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Boise's Hiring Shortage: Why Boise's Businesses are Unable to Fill Positions

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Abstract

In today's ever-changing market, keeping the supply and demand of labor equal can be increasingly difficult. The new technologies and a vast amount of uncertainty about the future can be attributed to job shortages as well as over saturation in certain industries. These problems are caused by the misallocation of job skills and could lead to increases in the cost of labor for companies ultimately pushing businesses to migrate away from the Boise city center. Our group will use data from the US Bureau of Labor Statistics to further explore the intricacies of the supply of labor in Boise. We want to explore what industries are getting hit the hardest and use analytical tools to identify independent variables affecting this. These variables may be new production methods that need specific training, is it intrinsic to the worker (such as not wanting to get into a blue-collar career), has the economy shifted people's willingness to work, etc. We would like to explore preventative/responsive ideas that can help get the labor market into a more socially optimal equilibrium.

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Service-Learning Research Project for Econ 432: Urban Economics
 Faculty Sponsor: Dr. Samia Islam



Research Objective

Our service-learning research examines:

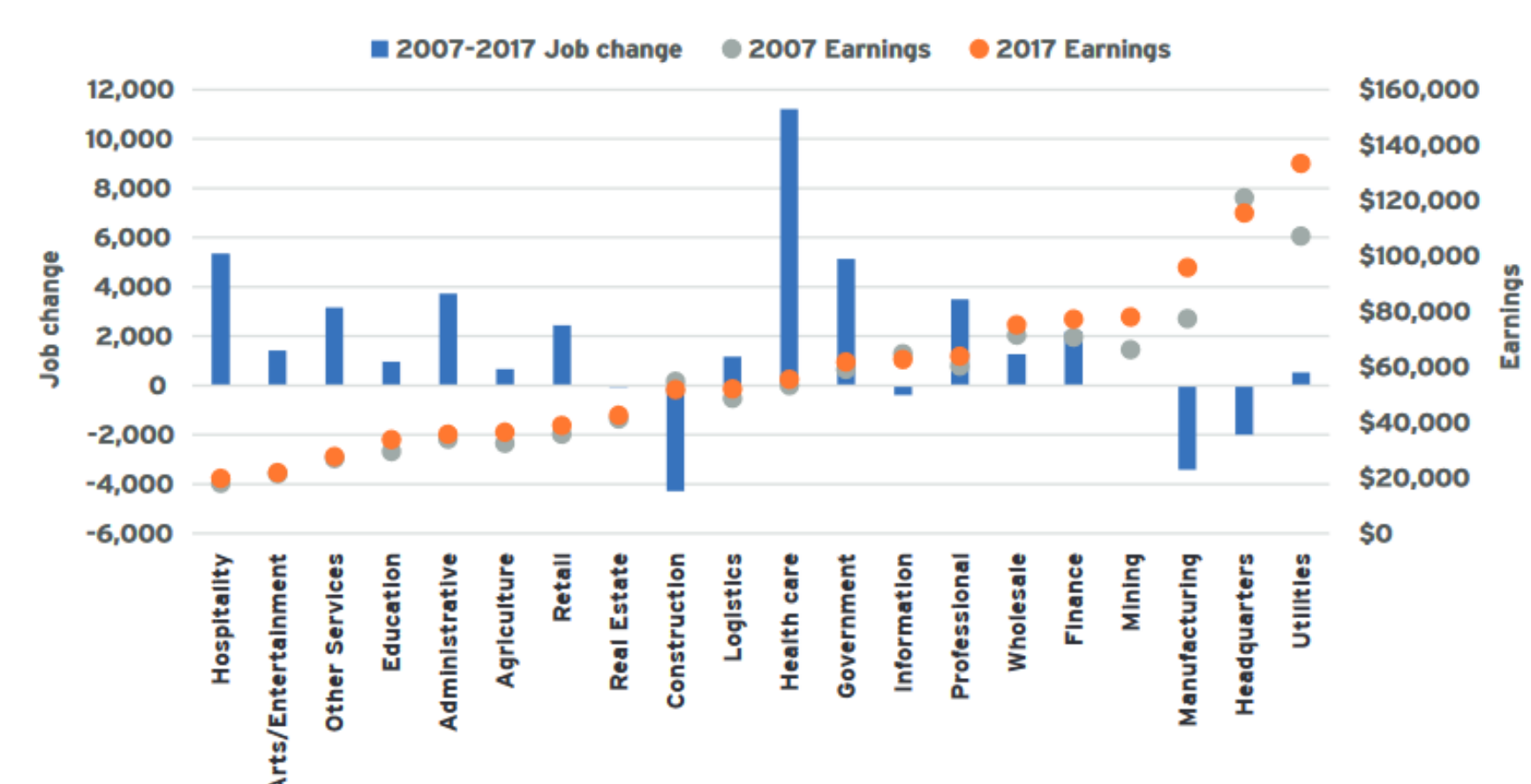
- What Industries in the Boise area are the hardest to fill for employers
- What causes these shortages for the primarily affected industries
- Will businesses leave due to the challenges of hiring in Boise.

