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Utah's Industry Cluster Supply Chains: A Regional Analysis

This report presents Utah's economic regions and analyzes the supply chains of significant industry clusters located within those regions. Regional clusters purchase significant shares of inputs from within the region or from other regions in Utah.

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Analysis in Brief

This report presents Utah's economic regions and analyzes the supply chains of significant industry clusters located within those regions. The six economic regions are East Central, Greater Salt Lake, Southeast, Southwest, Uintah Basin, and West Central.

Significant clusters are defined as those, among the state's seven strategic clusters, that provide at least 100 jobs in a region. The clusters are Advanced Manufacturing, Aerospace and Defense, Energy and Natural Resources, Finance, IT / Software, Life Sciences, and Outdoor Recreation.

Regional clusters purchase output from other industries. Significant portions of these purchases are sourced from within the region or from other regions in the state.

Utah's Economic Regions

Region	Counties	Significant Industry Clusters
East Central	Carbon and Emery	Energy and Natural Resources, Finance, IT / Software
Greater Salt Lake	Box Elder, Cache, Davis, Juab, Morgan, Rich, Salt Lake, Summit, Tooele, Utah, Wasatch, and Weber	Advanced Manufacturing, Aerospace and Defense, Energy and Natural Resources, Finance, IT / Software, Life Sciences, Outdoor Recreation
Southeast	Grand and San Juan	Energy and Natural Resources, Finance
Southwest	Beaver, Garfield, Iron, Kane, and Washington	Advanced Manufacturing, Aerospace and Defense, Energy and Natural Resources, Finance, IT / Software, Life Sciences, Outdoor Recreation
Uintah Basin	Daggett, Duchesne, and Uintah	Energy and Natural Resources, Finance, IT / Software
West Central	Millard, Piute, Sanpete, Sevier, and Wayne	Advanced Manufacturing, Aerospace and Defense, Energy and Natural Resources, Finance, IT / Software, Life Sciences, Outdoor Recreation

Source: Kem C. Gardner Policy Institute

Key Points:

- **East Central**—Energy and Natural Resources is the largest industry cluster in East Central, with about 1,700 jobs. The Mining industry supplies the largest share of inputs to this cluster and more than 75% of Mining inputs are sourced from other regions in the state.
- **Greater Salt Lake**—IT / Software is the largest industry cluster in Greater Salt Lake, with more than 78,000 jobs. The Professional and Technical Services industry supplies the largest share of inputs to this cluster (22%), and more than 80% of these inputs are sourced within the Greater Salt Lake region.
- **Southeast**—Energy and Natural Resources is the largest industry cluster in Southeast, with almost 300 jobs. The Manufacturing industry supplies the largest share of inputs to this cluster (33%), and about 70% of these inputs are sourced from other regions in the state.
- **Southwest**—Finance is the largest industry cluster in Southwest, with almost 2,900 jobs. The Real Estate, Rental, and Leasing industry supplies the largest share of inputs to this cluster (19%), and about 85% of these inputs are provided from within the Southwest region.
- **Uintah Basin**—Energy and Natural Resources is the largest industry cluster in Uintah Basin, with more than 3,500 jobs. The Manufacturing sector supplies the largest share of inputs to this cluster (21%), and about 70% of Manufacturing inputs are sourced from other regions in the state.
- **West Central**—Energy and Natural Resources is the largest industry cluster in West Central, with more than 1,000 jobs. The Mining sector supplies the largest share of inputs to this cluster (22%), and about 56% of Mining inputs are sourced from within the West Central region.

Table of Contents

Summary	1	Table 14: Southwest Advanced Manufacturing.....	9
Defining Utah’s Economic Regions	1	Table 15: Southwest Aerospace and Defense.....	9
Assessing the Size and Supply Chains of Regional		Table 16: Southwest Energy and Natural Resources	9
Industry Clusters	2	Table 17: Southwest Finance	10
The Presence of Significant Clusters by Region.....	2	Table 18: Southwest IT / Software.....	10
Supply Chains of Regional Clusters	3	Table 19: Southwest Life Sciences	10
Methods	3	Table 20: Southwest Outdoor Recreation	11
Conclusions	4	Table 21: Uintah Basin Energy and Natural Resources... ..	11
Bibliography	18	Table 22: Uintah Basin Finance	11
		Table 23: Uintah Basin IT / Software.....	12
Figure		Table 24: West Central Advanced Manufacturing.....	12
Figure 1: Utah’s Economic Regions.....	1	Table 25: West Central Aerospace and Defense.....	12
		Table 26: West Central Energy and Natural Resources... ..	13
Tables		Table 27: West Central Finance	13
Table 1: Employment and Wages by Region and Cluster ...	2	Table 28: West Central IT / Software.....	13
Table 2: East Central Energy and Natural Resources	5	Table 29: West Central Life Sciences.....	14
Table 3: East Central Finance	5	Table 30: West Central Outdoor Recreation	14
Table 4: East Central IT / Software.....	5	Table 31: Advanced Manufacturing Cluster Definition ...	15
Table 5: Greater Salt Lake Advanced Manufacturing.....	6	Table 32: Aerospace and Defense Cluster Definition.....	15
Table 6: Greater Salt Lake Aerospace and Defense.....	6	Table 33: Energy and Natural Resources	
Table 7: Greater Salt Lake Energy and Natural Resources... ..	6	Cluster Definition.....	16
Table 8: Greater Salt Lake Finance	7	Table 34: Finance Cluster Definition	16
Table 9: Greater Salt Lake IT / Software.....	7	Table 35: IT / Software Cluster Definition.....	17
Table 10: Greater Salt Lake Life Sciences	7	Table 36: Life Sciences Cluster Definition.....	17
Table 11: Greater Salt Lake Outdoor Recreation	8	Table 37: Outdoor Recreation Cluster Definition.....	17
Table 12: Southeast Energy and Natural Resources	8		
Table 13: Southeast Finance.....	8		

Summary

This report analyzes the size and supply chains of industry clusters at a regional level. Our analysis begins with defining economic regions for the state. With regions defined, we identify each regional industry cluster in turn and estimate the major economic sectors that constitute its supply chain. These results show, for example, that in the Uintah Basin Energy and Natural Resources cluster, the Manufacturing sector contributes

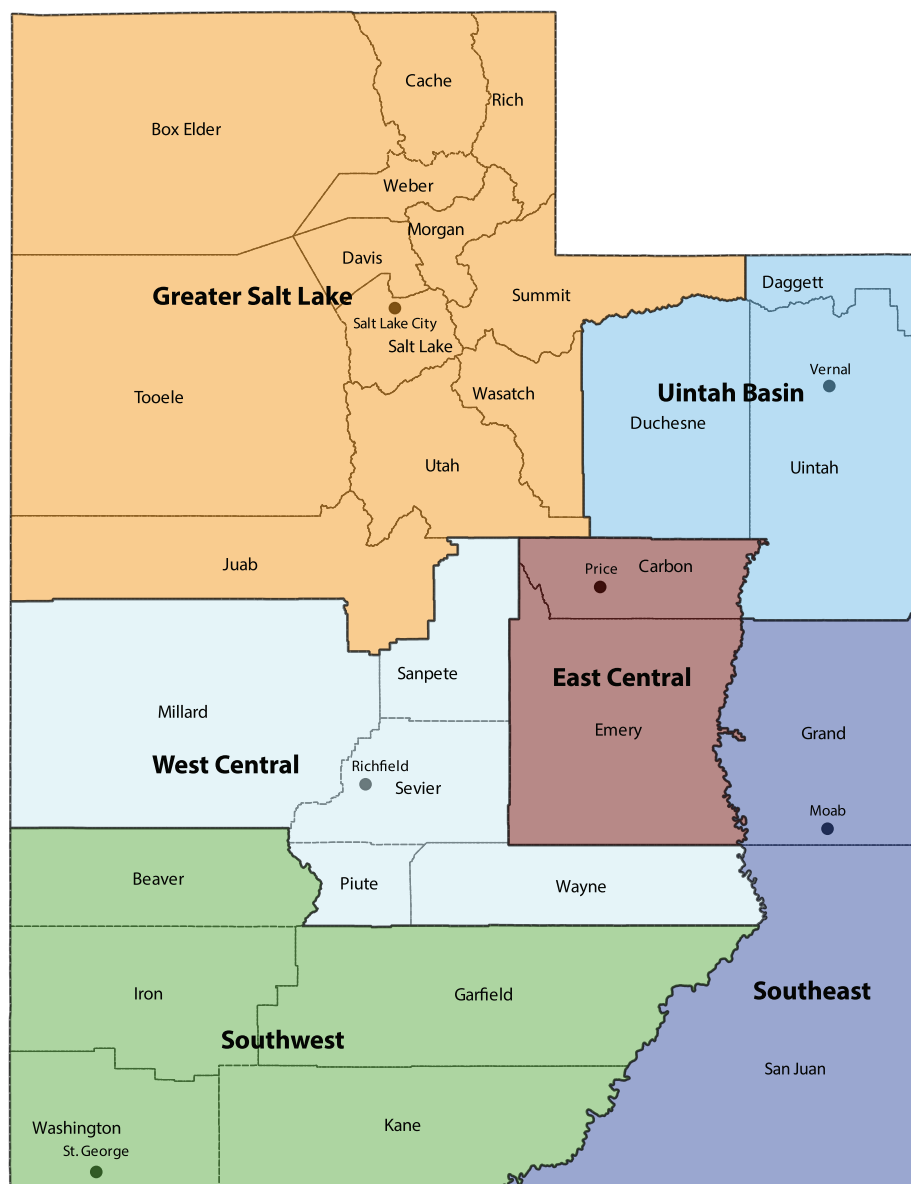
the largest share of production inputs (21%), with about 14% of these Manufacturing inputs originating in the Greater Salt Lake region. Although we have used the best available data, these data are only estimates of trade flows, not actual trade flows; actual trade flow data are not available for the vast majority of regional industries. Consequently, the supply-chain results presented in this report may not be accurate in all cases.

