

COVID-19 Crisis: Potential impact on employment and income in Utah

Ansel Schiavone, Codrina Rada, Ivan Mendieta-Muñoz and Rudi von Arnim

Key findings

- Salt Lake County has an at-risk employment share of 31.3 percent, which when multiplied by the county's total labor force equates to 209,086 individuals – approximately fourteen percent of the Utah workforce – that are either already or likely soon to be unemployed.
- If all at-risk workers were to become unemployed for a single month the total loss of wage income would be approximately \$1.7 billion. If the crisis continues until the end of August – a “best case scenario” by most models – Utahns previously employed in at-risk industries would see a total loss of wage income more than \$10.2 billion, approximately 5.5 percent of the state's GDP.

Economic impacts of social distancing

On March 26, 2020, the Utah Department of Workforce Services announced that it had received 19,591 unemployment claims over the week of March 15-21. In the following week of March 22-28, 28,560 new claims were received (see PR-03-26-20 and PR-04-2-20). These numbers are unprecedented; the weekly average of claims in 2019 was 1,131.

Of the more than 48,000 claims filed in these two weeks, approximately 43 percent have been from Salt Lake County. This comes as no surprise – Salt Lake County is the most populated county in the state, with approximately 36 percent of the state's population and 46 percent of its labor force. On March 29, Salt Lake County issued a “*Stay Safe, Stay Home*” order, that, among other initiatives, ordered the closure of “non-essential” businesses while allowing those deemed “essential” to remain open. A third “restricted” category lists businesses for which only certain services may continue to be provided. A list of businesses falling into each category is supplied with the order ([see](#)

[here](#)). Utah is one of a handful of states yet to issue a “stay-at-home” mandate, despite mounting pressure from politicians and public opinion. It is our belief that the issuance of such an order in the state is simply a matter of time.

The goal of this brief is to provide an informative look at the structure of Utah's economy in an attempt to determine the immediate economic impact of state-wide social distancing efforts. The first task at hand is to determine which jobs will effectively cease to exist in the coming weeks and months, and which will be preserved – at least in the short run. Among the litany of COVID-related terms that have populated our lexicon in the past month, two phrases in particular have come to bear incredibly important economic significance: “essential activity” and “able to work from home”. If your employment falls into one or both of those categories, your short-term job security is high. If not, it is quite likely that you are either unemployed or soon will be.

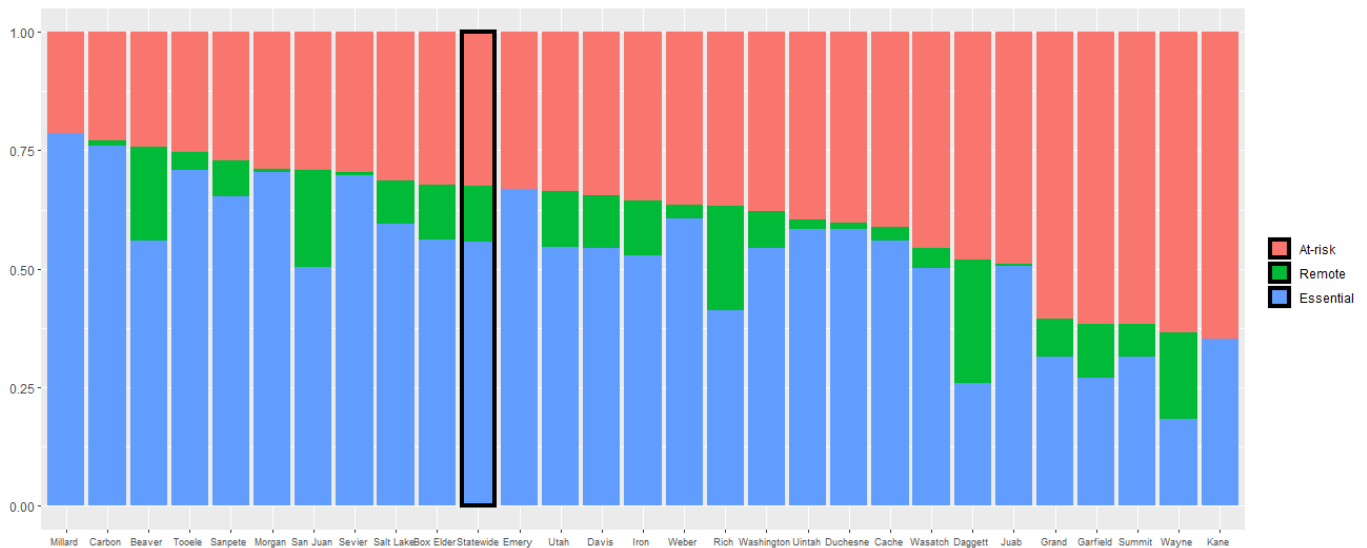
The Quarterly Census of Employment & Wages (QCEW) provides industry employment and wage data on a quarterly and annual basis for all US states and counties. The most recent complete annual data set is 2018. The industries are broken down into 2, 3, 4, 5, and 6-digit NAICS classification. However, missing data becomes a pervasive issue beyond the 3-digit level. Using the 3-digit industry list, we proceed in classifying each as “essential” or “non-essential” based on the Salt Lake County order. From the set of industries classified as “non-essential”, we further determine whether the industry is capable of transitioning to remote work-from-home operations. If so, this industry is classified as “remote”. See **Table 1** for results. Throughout this research brief we refer to industries that are either essential or remote as “secure” employment, while industries that fit neither of those criteria are deemed “at-risk”.

