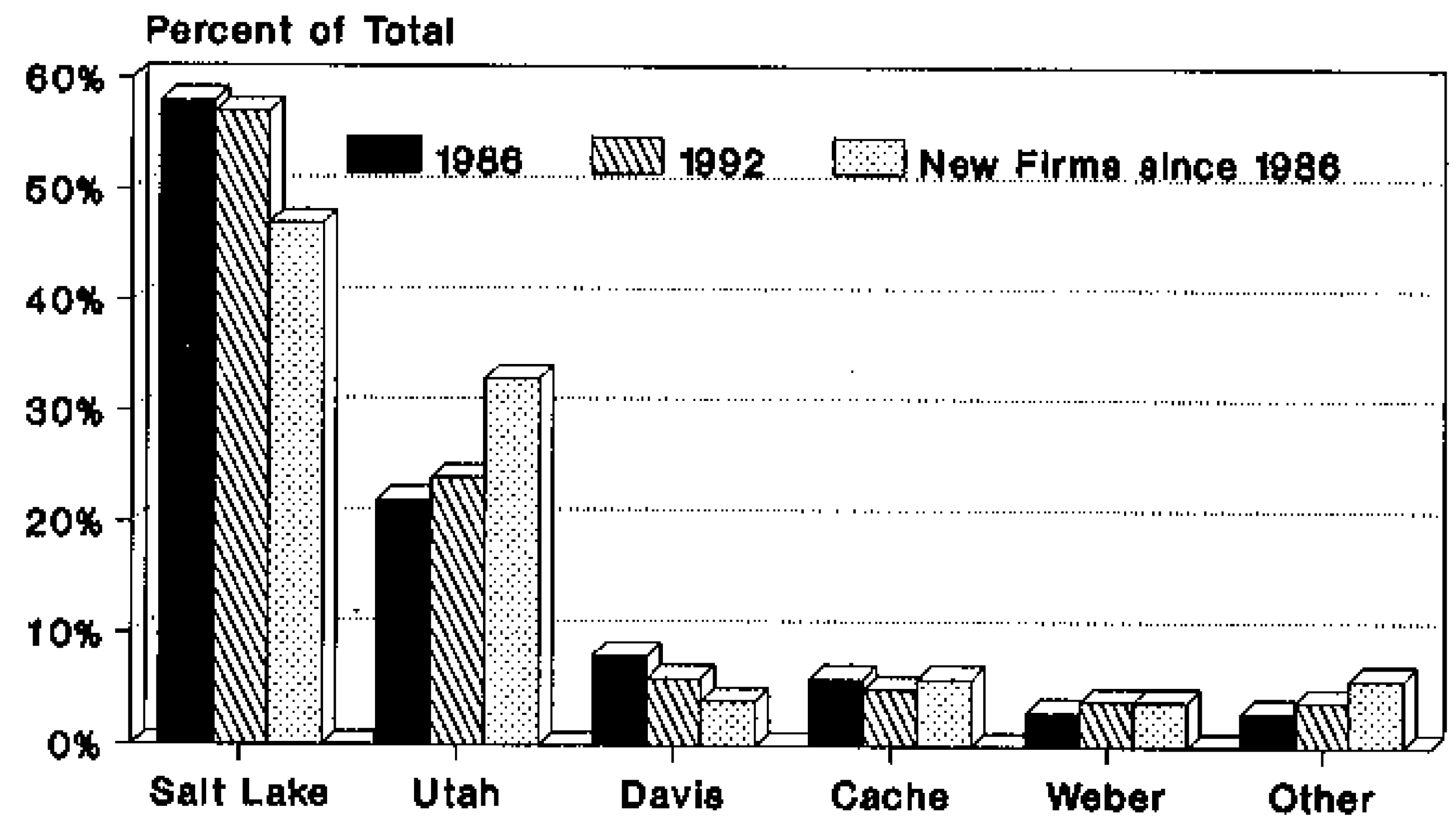
Lastly, with few exceptions, Utah-based companies which design and manufacture computer equipment and peripherals experienced modest growth between 1990 and 1992, reporting an increase of 453 jobs. Of special note were Iomega, Dayna Communications, Megahertz, and Radix Corporation.

Change in Spatial Distribution

In addition to changes in sectoral employment concentrations, a shift in the spatial distribution of high technology businesses has been occurring. In 1986, 58 percent of all high tech companies were located in Salt Lake County. Utah County had the second highest concentration with 22 percent. Davis, Cache and Weber were the locations of choice for 17 percent of technology businesses. By 1992, the number of high tech businesses located in Salt Lake County dropped by 1.0 percent, while Utah County's concentration grew by 2.0 percent. More important has been the propensity of new start-ups to select a location outside of Salt Lake County.

