

Utah State and Local Government Fiscal Impact Model  
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**Multipliers for Utah**

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Economic multipliers are widely used to describe the ultimate effects on the economy of various projects, policies and other activities. In general, multipliers compare the total change throughout the economy to the initial change in the industrial sector where the activity begins. For example, if a new tire factory opens, there is the initial effect in the tire manufacturing sector, and a secondary effect because of the factory's vendor purchases and the consumer spending of the factory's employees. This second round of spending launches a third round and so on. A multiplier captures the effects of all the spending rounds throughout the economy in comparison to the initial, or direct effect.

There is virtually no limit to the number of different types of multipliers that could be created, but the most commonly used types relate to output, employment and earned income, or earnings. The multipliers used by GOPB have been developed through the Utah Multi-Regional Input-Output (UMRIO) process, which is described in detail in working papers 94-1 and 98-1.<sup>1</sup> This paper defines output, employment and income, describes the five types of multipliers that have been generated, and presents estimates of these multipliers for Utah for over 500 detailed industries.

## Definitions

Output, employment and income have specific definitions in the context of multipliers. Output and sales are very similar concepts. Output measures the dollar value of all the transactions comprising economic activity. Total gross output, the technical term for output, includes output delivered to both intermediate and to final demand, or, all the intermediate transactions necessary to complete a final sale, as well as the final sale. In this sense, output incorporates a large amount of double counting. Not only is the value of a good or service counted at the point of final sale, but the value of all the components, the value of their components, and so on, are added to the final sale value to arrive at the amount of output required to provide the final good or service. Nonetheless, output is an important measure because it gives a dollar value for all the activity associated with a particular event.

Employment includes full-time and part-time jobs. No adjustment is made for hours worked on the job. A job requiring 10 hours of work per week counts the same as a job requiring 60 hours per week. The main reason for this convention is the employment data measure the number of jobs, not hours of work.

Income can be divided between labor and non-labor sources. Labor income, known as earnings, is the income concept used in UMRIO. Non-labor income, such as public assistance, capital gains, dividends, and interest, is excluded because it is not directly related the kinds of activities being modeled. When a new R&D facility opens up, for example, it is unlikely that significant additional income assistance or capital gains will be recorded in Utah. Earnings include wages and salaries, benefits, and the profits of non-corporate business establishments, such as restaurants.

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<sup>1</sup>These papers are available on line at:  
[http://governor.state.ut.us/dea/publications/Fiscal\\_Impact\\_Models/fiscal\\_impact\\_models.html](http://governor.state.ut.us/dea/publications/Fiscal_Impact_Models/fiscal_impact_models.html)

## Multipliers

Five types of multipliers have been generated by GOPB: final demand multipliers for output, earnings, and employment; and direct effect multipliers for earnings and employment.

Final demand multipliers for output measure the total change in output in all sectors of the economy, given a change in final demand in a particular sector. As suggested above, final demand is the ultimate selling price of a good or service. For the economy as a whole, final demand and gross state product are the same, though at the sector level they are not. These multipliers are generally in the range of 2.5, which means for every \$1.00 increase in final demand in a sector, output throughout the rest of the economy goes up \$1.50, so the total effect is \$2.50. Sectors with large final demand output multipliers include: poultry processing (3.20); stock brokers (3.09); meat processing (2.97); clothing stores (2.96); and freight warehousing (2.93). The median multiplier for the 411 industries in the UMRIO model, or the 205th multiplier when the multipliers are ranked from smallest to largest is 2.52.

Final demand multipliers for earnings measure the earnings generated in all sectors of the economy, given a change in final demand in a particular sector. These multipliers are generally in the range of 0.6, which means for every \$1.00 increase in final demand in a sector, earnings in all sectors of the economy, including the sector with the initial increase in final demand, go up 60 cents. Sectors with large final demand earnings multipliers include: domestic services (1.35); labor and civic organizations (1.31); stock brokers (1.25); temporary employment services (1.25); and business associations (1.23). The median multiplier is 0.62.

Final demand multipliers for employment measure the employment generated in all sectors of the economy, given a change in final demand in a particular sector. These multipliers are generally in the range of 20, which means for every \$1 million increase in final demand in a sector, employment in all sectors of the economy, including the sector with the initial increase in final demand, goes up by 20 jobs. Sectors with large final demand employment multipliers include: domestic services (123.3); sheep ranching (77.8); barber shops (77.5); agricultural services (66.4); and accounting (52.1). The median multiplier is 20.3.

An earnings direct effect is the initial change in earnings given a change in activity, such as a plant opening, in a particular sector. A direct effect earnings multiplier measures the total change in earnings given the initial, direct, change in a given sector. These multipliers are generally in the range of 2.5, which means for every dollar increase in earnings paid to employees in a given sector, earnings in the other sectors go up \$1.50, and earnings throughout the economy go up \$2.50. Sectors with large direct effect earnings multipliers include: canning (10.55); fertilizers (8.04); metal work (6.69); plastics (6.26); and cheese (6.18). The median multiplier is 2.40.

A direct effect employment multiplier measures the total change in employment given the initial, direct, change in a given sector. These multipliers are generally in the range of 2.5, which means for every job in a given sector, employment in the other sectors goes up by 1.5 jobs, and employment throughout the economy goes up by 2.5 jobs. Sectors with large direct effect employment multipliers include: oil refining (10.5); motor vehicle parts (9.6); copper refining (9.4); natural gas production and transmission (9.0); and flour (8.6). The median multiplier is 2.55.