Defining Utah's Economic Regions

The Kem C. Gardner Policy Institute has carried out an analysis defining Utah's economic regions. A separate report provides the details of that analysis.¹ For the current report we simply display the regions (see Figure 1) and present a very brief summary of our data and methodology.

These regions were developed by the Gardner Institute following the notion of a *functional economic area*. A functional economic area (region) is a geographical space that contains much of the economic activity of its residents. We operationalize this concept by analyzing where people travel for work and to receive their healthcare. In particular, the regions shown in Figure 1 are developed by grouping together counties with strong connections in terms of commuting or healthcare visits. The particular methodology we employ, as well as assessments of how well the methods perform, is discussed in detail in a separate report (Hogue (2020)).

Figure 1: Utah's Economic Regions



Source: Kem C. Gardner Policy Institute

Assessing the Size and Supply Chains of Regional Industry Clusters

We assess the supply chains of industry clusters that exist within each of the regions defined above. For the purpose of this analysis an industry cluster is simply a group of industries of particular importance to the Governor's Office of Economic Development (GOED). This section shows which clusters are present in which regions and from what other economic sectors these clusters draw to produce their products.

The Presence of Significant Clusters by Region

There are seven industry clusters: Advanced Manufacturing, Aerospace and Defense, Energy and Natural Resources, Finance, IT / Software, Life Sciences, and Outdoor Recreation. GOED provided the Gardner Institute a list of industries that compose each cluster. These are shown at the end of the report in Tables 31–37.

First, we check for the presence of these clusters in each of the six economic regions. Table 1 shows employment, total wages, and average wages, for cluster-region combinations

where employment is at least 100. We consider such clusters to have a “significant” presence in the region.²

In East Central (Carbon and Emery counties), there are three significant clusters. The largest of these is Energy and Natural Resources, primarily centering around the coal industry, with 1,668 jobs and \$155.9 million in wages.

In Greater Salt Lake (Box Elder, Cache, Davis, Juab, Morgan, Rich, Salt Lake, Summit, Tooele, Utah, Wasatch, and Weber counties), the largest cluster in terms of either employment or wages is IT / Software (78,443 jobs, \$7.3 billion in wages), followed closely by Finance (76,183 jobs, \$5.7 billion in wages). Perhaps not surprisingly, all industry clusters have a significant presence—in fact their largest presence—in Greater Salt Lake.

Southeast (Grand and San Juan counties) has two significant clusters, Energy and Natural Resources and Finance, with 299 and 159 jobs and \$21.8 million and \$7.3 million in wages, respectively.

Table 1: Employment and Wages by Region and Cluster

Region	Cluster	Employment	Total Wages	Average Wage
East Central	Energy and Natural Resources	1,668	\$155,916,428	\$93,475
	IT / Software	310	\$19,092,166	\$61,588
	Finance	219	\$9,476,039	\$43,270
Greater Salt Lake	IT / Software	78,443	\$7,331,531,681	\$93,463
	Finance	76,183	\$5,682,807,443	\$74,594
	Life Sciences	41,051	\$3,020,886,626	\$73,589
	Aerospace and Defense	35,512	\$2,866,157,961	\$80,710
	Advanced Manufacturing	20,661	\$1,374,034,737	\$66,504
	Energy and Natural Resources	7,866	\$778,030,710	\$98,911
	Outdoor Recreation	6,149	\$308,906,375	\$50,237
Southeast	Energy and Natural Resources	299	\$21,757,979	\$72,769
	Finance	159	\$7,251,687	\$45,608
Southwest	Finance	2,890	\$180,754,792	\$62,545
	IT / Software	1,925	\$115,920,387	\$60,218
	Advanced Manufacturing	1,235	\$52,330,042	\$42,373
	Aerospace and Defense	706	\$38,417,428	\$54,416
	Energy and Natural Resources	637	\$42,953,320	\$67,431
	Life Sciences	585	\$27,981,733	\$47,832
	Outdoor Recreation	123	\$4,491,224	\$36,514
Uintah Basin	Energy and Natural Resources	3,510	\$261,604,134	\$74,531
	Finance	378	\$16,893,095	\$44,691
	IT / Software	307	\$19,166,228	\$62,431
West Central	Energy and Natural Resources	1,010	\$96,616,270	\$95,660
	Finance	422	\$18,352,225	\$43,489
	Aerospace and Defense	341	\$18,271,466	\$53,582
	Advanced Manufacturing	215	\$8,805,232	\$40,955
	IT / Software	200	\$13,187,957	\$65,940
	Life Sciences	186	\$9,447,674	\$50,794
	Outdoor Recreation	175	\$8,107,890	\$46,331

Source: Kem C. Gardner Policy Institute analysis of data provided by the Utah Department of Workforce Services

Like Greater Salt Lake, Southwest (Beaver, Garfield, Iron, Kane, and Washington counties) hosts all seven clusters. Finance and IT / Software are the top two, with 2,890 and 1,925 jobs and \$180.8 million and \$115.9 million in wages, respectively.

Uintah Basin (Daggett, Duchesne, and Uintah counties) has significant clusters in Energy and Natural Resources, Finance, and IT / Software. Energy and Natural Resources, which in this region consists mostly of the oil and natural gas industry, is by far the largest with 3,510 jobs and \$261.6 million in wages.

West Central (Millard, Piute, Sanpete, Sevier, and Wayne counties) has significant representation from all seven industry clusters. Energy and Natural Resources is the largest in terms of jobs (1,010) and wages (\$96.6 million).

Supply Chains of Regional Clusters

We estimate the dollar value of output each significant regional industry cluster purchases from other major economic sectors.³ We also estimate the share of these purchases by geographic origin. This analysis is presented by significant regional cluster in Tables 2–30.

To illustrate how Tables 2–30 work, consider Table 2 as an example. Table 2 concerns the Energy and Natural Resources cluster in the East Central region (Carbon and Emery counties). In East Central, this cluster refers mainly to businesses tied to coal mining.

Each row in the table shows an economic sector that provides inputs to Energy and Natural Resources, and the geographical origin of those inputs. The sectors are sorted by their share of the total dollar-value of inputs, from largest contributor to smallest. The top 10 largest sectors by share are shown; these typically account for about 90% of the total dollar-value of inputs. On a technical note, these inputs are, more specifically, “intermediate inputs.” An intermediate input is a good or service produced by one sector that is consumed by another sector as part of its production process. For example, concrete, produced by the Manufacturing sector, is a major intermediate input to the Construction sector.

The geographical origin of each sector’s contribution is shown in the columns. We distinguish eight mutually exclusive geographical areas: Utah’s six economic regions, the rest of the U.S., and the rest of the world.

As Table 2 shows, the Mining sector constitutes the largest part (22.5%) of the value of all intermediate inputs used by the Energy and Natural Resources cluster (in this region). That the sector providing the largest share of cluster input is a major component of the cluster itself, is typical.

In terms of geographical origin, about 41% of these Mining sector inputs are shipped from the West Central region (Millard, Piute, Sanpete, Sevier, and Wayne counties), 20% from within the East Central region itself, 13% from the Uintah Basin, and 21%

from outside of the U.S. The remaining 5% comes from Greater Salt Lake, Southeast, Southwest, or elsewhere in the U.S.

The other rows in Table 2 provide similar information. For example, the Construction sector is near the bottom of the table, indicating that it plays a relatively small part in the supply chain for Energy and Natural Resources, contributing only about 3% of the total value of intermediate inputs. About 70% percent of Construction inputs are sourced from within East Central, with almost all the rest sourced from Greater Salt Lake.

The remaining tables, 3–30, lay out information in the same way as Table 2. Each table concerns a different regional cluster. Different regional clusters have different supply chains; the inputs needed to produce software are different from the inputs needed to produce coal. Consequently, the supply chain sectors listed in the rows, as well as the order in which they are listed, vary by table (regional cluster).

All of the supply chain results in Tables 2–30 are estimates. There are very few cases where actual supply chain data are publicly available for geographies as detailed as those analyzed in this report.⁴ The estimates presented in this report are based on county-to-county commodity flows as predicted from a model of trade patterns. This and other methodological details are provided below.

Methods

For each regional cluster we estimated the dollar value of inputs provided by various other sectors of the economy, and where these inputs may originate. These estimates are shown in Tables 2–30. As noted above, for the vast majority of regional clusters defined as precisely by industry and geography as those we analyze in this report, there is no publicly available data on their supply chains. Our analysis is instead based on IMPLAN⁵ estimates of county-to-county commodity shipments, reorganized by the Alward Institute.⁶ These data show commodity shipments as predicted by a gravity model. A gravity model assumes that the shipment of commodities from the counties where they are produced to the counties where they are consumed is inversely proportional to the distance between these counties and directly proportional to their sizes. In IMPLAN’s variant of the gravity model, “distance” is more general than geographic, reflecting the available modes of transportation between counties (e.g. rail, truck) and the mix of transportation modes by commodity.⁷

These commodity shipment estimates show for each pair of Utah counties, the rest of the U.S., and the rest of the world, and for each of several hundred commodities, the dollar value of that commodity shipped from one area to another. These shipments, however, do not directly indicate the supply chains of regional clusters.

In order to link commodity shipments to regional clusters, we need to determine the various commodities required by each industry within the cluster. The commodity requirements for a given industry can be factored into two components: the proportion of the commodity in the “recipe” for that industry’s output, and the amount of output.