Our research objective is to present an analysis of the local hiring market of Boise and to see if the local problems are shared regionally and/or nationally

What Industries struggle to fill positions.

- STEM (Science, Technology, Engineering, Mathematics) fields and healthcare fields are the primary industries that are struggling to find workers
 - Unfilled STEM jobs has increased from 3,813 to 7,633 from 2016 to 2019 [1]
 - “The Idaho Department of Labor projects 49,000 unfilled jobs by 2024, 36,000 of them in science, technology, engineering, and math (STEM) fields”[2]
 - “If you look at Ada County, there's 1 primary care doctor for every 1,100 patients,” [3] This compared to the national average of 1 primary care doctor for every 630 patients is abysmally low.
 - “Healthcare workers are in huge demand and will be for the foreseeable future.”[4]
- In Figure 1 you can see the large job growth in Healthcare

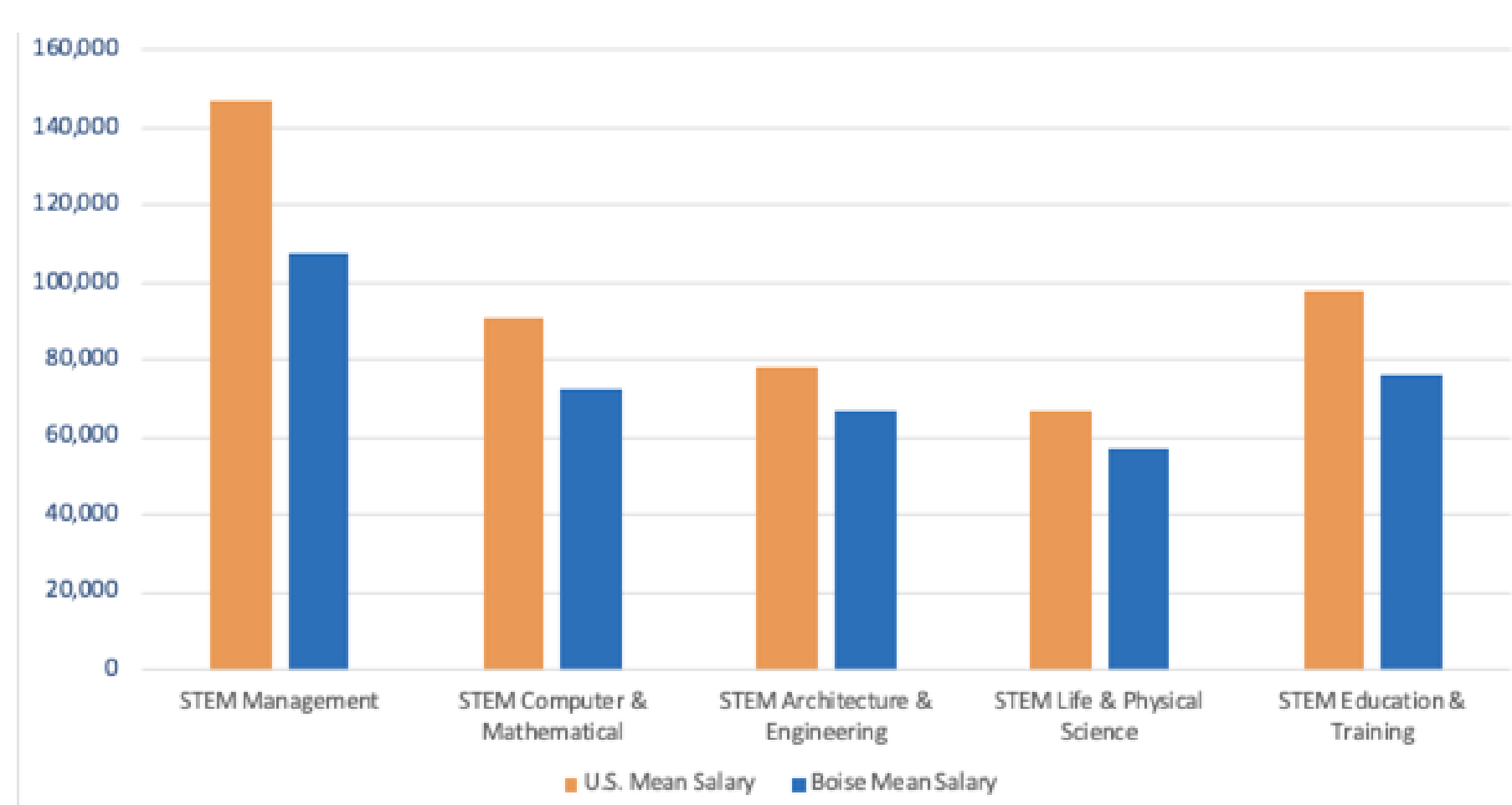
Figure 1: Job Change by sector in Boise Metropolitan Area