# Multipliers for Utah

## by Detailed Industry

See notes at end of table for multiplier definitions

Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
1 Dairy Farm Products	2.68	0.62	22.7	2.68	4.6
2 Poultry and Eggs	2.82	0.51	19.8	4.14	4.7
3 Ranch Fed Cattle	2.76	0.59	32.1	3.53	2.4
4 Range Fed Cattle	2.61	0.56	31.0	3.12	2.2
5 Cattle Feedlots	2.77	0.57	22.7	3.92	6.1
6 Sheep, Lambs and Goats	2.64	0.57	77.8	3.07	1.4
7 Hogs, Pigs and Swine	2.71	0.49	24.5	6.16	3.9
8 Other Meat Animal Products	2.73	0.56	33.7	3.99	2.2
9 Miscellaneous Livestock	2.53	0.56	47.3	2.62	1.5
11 Food Grains	2.68	0.56	33.2	4.41	1.8
12 Feed Grains	2.61	0.54	26.9	4.46	2.3
13 Hay and Pasture	2.67	0.60	49.6	3.58	1.5
14 Grass Seeds	2.45	0.47	59.6	3.95	1.3
16 Fruits	2.66	0.68	29.8	2.59	2.2
17 Tree Nuts	2.78	0.91	38.6	1.80	1.7
18 Vegetables	2.53	0.65	25.8	2.38	2.5
19 Sugar Crops	2.50	0.50	38.6	4.40	1.5
20 Miscellaneous Crops	2.29	0.50	34.0	3.16	1.9
21 Oil Bearing Crops	2.64	0.59	29.6	3.46	2.0
22 Forest Products	2.39	0.46	24.7	4.39	2.1
23 Greenhouse and Nursery Products	2.49	0.69	27.3	2.03	1.9
24 Forestry Products	1.97	0.31	31.4	28.01	2.0
25 Commercial Fishing	2.17	0.56	17.9	1.83	2.0
26 Agricultural, Forestry, Fishery Services	2.63	0.85	66.4	1.77	1.2
27 Landscape and Horticultural Services	2.62	0.83	56.1	1.87	1.3
29 Copper Ores	2.29	0.63	15.9	1.96	2.8
31 Gold Ores	2.20	0.56	13.4	2.27	4.2
32 Silver Ores	2.61	0.97	21.1	1.60	2.6
34 Metal Mining Services	2.45	0.83	20.1	1.70	2.4
35 Uranium-radium-vanadium Ores	2.85	1.22	30.3	1.47	1.9
36 Metal Ores, Not Elsewhere Classified	2.75	0.80	21.2	2.26	3.3
37 Coal Mining	2.92	0.80	20.3	2.91	5.5
38 Natural Gas & Crude Petroleum	2.59	0.67	20.3	2.43	2.9

## Multipliers for Utah by Detailed Industry

See notes at end of table for multiplier definitions

Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
39 Natural Gas Liquids	2.58	0.50	16.2	5.49	6.2
40 Dimension Stone	2.44	0.65	23.5	2.10	2.0
41 Sand and Gravel	2.52	0.78	24.3	1.79	1.9
42 Clay, Ceramic, Refractory Minerals, N.E.C.	2.40	0.60	20.1	2.29	2.2
43 Potash, Soda, and Borate Minerals	2.32	0.50	13.8	2.73	3.9
44 Phosphate Rock	2.32	0.48	13.7	3.08	4.1
45 Chemical, Fertilizer Mineral Mininig, N.E.C.	2.64	0.90	23.3	1.67	2.2
46 Nonmetallic Minerals (Except Fuels) Service	2.46	0.61	16.8	2.48	3.4
47 Misc. Nonmetallic Minerals, N.E.C.	2.47	0.68	20.1	2.07	2.4
48 New Residential Structures	2.60	0.61	22.1	3.37	3.0
49 New Industrial and Commercial Buildings	2.52	0.68	21.4	2.31	2.6
50 New Utility Structures	2.54	0.74	23.0	2.01	2.3
51 New Highways and Streets	2.52	0.69	21.8	2.12	2.3
53 New Mineral Extraction Facilities	2.82	0.94	28.5	1.81	2.1
54 New Government Facilities	2.51	0.69	19.4	2.17	3.0
55 Maintenance and Repair, Residential	2.64	0.79	26.8	2.02	2.1
56 Maintenance and Repair Other Facilities	2.67	0.95	29.7	1.63	1.8
57 Maintenance and Repair Oil and Gas Wells	2.61	0.63	21.3	2.97	3.0
58 Meat Packing Plants	2.63	0.44	18.6	5.14	6.5
59 Sausages and Other Prepared Meats	2.97	0.57	20.3	4.61	4.8
60 Poultry Processing	3.20	0.59	23.4	3.92	3.3
62 Cheese, Natural and Processed	2.23	0.35	11.6	6.18	6.7
63 Condensed and Evaporated Milk	2.23	0.38	11.5	4.50	6.9
64 Ice Cream and Frozen Desserts	2.45	0.48	15.8	3.87	3.8
65 Fluid Milk	2.23	0.41	13.1	3.89	5.0
67 Canned Fruits and Vegetables	2.08	0.34	16.3	10.55	2.5
68 Dehydrated Food Products	2.34	0.56	16.7	2.40	3.0
69 Pickles, Sauces, and Salad Dressings	2.25	0.44	13.4	3.48	4.5
70 Frozen Fruits, Juices and Vegetables	2.61	0.58	18.5	3.69	4.1
71 Frozen Specialties	2.59	0.54	17.3	3.22	3.7
72 Flour and Other Grain Mill Products	2.90	0.62	21.7	5.12	8.6
75 Blended and Prepared Flour	2.75	0.54	18.1	5.88	6.8
77 Dog, Cat, and Other Pet Food	2.52	0.49	16.0	5.19	7.8