The commodity-use proportions are estimated for each industry using the Use table, published by the U.S. Bureau of Economic Analysis.⁸ The Use table shows the dollar-value of commodities used by each of 405 industries. We compute the dollar-share of commodities used by dividing each commodity’s dollar-value by total industry output.⁹

Estimates of output by industry, by county, were obtained from IMPLAN. We aggregated these estimates by industry to the six regions we identified in Utah, shown in Figure 1 and Table 1.

We determine the dollar-value of commodities used by each industry within a regional cluster by multiplying that industry’s list of commodity-use proportions by industry output. The dollar-value of commodities used by a regional cluster is simply the sum of these across all the industries in the cluster.

We assume that the distribution of commodities by area of origin is the same for regional clusters as it is for other industries in the area. Given this assumption, to determine the dollar amount of a given commodity used in a regional cluster by area of origin we multiply the total dollar value of each commodity used in a regional cluster by the observed share of commodity value originating from each area. These values are shown as shares in the rows of Tables 2–30. In addition, Tables 2–30 aggregate the 392 detailed commodities into broad commodity groups. Finally, the column “Sector Share” in Tables 2–30 is the share of each broad commodity group in the total use of commodities for the given regional cluster.

This analysis involves a number of data limitations and assumptions that may affect the accuracy of the supply-chain estimates shown in Tables 2–30.

First, the Use table that provides us information on the production recipes by industry is national in scope, not regional.

Regional industries may produce their output using a substantially different mix of commodities than the nation as a whole. For example, the coal mining industry in Utah’s East Central region engages in underground mining. The input structure for coal mining revealed in the Use table, however, reflects the national mixture of underground and surface coal mining. If underground coal mining uses commodities differently than surface coal mining, then the hybrid coal industry reflected in the Use table has only approximately the same input structure as the actual coal industry in East Central. A related limitation is that the Use table is available only at a long lag: The most recently available version is from 2012. It may be that for some industries, input structure has changed significantly since 2012.

Second, industry output by region is not known for industries and geographies as detailed as those we assess in this report. We have used IMPLAN estimates. To the extent these estimates differ from the true amount of industry output by region, the estimated industry composition of regional clusters by output share will be different from the true industry composition. Consequently, the commodity input composition of the cluster will also differ somewhat from its true commodity input composition, adversely affecting the quality of the “Sector Share” column in Tables 2–30.

Third, and as noted at the beginning of this section, county-to-county commodity shipments are not known for the vast majority of commodity-county combinations. Although the IMPLAN estimates on which we rely are based on a relatively sophisticated gravity model, they may nevertheless be subject to considerable error. Estimation error in commodity shipments would affect the accuracy of the shares of commodity inputs by area of origin (rows of Tables 2–30).

Finally, this analysis relies on a number of bridge assumptions. These include, for example, the assumption that in cases where a cluster industry is defined at a more disaggregated level than is available in the Use table, that the Use table’s more aggregated industry provides a reasonable approximation to the actual input structure of the cluster industry.

Conclusions

This report has shown which economic sectors are involved in supplying inputs to Utah’s seven industry clusters, and where those inputs originate. The analysis was carried out at a regional level, with regions newly defined by the Gardner Institute (see Hogue (2020)). The trade-flow data behind our analysis is “modeled,” in the sense that it reflects the trade flows that would

be expected given what is known about the output of certain commodities and the input needs of the industries that compose each cluster (as well as estimated transportation costs). Therefore, although we expect the broader patterns suggested by this analysis are largely accurate, it is possible that specific results are not accurate.

Table 2: East Central Energy and Natural Resources

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Mining	19.8%	0.6%	1.0%	0.1%	13.4%	41.3%	2.8%	21.0%	22.5%
Manufacturing	3.4%	25.7%	0.0%	0.1%	0.6%	52.1%	0.2%	17.9%	17.9%
Utilities	99.3%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.3%	15.0%
Professional and Technical Services	30.3%	6.0%	0.0%	0.0%	0.1%	61.0%	0.0%	2.7%	9.7%
Finance and Insurance	55.4%	13.6%	0.0%	0.0%	0.0%	30.6%	0.4%	0.0%	7.2%
Real Estate, Rental, and Leasing	28.0%	41.8%	0.0%	0.1%	2.9%	27.1%	0.0%	0.1%	5.5%
Administrative and Waste Services	58.0%	9.4%	0.0%	0.2%	0.2%	32.0%	0.0%	0.2%	3.9%
Construction	69.8%	29.7%	0.0%	0.0%	0.2%	0.4%	0.0%	0.0%	3.3%
Transportation and Warehousing	38.8%	20.7%	0.2%	5.4%	0.1%	28.8%	0.1%	6.0%	3.1%
Information	67.0%	11.7%	0.0%	0.0%	0.7%	20.5%	0.0%	0.1%	2.4%

Source: Kem C. Gardner Policy Institute

Table 3: East Central Finance

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Finance and Insurance	59.3%	15.0%	0.0%	0.1%	0.1%	25.2%	0.3%	0.0%	33.8%
Professional and Technical Services	25.1%	6.0%	0.2%	0.0%	0.2%	65.2%	0.0%	3.4%	19.9%
Real Estate, Rental, and Leasing	29.1%	38.7%	0.0%	0.1%	0.9%	31.0%	0.0%	0.0%	8.8%
Manufacturing	2.6%	52.5%	0.0%	0.1%	0.0%	22.0%	0.0%	22.8%	6.3%
Information	64.3%	11.7%	0.0%	0.0%	0.9%	22.9%	0.0%	0.2%	5.3%
Administrative and Waste Services	57.7%	6.9%	0.0%	0.2%	0.2%	34.8%	0.0%	0.2%	5.0%
Accommodation and Food Services	41.2%	1.6%	8.1%	0.5%	0.0%	48.3%	0.3%	0.0%	4.1%
Other Services, Except Government	76.6%	4.0%	0.0%	0.1%	1.3%	17.5%	0.2%	0.4%	3.5%
Management of Companies and Enterprises	42.3%	0.0%	0.1%	0.0%	0.4%	57.3%	0.0%	0.0%	3.3%
Transportation and Warehousing	39.2%	33.3%	0.0%	1.4%	0.0%	16.1%	0.2%	9.8%	3.1%

Source: Kem C. Gardner Policy Institute

Table 4: East Central IT / Software

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Professional and Technical Services	30.7%	6.6%	0.1%	0.0%	0.1%	59.2%	0.0%	3.3%	21.3%
Information	52.9%	3.5%	0.0%	0.0%	0.5%	41.9%	0.0%	1.2%	21.0%
Manufacturing	0.9%	11.2%	0.0%	0.2%	0.1%	59.0%	0.4%	28.1%	19.0%
Real Estate, Rental, and Leasing	34.0%	32.5%	0.0%	0.1%	1.0%	32.3%	0.0%	0.1%	8.7%
Miscellaneous	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	5.2%
Administrative and Waste Services	56.5%	8.0%	0.0%	0.1%	0.0%	35.1%	0.0%	0.3%	5.0%
Transportation and Warehousing	44.6%	13.0%	0.0%	5.4%	0.0%	33.1%	0.1%	3.7%	4.2%
Management of Companies and Enterprises	42.3%	0.0%	0.1%	0.0%	0.4%	57.3%	0.0%	0.0%	3.2%
Wholesale Trade	58.7%	0.0%	0.0%	0.0%	0.0%	41.3%	0.0%	0.0%	2.8%
Other Services, Except Government	88.6%	5.4%	0.0%	0.2%	1.9%	2.9%	0.3%	0.8%	2.3%

Source: Kem C. Gardner Policy Institute

Table 5: Greater Salt Lake Advanced Manufacturing

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	0.0%	17.4%	0.0%	0.1%	0.0%	59.0%	0.1%	23.4%	64.9%
Professional and Technical Services	0.0%	80.5%	0.0%	0.0%	0.0%	16.5%	0.0%	3.0%	7.3%
Mining	1.3%	43.2%	0.1%	0.4%	0.0%	50.2%	2.4%	2.4%	7.2%
Utilities	5.6%	57.4%	0.0%	0.1%	0.5%	25.7%	9.9%	0.7%	3.5%
Real Estate, Rental, and Leasing	0.0%	99.2%	0.0%	0.0%	0.0%	0.7%	0.0%	0.1%	3.2%
Administrative and Waste Services	0.2%	81.8%	0.0%	0.1%	0.2%	17.3%	0.3%	0.1%	2.8%
Management of Companies and Enterprises	0.0%	69.2%	0.0%	0.0%	0.0%	30.8%	0.0%	0.0%	2.5%
Finance and Insurance	0.0%	97.8%	0.0%	0.0%	0.0%	2.2%	0.0%	0.0%	1.8%
Miscellaneous	0.0%	48.0%	0.0%	0.0%	0.0%	0.8%	0.1%	51.1%	1.3%
Information	0.1%	75.1%	0.0%	0.0%	0.0%	24.5%	0.2%	0.1%	1.1%

Source: Kem C. Gardner Policy Institute

Table 6: Greater Salt Lake Aerospace and Defense

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	0.0%	19.3%	0.0%	0.1%	0.1%	62.3%	0.1%	18.1%	39.8%
Professional and Technical Services	0.0%	80.5%	0.0%	0.0%	0.1%	15.7%	0.0%	3.8%	20.9%
Transportation and Warehousing	0.0%	76.2%	0.0%	0.3%	0.0%	21.2%	0.0%	2.2%	8.5%
Real Estate, Rental, and Leasing	0.0%	99.6%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	7.9%
Administrative and Waste Services	0.1%	78.7%	0.0%	0.0%	0.0%	20.5%	0.4%	0.2%	6.9%
Management of Companies and Enterprises	0.0%	69.2%	0.0%	0.0%	0.0%	30.8%	0.0%	0.0%	6.2%
Information	0.1%	74.5%	0.0%	0.0%	0.0%	25.0%	0.3%	0.2%	2.0%
Finance and Insurance	0.0%	97.4%	0.0%	0.0%	0.0%	2.5%	0.0%	0.0%	2.0%
Accommodation and Food Services	0.0%	55.8%	0.2%	0.4%	0.0%	43.6%	0.0%	0.0%	1.5%
Utilities	5.1%	59.0%	0.0%	0.1%	0.5%	25.9%	8.8%	0.6%	1.5%