There is undoubtedly inaccuracies in our method for classification. For example, we designate “Educational services” as a remote industry. It is true that most

colleges and universities have moved courses and administration entirely online, and hence most employees are able to continue working. Public primary and secondary schools have attempted a similar transition, however the process is significantly more difficult depending on the age of students as well as their ability to access the internet. The need for school districts to maintain pre-crisis levels of K-12 teachers and administrators on the payroll is thus a key question as to whether this industry will experience significant displacement.

The uncertainty regarding the duration of the crisis complicate matters further. There is clearly a significant degree of labor hoarding occurring in across various industries; many salaried employees are being kept on payroll with the hope that operations will return to normal within a relatively short period of time. While these jobs have been effectively eliminated in the short-term, these individuals may technically still be “employed”. A second complication is the possibility of labor transfers. While most industries have seen

Figure 1: Employment share breakdown by county (excludes Piute County due to lack of data); Utah statewide column in bold



a dramatic decline in output, certain activities have seen an increase in demand generated by the crisis.¹ With this shift in economic focus, it is likely some newly unemployed workers will be reabsorbed rather than simply displaced. Nevertheless, in the short-run these saving graces are likely the exception, not the rule.

Although the process is surely messier than the distinction in **Table 1** suggests, at the end of the day it is those whose employment fall into the category of at-risk that will bear the brunt of COVID-19 unemployment, while those in secure employment will be disproportionately spared.²

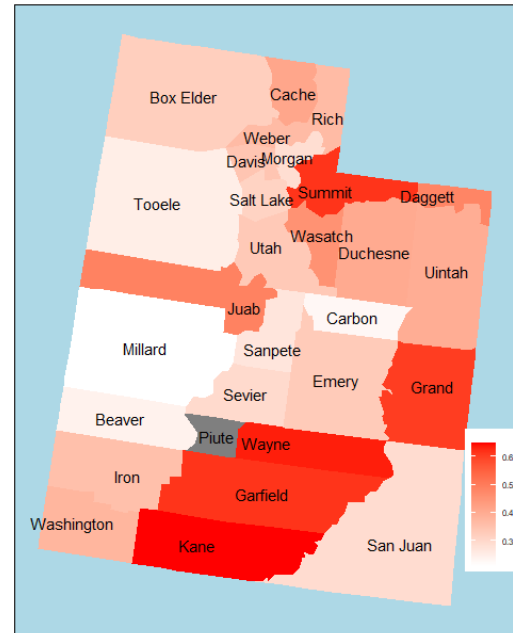
1 Activities such as health care, food and grocery delivery, shipping services, online retail, grocery chains, and medical equipment manufacturing have all seen a rise in demand.
 2 At least in the short-run.

Employment loss

A vital piece of information in crafting policy in response to a crisis is to know the regional distribution of its impact. In terms of the economic impact of COVID-19, the first symptom is job loss. Our goal in this section is to determine which Utah counties are most vulnerable. **Figure 1** displays the employment shares of essential, remote and at-risk (non-essential-non-remote) industries across Utah counties. The five most “high-risk” counties and their associated most populous city are: Garfield (Panguitch), Grand (Moab), Kane (Kanab), Summit (Coalville), and Wayne (Loa). These five counties all have at-risk employment shares above 0.6, meaning that more than sixty percent of their current workforce faces immediate displacement (see **Figure 2**). The economies of these counties are based largely on tourism,³ and as such most employment requires personal interactions and hence falls under the “non-essential” delineation. This is to say nothing of the secondary impact that an effectively global ban on travel will have on demand for these activities.