## Multipliers for Utah by Detailed Industry

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Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
78 Prepared Feeds, N.E.C	2.41	0.42	15.4	5.52	7.4
79 Bread, Cake, and Related Products	2.63	0.62	19.8	2.78	3.2
80 Cookies and Crackers	2.32	0.48	15.9	2.99	3.1
81 Sugar	2.53	0.52	14.3	3.76	6.9
82 Confectionery Products	2.30	0.44	15.8	4.30	3.3
91 Malt Beverages	2.23	0.47	16.0	5.64	4.8
93 Wines, Brandy, and Brandy Spirits	2.92	0.74	23.2	5.69	6.7
95 Bottled and Canned Soft Drinks & Water	2.28	0.46	14.0	3.81	4.8
96 Flavoring Extracts and Syrups, N.E.C.	2.21	0.49	11.0	2.34	8.0
100 Potato Chips & Similar Snacks	2.34	0.46	14.8	3.89	4.8
101 Manufactured Ice	2.50	0.74	37.3	1.83	1.5
103 Food Preparations, N.E.C	2.41	0.52	17.0	3.12	3.6
108 Broadwoven Fabric Mills and Finishing	1.98	0.42	17.3	2.43	2.0
112 Knit Outerwear Mills	2.00	0.49	19.4	1.91	1.7
116 Yarn Mills and Finishing Of Textiles, N.E.C.	1.93	0.42	15.5	2.30	2.1
122 Cordage and Twine	2.26	0.56	21.3	2.36	2.0
123 Textile Goods, N.E.C	2.23	0.49	20.6	3.25	2.3
124 Apparel Made From Purchased Materials	2.06	0.45	21.0	2.41	1.8
125 Curtains and Draperies	2.17	0.48	22.3	2.40	1.9
126 Housefurnishings, N.E.C	2.08	0.44	18.4	2.59	2.0
127 Textile Bags	2.05	0.46	21.1	2.27	1.7
128 Canvas Products	2.45	0.70	24.7	1.91	1.9
129 Pleating and Stitching	2.39	0.73	31.3	1.70	1.5
130 Automotive and Apparel Trimmings	2.27	0.48	18.0	2.78	2.5
132 Fabricated Textile Products, N.E.C.	2.19	0.47	18.1	2.90	2.3
133 Logging Camps and Logging Contractors	1.94	0.37	14.6	2.50	2.3
134 Sawmills and Planing Mills, General	2.31	0.48	17.1	2.97	2.8
135 Hardwood Dimension and Flooring Mills	2.37	0.61	27.8	2.17	1.7
136 Special Product Sawmills, N.E.C	2.52	0.85	43.4	1.55	1.3
137 Millwork	2.51	0.69	24.4	2.14	2.1
138 Wood Kitchen Cabinets	2.50	0.71	24.3	1.99	2.0
140 Structural Wood Members, N.E.C	2.45	0.60	21.3	2.53	2.3
141 Wood Containers	2.48	0.69	28.1	2.04	1.8

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Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
142 Wood Pallets and Skids	2.55	0.68	27.0	2.24	1.9
143 Mobile Homes	2.29	0.58	17.8	2.09	2.4
144 Prefabricated Wood Buildings	2.59	0.67	21.1	2.43	2.7
145 Wood Preserving	2.36	0.43	14.7	5.69	4.8
147 Wood Products, N.E.C	2.44	0.63	25.3	2.24	1.9
148 Wood Household Furniture	2.41	0.62	23.8	2.28	2.0
149 Upholstered Household Furniture	2.50	0.69	22.6	2.12	2.2
150 Metal Household Furniture	2.43	0.52	20.4	3.38	2.3
151 Mattresses and Bedspings	2.42	0.61	20.1	2.34	2.5
152 Wood Tv and Radio Cabinets	2.30	0.62	27.4	1.94	1.6
153 Household Furniture, N.E.C	2.35	0.72	28.1	1.72	1.6
154 Wood Office Furniture	2.47	0.67	24.3	2.23	2.1
155 Metal Office Furniture	2.57	0.59	18.8	3.66	4.0
156 Public Building Furniture	2.43	0.54	17.9	3.14	3.2
157 Wood Partitions and Fixtures	2.52	0.68	22.2	2.21	2.3
158 Metal Partitions and Fixtures	2.64	0.65	20.8	2.64	2.7
159 Blinds, Shades, and Drapery Hardware	2.47	0.59	20.3	2.47	2.4
160 Furniture and Fixtures, N.E.C	1.83	0.35	11.5	2.03	2.1
164 Paperboard Containers and Boxes	2.09	0.47	14.3	2.48	2.9
165 Paper Coated & Laminated Packaging	2.29	0.53	14.9	2.49	3.4
167 Bags, Plastic	2.24	0.49	14.9	2.72	3.2
168 Bags, Paper	2.24	0.50	15.6	2.61	2.9
169 Die-cut Paper and Board	2.19	0.53	16.6	2.31	2.5
170 Sanitary Paper Products	2.08	0.38	11.0	3.81	5.7
171 Envelopes	2.31	0.58	17.4	2.29	2.7
173 Converted Paper Products, N.E.C	2.24	0.52	16.3	2.53	2.8
174 Newspapers	2.43	0.71	24.8	1.95	2.0
175 Periodicals	2.48	0.60	20.8	2.82	2.7
176 Book Publishing	2.70	0.58	19.5	4.11	4.3
177 Book Printing	2.36	0.59	19.8	2.42	2.4
178 Miscellaneous Publishing	2.55	0.66	23.3	2.41	2.3
179 Commercial Printing	2.40	0.65	21.0	2.14	2.3
180 Manifold Business Forms	2.17	0.53	15.8	2.27	2.7