Source: Kem C. Gardner Policy Institute

Table 7: Greater Salt Lake Energy and Natural Resources

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	0.1%	53.8%	0.0%	0.1%	0.0%	26.4%	0.2%	19.5%	28.5%
Mining	1.0%	12.8%	0.8%	0.0%	5.7%	34.2%	0.2%	45.3%	19.8%
Professional and Technical Services	0.0%	84.5%	0.0%	0.0%	0.1%	12.6%	0.0%	2.9%	13.2%
Utilities	5.4%	60.8%	0.0%	0.1%	0.7%	22.7%	9.6%	0.6%	7.9%
Administrative and Waste Services	0.1%	80.3%	0.0%	0.0%	0.1%	18.9%	0.2%	0.3%	4.4%
Real Estate, Rental, and Leasing	0.0%	99.4%	0.0%	0.0%	0.0%	0.5%	0.0%	0.1%	4.4%
Transportation and Warehousing	0.0%	82.2%	0.0%	0.5%	0.0%	15.1%	0.0%	2.2%	4.2%
Construction	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%
Finance and Insurance	0.0%	98.6%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	3.6%
Information	0.1%	76.0%	0.0%	0.0%	0.0%	23.5%	0.3%	0.2%	2.0%

Source: Kem C. Gardner Policy Institute

Table 8: Greater Salt Lake Finance

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Finance and Insurance	0.0%	98.1%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	20.9%
Professional and Technical Services	0.0%	79.0%	0.0%	0.0%	0.1%	17.5%	0.0%	3.5%	19.1%
Real Estate, Rental, and Leasing	0.0%	99.5%	0.0%	0.0%	0.0%	0.4%	0.0%	0.1%	12.9%
Administrative and Waste Services	0.2%	78.8%	0.0%	0.0%	0.1%	20.4%	0.2%	0.2%	8.0%
Manufacturing	0.0%	57.9%	0.0%	0.1%	0.0%	20.4%	0.0%	21.6%	7.0%
Information	0.1%	72.4%	0.0%	0.0%	0.0%	27.0%	0.3%	0.2%	6.7%
Accommodation and Food Services	0.0%	54.9%	0.2%	0.4%	0.0%	44.4%	0.0%	0.0%	5.0%
Transportation and Warehousing	0.0%	82.6%	0.0%	0.1%	0.0%	8.0%	0.2%	9.1%	4.7%
Management of Companies and Enterprises	0.0%	69.2%	0.0%	0.0%	0.0%	30.8%	0.0%	0.0%	4.6%
Other Services, Except Government	0.0%	91.2%	0.0%	0.0%	0.0%	8.3%	0.0%	0.5%	3.3%

Source: Kem C. Gardner Policy Institute

Table 9: Greater Salt Lake IT / Software

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Professional and Technical Services	0.0%	81.1%	0.0%	0.0%	0.1%	15.5%	0.0%	3.3%	22.3%
Manufacturing	0.0%	22.1%	0.0%	0.2%	0.0%	47.3%	0.1%	30.2%	19.4%
Information	0.1%	75.5%	0.0%	0.0%	0.0%	23.0%	0.3%	1.1%	14.9%
Real Estate, Rental, and Leasing	0.0%	99.1%	0.0%	0.0%	0.0%	0.8%	0.0%	0.1%	9.2%
Administrative and Waste Services	0.1%	77.2%	0.0%	0.0%	0.0%	22.1%	0.2%	0.3%	6.4%
Transportation and Warehousing	0.0%	87.1%	0.0%	0.5%	0.0%	9.3%	0.1%	3.0%	6.2%
Miscellaneous	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	4.1%
Management of Companies and Enterprises	0.0%	69.2%	0.0%	0.0%	0.0%	30.8%	0.0%	0.0%	3.8%
Wholesale Trade	0.0%	86.7%	0.0%	0.0%	0.0%	13.3%	0.0%	0.0%	3.6%
Finance and Insurance	0.0%	98.7%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	2.7%

Source: Kem C. Gardner Policy Institute

Table 10: Greater Salt Lake Life Sciences

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Professional and Technical Services	0.0%	82.9%	0.0%	0.0%	0.1%	13.6%	0.0%	3.4%	37.4%
Manufacturing	0.0%	21.4%	0.0%	0.2%	0.0%	52.0%	0.2%	26.2%	17.5%
Real Estate, Rental, and Leasing	0.0%	99.5%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	11.7%
Administrative and Waste Services	0.1%	80.9%	0.0%	0.0%	0.1%	18.4%	0.2%	0.2%	7.9%
Management of Companies and Enterprises	0.0%	69.2%	0.0%	0.0%	0.0%	30.8%	0.0%	0.0%	5.6%
Transportation and Warehousing	0.0%	71.1%	0.0%	0.3%	0.0%	26.5%	0.0%	2.0%	5.6%
Finance and Insurance	0.0%	99.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	3.6%
Information	0.1%	76.3%	0.0%	0.0%	0.0%	22.8%	0.2%	0.6%	3.4%
Other Services, Except Government	0.0%	93.7%	0.0%	0.0%	0.1%	5.6%	0.0%	0.5%	2.0%
Accommodation and Food Services	0.0%	63.9%	0.1%	0.3%	0.0%	35.6%	0.0%	0.0%	1.9%

Source: Kem C. Gardner Policy Institute

Table 11: Greater Salt Lake Outdoor Recreation

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	0.0%	19.8%	0.0%	0.1%	0.0%	57.4%	0.0%	22.6%	44.3%
Professional and Technical Services	0.0%	82.4%	0.0%	0.0%	0.0%	15.0%	0.0%	2.5%	14.8%
Transportation and Warehousing	0.0%	83.6%	0.0%	0.4%	0.0%	13.8%	0.0%	2.2%	8.2%
Real Estate, Rental, and Leasing	0.0%	99.3%	0.0%	0.0%	0.0%	0.7%	0.0%	0.1%	7.4%
Management of Companies and Enterprises	0.0%	69.2%	0.0%	0.0%	0.0%	30.8%	0.0%	0.0%	5.5%
Administrative and Waste Services	0.2%	82.4%	0.0%	0.0%	0.2%	16.8%	0.3%	0.2%	4.4%
Finance and Insurance	0.0%	96.4%	0.0%	0.0%	0.0%	3.5%	0.0%	0.0%	3.6%
Wholesale Trade	0.0%	86.7%	0.0%	0.0%	0.0%	13.3%	0.0%	0.0%	3.0%
Information	0.1%	69.0%	0.0%	0.0%	0.0%	30.4%	0.3%	0.2%	2.3%
Utilities	6.2%	55.9%	0.0%	0.1%	0.6%	25.2%	11.3%	0.7%	1.9%

Source: Kem C. Gardner Policy Institute

Table 12: Southeast Energy and Natural Resources

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	0.6%	23.2%	7.7%	0.1%	0.1%	47.6%	0.2%	20.4%	32.5%
Professional and Technical Services	0.3%	8.0%	24.6%	0.0%	0.0%	64.6%	0.0%	2.5%	13.8%
Mining	0.4%	3.4%	26.8%	0.1%	0.1%	42.9%	0.5%	25.8%	11.2%
Utilities	6.3%	0.0%	53.0%	0.0%	0.5%	38.2%	1.4%	0.7%	7.7%
Finance and Insurance	0.2%	7.5%	55.9%	0.0%	0.0%	36.3%	0.2%	0.0%	7.3%
Real Estate, Rental, and Leasing	0.0%	0.6%	68.6%	0.0%	0.1%	30.6%	0.0%	0.1%	5.6%
Administrative and Waste Services	0.0%	0.2%	34.2%	0.0%	0.0%	65.4%	0.0%	0.2%	4.1%
Management of Companies and Enterprises	0.0%	0.0%	69.9%	0.0%	0.0%	30.1%	0.0%	0.0%	3.9%
Transportation and Warehousing	0.1%	2.7%	60.3%	1.6%	0.1%	32.4%	0.0%	2.9%	3.4%
Construction	0.0%	0.6%	68.9%	0.0%	0.0%	30.3%	0.1%	0.0%	2.9%

Source: Kem C. Gardner Policy Institute

Table 13: Southeast Finance

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Finance and Insurance	0.2%	9.3%	58.8%	0.1%	0.0%	31.5%	0.1%	0.0%	31.1%
Professional and Technical Services	0.1%	4.5%	30.0%	0.0%	0.0%	61.7%	0.0%	3.7%	21.0%
Real Estate, Rental, and Leasing	0.0%	0.7%	59.2%	0.0%	0.0%	40.0%	0.0%	0.0%	8.7%
Manufacturing	0.0%	36.0%	12.5%	0.1%	0.0%	28.5%	0.0%	22.9%	6.4%
Information	0.1%	21.8%	15.2%	0.0%	0.2%	62.5%	0.0%	0.2%	5.7%
Administrative and Waste Services	0.0%	0.1%	32.0%	0.0%	0.0%	67.7%	0.0%	0.2%	5.2%
Accommodation and Food Services	0.0%	0.2%	52.6%	0.1%	0.0%	47.0%	0.0%	0.0%	4.0%
Other Services, Except Government	1.8%	0.7%	62.8%	0.1%	0.2%	33.9%	0.0%	0.4%	3.5%
Utilities	0.8%	0.0%	58.6%	0.0%	0.1%	40.2%	0.2%	0.1%	3.5%
Transportation and Warehousing	0.0%	9.9%	43.8%	3.9%	0.0%	32.2%	0.0%	10.2%	2.9%