The outlook for Utah’s high-risk counties is indeed grim. However, collectively these counties make up only about two percent of Utah’s population, and hence do not accurately represent the plight of aggregate Utah economy. The three most populous counties- Salt Lake County, Utah County, and Davis County- together contain more than fifty-six percent of the state’s population. The at-risk share in these densely populated areas more closely reflect that of the state as a whole, which is shown by the bold column in **Figure 1**. While the more populated counties and the state at an aggregate level are less exposed than the previously mentioned high-risk counties, the large populations of these counties mean a significantly higher level of individual who will be potentially unemployed by containment policy alone. Salt Lake County has an at-risk share of 31.3 percent, which when multiplied by the county’s total labor force equates to 209,086 individuals - approximately fourteen percent of the Utah workforce - that are either already or likely soon to be unemployed.

Figure 2: At-risk employment share by county (excludes Piute County due to lack of data)



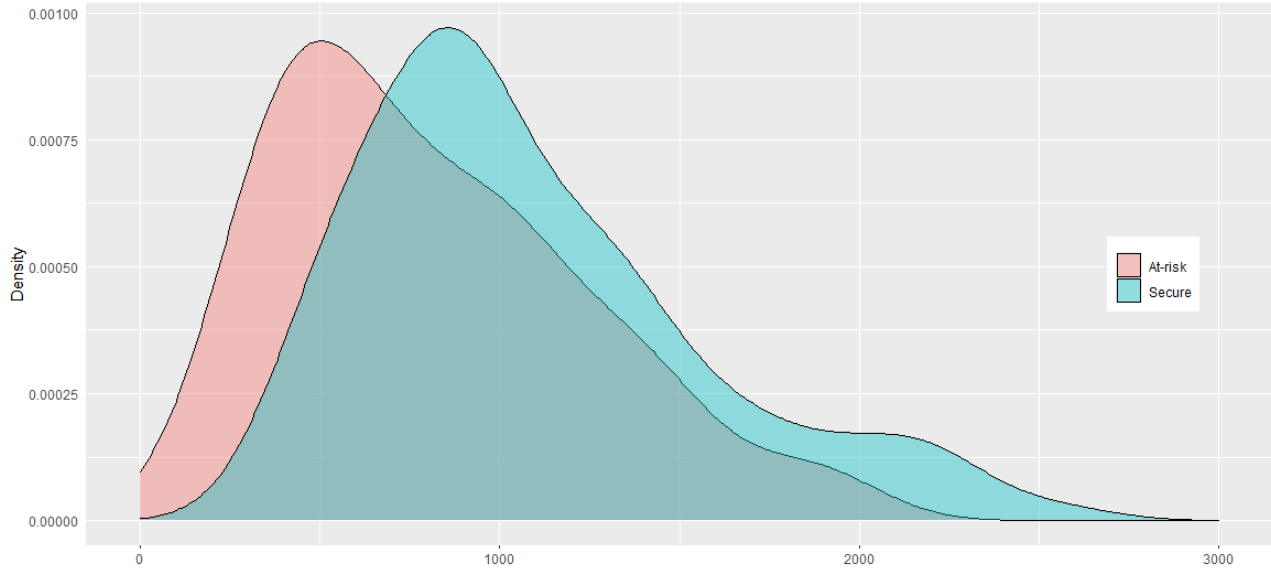
Exacerbating the predicament of at-risk workers, pre-crisis data displayed in **Figure 3** show that at-risk industries (non-essential-non-remote) paid on average only \$672 weekly wage compared to \$897 in secure industries (essential or remotely capable). Displaced workers, who in the short run will come primarily from at-risk industries, are less likely to hold substantial savings in case of a prolonged period of unemployment.

Wage & GDP loss

The impact of the COVID-19 crisis on Utah’s overall economy will be immense. Spurred by massive job loss, the impact of collapsing demand will force further furloughs, layoffs, and closures in the coming weeks, months, and perhaps years. To borrow terminology from epidemiologists, this “second wave” will be just as devastating as the first, and the inoculents of being an essential or remote employee will be wholly ineffective. If all at-risk workers were to become unemployed for a single month the total loss of wage income would be approximately \$1.7 billion. If the crisis continues until the end of August - a “best case scenario” by

³ All of Utah’s national parks are located - at least in part - in the counties of Kane, Garfield, Wayne, and Grand. Summit County, with Park City Resort and Deer Valley ski areas, is an international tourist destination.