## Multipliers for Utah by Detailed Industry

See notes at end of table for multiplier definitions

Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
181 Greeting Card Publishing	2.47	0.54	20.4	3.38	3.1
182 Blankbooks and Looseleaf Binder	2.66	0.69	23.3	2.59	2.7
183 Bookbinding & Related	2.52	0.75	28.8	1.93	1.8
184 Typesetting	2.33	0.59	22.3	2.40	2.2
185 Plate Making	2.71	1.01	30.0	1.59	1.8
186 Alkalies & Chlorine	2.38	0.63	15.8	2.11	3.3
187 Industrial Gases	2.49	0.80	18.5	1.71	2.6
189 Inorganic Chemicals Nec.	2.28	0.49	13.7	2.97	4.2
190 Cyclic Crudes, Interm. & Indus. Organic Chem.	2.21	0.42	12.1	4.14	5.7
191 Plastics Materials and Resins	2.14	0.37	11.8	6.26	5.8
192 Synthetic Rubber	2.07	0.42	12.9	2.74	2.9
195 Drugs	2.40	0.53	16.2	2.88	3.5
196 Soap and Other Detergents	2.15	0.44	13.3	2.86	3.3
197 Polishes and Sanitation Goods	2.32	0.55	15.2	2.29	3.2
199 Toilet Preparations	2.25	0.43	15.4	4.28	3.3
200 Paints and Allied Products	2.13	0.43	12.0	3.14	4.3
202 Nitrogenous and Phosphatic Fertilizers	2.25	0.38	12.3	7.18	5.3
203 Fertilizers, Mixing Only	2.17	0.35	12.2	8.04	4.8
204 Agricultural Chemicals, N.E.C	2.27	0.47	12.5	3.03	5.5
205 Adhesives and Sealants	2.22	0.47	13.9	2.79	3.4
206 Explosives	2.67	0.81	20.2	2.12	3.5
207 Printing Ink	2.09	0.45	13.1	2.44	3.0
209 Chemical Preparations, N.E.C	2.25	0.47	13.6	3.15	4.0
210 Petroleum Refining	1.94	0.29	8.0	5.09	10.5
211 Paving Mixtures and Blocks	2.36	0.42	12.6	4.17	5.0
212 Asphalt Felts and Coatings	2.17	0.39	11.8	3.31	4.0
213 Lubricating Oils and Greases	2.50	0.45	12.9	5.10	7.8
214 Petroleum and Coal Products, N.E.C.	1.95	0.30	8.7	3.08	4.3
217 Rubber and Plastics Hose and Belting	2.30	0.56	17.5	2.31	2.6
218 Gaskets, Packing and Sealing Devices	2.41	0.63	19.6	2.19	2.4
219 Fabricated Rubber Products, N.E.C.	2.39	0.60	18.4	2.37	2.7
220 Miscellaneous Plastics Products	2.40	0.58	17.4	2.59	3.0
221 Leather Tanning and Finishing	2.41	0.39	15.3	4.54	3.4