Source: Kem C. Gardner Policy Institute

Table 14: Southwest Advanced Manufacturing

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	0.2%	5.5%	0.0%	2.5%	0.0%	70.7%	0.2%	20.9%	57.8%
Professional and Technical Services	0.0%	1.0%	0.0%	52.2%	0.0%	42.8%	0.9%	3.0%	7.8%
Utilities	0.5%	0.0%	0.0%	70.1%	0.0%	26.1%	2.6%	0.7%	6.1%
Administrative and Waste Services	0.0%	0.5%	0.0%	64.1%	0.0%	34.5%	0.6%	0.1%	5.6%
Real Estate, Rental, and Leasing	0.0%	0.2%	0.0%	71.7%	0.0%	28.0%	0.0%	0.1%	4.0%
Management of Companies and Enterprises	0.0%	0.0%	0.0%	79.3%	0.0%	20.7%	0.0%	0.0%	3.7%
Finance and Insurance	0.0%	2.6%	0.0%	81.6%	0.0%	15.4%	0.4%	0.0%	3.2%
Other Services, Except Government	6.2%	17.8%	0.0%	66.9%	0.9%	7.4%	0.4%	0.4%	1.8%
Mining	5.6%	0.2%	0.5%	22.6%	0.1%	58.6%	8.8%	3.6%	1.7%
Information	0.1%	19.9%	0.0%	37.4%	0.0%	42.4%	0.1%	0.1%	1.6%

Source: Kem C. Gardner Policy Institute

Table 15: Southwest Aerospace and Defense

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	0.2%	6.2%	0.0%	3.3%	0.0%	65.8%	0.3%	24.2%	34.1%
Professional and Technical Services	0.0%	1.7%	0.0%	48.2%	0.0%	44.7%	1.4%	4.1%	20.9%
Transportation and Warehousing	0.0%	0.1%	0.0%	48.7%	0.0%	48.3%	0.5%	2.3%	9.7%
Administrative and Waste Services	0.0%	0.5%	0.0%	49.6%	0.0%	49.1%	0.6%	0.2%	9.7%
Real Estate, Rental, and Leasing	0.0%	0.1%	0.0%	84.2%	0.0%	15.6%	0.0%	0.0%	8.0%
Management of Companies and Enterprises	0.0%	0.0%	0.0%	79.3%	0.0%	20.7%	0.0%	0.0%	6.2%
Information	0.1%	20.0%	0.0%	34.8%	0.0%	44.6%	0.1%	0.2%	2.5%
Finance and Insurance	0.0%	3.9%	0.0%	84.6%	0.0%	11.1%	0.4%	0.0%	2.2%
Accommodation and Food Services	0.0%	0.3%	0.0%	63.8%	0.0%	35.9%	0.0%	0.0%	1.9%
Other Services, Except Government	3.0%	9.5%	0.0%	73.0%	0.5%	13.2%	0.3%	0.5%	1.7%

Source: Kem C. Gardner Policy Institute

Table 16: Southwest Energy and Natural Resources

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	0.4%	31.4%	0.0%	6.9%	0.0%	40.3%	0.6%	20.3%	25.4%
Professional and Technical Services	0.0%	1.5%	0.0%	48.9%	0.0%	45.9%	0.9%	2.7%	18.0%
Utilities	0.6%	0.0%	0.0%	63.3%	0.0%	32.1%	3.1%	0.8%	10.9%
Finance and Insurance	0.0%	4.3%	0.0%	88.0%	0.0%	7.5%	0.3%	0.0%	6.6%
Transportation and Warehousing	0.0%	0.0%	0.0%	59.6%	0.0%	37.9%	0.1%	2.3%	6.1%
Administrative and Waste Services	0.0%	0.5%	0.0%	50.3%	0.0%	48.5%	0.4%	0.3%	6.1%
Real Estate, Rental, and Leasing	0.0%	0.2%	0.0%	79.5%	0.0%	20.2%	0.0%	0.2%	6.0%
Construction	0.0%	4.1%	0.0%	94.9%	0.0%	0.7%	0.4%	0.0%	3.6%
Mining	1.7%	1.6%	0.6%	31.4%	2.4%	32.5%	3.5%	26.3%	3.4%
Information	0.1%	22.9%	0.0%	38.3%	0.1%	38.3%	0.1%	0.2%	2.9%

Source: Kem C. Gardner Policy Institute

Table 17: Southwest Finance

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Real Estate, Rental, and Leasing	0.0%	0.1%	0.0%	84.5%	0.0%	15.3%	0.0%	0.0%	18.7%
Finance and Insurance	0.0%	1.7%	0.0%	87.3%	0.0%	10.7%	0.3%	0.0%	17.1%
Professional and Technical Services	0.0%	1.5%	0.0%	45.5%	0.0%	49.2%	0.4%	3.4%	15.2%
Information	0.1%	10.5%	0.0%	32.3%	0.0%	56.7%	0.1%	0.2%	7.9%
Administrative and Waste Services	0.0%	0.4%	0.0%	53.6%	0.0%	45.4%	0.4%	0.2%	7.8%
Manufacturing	0.0%	45.3%	0.0%	3.5%	0.0%	27.9%	0.0%	23.3%	7.4%
Accommodation and Food Services	0.0%	0.2%	0.0%	71.4%	0.0%	28.4%	0.0%	0.0%	5.3%
Management of Companies and Enterprises	0.0%	0.0%	0.0%	79.3%	0.0%	20.7%	0.0%	0.0%	4.2%
Other Services, Except Government	1.6%	5.0%	0.0%	74.0%	0.2%	18.2%	0.3%	0.7%	4.1%
Transportation and Warehousing	0.0%	0.0%	0.0%	77.3%	0.0%	14.1%	0.0%	8.5%	3.9%

Source: Kem C. Gardner Policy Institute

Table 18: Southwest IT / Software

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Professional and Technical Services	0.0%	2.0%	0.0%	46.0%	0.0%	48.1%	0.6%	3.3%	21.7%
Manufacturing	0.1%	4.5%	0.0%	5.1%	0.0%	57.9%	0.3%	32.0%	20.1%
Information	0.1%	7.3%	0.0%	39.5%	0.0%	51.7%	0.1%	1.1%	12.4%
Real Estate, Rental, and Leasing	0.0%	0.1%	0.0%	77.6%	0.0%	22.2%	0.0%	0.0%	9.7%
Transportation and Warehousing	0.0%	0.1%	0.0%	80.0%	0.0%	17.0%	0.3%	2.6%	6.6%
Administrative and Waste Services	0.0%	0.5%	0.0%	47.3%	0.0%	51.6%	0.3%	0.3%	6.5%
Wholesale Trade	0.0%	0.0%	0.0%	40.9%	0.0%	59.1%	0.0%	0.0%	4.5%
Miscellaneous	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	4.3%
Management of Companies and Enterprises	0.0%	0.0%	0.0%	79.3%	0.0%	20.7%	0.0%	0.0%	3.4%
Finance and Insurance	0.0%	4.0%	0.0%	86.9%	0.0%	8.9%	0.2%	0.0%	2.8%

Source: Kem C. Gardner Policy Institute

Table 19: Southwest Life Sciences

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Professional and Technical Services	0.0%	1.2%	0.0%	44.6%	0.0%	50.5%	0.5%	3.1%	32.4%
Manufacturing	0.2%	5.6%	0.0%	3.1%	0.0%	68.1%	0.5%	22.5%	19.9%
Real Estate, Rental, and Leasing	0.0%	0.1%	0.0%	82.8%	0.0%	17.1%	0.0%	0.0%	12.2%
Administrative and Waste Services	0.0%	0.5%	0.0%	52.5%	0.0%	46.3%	0.4%	0.2%	7.9%
Management of Companies and Enterprises	0.0%	0.0%	0.0%	79.3%	0.0%	20.7%	0.0%	0.0%	6.8%
Transportation and Warehousing	0.0%	0.0%	0.0%	48.9%	0.0%	48.5%	0.1%	2.5%	4.7%
Finance and Insurance	0.0%	4.3%	0.0%	89.3%	0.0%	6.2%	0.2%	0.0%	3.8%
Information	0.1%	22.1%	0.0%	37.1%	0.0%	40.1%	0.1%	0.5%	3.6%
Other Services, Except Government	2.9%	9.2%	0.0%	65.3%	0.4%	21.3%	0.3%	0.5%	2.1%
Accommodation and Food Services	0.0%	0.2%	0.0%	60.8%	0.0%	39.0%	0.0%	0.0%	2.1%

Source: Kem C. Gardner Policy Institute

Table 20: Southwest Outdoor Recreation

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	0.0%	5.5%	0.0%	4.1%	0.0%	68.0%	0.1%	22.3%	36.3%
Professional and Technical Services	0.0%	1.1%	0.0%	47.5%	0.0%	48.4%	0.2%	2.7%	14.6%
Transportation and Warehousing	0.0%	0.0%	0.0%	70.3%	0.0%	27.8%	0.1%	1.7%	10.3%
Real Estate, Rental, and Leasing	0.0%	0.2%	0.0%	79.9%	0.0%	19.9%	0.0%	0.1%	9.0%
Management of Companies and Enterprises	0.0%	0.0%	0.0%	79.3%	0.0%	20.7%	0.0%	0.0%	6.8%
Administrative and Waste Services	0.0%	0.6%	0.0%	56.0%	0.0%	42.7%	0.5%	0.2%	5.6%
Finance and Insurance	0.0%	2.0%	0.0%	78.2%	0.0%	19.5%	0.4%	0.0%	4.0%
Wholesale Trade	0.0%	0.0%	0.0%	40.9%	0.0%	59.1%	0.0%	0.0%	3.6%
Information	0.1%	12.6%	0.0%	32.7%	0.0%	54.2%	0.1%	0.2%	2.6%
Other Services, Except Government	4.6%	13.9%	0.0%	70.8%	0.7%	9.1%	0.4%	0.5%	2.5%