Of those businesses formed after 1986, fewer than half located in Salt Lake County. Almost one-third located in Utah County and 6 percent opted for a rural area. Nonetheless, 98 percent of high tech companies are still located along the Wasatch Front; however, other areas of Utah, especially the southern regions, are becoming attractive alternatives for new high tech start-ups. (Exhibit 6).

Location Trends of
Utah's High Technology Companies
1986, 1992, and New Firms Since 1986



Bureau of Economic and Business Research

Outlook

For its size, Utah has been remarkably successful in developing a solid base of high tech companies. And, while all sectors face stiff competition and none are assured of success, no sector appears destined to face the downsizing impacts of the defense contractors. It is likely that high tech employment could grow by 1 to 2 percent over the next two years.

Obstacles to high tech employment growth will come primarily from the aerospace sector and other technology-based companies which depend heavily upon defense contracting. The state's aerospace sector has sustained dramatic losses resulting from cutbacks in defense spending. Calls for further reductions continue, and Utah defense contractors will likely respond with deeper employment cuts for the next two years.

Employment growth in the software sector should proceed, though it is questionable how long software development companies can compensate for lost aerospace jobs. The software sector is maturing. Five software companies essentially control most of the software market. Niche markets exist, but the odds of a small or medium-sized Utah-based software company gaining significant market share from one of these software giants is remote.

Furthermore, the rate of software company formation is slowing as competition becomes more intense. Many of Utah's smaller software companies have abandoned product development efforts altogether having opted to become software consultants.

Competition in the "computing industry", which includes manufacturers of computers and peripheral equipment is fierce and shows no signs of abating. With few exceptions, Utah's computer equipment manufacturers are likely to remain at their present employment levels for the next few years. This component of the state's high tech sector is not likely to grow significantly.

Other sectors which should continue to perform well are automotive products, and equipment/ machinery manufacturers. Many Utah companies in these two sectors are involved in the development of highly specialized products for niche markets that are growing rapidly.

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[1] Surveys were mailed to approximately 600 companies located in Utah in 1992. The list of companies was derived from several sources including referrals from business owners, and community leaders, publications from the Utah Department of Employment Security, and directories published by organizations such as UITA, and Leading Edge Communications, Inc. Follow-up telephone requests for information were made to companies approximately three weeks after the initial survey was mailed. Gary Ricks, Diane Gillam, Austin Sargent, Jim Peters and Lynn Salisbury all assisted with the telephone survey.

[2] Identifying those characteritsics which define a high technology company is a difficult proposition. An important distinction is made between users of high tech processes, such as Kennecott Copper, Geneva Steel, and U.S. West, and producers of high technology products. BEBR has chosen to use the following definition of a high technology company developed by the Bureau of Labor Statistics.

...Manufacturing companies that have a proportion of technology-oriented workers greater than the average for all manufacturing industries (6.3%); and have a ratio of R&D expenditure to sales about the same as the average for all manufacturing industries (3.1%).

Two service sectors are also considered high tech: research and development laboratories, and software development companies.