## Multipliers for Utah by Detailed Industry

See notes at end of table for multiplier definitions

Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
224 Shoes, Except Rubber	2.00	0.50	30.0	1.73	1.3
226 Luggage	2.09	0.42	19.4	2.72	1.9
228 Personal Leather Goods	2.23	0.59	38.8	1.75	1.3
229 Leather Goods, N.E.C	2.37	0.70	41.4	1.66	1.3
230 Glass and Glass Products, Exc Containers	2.41	0.63	21.4	2.17	2.2
232 Cement, Hydraulic	2.57	0.54	15.2	3.70	5.5
233 Brick and Structural Clay Tile	2.75	0.77	24.1	2.25	2.4
235 Clay Refractories	2.70	0.73	21.2	2.31	2.9
236 Structural Clay Products, N.E.C	2.80	1.20	35.8	1.43	1.6
240 Porcelain Electrical Supplies	2.71	0.75	21.7	2.23	2.7
241 Pottery Products, N.E.C	2.62	0.71	27.3	2.26	2.0
242 Concrete Block and Brick	2.56	0.61	19.2	2.79	3.1
243 Concrete Products, N.E.C	2.65	0.68	21.3	2.48	2.7
244 Ready-mixed Concrete	2.58	0.64	18.9	2.62	3.1
245 Lime	2.71	0.64	17.0	2.91	4.6
246 Gypsum Products	2.47	0.49	14.9	4.68	5.5
247 Cut Stone and Stone Products	2.46	0.75	26.2	1.87	1.8
250 Minerals, Ground Or Treated	2.43	0.55	21.8	2.80	2.1
251 Mineral Wool	2.20	0.50	19.5	2.40	2.0
253 Nonmetallic Mineral Products, N.E.C.	2.80	0.85	19.9	1.97	3.4
254 Blast Furnaces and Steel Mills	2.62	0.61	15.7	3.26	5.8
257 Cold Finishing Of Steel Shapes	2.74	0.58	15.7	3.95	5.9
258 Steel Pipe and Tubes	2.81	0.62	16.9	3.52	4.9
259 Iron and Steel Foundries	2.55	0.71	20.6	2.17	2.7
260 Primary Copper	1.76	0.24	6.9	5.10	9.4
262 Primary Nonferrous Metals, N.E.C.	2.12	0.50	12.2	2.14	3.5
263 Secondary Nonferrous Metals	2.64	0.57	17.4	5.67	7.0
264 Copper Rolling and Drawing	2.45	0.52	14.8	3.55	5.1
265 Aluminum Rolling and Drawing	2.18	0.47	12.5	2.76	4.5
266 Nonferrous Rolling and Drawing, N.E.C.	2.24	0.51	13.7	2.89	4.6
267 Nonferrous Wire Drawing and Insulating	2.52	0.54	15.8	3.20	4.0
268 Aluminum Foundries	2.29	0.60	19.2	2.03	2.2
269 Brass, Bronze, and Copper Foundries	2.52	0.92	34.8	1.51	1.5

## Multipliers for Utah by Detailed Industry

See notes at end of table for multiplier definitions

Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
271 Metal Heat Treating	2.54	0.61	17.2	2.52	3.3
272 Primary Metal Products, N.E.C	2.36	0.59	16.6	2.27	3.3
276 Hand and Edge Tools, N.E.C.	2.33	0.57	22.8	2.19	1.8
277 Hand Saws and Saw Blades	2.34	0.51	17.5	2.85	2.6
278 Hardware, N.E.C.	2.33	0.56	18.3	2.35	2.4
279 Metal Sanitary Ware	2.46	0.71	23.8	1.82	1.9
280 Plumbing Fixture Fittings and Trim	2.37	0.56	18.6	2.49	2.5
281 Heating Equipment, Except Electric	2.33	0.55	17.5	2.31	2.4
282 Fabricated Structural Metal	2.58	0.61	17.7	2.71	3.2
283 Metal Doors, Sash, and Trim	2.40	0.60	18.0	2.21	2.6
284 Fabricated Plate Work (Boiler Shops)	2.59	0.76	21.2	1.90	2.3
285 Sheet Metal Work	2.46	0.61	18.8	2.27	2.5
286 Architectural Metal Work	2.50	0.67	20.2	2.03	2.3
287 Prefabricated Metal Buildings	2.53	0.62	19.2	2.34	2.5
288 Miscellaneous Metal Work	2.64	0.49	14.8	6.69	6.0
289 Screw Machine Products and Bolts, Etc.	2.53	0.63	19.5	2.50	2.8
292 Automotive Stampings	2.69	0.60	18.7	3.66	3.5
294 Metal Stampings, N.E.C.	2.56	0.66	19.9	2.37	2.6
295 Plating and Polishing	2.49	0.85	28.2	1.56	1.6
296 Metal Coating and Allied Services	2.47	0.55	18.1	2.76	2.6
297 Small Arms Ammunition	2.53	0.82	28.7	1.81	1.8
299 Small Arms	2.42	0.67	24.9	2.14	2.0
301 Industrial and Fluid Valves	2.67	0.64	17.4	3.06	4.8
302 Steel Springs, Except Wire	2.71	0.69	18.6	2.43	3.3
303 Pipe, Valves, and Pipe Fittings	2.60	0.70	21.4	2.27	2.5
304 Miscellaneous Fabricated Wire Products	2.62	0.73	22.2	2.11	2.3
306 Fabricated Metal Products, N.E.C.	2.60	0.61	19.4	3.00	3.1
307 Steam Engines and Turbines	2.47	0.60	16.2	2.61	3.9
308 Internal Combustion Engines, N.E.C.	2.30	0.47	14.1	3.84	4.5
309 Farm Machinery and Equipment	2.47	0.52	17.6	3.79	3.3
311 Construction Machinery and Equipment	2.52	0.53	16.5	4.17	4.3
312 Mining Machinery, Except Oil Field	2.68	0.71	19.1	2.50	3.6
313 Oil Field Machinery	2.79	0.87	21.9	1.95	2.8