Source: Kem C. Gardner Policy Institute

Table 21: Uintah Basin Energy and Natural Resources

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	1.4%	14.2%	0.0%	0.1%	12.1%	51.3%	0.2%	20.8%	21.3%
Mining	3.4%	2.5%	0.0%	0.0%	53.2%	16.9%	0.7%	23.1%	16.1%
Professional and Technical Services	0.1%	6.8%	0.0%	0.0%	31.8%	58.7%	0.0%	2.6%	12.6%
Finance and Insurance	0.2%	16.1%	0.0%	0.0%	51.3%	32.4%	0.0%	0.0%	11.9%
Utilities	4.0%	0.0%	0.0%	0.0%	50.5%	44.5%	0.0%	0.9%	5.7%
Administrative and Waste Services	0.4%	9.2%	0.0%	0.0%	41.8%	48.3%	0.0%	0.2%	5.7%
Real Estate, Rental, and Leasing	0.0%	20.4%	0.0%	0.0%	55.9%	23.4%	0.0%	0.2%	4.8%
Construction	0.0%	4.5%	0.0%	0.0%	92.4%	3.1%	0.0%	0.0%	4.4%
Transportation and Warehousing	0.0%	15.8%	0.1%	0.4%	40.4%	38.8%	0.0%	4.5%	3.9%
Management of Companies and Enterprises	0.0%	0.0%	0.0%	0.0%	90.5%	9.5%	0.0%	0.0%	3.7%

Source: Kem C. Gardner Policy Institute

Table 22: Uintah Basin Finance

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Finance and Insurance	0.2%	15.8%	0.0%	0.0%	58.7%	25.3%	0.0%	0.0%	41.2%
Professional and Technical Services	0.1%	7.7%	0.0%	0.0%	28.9%	59.4%	0.0%	3.9%	18.7%
Real Estate, Rental, and Leasing	0.1%	34.6%	0.0%	0.0%	48.3%	16.9%	0.0%	0.0%	7.4%
Manufacturing	0.0%	26.1%	0.0%	0.1%	22.7%	28.0%	0.0%	23.1%	5.5%
Information	0.3%	30.3%	0.0%	0.0%	9.5%	59.7%	0.0%	0.2%	4.5%
Administrative and Waste Services	0.3%	6.0%	0.0%	0.0%	43.5%	50.0%	0.0%	0.2%	4.3%
Accommodation and Food Services	0.4%	3.7%	2.6%	0.2%	37.0%	56.1%	0.0%	0.0%	3.5%
Other Services, Except Government	0.2%	2.1%	0.0%	0.0%	79.1%	18.3%	0.0%	0.4%	3.2%
Utilities	2.1%	0.0%	0.0%	0.0%	91.5%	6.3%	0.0%	0.1%	3.0%
Transportation and Warehousing	0.0%	35.0%	0.0%	0.2%	28.8%	25.9%	0.0%	10.0%	2.6%

Source: Kem C. Gardner Policy Institute

Table 23: Uintah Basin IT / Software

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Professional and Technical Services	0.1%	8.4%	0.0%	0.0%	28.3%	60.2%	0.0%	3.0%	24.3%
Information	0.4%	7.3%	0.0%	0.0%	15.1%	76.0%	0.0%	1.1%	18.4%
Manufacturing	0.2%	4.8%	0.0%	0.2%	2.7%	60.8%	0.5%	30.8%	13.6%
Real Estate, Rental, and Leasing	0.1%	26.9%	0.0%	0.0%	40.6%	32.3%	0.0%	0.1%	11.0%
Miscellaneous	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	5.9%
Administrative and Waste Services	0.4%	10.6%	0.0%	0.0%	29.3%	59.4%	0.0%	0.3%	5.1%
Transportation and Warehousing	0.0%	19.4%	0.0%	0.4%	37.9%	36.7%	0.0%	5.6%	4.2%
Wholesale Trade	0.0%	0.0%	0.0%	0.0%	79.0%	20.9%	0.0%	0.0%	3.9%
Finance and Insurance	0.3%	28.4%	0.0%	0.0%	67.5%	3.8%	0.0%	0.0%	3.1%
Management of Companies and Enterprises	0.0%	0.0%	0.0%	0.0%	90.5%	9.5%	0.0%	0.0%	3.0%

Source: Kem C. Gardner Policy Institute

Table 24: West Central Advanced Manufacturing

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	0.3%	13.9%	0.0%	0.3%	0.2%	61.5%	0.8%	23.0%	65.1%
Professional and Technical Services	0.0%	19.3%	0.0%	0.1%	0.0%	37.0%	40.5%	3.0%	6.3%
Utilities	8.1%	0.6%	0.0%	1.7%	0.0%	11.2%	77.8%	0.6%	5.7%
Administrative and Waste Services	0.0%	11.1%	0.0%	1.0%	0.0%	37.5%	50.2%	0.1%	5.1%
Management of Companies and Enterprises	0.2%	0.0%	0.0%	0.0%	0.0%	80.5%	19.3%	0.0%	4.1%
Real Estate, Rental, and Leasing	0.0%	19.1%	0.0%	2.2%	0.0%	49.2%	29.4%	0.1%	3.2%
Finance and Insurance	0.0%	17.9%	0.0%	0.7%	0.0%	5.5%	75.9%	0.0%	2.6%
Mining	8.1%	3.3%	0.6%	5.9%	0.3%	52.5%	18.3%	11.0%	1.4%
Other Services, Except Government	4.5%	11.2%	0.0%	0.6%	0.2%	4.3%	78.8%	0.4%	1.4%
Information	0.5%	30.4%	0.0%	0.2%	0.0%	34.5%	34.2%	0.1%	1.1%

Source: Kem C. Gardner Policy Institute

Table 25: West Central Aerospace and Defense

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	0.2%	10.3%	0.0%	0.4%	0.1%	64.0%	1.4%	23.6%	36.2%
Professional and Technical Services	0.0%	12.5%	0.0%	0.1%	0.0%	26.1%	57.1%	4.2%	19.6%
Transportation and Warehousing	0.0%	6.3%	0.0%	5.3%	0.0%	43.1%	42.8%	2.4%	10.9%
Administrative and Waste Services	0.0%	11.4%	0.0%	0.4%	0.0%	47.9%	40.0%	0.2%	9.0%
Real Estate, Rental, and Leasing	0.0%	22.3%	0.0%	1.6%	0.0%	47.9%	28.2%	0.1%	7.2%
Management of Companies and Enterprises	0.2%	0.0%	0.0%	0.0%	0.0%	80.5%	19.3%	0.0%	4.5%
Information	0.5%	31.3%	0.0%	0.2%	0.0%	35.1%	32.7%	0.2%	2.6%
Accommodation and Food Services	0.0%	1.4%	0.3%	2.1%	0.0%	56.7%	39.6%	0.0%	2.3%
Finance and Insurance	0.0%	18.2%	0.0%	0.3%	0.0%	5.0%	76.5%	0.0%	2.3%
Other Services, Except Government	2.0%	16.0%	0.0%	1.9%	0.1%	18.4%	61.0%	0.5%	1.9%

Source: Kem C. Gardner Policy Institute

Table 26: West Central Energy and Natural Resources

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Mining	6.2%	0.8%	0.5%	1.0%	1.3%	56.1%	8.2%	25.8%	22.3%
Manufacturing	0.5%	34.6%	0.0%	0.4%	0.2%	42.6%	2.0%	19.7%	18.0%
Professional and Technical Services	0.0%	10.5%	0.0%	0.1%	0.0%	43.3%	43.2%	2.8%	12.2%
Utilities	10.4%	0.8%	0.0%	2.1%	0.0%	12.5%	73.4%	0.7%	6.8%
Finance and Insurance	0.0%	18.2%	0.0%	0.4%	0.0%	7.2%	74.1%	0.0%	6.8%
Real Estate, Rental, and Leasing	0.0%	24.7%	0.0%	1.6%	0.0%	46.0%	27.6%	0.1%	6.5%
Transportation and Warehousing	0.0%	14.4%	0.0%	20.7%	0.0%	28.1%	31.4%	5.3%	5.1%
Administrative and Waste Services	0.0%	11.5%	0.0%	0.6%	0.0%	41.0%	46.6%	0.2%	5.0%
Accommodation and Food Services	0.0%	0.8%	0.4%	2.3%	0.0%	58.9%	37.5%	0.0%	3.2%
Information	0.7%	28.0%	0.0%	0.3%	0.0%	30.8%	40.2%	0.1%	3.2%

Source: Kem C. Gardner Policy Institute

Table 27: West Central Finance

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Real Estate, Rental, and Leasing	0.0%	21.9%	0.0%	1.5%	0.0%	48.6%	27.9%	0.0%	16.9%
Professional and Technical Services	0.0%	10.7%	0.0%	0.1%	0.0%	42.7%	43.1%	3.3%	14.5%
Finance and Insurance	0.0%	14.3%	0.0%	1.0%	0.0%	9.4%	75.3%	0.0%	13.7%
Manufacturing	0.0%	58.9%	0.0%	0.1%	0.0%	17.1%	0.4%	23.5%	11.6%
Information	0.6%	18.7%	0.0%	0.3%	0.0%	45.6%	34.5%	0.2%	7.7%
Administrative and Waste Services	0.0%	10.0%	0.0%	0.8%	0.0%	42.6%	46.3%	0.2%	7.1%
Accommodation and Food Services	0.0%	2.5%	0.3%	2.0%	0.0%	44.9%	50.2%	0.0%	5.7%
Transportation and Warehousing	0.0%	20.2%	0.0%	11.5%	0.0%	20.5%	40.2%	7.5%	4.4%
Management of Companies and Enterprises	0.2%	0.0%	0.0%	0.0%	0.0%	80.5%	19.3%	0.0%	4.1%
Other Services, Except Government	1.0%	8.7%	0.0%	2.1%	0.1%	16.7%	70.6%	0.8%	3.9%