Utah Business Statistics

UTAH DATA	Feb. 1992	Feb. 1993	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted, mil. of dol., qtly.)	27,096	28,458	5.0%	28,070	26,196	7.2%
New Corporations (no.)	582	555	–4.6%	541	523	3.4%
New Car, Truck, and Motor Home Sales (no.)	4,362	4,394	0.7%	5,237	4,783	9.5%
Agriculture						
Average Prices Received by Farmers (dol.)						
Lambs (cwt)	49.60	66.00	33.1%	54.50	44.66	22.0%
Milk, All (cwt) 1	12.10	11.50	–5.0%	12.13	11.71	3.6%
Barley (per bushel)	2.39	2.25	–5.9%	2.30	2.33	–1.4%
Alfalfa Hay, Baled (per ton) 2	53.00	61.00	15.1%	60.25	59.58	1.1%
Commercial Red Meat Production (thous. of lbs.)	33,197	33,466	0.8%	35,022	34,086	2.7%
Construction						
Total Construction (thous. of dol.) 3	75,430.2	79,168.7	5.0%	119,196.5	96,339.3	23.7%
Residential	49,291.1	61,240.7	24.2%	81,162.6	59,120.3	37.3%
Nonresidential	13,043.4	7,536.9	–42.2%	20,883.4	22,200.6	–5.9%
Additions, Alterations, and Conversions	13,095.7	10,391.1	–20.7%	17,150.4	15,018.4	14.2%
Total Permit Construction (thous. of dol.) 4	87,992.6	95,271.9	8.3%	146,899.5	113,934.3	28.9%
Residential	56,605.5	71,180.6	25.7%	94,272.7	68,706.1	37.2%
Nonresidential	15,934.4	12,338.2	–22.6%	33,214.4	29,284.1	13.4%
Additions, Alterations, and Repairs	15,452.7	11,753.1	–23.9%	19,412.5	15,944.1	21.8%
New Dwelling Units (no.)	656	878	33.8%	1,096	822	33.3%
Employment						
Civilian Labor Force (thous.)	804.9	815.3	1.3%	815.4	806.8	1.1%
Total Employed Persons	763.9	781.1	2.3%	775.6	767.3	1.1%
Unemployed Persons	41.0	34.2	–16.6%	39.8	39.5	0.7%
Percent Total Labor Force	5.1	4.2	–17.6%	4.9	4.9	–0.8%
Employees on Nonagricultural Payrolls (thous. of jobs)	748.6	778.8	4.0%	770.6	748.3	3.0%
Mining	8.5	8.4	–1.2%	8.5	8.6	–1.3%
Contract Construction	28.5	33.9	18.9%	34.7	32.0	8.4%
Manufacturing	105.5	105.4	–0.1%	104.6	105.6	–0.9%
Transportation, Communication, and Utilities	42.8	44.4	3.7%	43.7	42.5	2.8%
Wholesale Trade	38.7	39.2	1.3%	41.2	40.8	1.0%
Retail Trade	138.6	145.8	5.2%	144.2	138.8	3.9%
Finance, Insurance, and Real Estate	36.5	37.6	3.0%	37.7	36.2	4.1%
Services 5	191.0	203.6	6.6%	198.4	189.4	4.7%
Federal Government	38.7	36.5	–5.7%	38.1	38.8	–1.7%
State Government 6	46.8	48.3	3.2%	45.9	44.3	3.5%
Local Government 6	73.0	75.7	3.7%	73.7	71.4	3.2%
Average Weekly Hours						
Mining	44.7	45.0	0.7%	43.8	43.9	–0.3%
Manufacturing	40.0	38.9	–2.8%	40.1	40.0	0.1%
Wholesale Trade	35.6	36.6	2.8%	36.1	36.6	–1.3%
Retail Trade	26.5	23.8	–10.2%	26.7	26.5	0.5%
Amount of Unemployment Compensation (thous. of dol.)	9,748.3	8,795.6	–9.8%	6,613.7	6,322.3	4.6%
Finance (qtly.)						
Total State and Nationally-Chartered Banks (no.)	39	39	0.0%	39	40	–1.5%
Total Assets (mil. of dol.)	12,536.3	13,381.0	6.7%	12,983.9	12,236.3	6.1%
Total Liabilities (mil. of dol.)	11,648.3	12,402.5	6.5%	12,042.2	11,380.0	5.8%
Total Equity Capital (mil. of dol.)	888.0	978.5	10.2%	941.7	856.4	10.0%
Capital to Assets 7	8.44	8.65	2.5%	8.61	8.33	3.3%
Loan Loss Reserve Ratio	2.24	2.30	2.7%	2.27	2.16	5.0%
Loans to Assets	60.61	57.91	–4.5%	59.48	61.39	–3.1%
Temporary Investment Ratio	17.88	19.87	11.1%	18.75	17.85	5.1%
Return on Assets	0.28	0.33	17.9%	0.32	0.24	35.7%
Production						
Crude Oil to Refineries (thous. of bbls.)	3,549.8	3,192.6	–10.1%	3,647.5	3,657.2	–0.3%
Crude Oil (thous. of bbls.)	1,867.3	1,669.9	–10.6%	1,859.3	1,909.8	–2.6%
Natural Gas (mil. of cu. ft.)	25,077.6	27,417.5	9.3%	26,541.0	26,746.8	–0.8%
Coal (thous. short tons)	2,164.0	1,723.0	–20.4%	1,716.5	1,835.3	–6.5%
Travel/Tourism						
Air Passengers (total no. on and off, S.L. Int'l. Airport)	983,780	1,166,730	18.6%	1,183,588	1,041,811	13.6%
Highway Traffic Count Across State Lines (qtly.)	46,636	47,350	1.5%	47,221	46,112	2.4%
Visits to State and National Parks and Monuments	413,434	377,250	–8.8%	1,349,494	1,243,584	8.5%
Utilities						
Electric Customers (Residential)	507,475	515,883	1.7%	510,841	501,055	2.0%
Electric Customers (Commercial)	50,630	51,551	1.8%	50,847	49,834	2.0%
Natural Gas Customers (Residential and Commercial)	509,995	525,793	3.1%	514,082	500,553	2.7%
Natural Gas Customers (Industrial)	767	783	2.1%	799	651	22.7%
Telephone Lines in Service (U.S. West, Residential Access)	552,200	571,127	3.4%	559,753	540,422	3.6%
Telephone Lines in Service (U.S. West, Business Access)	204,915	218,456	6.6%	211,702	206,430	2.6%