Figure 3: Distribution of average weekly wages by industry; at-risk versus secure industries

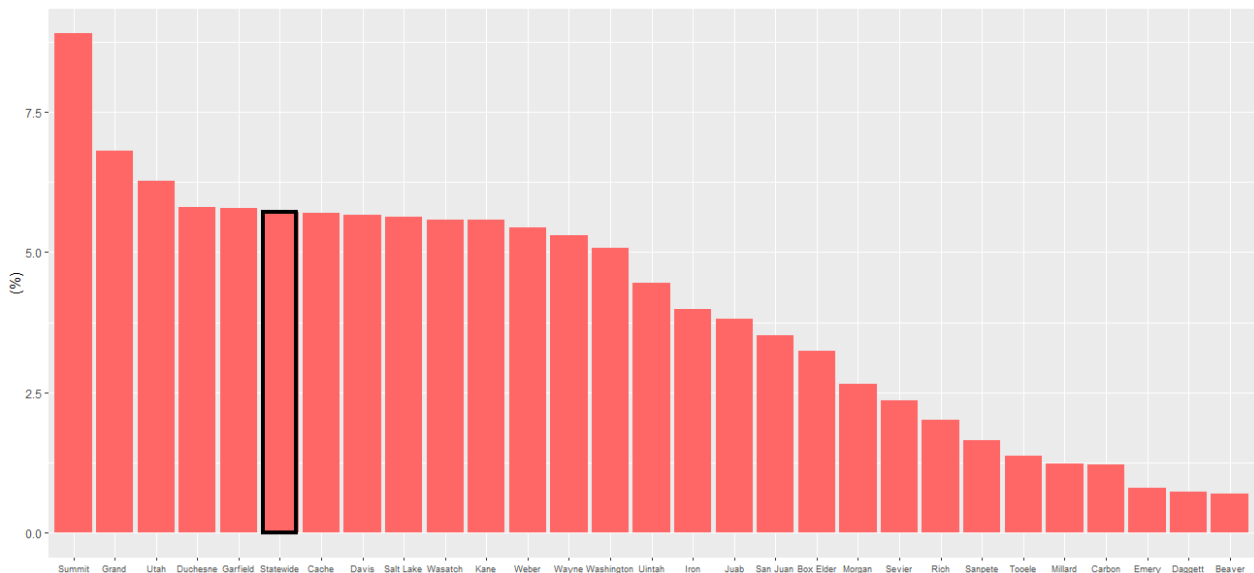


most models – Utahns previously employed in at-risk industries would see a total loss of wage income more than \$10.2 billion, approximately 5.5 percent of the state’s GDP. For counties with economies based around industries such as entertainment, tourism, and recreation, the relative impact on demand will be even more severe (see Figure 4). This is to say nothing of wage loss from essential or remote industries, which will inevitably see payrolls reduced in response to collapsing demand, exacerbating the downturn.

Conclusion

This brief is to serve as a non-comprehensive summary of Utah’s economic vulnerability to the COVID-19 crisis. Based on our findings, its likely the impact will vary across regions and industries. Tourism, hospitality, food services, recreation, and other at-risk industries will be ground zero with regards to the impact of social distancing. Individuals employed in these industries – which tend to pay

Figure 4: 6-month at-risk wage bill relative to annual regional GDP (excludes Piute County due to lack of data)



lower weekly wages than secure industry employment – will be first and hardest hit by these measures. Regional economies based on such activities will be disproportionately impacted.

This crisis, however, will affect all regions and industries in Utah. Even a 6-month hiatus of all at-risk employment equates to nearly half a million unemployed individuals and a loss in wage income of approximately 5.5 percent of the state's GDP. Such a dramatic collapse in income will have powerful multiplicative effects, as businesses in both at-risk and secure industries lay off workers and close their doors in response to insufficient demand. Tax revenue will drop dramatically, and unemployment claims will persist at unprecedented levels. Utahns in all industries must be prepared for the effects of this crisis, regardless of how “secure” their employment may seem.