Source: Kem C. Gardner Policy Institute

Table 28: West Central IT / Software

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Professional and Technical Services	0.0%	11.4%	0.0%	0.1%	0.0%	41.6%	43.7%	3.3%	18.7%
Manufacturing	0.2%	10.3%	0.0%	0.7%	0.1%	58.0%	2.2%	28.4%	17.8%
Real Estate, Rental, and Leasing	0.0%	22.2%	0.0%	1.6%	0.0%	47.7%	28.4%	0.1%	12.0%
Information	0.6%	18.0%	0.0%	0.2%	0.0%	44.8%	35.5%	0.9%	10.3%
Transportation and Warehousing	0.0%	10.3%	0.0%	22.9%	0.0%	22.6%	40.3%	3.8%	6.7%
Administrative and Waste Services	0.0%	9.0%	0.0%	0.6%	0.0%	49.9%	40.2%	0.2%	6.6%
Wholesale Trade	0.0%	0.0%	0.0%	0.0%	0.0%	53.3%	46.6%	0.0%	6.0%
Management of Companies and Enterprises	0.2%	0.0%	0.0%	0.0%	0.0%	80.5%	19.3%	0.0%	5.1%
Finance and Insurance	0.0%	21.5%	0.0%	0.3%	0.0%	3.7%	74.5%	0.0%	4.1%
Accommodation and Food Services	0.0%	1.1%	0.3%	1.8%	0.0%	65.2%	31.6%	0.0%	2.6%

Source: Kem C. Gardner Policy Institute

Table 29: West Central Life Sciences

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Professional and Technical Services	0.0%	8.7%	0.0%	0.1%	0.0%	41.7%	46.5%	3.0%	30.7%
Manufacturing	0.4%	10.2%	0.0%	0.5%	0.1%	63.8%	2.1%	22.9%	15.8%
Real Estate, Rental, and Leasing	0.0%	18.9%	0.0%	1.5%	0.0%	51.5%	28.0%	0.0%	14.5%
Administrative and Waste Services	0.0%	14.5%	0.0%	0.4%	0.0%	42.2%	42.6%	0.2%	8.5%
Management of Companies and Enterprises	0.2%	0.0%	0.0%	0.0%	0.0%	80.5%	19.3%	0.0%	6.9%
Transportation and Warehousing	0.0%	6.3%	0.0%	8.0%	0.0%	48.1%	35.2%	2.4%	6.1%
Finance and Insurance	0.0%	19.7%	0.0%	0.3%	0.0%	4.0%	75.9%	0.0%	4.4%
Information	0.4%	39.5%	0.0%	0.3%	0.0%	31.3%	28.0%	0.5%	4.1%
Accommodation and Food Services	0.0%	0.9%	0.2%	2.3%	0.0%	56.1%	40.5%	0.0%	2.6%
Other Services, Except Government	1.9%	16.1%	0.0%	2.7%	0.1%	22.2%	56.5%	0.5%	2.4%

Source: Kem C. Gardner Policy Institute

Table 30: West Central Outdoor Recreation

Input Sector	Region of Origin								Sector Share
	East Central	Greater Salt Lake	Southeast	Southwest	Uintah Basin	West Central	Rest of U.S.	Rest of World	
Manufacturing	0.0%	7.7%	0.0%	0.6%	0.1%	71.3%	0.6%	19.8%	39.9%
Professional and Technical Services	0.0%	8.6%	0.0%	0.1%	0.0%	48.0%	40.3%	3.0%	12.4%
Transportation and Warehousing	0.0%	3.0%	0.0%	19.5%	0.0%	33.7%	42.4%	1.4%	9.5%
Real Estate, Rental, and Leasing	0.0%	23.5%	0.0%	1.5%	0.0%	47.4%	27.5%	0.1%	8.5%
Management of Companies and Enterprises	0.2%	0.0%	0.0%	0.0%	0.0%	80.5%	19.3%	0.0%	7.0%
Administrative and Waste Services	0.0%	15.0%	0.0%	0.5%	0.0%	40.1%	44.1%	0.2%	6.4%
Finance and Insurance	0.0%	33.4%	0.0%	0.4%	0.0%	3.9%	62.2%	0.0%	3.8%
Wholesale Trade	0.0%	0.0%	0.0%	0.0%	0.0%	53.3%	46.6%	0.0%	3.3%
Other Services, Except Government	3.4%	16.9%	0.0%	2.3%	0.2%	4.9%	71.8%	0.5%	2.6%
Utilities	9.3%	0.7%	0.0%	1.9%	0.0%	11.2%	76.2%	0.6%	2.4%

Source: Kem C. Gardner Policy Institute

Table 31: Advanced Manufacturing Cluster Definition

NAICS	Description
336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing
326199	All Other Plastics Product Manufacturing
336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing
336414	Guided Missile and Space Vehicle Manufacturing
335991	Carbon and Graphite Product Manufacturing
326111	Plastics Bag and Pouch Manufacturing
331410	Nonferrous Metal (except Aluminum) Smelting and Refining
322211	Corrugated and Solid Fiber Box Manufacturing
336412	Aircraft Engine and Engine Parts Manufacturing
331318	Other Aluminum Rolling, Drawing, and Extruding
326122	Plastics Pipe and Pipe Fitting Manufacturing
322220	Paper Bag and Coated and Treated Paper Manufacturing
313310	Textile and Fabric Finishing Mills
322291	Sanitary Paper Product Manufacturing
326130	Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing
326140	Polystyrene Foam Product Manufacturing
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding
326191	Plastics Plumbing Fixture Manufacturing
314910	Textile Bag and Canvas Mills
336411	Aircraft Manufacturing
326299	All Other Rubber Product Manufacturing
326160	Plastics Bottle Manufacturing
336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing
322212	Folding Paperboard Box Manufacturing
314999	All Other Miscellaneous Textile Product Mills
322230	Stationery Product Manufacturing
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel
325510	Paint and Coating Manufacturing
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing

NAICS	Description
326220	Rubber and Plastics Hoses and Belting Manufacturing
326121	Unlaminated Plastics Profile Shape Manufacturing
326212	Tire Retreading
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing
314994	Rope, Cordage, Twine, Tire Cord, and Tire Fabric Mills
326291	Rubber Product Manufacturing for Mechanical Use
325220	Artificial and Synthetic Fibers and Filaments Manufacturing
331420	Copper Rolling, Drawing, Extruding, and Alloying
322219	Other Paperboard Container Manufacturing
325520	Adhesive Manufacturing
322299	All Other Converted Paper Product Manufacturing
325211	Plastics Material and Resin Manufacturing
325212	Synthetic Rubber Manufacturing
331221	Rolled Steel Shape Manufacturing
325910	Printing Ink Manufacturing
331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)
331222	Steel Wire Drawing
326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing
325992	Photographic Film, Paper, Plate, and Chemical Manufacturing
325991	Custom Compounding of Purchased Resins
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing
325920	Explosives Manufacturing
313320	Fabric Coating Mills
331314	Secondary Smelting and Alloying of Aluminum
331315	Aluminum Sheet, Plate, and Foil Manufacturing
326211	Tire Manufacturing (except Retreading)
331313	Alumina Refining and Primary Aluminum Production

Source: Governor's Office of Economic Development

Table 32: Aerospace and Defense Cluster Definition

NAICS	Description
325211	Plastics Material and Resin Mfg.
325920	Explosives Manufacturing
334511	Search, Detection, and Navigation Instruments
335991	Carbon and Graphite Product Mfg.
336411	Aircraft Mfg.
336412	Aircraft Engine and Engine Parts Mfg.
336413	Other Aircraft Parts and Equipment Mfg.
336414	Guided Missile and Space Vehicle Mfg.

NAICS	Description
336415	Guided Missile and Space Vehicle Propulsion Units and Parts Mfg.
336419	Other Guided Missile and Space Vehicle Parts Mfg.
488190	Other Support Activities for Air Transportation
541330	Engineering Services
927110	Space Research and Technology
928110	National Security

Source: Governor's Office of Economic Development

Table 33: Energy and Natural Resources Cluster Definition

NAICS	Description
211111	Crude Petroleum and Natural Gas Extraction
211112	Natural Gas Liquid Extraction
211120	Crude Petroleum Extraction
211130	Natural Gas Extraction
212111	Bituminous Coal and Lignite Surface Mining
212112	Bituminous Coal Underground Mining
212113	Anthracite Mining
212291	Uranium-Radium-Vanadium Ore Mining
213111	Drilling Oil and Gas Wells
213112	Support Activities for Oil and Gas Operations
213113	Support Activities for Coal Mining
221111	Hydroelectric Power Generation
221112	Fossil Fuel Electric Power Generation
221113	Nuclear Electric Power Generation
221114	Solar Electric Power Generation
221115	Wind Electric Power Generation
221116	Geothermal Electric Power Generation
221118	Other Electric Power Generation
221121	Electric Bulk Power Transmission and Control

NAICS	Description
221122	Electric Power Distribution
221210	Natural Gas Distribution
237120	Oil and Gas Pipeline Construction
237130	Power and Communication System Construction
324110	Petroleum Refineries
325110	Petrochemical Mfg.
325120	Industrial Gas Manufacturing
325193	Ethyl Alcohol Mfg.
333132	Oil and Gas Field Machinery and Equipment Mfg.
333611	Turbine and Power Transmission Equipment Mfg.
335311	Electric Power and Specialty Transformer Mfg.
424710	Petroleum Bulk Stations and Terminals
424720	Petroleum Product Merchant Wholesalers
454310	Fuel Dealers
486110	Pipeline Transportation of Crude Oil
486210	Pipeline Transportation of Natural Gas
486910	Refined Petroleum Product Pipeline Transport
541360	Geophysical Surveying and Mapping Services