## Multipliers for Utah by Detailed Industry

See notes at end of table for multiplier definitions

Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
315 Conveyors and Conveying Equipment	2.59	0.66	19.5	2.57	3.0
317 Industrial Trucks and Tractors	2.73	0.70	19.4	2.82	3.9
318 Machine Tools, Metal Cutting Types	2.30	0.56	22.6	2.47	2.0
320 Industrial Patterns	2.59	0.94	34.2	1.58	1.6
321 Special Dies and Tools and Accessories	2.53	0.78	27.9	1.83	1.8
327 Woodworking Machinery	2.41	0.58	20.8	2.55	2.2
329 Printing Trades Machinery	2.35	0.55	17.8	2.72	2.8
330 Food Products Machinery	2.68	0.79	22.8	2.08	2.5
331 Special Industry Machinery N.E.C.	2.50	0.56	16.9	3.49	4.2
332 Pumps and Compressors	2.53	0.61	17.1	2.91	4.1
334 Blowers and Fans	2.42	0.63	21.5	2.21	2.2
335 Packaging Machinery	2.48	0.60	17.7	2.85	3.6
336 Power Transmission Equipment	2.58	0.70	19.8	2.29	2.9
337 Industrial Furnaces and Ovens	2.64	0.73	20.4	2.22	2.8
338 General Industrial Machinery, N.E.C	2.45	0.61	19.2	2.52	2.7
339 Electronic Computers	2.41	0.55	14.4	2.77	4.2
340 Computer Storage Devices	2.45	0.57	14.1	2.93	5.6
342 Computer Peripheral Equipment,	2.39	0.52	14.0	3.27	4.9
343 Calculating and Accounting Machines	2.45	0.64	15.7	2.18	3.6
344 Typewriters and Office Machines N.E.C.	2.61	0.87	21.6	1.73	2.4
345 Automatic Merchandising Machine	2.39	0.51	18.3	3.38	2.7
346 Commercial Laundry Equipment	2.50	0.65	22.3	2.29	2.2
347 Refrigeration and Heating Equipment	2.49	0.60	16.8	2.80	3.8
348 Measuring and Dispensing Pumps	2.53	0.52	16.2	4.84	5.0
349 Service Industry Machines, N.E.C.	2.69	0.69	19.0	2.67	3.8
350 Carburetors, Pistons, Rings, Valves	2.63	0.80	20.7	1.93	2.7
351 Fluid Power Cylinders & Actuators	2.81	0.75	20.3	2.71	4.2
353 Scales and Balances	2.57	0.71	19.9	2.09	2.6
354 Industrial Machines N.E.C.	2.66	0.79	24.6	2.03	2.3
356 Switchgear and Switchboard Apparatus	2.40	0.62	17.6	2.15	2.7
357 Motors and Generators	2.35	0.54	19.0	2.56	2.3
358 Carbon and Graphite Products	2.53	0.56	15.6	2.75	3.6
359 Relays & Industrial Controls	2.49	0.62	17.2	2.48	3.5

## Multipliers for Utah by Detailed Industry

See notes at end of table for multiplier definitions

Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
360 Electrical Industrial Apparatus, N.E.C.	2.31	0.50	15.2	3.28	5.3
364 Electric Housewares and Fans	2.35	0.59	18.3	2.15	2.4
367 Electric Lamps	2.41	0.66	18.1	1.97	2.6
368 Wiring Devices	2.41	0.63	18.6	2.11	2.5
369 Lighting Fixtures and Equipment	2.50	0.60	18.9	2.71	3.0
370 Radio and TV Receiving Sets	2.33	0.59	17.9	2.24	2.5
371 Phonograph Records and Tape	2.49	0.95	25.6	1.44	1.7
372 Telephone and Telegraph Apparatus	2.21	0.47	13.8	2.80	3.2
373 Radio and Tv Communication Equipment	2.39	0.57	14.4	2.46	4.1
374 Communications Equipment N.E.C.	2.44	0.73	19.5	1.77	2.3
376 Printed Circuit Boards	2.71	0.99	27.3	1.59	1.9
377 Semiconductors and Related Devices	2.34	0.61	14.9	2.09	3.6
378 Electronic Components, N.E.C.	2.51	0.56	16.8	3.24	3.7
381 Engine Electrical Equipment	2.19	0.51	20.5	2.37	1.9
383 Electrical Equipment, N.E.C.	2.56	0.60	17.2	3.09	4.1
384 Motor Vehicles	2.48	0.51	12.6	3.38	9.6
385 Truck and Bus Bodies	1.90	0.41	10.5	1.97	2.9
386 Motor Vehicle Parts and Accessories	2.49	0.57	16.4	2.95	3.6
387 Truck Trailers	2.33	0.53	16.2	2.54	2.8
388 Motor Homes	1.68	0.34	8.7	1.71	2.3
389 Aircraft	2.45	0.56	16.4	3.31	3.7
390 Aircraft and Missile Engines and Parts	2.55	0.70	16.7	2.34	4.2
391 Aircraft and Missile Equipment,	2.58	0.77	20.0	2.00	2.9
392 Ship Building and Repairing	2.63	0.86	20.7	1.74	2.6
393 Boat Building and Repairing	2.53	0.74	21.4	1.92	2.4
394 Railroad Equipment	2.37	0.49	15.4	3.50	3.5
395 Motorcycles, Bicycles, and Parts	2.07	0.44	16.9	2.68	2.1
396 Complete Guided Missiles	2.57	0.70	16.9	2.22	4.1
397 Travel Trailers and Camper	2.30	0.50	16.7	2.58	2.6
399 Transportation Equipment, N.E.C	2.76	0.56	17.3	4.25	4.6
400 Search & Navigation Equipment	2.58	0.70	19.2	2.46	3.8
401 Laboratory Apparatus & Furniture	2.41	0.49	16.4	4.34	4.1
402 Automatic Temperature Controls	2.76	1.03	24.1	1.60	2.3