Utah Business Statistics

UTAH DATA	Feb. 1992	Feb. 1993	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Nonagricultural Employment (thous.)	58.1	61.0	5.0%	61.4	59.8	2.6%
Unemployment Rate	4.2	3.3	−21.4%	4.4	4.5	−1.3%
Authorized Permit Construction (thous. of dol.)	8,215.5	14,395.8	75.2%	20,777.6	13,163.4	57.8%
New Dwelling Units (no.)	89	189	112.4%	128	91	40.2%
New Car, Truck, and Motor Home Sales, Owner's County (no.)	420	371	−11.7%	452	436	3.7%
Electric Customers (Residential)	51,589	53,110	2.9%	52,051	51,017	2.0%
Electric Customers (Commercial)	3,951	4,116	4.2%	3,991	3,875	3.0%
Natural Gas Customers (Residential and Commercial)	55,262	56,570	2.4%	55,692	54,376	2.4%
Natural Gas Customers (Industrial)	92	91	−1.1%	90	76	19.1%
Telephone Lines in Service (U.S. West, Residential Access)	64,128	66,645	3.9%	65,404	63,002	3.8%
Telephone Lines in Service (U.S. West, Business Access)	13,716	14,796	7.9%	14,252	13,639	4.5%
Salt Lake County						
Nonagricultural Employment (thous.)	380.0	396.5	4.3%	391.6	380.5	2.9%
Unemployment Rate	4.3	3.4	−20.9%	4.4	4.5	−2.0%
Authorized Permit Construction (thous. of dol.)	35,161.3	40,676.8	15.7%	50,654.4	43,652.2	16.0%
New Dwelling Units (no.)	253	281	11.1%	351	285	23.0%
New Car, Truck, and Motor Home Sales, Owner's County (no.)	2,170	2,013	−7.2%	2,567	2,252	14.0%
Electric Customers (Residential)	253,347	256,576	1.3%	254,672	250,869	1.5%
Electric Customers (Commercial)	21,985	22,368	1.7%	22,079	21,673	1.9%
Natural Gas Customers (Residential and Commercial)	237,039	241,481	1.9%	237,493	233,304	1.8%
Natural Gas Customers (Industrial)	346	345	−0.3%	366	270	35.5%
Telephone Lines in Service (U.S. West, Residential Access)	259,099	266,841	3.0%	262,395	254,211	3.2%
Telephone Lines in Service (U.S. West, Business Access)	121,347	128,725	6.1%	125,013	123,670	1.1%
Utah County						
Nonagricultural Employment (thous.)	99.7	104.4	4.7%	102.6	99.4	3.2%
Unemployment Rate	4.2	3.4	−19.0%	4.3	4.4	−3.6%
Authorized Permit Construction (thous. of dol.)	12,762.4	12,667.9	−0.7%	24,272.7	21,272.4	14.1%
New Dwelling Units (no.)	103	119	15.5%	200	153	30.3%
New Car, Truck, and Motor Home Sales, Owner's County (no.)	380	387	1.8%	474	432	9.8%
Electric Customers (Residential)	55,498	57,247	3.2%	56,351	55,303	1.9%
Electric Customers (Commercial)	6,275	6,456	2.9%	6,375	6,381	−0.1%
Natural Gas Customers (Residential and Commercial)	67,821	70,373	3.8%	68,667	66,511	3.2%
Natural Gas Customers (Industrial)	84	93	10.7%	90	81	10.1%
Telephone Lines in Service (U.S. West, Residential Access)	71,621	74,297	3.7%	72,505	69,924	3.7%
Telephone Lines in Service (U.S. West, Business Access)	22,780	24,755	8.7%	23,666	22,711	4.2%
Weber County						
Nonagricultural Employment (thous.)	69.4	71.6	3.2%	69.8	68.2	2.4%
Unemployment Rate	5.2	4.7	−9.6%	6.2	5.7	9.8%
Authorized Permit Construction (thous. of dol.)	5,869.7	2,981.0	−49.2%	8,540.2	7,633.5	11.9%
New Dwelling Units (no.)	53	26	−50.9%	63	53	17.8%
New Car, Truck, and Motor Home Sales, Owner's County (no.)	337	294	−12.8%	417	350	19.1%
Electric Customers (Residential)	56,336	57,156	1.5%	56,645	55,759	1.6%
Electric Customers (Commercial)	5,288	5,419	2.5%	5,360	5,233	2.4%
Natural Gas Customers (Residential and Commercial)	53,071	54,202	2.1%	53,334	52,241	2.1%
Natural Gas Customers (Industrial)	93	97	4.3%	96	85	13.4%
Telephone Lines in Service (U.S. West, Residential Access)	49,530	50,876	2.7%	50,130	48,734	2.9%
Telephone Lines in Service (U.S. West, Business Access)	13,277	14,012	5.5%	13,731	13,722	0.1%