Source: Governor's Office of Economic Development

Table 34: Finance Cluster Definition

NAICS	Description
521110	Central Bank
522110	Commercial Banking
522120	Savings Institutions
522130	Credit Unions
522190	Banks, Industrial, Depository
522210	Credit Card Issuing
522220	Sales Financing
522291	Consumer Lending
522292	Real Estate Credit
522293	International Trade Financing
522294	Secondary Market Financing
522298	All Other Nondepository Credit Intermediation
522310	Mortgage and nonmortgage Loan Brokers
522320	Financial Transactions Processing, Reserve, and Clearinghouse Activities
522390	Other Activities Related to Credit Intermediation
523110	Investment Banking & Securities dealing
523120	Securities Brokerage
523130	Commodity Contracts Dealing
523140	Commodity Contracts Brokerage
523210	Commodity Contracts Exchanges
523910	Misc. Intermediation
523920	Portfolio Management
523930	Investment Advice

NAICS	Description
523991	Trust, Fiduciary & Custody Activities
523999	Misc. Financial Investment Activities
524113	Direct Life Insurance Carriers
524114	Direct Health and Medical Insurance Carriers
524126	Direct Property and Casualty Insurance Carriers
524127	Direct Title Insurance Carriers
524128	Other Direct Insurance (except Life, Health, and Medical) Carriers
524130	Reinsurance Carriers
524210	Insurance Agencies and Brokerages
524291	Claims Adjusting
524292	Third Party Administration of Insurance and Pension Funds
524298	All Other Insurance Related Activities
525110	Pension Funds
525120	Health & Welfare Funds
525190	Other Insurance Funds
525910	Open-End Investment Funds
525920	Trusts, Estates & Agency Accounts
525990	Other Financial Vehicles
541211	Offices of CPAs
541213	Tax Preparation Services
541214	Payroll Processing Services
541219	Accountants' (except CPAs) offices

Source: Governor's Office of Economic Development

Table 35: IT / Software Cluster Definition

NAICS	Description
334111	Electronic Computer Mfg.
334112	Computer Storage Device Mfg.
334118	Computer Terminal and Other Computer Peripheral Mfg.
334210	Telephone Apparatus Mfg.
334220	Radio and Television Broadcasting and Wireless Communications Equip. Mfg.
334290	Other Communications Equipment Mfg.
334310	Audio and Video Equipment Mfg.
334412	Bare Printed Circuit Board Mfg.
334413	Semiconductor and Related Device Mfg.
334416	Electronic Coil, Transformer, and Other Inductor Mfg.
334417	Electronic Connector Mfg.
334418	Printed Circuit Assembly Mfg.
334419	Other Electronic Component Mfg.
334512	Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables
334514	Totalizing Fluid Meter and Counting Device Manufacturing
334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
334519	Other Measuring and Controlling Device Manufacturing
334613	Blank Magnetic and Optical Recording Media Manufacturing
334614	Software and Other Pre-recorded Disc, Tape, and Record Reproducing
423430	Computer and Supply Merchant Wholesalers

NAICS	Description
425110	Business to Business Electronic Markets
454110	Electronic Shopping and Mail-Order Houses
454111	Electronic Shopping
454112	Electronic Auctions
511210	Software Publishers
516110	Internet Publishing and Broadcasting
517110	Wired Telecommunications Carriers
517210	Wireless Telecommunications Carriers (except Satellite)
517211	Paging
517212	Cellular and Other Wireless Telecommunications
517310	Telecommunications Resellers
517311	Wired Telecommunications Carriers
517312	Wireless Telecommunications Carriers (except Satellite)
517410	Satellite Telecommunications
517910	Other Telecommunications
517911	Telecommunications Resellers
517919	All Other Telecommunications
518111	Internet Service Providers
518210	Data Processing, Hosting, and Related Services
519130	Internet Publishing and Broadcasting and Web Search Portals
541511	Custom Computer Programming Services
541512	Computer Systems Design Services
541513	Computer Facilities Management Services
541519	Other Computer Related Services

Source: Governor's Office of Economic Development

Table 36: Life Sciences Cluster Definition

NAICS	Description
325411	Medicinal & Botanical Manufacturing
325412	Pharmaceutical Preparation Manufacturing
325413	In-Vitro Diagnostic Substance Manufacturing
325414	Biological Product Manufacturing
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing
334516	Analytical Laboratory Instrument Mfg.
334517	Irradiation Apparatus Mfg.
339112	Surgical and Medical Instrument Mfg.
339113	Surgical Appliance and Supplies Mfg.
339114	Dental Equipment and Supplies Mfg.
339115	Ophthalmic Goods Mfg.
339116	Dental Laboratories
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers

NAICS	Description
423460	Ophthalmic Goods Merchant Wholesalers
424210	Drugs and Druggists' Sundries Merchant Wholesalers
541380	Testing Laboratories
541710	R&D in the Physical, Engineering, and Life Sciences
541711	R & D in Biotechnology
541712	R & D in the Physical, Engineering, and Life Sciences
541713	R&D in Nanotechnology
541714	R&D in Biotechnology (except Nanobiotechnology)
541715	R&D in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)
621511	Medical Laboratories

Source: Governor's Office of Economic Development

Table 37: Outdoor Recreation Cluster Definition

NAICS	Description
332992	Small Arms Ammunition Manufacturing
332993	Ammunition, except Small Arms, Mfg
332994	Small Arms Manufacturing

NAICS	Description
339920	Sporting and Athletic Goods Manufacturing
423910	Sporting and Recreational Goods and Supplies Merchant Wholesalers

Source: Governor's Office of Economic Development

Bibliography

- Bateman, M., & Young, N. (2020). *Moving Toward 2020: Utah Commuting Patterns, 2000 to 2010*. Kem C. Gardner Policy Institute.
- Fowler, C. S., Jensen, L., & Rhubart, D. C. (2018). *Assessing U.S. Labor Market Delineations for Containment, Economic Core, and Wage Correlation*.
- Fowler, C. S., Rhubart, D. C., & Jensen, L. (2016). Reassessing and Revising Commuting Zones for 2010: History, Assessment, and Updates for U.S. 'Labor-Sheds' 1990–2010. *Population Research and Policy Review*, 35(2), 263–286.
- Fox, K. A., & Kumar, T. K. (1965). The Functional Economic Area: Delineation and Implications for Economic Analysis and Policy. *Papers of the Regional Science Association*, 15(1).
- Hogue, M. (2020). *Utah's Economic Regions*. Kem C. Gardner Policy Institute. Available from <https://gardner.utah.edu/wp-content/uploads/EconRegions-Nov2020.pdf>.
- Johnson, K. P. (1995). Redefinition of the BEA Economic Areas. *Survey of Current Business*.
- Johnson, R. A., & Wichern, D. W. (2007). *Applied Multivariate Statistical Analysis* (6th ed.). Pearson.
- Makuc, D. M., Haglund, B. J. A., Ingram, D. D., Kleinman, J. C., & Feldman, J. J. (1991). *Health Service Areas for the United States*. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Health Statistics.
- Neville, S. W., Crandall, L., Farnsworth, W. T., Fitzgerald, S., Grant, C. A., Huefner, R. P., & Pulsipher, J. (1966). *Utah State Multi-County Planning Regions*. Utah State Planning Program.
- Tolbert, C., & Sizer, M. (1996). *U.S. Commuting Zones and Labor Market Areas: A 1990 Update*. Rural Economy Division, Economic Research Service, U.S. Department of Agriculture.
- Tolbert, C. M., & Killian, M. S. (1987). *Labor Market Areas for the United States*. Agriculture and Rural Economy Division, Economic Research Service, U.S. Department of Agriculture.

Endnotes

1. See Hogue (2020).
2. Cluster employment (and wages) is the sum of employment across all the industries constituting that cluster (shown in Tables 31–37).
3. These major sectors are two-digit NAICS sectors, with one exception: Miscellaneous. This sector is an aggregate of various sectors that do not conform to the NAICS system. It includes “noncomparable imports” (imports for which there is no domestic producer), scrap, and used and secondhand goods. For example, Table 6 shows the supply chain sectors for Advanced Manufacturing in Greater Salt Lake. The sector Miscellaneous provides about 1% of total inputs by value to this regional cluster. About half of these inputs originate in Greater Salt Lake and half originate outside the U.S. Typically, the part of Miscellaneous originating outside the U.S. will refer to noncomparable imports, while the part originating within the U.S. can only refer to scrap and secondhand goods.
4. An example of a case where actual data are available is that of coal-fired power plants. In that case, the U.S. Department of Energy, Energy Information Administration, publishes the amount of coal consumed by power plant, by coal mine (other inputs to coal-fired power plants are not generally available).
5. <https://www.implan.com/>.
6. <https://alwardinstitute.org/>.
7. IMPLAN's transportation system data is derived from the Freight Analysis Framework of the Oak Ridge National Laboratory: <https://faf.ornl.gov/fafweb/Default.aspx>. For more methodological background on the IMPLAN gravity model, see <https://blog.implan.com/estimating-region-specific-foreign-trade-rates>.
8. See <https://www.bea.gov/industry/input-output-accounts-data>. We use the 2012 vintage table, which is the most recent available.
9. Intermediate commodities are goods and services produced by one industry that are consumed by another industry to make the products produced by the latter. The other major input to production is labor. We divide by output, which includes labor, rather than total intermediate commodities so that the dollar-amount of commodities is a function of the volume of output.

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