Economic Evaluation Unit



Table 1: NAICS 3-digit industry classification

	Industry	Essential	Remote
1	NAICS 111 Crop production	1	0
2	NAICS 112 Animal production and aquaculture	1	0
3	NAICS 113 Forestry and logging	0	0
4	NAICS 114 Fishing, hunting and trapping	0	0
5	NAICS 115 Agriculture and forestry support activities	1	0
6	NAICS 211 Oil and gas extraction	0	0
7	NAICS 212 Mining, except oil and gas	0	0
8	NAICS 213 Support activities for mining	0	0
9	NAICS 221 Utilities	1	0
10	NAICS 236 Construction of buildings	0	0
11	NAICS 237 Heavy and civil engineering construction	1	0
12	NAICS 238 Specialty trade contractors	1	0
13	NAICS 311 Food manufacturing	1	0
14	NAICS 312 Beverage and tobacco product manufacturing	1	0
15	NAICS 313 Textile mills	0	0
16	NAICS 314 Textile product mills	0	0
17	NAICS 315 Apparel manufacturing	0	0
18	NAICS 316 Leather and allied product manufacturing	0	0
19	NAICS 321 Wood product manufacturing	0	0
20	NAICS 322 Paper manufacturing	1	0
21	NAICS 323 Printing and related support activities	1	0
22	NAICS 324 Petroleum and coal products manufacturing	1	0
23	NAICS 325 Chemical manufacturing	1	0
24	NAICS 326 Plastics and rubber products manufacturing	0	0
25	NAICS 327 Nonmetallic mineral product manufacturing	0	0
26	NAICS 331 Primary metal manufacturing	0	0
27	NAICS 332 Fabricated metal product manufacturing	0	0
28	NAICS 333 Machinery manufacturing	1	0
29	NAICS 334 Computer and electronic product manufacturing	1	0
30	NAICS 335 Electrical equipment and appliance mfg.	1	0
31	NAICS 336 Transportation equipment manufacturing	0	0
32	NAICS 337 Furniture and related product manufacturing	0	0
33	NAICS 339 Miscellaneous manufacturing	0	0
34	NAICS 423 Merchant wholesalers, durable goods	1	0
35	NAICS 424 Merchant wholesalers, nondurable goods	1	0
36	NAICS 425 Electronic markets and agents and brokers	1	0
37	NAICS 441 Motor vehicle and parts dealers	1	0
38	NAICS 442 Furniture and home furnishings stores	0	0
39	NAICS 443 Electronics and appliance stores	1	0
40	NAICS 444 Building material and garden supply stores	1	0
41	NAICS 445 Food and beverage stores	1	0
42	NAICS 446 Health and personal care stores	1	0
43	NAICS 447 Gasoline stations	1	0
44	NAICS 448 Clothing and clothing accessories stores	0	0
45	NAICS 451 Sports, hobby, music instrument, book stores	0	0
46	NAICS 452 General merchandise stores	0	0

	Industry	Essential	Remote
47	NAICS 453 Miscellaneous store retailers	0	0
48	NAICS 454 Nonstore retailers	0	0
49	NAICS 481 Air transportation	1	0
50	NAICS 482 Rail transportation	1	0
51	NAICS 483 Water transportation	1	0
52	NAICS 484 Truck transportation	1	0
53	NAICS 485 Transit and ground passenger transportation	1	0
54	NAICS 486 Pipeline transportation	1	0
55	NAICS 487 Scenic and sightseeing transportation	0	0
56	NAICS 488 Support activities for transportation	1	0
57	NAICS 491 Postal service	1	0
58	NAICS 492 Couriers and messengers	0	0
59	NAICS 493 Warehousing and storage	1	0
60	NAICS 511 Publishing industries, except internet	1	0
61	NAICS 512 Motion picture and sound recording industries	0	0
62	NAICS 515 Broadcasting, except internet	1	0
63	NAICS 517 Telecommunications	1	0
64	NAICS 518 Data processing, hosting and related services	1	0
65	NAICS 519 Other information services	1	0
66	NAICS 521 Monetary authorities - central bank	1	0
67	NAICS 522 Credit intermediation and related activities	1	0
68	NAICS 523 Securities, commodity contracts, investments	1	0
69	NAICS 524 Insurance carriers and related activities	1	0
70	NAICS 525 Funds, trusts, and other financial vehicles	1	0
71	NAICS 531 Real estate	0	1
72	NAICS 532 Rental and leasing services	1	0
73	NAICS 533 Lessors of nonfinancial intangible assets	0	0
74	NAICS 541 Professional and technical services	0	0
75	NAICS 551 Management of companies and enterprises	0	1
76	NAICS 561 Administrative and support services	1	0
77	NAICS 562 Waste management and remediation services	1	0
78	NAICS 611 Educational services	0	1
79	NAICS 621 Ambulatory health care services	1	0
80	NAICS 622 Hospitals	1	0
81	NAICS 623 Nursing and residential care facilities	1	0
82	NAICS 624 Social assistance	1	0
83	NAICS 711 Performing arts and spectator sports	0	0
84	NAICS 712 Museums, historical sites, zoos, and parks	0	0
85	NAICS 713 Amusements, gambling, and recreation	0	0
86	NAICS 721 Accommodation	0	0
87	NAICS 722 Food services and drinking places	0	0
88	NAICS 811 Repair and maintenance	1	0
89	NAICS 812 Personal and laundry services	1	0
90	NAICS 813 Membership associations and organizations	0	0
91	NAICS 814 Private households	0	0
92	NAICS 999 Unclassified	0	0