1 Before deductions for hauling and government withholding, but includes quality, quantity and other premiums. Excludes hauling subsidies.
2 Mid-month prices.
3 Obtained from U.S. Bureau of the Census Construction Statistics Division.
4 Obtained from *Utah Construction Report.*
5 Includes services by nonprofit and religious organizations.
6 Includes public schools and college institutions.
7 Includes allowance for loan losses.

Sources:	
Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Department of Commerce, Division of Corporations and Commercial Code.
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Utilities Data	Cooperating Utah Utility Companies.

Utah Business Statistics

UTAH DATA	Mar. 1992	Mar. 1993	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted, mil. of dol., qtly.)	27,096	28,458	5.0%	28,183	26,347	7.0%
New Corporations (no.)	584	761	30.3%	556	529	5.1%
New Car, Truck, and Motor Home Sales (no.)	4,729	5,020	6.2%	5,261	4,827	9.0%
Agriculture						
Average Prices Received by Farmers (dol.)						
Lambs (cwt)	56.60	63.00	11.3%	55.03	45.97	19.7%
Milk, All (cwt) 1	11.70	11.30	–3.4%	12.09	11.80	2.5%
Barley (per bushel)	2.39	2.32	–2.9%	2.29	2.33	–1.4%
Alfalfa Hay, Baled (per ton) 2	54.00	65.00	20.4%	61.17	58.33	4.9%
Commercial Red Meat Production (thous. of lbs.)	34,133	35,137	2.9%	35,106	34,269	2.4%
Construction						
Total Construction (thous. of dol.) 3	122,675.0	147,900.6	20.6%	121,298.6	100,181.2	21.1%
Residential	79,660.2	107,766.0	35.3%	83,504.8	61,536.0	35.7%
Nonresidential	21,496.0	27,264.4	26.8%	21,364.1	22,752.6	–6.1%
Additions, Alterations, and Conversions	21,518.7	12,870.2	–40.2%	16,429.7	15,892.7	3.4%
Total Permit Construction (thous. of dol.) 4	207,260.5	174,323.6	–15.9%	144,154.8	123,938.3	16.3%
Residential	96,982.5	127,063.3	31.0%	96,779.4	72,283.8	33.9%
Nonresidential	88,613.2	32,548.4	–63.3%	28,542.3	34,842.5	–18.1%
Additions, Alterations, and Repairs	21,664.8	14,711.9	–32.1%	18,833.1	16,812.0	12.0%
New Dwelling Units (no.)	1,132	1,469	29.8%	1,124	863	30.2%
Employment						
Civilian Labor Force (thous.)	807.0	821.7	1.8%	816.6	808.1	1.1%
Total Employed Persons	766.7	789.9	3.0%	777.6	768.4	1.2%
Unemployed Persons	40.3	31.9	–20.8%	39.1	39.7	–1.6%
Percent Total Labor Force	5.0	3.9	–22.0%	4.8	4.9	–3.0%
Employees on Nonagricultural Payrolls (thous. of jobs)	754.4	786.5	4.3%	773.4	749.9	3.1%
Mining	8.2	8.4	2.4%	8.5	8.5	–0.9%
Contract Construction	30.2	35.1	16.2%	35.2	32.3	9.1%
Manufacturing	105.3	106.2	0.9%	104.8	105.4	–0.6%