## Multipliers for Utah by Detailed Industry

See notes at end of table for multiplier definitions

Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
403 Mechanical Measuring Devices	2.64	0.76	20.2	2.12	2.9
404 Instruments To Measure Electricity	2.48	0.69	17.8	2.11	3.0
405 Analytical Instruments	2.62	0.68	19.1	2.71	4.3
406 Optical Instruments & Lenses	2.42	0.63	21.3	2.40	2.4
407 Surgical and Medical Instrument	2.64	0.66	19.8	2.77	3.3
408 Surgical Appliances and Supplies	2.56	0.62	18.9	2.91	3.5
409 Dental Equipment and Supplies	2.64	0.62	19.7	3.35	3.6
410 X-Ray Apparatus	2.58	0.61	16.1	2.87	4.8
411 Electromedical Apparatus	2.41	0.53	15.8	3.06	3.6
412 Ophthalmic Goods	2.64	0.71	24.3	2.42	2.4
413 Photographic Equipment and Supplies	2.46	0.59	17.6	3.03	3.9
415 Jewelry, Precious Metal	2.01	0.52	16.6	1.79	1.9
416 Silverware and Plated Ware	2.41	0.60	19.6	2.47	2.5
417 Jewelers Materials and Lapidary Work	1.70	0.40	13.7	1.64	1.7
418 Musical Instruments	2.34	0.71	33.6	1.75	1.5
419 Dolls	2.17	0.78	34.5	1.43	1.3
420 Games, Toys, and Childrens Vehicles	2.26	0.54	21.3	2.38	2.0
421 Sporting and Athletic Goods, N.E.C.	2.64	0.66	22.3	2.96	2.8
423 Lead Pencils and Art Goods	2.15	0.46	28.3	2.69	1.5
424 Marking Devices	2.58	0.85	38.9	1.66	1.4
426 Costume Jewellery	2.02	0.53	23.2	1.67	1.5
427 Fasteners, Buttons, Needles, Pins	2.50	0.83	28.0	1.64	1.7
428 Brooms and Brushes	2.45	0.62	22.7	2.32	2.1
429 Signs and Advertising Displays	2.69	0.76	24.8	2.17	2.3
430 Burial Caskets and Vaults	2.24	0.55	20.6	1.95	1.8
432 Manufacturing Industries, N.E.C.	2.38	0.57	24.8	2.66	1.9
433 Railroads and Related Services	2.71	0.85	18.6	2.01	4.3
434 Local, Interurban Passenger Transit	2.68	0.86	38.8	1.87	1.6
435 Motor Freight Transport and Warehousing	2.93	0.82	25.8	2.53	2.9
436 Water Transportation	2.15	0.46	18.4	3.67	2.9
437 Air Transportation	2.67	0.85	24.9	2.04	2.6
438 Pipe Lines, Except Natural Gas	2.09	0.42	11.2	3.07	5.9
439 Arrangement Of Passenger Transportation	2.53	0.84	35.1	1.74	1.5

## Multipliers for Utah by Detailed Industry

See notes at end of table for multiplier definitions

Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
440 Transportation Services	2.63	0.92	31.7	1.70	1.7
441 Communications, Except Radio and TV	2.47	0.62	17.5	2.61	3.6
442 Radio and TV Broadcasting	2.40	0.67	19.1	2.02	2.7
443 Electric Services	2.47	0.61	15.1	3.18	8.6
444 Gas Production and Distribution	2.30	0.48	12.9	4.02	9.0
445 Water Supply and Sewerage Systems	2.75	0.78	22.6	2.73	3.8
446 Sanitary Services and Steam Supply	3.10	0.97	25.0	2.66	4.9
447 Wholesale Trade	2.89	0.91	27.5	2.37	2.9
448 Building Materials & Gardening	2.96	1.07	38.1	1.94	1.9
449 General Merchandise Stores	2.96	1.01	49.2	2.12	1.6
450 Food Stores	2.96	1.12	46.3	1.83	1.6
451 Automotive Dealers & Service Stations	2.96	1.06	34.6	1.97	2.1
452 Apparel & Accessory Stores	2.96	0.96	47.8	2.32	1.6
453 Furniture & Home Furnishings Stores	2.96	1.05	39.5	1.98	1.8
454 Eating & Drinking	2.77	0.81	45.6	2.23	1.5
455 Miscellaneous Retail	2.96	1.04	46.8	2.02	1.6
456 Banking	2.33	0.60	17.6	2.39	2.7
457 Credit Agencies	2.72	1.02	48.6	1.66	1.4
458 Security and Commodity Brokers	3.09	1.25	28.0	1.77	2.6
459 Insurance Carriers	3.02	0.96	28.9	2.87	3.9
460 Insurance Agents and Brokers	2.71	1.03	37.2	1.56	1.6
462 Real Estate	2.56	0.57	21.4	4.63	3.7
463 Hotels and Lodging Places	2.75	0.86	40.1	2.13	1.7
464 Laundry, Cleaning and Shoe Repair	2.84	1.08	66.0	1.64	1.3
465 Portrait and Photographic Studios	2.83	0.82	45.8	2.73	1.7
466 Beauty and Barber Shops	2.67	0.92	77.5	1.70	1.2
467 Funeral Service and Crematories	2.65	0.94	39.1	1.66	1.5
468 Miscellaneous Personal Services	2.88	0.74	37.9	4.33	2.3
469 Advertising	2.81	0.93	25.6	1.88	2.7
470 Other Business Services	2.53	0.73	29.2	2.14	1.9
471 Photofinishing, Commercial Photography	2.67	0.77	30.6	2.45	2.3
472 Services To Buildings	2.60	0.82	52.0	1.87	1.4
473 Equipment Rental and Leasing	2.52	0.74	23.1	2.06	2.3

## Multipliers for Utah by Detailed Industry

See notes at end of table for multiplier definitions

Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
474 Personnel Supply Services	2.86	1.25	59.5	1.43	1.3
475 Computer and Data Processing Services	2.61	0.94	23.2	1.62	2.2
476 Detective and Protective Services	2.77	1.03	48.9	1.64	1.4
477 Automobile Rental and Leasing	2.67	0.74	27.5	2.59	2.5
478 Automobile Parking and Car Wash	2.55	0.76	46.6	1.95	1.4
479 Automobile Repair and Services	2.69	0.75	26.7	2.26	2.2
480 Electrical Repair Service	2.61	0.76	27.4	2.16	2.0
481 Watch, Clock, Jewelry and Furniture Repair	2.41	0.60	30.7	2.47	1.7
482 Miscellaneous Repair Shops	2.58	0.73	27.9	2.21	2.0
483 Motion Pictures	2.52	0.69	26.3	2.20	2.1
484 Theatrical Producers, Bands Etc.	2.62	0.70	29.2	2.68	2.4
485 Bowling Alleys and Pool Halls	2.80	0.89	63.8	2.07	1.3
486 Commercial Sports Except Racing	2.58	0.93	18.6	1.67	3.3
487 Racing and Track Operation	2.55	0.72	33.3	2.78	1.9
488 Amusement and Recreation Services, N.E.C.	2.65	0.82	49.1	2.00	1.4
489 Membership Sports and Recreation Clubs	2.88	0.91	53.9	2.06	1.5
490 Doctors and Dentists	2.77	0.99	26.9	1.71	2.2
491 Nursing and Protective Care	2.87	1.08	48.0	1.62	1.5
492 Hospitals	2.81	1.02	30.1	1.65	2.0
493 Other Medical and Health Services	2.80	0.89	33.4	1.91	1.8
494 Legal Services	2.83	1.12	27.2	1.55	2.2
495 Elementary and Secondary Schools	2.76	0.89	56.9	1.96	1.4
496 Colleges, Universities, Schools	2.76	1.04	45.4	1.62	1.5
497 Other Educational Services	2.78	0.81	39.1	2.60	1.7
498 Job Trainings & Related Services	2.87	0.93	36.5	1.93	1.8
499 Child Day Care Services	2.76	0.79	44.1	2.34	1.5
500 Social Services, N.E.C.	2.81	0.90	35.7	1.99	1.8
501 Residential Care	2.87	1.07	50.4	1.62	1.4
502 Other Nonprofit Organizations	3.26	1.21	38.6	1.86	2.0
503 Business Associations	3.02	1.23	27.5	1.53	2.3
504 Labor and Civic Organizations	3.00	1.31	46.0	1.44	1.5
505 Religious Organizations	3.49	0.89	28.8	3.44	4.6
506 Engineering, Architectural Services	2.53	0.80	26.9	2.04	2.3

## Multipliers for Utah by Detailed Industry

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Code Industry Name	Final Demand Multiplier			Direct Effect Multiplier	
	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
507 Accounting, Auditing and Bookkeeping	2.83	1.22	52.1	1.45	1.4
508 Management and Consulting Services	2.57	0.85	28.4	1.81	2.0
509 Research, Development & Testing Services	2.53	0.88	35.3	1.67	1.6
510 Local Government Passenger Transit	3.32	0.88	25.3	3.42	4.5
511 State and Local Electric Utilities	2.40	0.49	13.3	4.33	6.8
512 Other State and Local Govt Enterprises	2.70	0.69	21.2	3.11	3.6
513 U.S. Postal Service	2.97	1.18	29.2	1.56	2.1
515 Other Federal Government Enterprises	2.00	0.44	16.9	2.26	1.9
516 Domestic Services	2.89	1.35	123.3	1.35	1.1
519 Local Public Administration	3.30	1.31	40.6	1.67	1.9
520 Local School	2.88	1.21	40.2	1.45	1.5
521 State Public Administration	3.31	1.31	40.6	1.67	1.9
522 State School	2.88	1.21	40.2	1.45	1.5
523 Federal Public Administration	3.13	1.32	38.4	1.54	1.8
524 Federal Military	2.61	0.94	32.3	1.63	1.7

### Notes

1. The output final demand multiplier is the total change in output resulting from a \$1 increase in final demand for the given industry's product.
2. The earnings final demand multiplier is the total change in earnings resulting from a \$1 increase in final demand for the given industry's product.
3. The employment final demand multiplier is the total change in employment resulting from a \$1 million increase in final demand for the given industry's product.
4. The earnings final demand multiplier is the total change in earnings resulting from a \$1 increase in earnings paid in the given industry.
5. The employment final demand multiplier is the total change in employment resulting from one additional job in the given industry.