Transportation, Communication, and Utilities	43.0	44.7	4.0%	43.9	42.6	3.0%
Wholesale Trade	39.1	39.7	1.5%	41.1	40.8	0.8%
Retail Trade	139.9	146.8	4.9%	144.9	139.4	4.0%
Finance, Insurance, and Real Estate	36.8	37.9	3.0%	37.7	36.3	3.9%
Services 5	193.4	206.6	6.8%	199.4	189.9	5.0%
Federal Government	38.7	36.4	–5.9%	37.9	38.7	–2.0%
State Government 6	46.0	47.6	3.5%	46.1	44.5	3.6%
Local Government 6	73.8	77.1	4.5%	73.9	71.6	3.3%
Average Weekly Hours						
Mining	43.2	45.1	4.4%	43.9	43.8	0.3%
Manufacturing	40.0	39.7	–0.7%	40.0	40.0	0.0%
Wholesale Trade	35.8	36.8	2.8%	36.2	36.6	–1.1%
Retail Trade	26.7	23.4	–12.4%	26.4	26.6	–1.0%
Amount of Unemployment Compensation (thous. of dol.)	9,854.0	9,958.9	1.1%	6,622.5	6,529.3	1.4%
Finance (qtly.)						
Total State and Nationally Chartered Banks (no.)	39	39	0.0%	39	40	–1.3%
Total Assets (mil. of dol.)	12,536.3	13,381.0	6.7%	13,054.3	12,289.7	6.2%
Total Liabilities (mil. of dol.)	11,648.3	12,402.5	6.5%	12,105.1	11,427.4	5.9%
Total Equity Capital (mil. of dol.)	888.0	978.5	10.2%	949.3	862.2	10.1%
Capital to Assets 7	8.44	8.65	2.5%	8.62	8.35	3.3%
Loan Loss Reserve Ratio	2.24	2.30	2.7%	2.28	2.18	4.6%
Loans to Assets	60.61	57.91	–4.5%	59.26	61.23	–3.2%
Temporary Investment Ratio	17.88	19.87	11.1%	18.92	17.80	6.3%
Return on Assets	0.28	0.33	17.9%	0.33	0.24	35.1%
Production						
Crude Oil to Refineries (thous. of bbls.)	3,765.6	3,448.1	–8.4%	3,621.0	3,671.0	–1.4%
Crude Oil (thous. of bbls.)	1,990.9	1,869.3	–6.1%	1,849.2	1,886.4	–2.0%
Natural Gas (mil. of cu. ft.)	25,990.7	31,267.4	20.3%	26,980.8	26,521.4	1.7%
Coal (thous. short tons)	2,023.0	1,846.0	–8.7%	1,701.8	1,857.0	–8.4%
Travel/Tourism						
Air Passengers (total no. on and off, S.L. Int'l. Airport)	1,141,436	1,358,546	19.0%	1,201,681	1,048,956	14.6%
Highway Traffic Count Across State Lines (qtly.)	46,636	47,350	1.5%	47,281	46,203	2.3%
Visits to State and National Parks and Monuments	671,319	671,537	0.0%	1,349,512	1,248,858	8.1%
Utilities						
Electric Customers (Residential)	506,554	519,873	2.6%	511,950	501,689	2.0%
Electric Customers (Commercial)	50,520	51,813	2.6%	50,955	49,871	2.2%
Natural Gas Customers (Residential and Commercial)	510,348	526,655	3.2%	515,441	501,489	2.8%
Natural Gas Customers (Industrial)	777	773	–0.5%	799	668	19.6%
Telephone Lines in Service (U.S. West, Residential Access)	553,124	571,901	3.4%	561,317	542,157	3.5%
Telephone Lines in Service (U.S. West, Business Access)	206,521	219,822	6.4%	212,811	206,768	2.9%

Utah Business Statistics

UTAH DATA	Mar. 1992	Mar. 1993	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Nonagricultural Employment (thous.)	59.0	61.4	4.1%	61.6	59.9	2.9%
Unemployment Rate	3.8	3.2	−15.8%	4.4	4.5	−2.0%
Authorized Permit Construction (thous. of dol.)	19,510.0	19,822.7	1.6%	20,803.7	13,750.1	51.3%
New Dwelling Units (no.)	133	146	9.8%	129	95	34.9%
New Car, Truck, and Motor Home Sales, Owner's County (no.)	420	547	30.2%	463	437	6.0%
Electric Customers (Residential)	51,586	53,253	3.2%	52,190	51,099	2.1%
Electric Customers (Commercial)	3,923	4,175	6.4%	4,012	3,886	3.2%
Natural Gas Customers (Residential and Commercial)	55,348	56,750	2.5%	55,809	54,479	2.4%
Natural Gas Customers (Industrial)	92	91	−1.1%	90	79	14.5%
Telephone Lines in Service (U.S. West, Residential Access)	64,339	66,891	4.0%	65,617	63,202	3.8%
Telephone Lines in Service (U.S. West, Business Access)	13,813	15,022	8.8%	14,353	13,683	4.9%
Salt Lake County						
Nonagricultural Employment (thous.)	383.4	401.8	4.8%	393.1	381.3	3.1%
Unemployment Rate	3.9	3.0	−23.1%	4.4	4.6	−4.4%
Authorized Permit Construction (thous. of dol.)	60,935.4	70,377.9	15.5%	51,441.2	45,757.6	12.4%
New Dwelling Units (no.)	357	451	26.3%	359	294	22.2%
New Car, Truck, and Motor Home Sales, Owner's County (no.)	2,368	2,669	12.7%	2,592	2,279	13.7%
Electric Customers (Residential)	253,441	258,606	2.0%	255,102	251,193	1.6%
Electric Customers (Commercial)	22,153	22,505	1.6%	22,108	21,733	1.7%
Natural Gas Customers (Residential and Commercial)	236,786	241,747	2.1%	237,906	233,572	1.9%
Natural Gas Customers (Industrial)	356	334	−6.2%	364	279	30.5%
Telephone Lines in Service (U.S. West, Residential Access)	259,496	267,123	2.9%	263,031	254,987	3.2%
Telephone Lines in Service (U.S. West, Business Access)	122,264	129,272	5.7%	125,597	123,650	1.6%
Utah County						
Nonagricultural Employment (thous.)	100.7	105.1	4.4%	102.9	99.6	3.3%
Unemployment Rate	3.8	3.1	−18.4%	4.2	4.4	−4.9%
Authorized Permit Construction (thous. of dol.)	24,038.8	33,164.2	38.0%	25,033.2	22,389.1	11.8%
New Dwelling Units (no.)	232	382	64.7%	212	166	27.7%
New Car, Truck, and Motor Home Sales, Owner's County (no.)	466	488	4.7%	476	440	8.1%
Electric Customers (Residential)	55,670	57,552	3.4%	56,508	55,293	2.2%
Electric Customers (Commercial)	6,305	6,599	4.7%	6,400	6,316	1.3%
Natural Gas Customers (Residential and Commercial)	67,883	70,433	3.8%	68,879	66,660	3.3%
Natural Gas Customers (Industrial)	83	94	13.3%	91	82	10.5%
Telephone Lines in Service (U.S. West, Residential Access)	71,782	74,483	3.8%	72,730	70,132	3.7%
Telephone Lines in Service (U.S. West, Business Access)	22,830	24,991	9.5%	23,846	22,788	4.6%
Weber County						
Nonagricultural Employment (thous.)	69.4	71.6	3.2%	70.1	68.4	2.5%
Unemployment Rate	4.9	4.6	−6.1%	6.2	5.7	9.4%
Authorized Permit Construction (thous. of dol.)	7,895.1	10,886.6	37.9%	8,789.5	7,822.2	12.4%
New Dwelling Units (no.)	70	88	25.7%	64	56	15.7%
New Car, Truck, and Motor Home Sales, Owner's County (no.)	368	379	3.0%	418	358	16.7%
Electric Customers (Residential)	56,296	57,160	1.5%	56,717	55,823	1.6%
Electric Customers (Commercial)	5,246	5,383	2.6%	5,371	5,232	2.7%
Natural Gas Customers (Residential and Commercial)	53,125	54,249	2.1%	53,427	52,308	2.1%
Natural Gas Customers (Industrial)	93	97	4.3%	97	86	12.1%
Telephone Lines in Service (U.S. West, Residential Access)	49,668	50,925	2.5%	50,235	48,862	2.8%
Telephone Lines in Service (U.S. West, Business Access)	13,521	14,122	4.4%	13,781	13,722	0.4%

1 Before deductions for hauling and government withholding, but includes quality, quantity and other premiums. Excludes hauling subsidies.
2 Mid-month prices.
3 Obtained from U.S. Bureau of the Census Construction Statistics Division.
4 Obtained from *Utah Construction Report.*
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NATIONAL DATA	Mar. 1992	Mar. 1993	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross Domestic Product (seasonally adjusted, bil., qtly.)	5,840.2	6,145.8	5.2%	6,027.1	5,741.1	5.0%
Total Personal Income (seasonally adjusted, bil. of dol.)	5,009.6	5,260.8	5.0%	5,122.4	4,885.2	4.9%
Industrial Production Index (seasonally adjusted, 1987=100)	105.6	110.1	4.3%	107.7	104.6	3.0%
New Plant and Equipment Expenditures by Business (bil., qtly.)	535.7	564.8	5.4%	553.4	529.3	4.5%
Net Exports of Goods and Services (seasonally adjusted, bil., qtly.)	–8.1	–49.4	509.9%	–40.8	–16.6	145.1%
Exports of Goods and Services (seasonally adjusted, bil., qtly.)	628.1	649.4	3.4%	641.6	611.9	4.9%
Imports of Goods and Services (seasonally adjusted, bil., qtly.)	636.2	698.9	9.9%	682.4	628.6	8.6%
Composite Index of 11 Leading Indicators (1982=100)	147.9	151.7	2.6%	150.3	145.0	3.6%
Price Indexes						
Consumer Price Indexes (not seasonally adjusted, 1982-84=100)						
CPI-U (All Urban Consumers) All Items	139.3	143.6	3.1%	141.4	137.2	3.1%
CPI-U (All Urban Consumers) Food & Beverages	138.8	140.9	1.5%	139.3	137.3	1.4%
CPI-U (All Urban Consumers) Housing	136.6	140.2	2.6%	138.4	134.6	2.8%
CPI-U (All Urban Consumers) Transportation	124.4	129.0	3.7%	127.7	124.0	3.0%
CPI-U (All Urban Consumers) Medical Care	187.3	198.6	6.0%	193.0	180.4	7.0%
CPI-U (All Urban Consumers) Energy	98.9	102.5	3.6%	103.8	101.5	2.3%
Producer Price Index (not seasonally adjusted, 1982=100)						
Producer Price Index, All Finished Goods	122.2	124.6	2.0%	123.8	121.8	1.6%
GDP Implicit Price Deflator (seasonally adjusted, 1987=100, qtly.)	119.8	122.9	2.6%	121.7	118.6	2.6%
Civilian Employment (seasonally adjusted)						
Total Civilian Labor Force (mil.)	126.5	127.4	0.7%	127.3	125.6	1.3%
Total Civilian Employment (mil.)	117.3	118.6	1.1%	117.9	116.9	0.8%
Unemployment Rate	7.3	7.0	–4.1%	7.4	6.9	6.1%
Construction						
Total Construction (thous. of dol.)	14,345,618	15,012,757	4.7%	14,075,347	13,148,092	7.1%
Residential	8,310,816	8,818,382	6.1%	7,960,544	6,986,596	13.9%
Nonresidential	2,766,965	2,967,216	7.2%	2,844,068	2,943,111	-3.4%
Additions, Alterations, and Conversions	3,267,837	3,227,159	–1.2%	3,270,735	3,218,385	1.6%
New Dwelling Units (no.)	97,932	98,208	0.3%	91,390	84,711	7.9%
Interest Rates						
Federal Funds Rate	3.98	3.07	–22.9%	3.28	5.09	–35.6%
Short Term (3-month Treasury bill rate)	4.05	2.97	–26.7%	3.23	4.87	–33.7%
Long Term (30-year Treasury bond yields)	7.93	6.65	–16.1%	7.31	8.02	-8.8%
Prime Rates Charged by Banks on Short-term Business Loans (avg.)	6.50	6.00	–7.7%	6.13	7.79	–21.4%
Mortgage Rates (new homes)	8.21	7.22	–12.1%	7.78	8.76	–11.2%
U.S. and Utah Consumer Sentiment Indexes (1966=100, qtly.)						
U.S. Population's View of the U.S.	67.5	89.3	32.3%	79.1	77.6	1.9%
Utahns' View of the U.S.	68.0	87.7	29.0%	78.3	78.6	–0.4%
Utahns' View of Utah	71.8	96.9	35.0%	91.5	81.3	12.5%

Sources: *Survey of Current Business*, U.S. Department of Commerce: U.S. Gross Domestic Product, Total Personal Income, Industrial Production Index, New Plant and Equipment Expenditures by Business, Export/Import Data, Composite Index of 11 Leading Indicators, GDP Implicit Price Deflator, National Employment Data, Interest Rates.

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Permit Authorized Construction in Permit Issuing Places, U.S. Bureau of the Census: National Construction Data.

University of Michigan and University of Utah Survey Research Center: U.S. and Utah Consumer Sentiment Indexes.