STEM

- One of the main causes of shortages in STEM is the fact that these positions require potential employees to have a bachelor's degree or more to apply. This restriction can be more impactful to finding employees in Boise because
 - "Among Idaho's 18-24-year-olds, 6.6 percent have a college degree compared to 10.5 percent for the entire country," [5]
- Another cause of the shortage of STEM positions in Boise is due to the wage gap when compared to the national average
 - This wage gap can be seen in Figure 2 and Figure 3 with figure 3 also showing one of the reasons this wage gap is such a problem

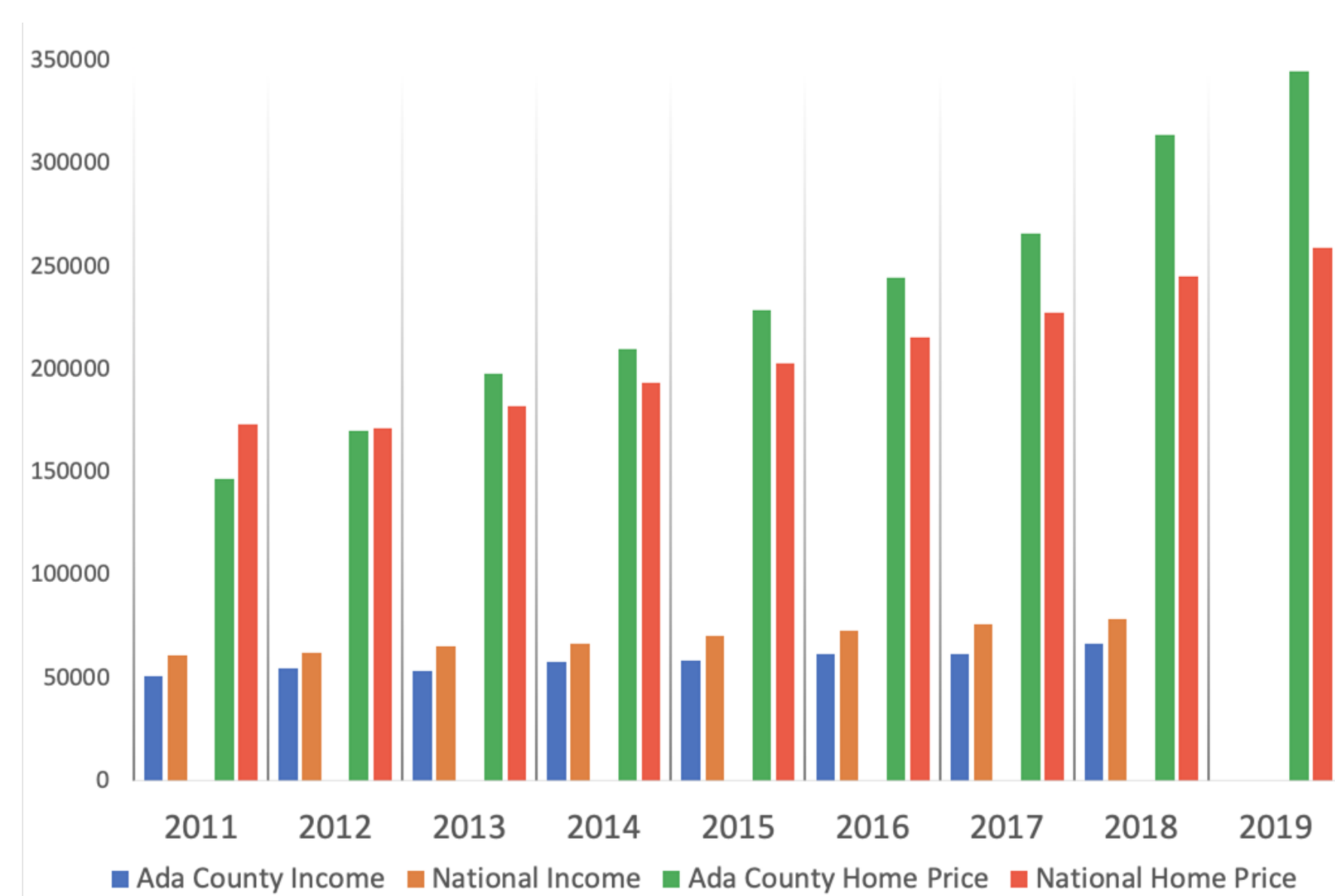
Figure 2: STEM Salaries Boise vs National



Healthcare

- Healthcare as an industry is less internally consistent than STEM and that leads to two main categories that we will regard:
 - Skilled: Which requires a bachelor's degree or higher in order to be qualified for a position
 - Unskilled: Which requires less than a bachelor's degree
- Within skilled healthcare you run into the problem of requiring degrees but until 2018 there wasn't a dedicated medical school in Idaho[6]. Which further reduced the availability of trained physicians.
- Within unskilled healthcare, shortages are caused by the rapid growth of needed support staff in order to care the ageing workforce[7] [8]

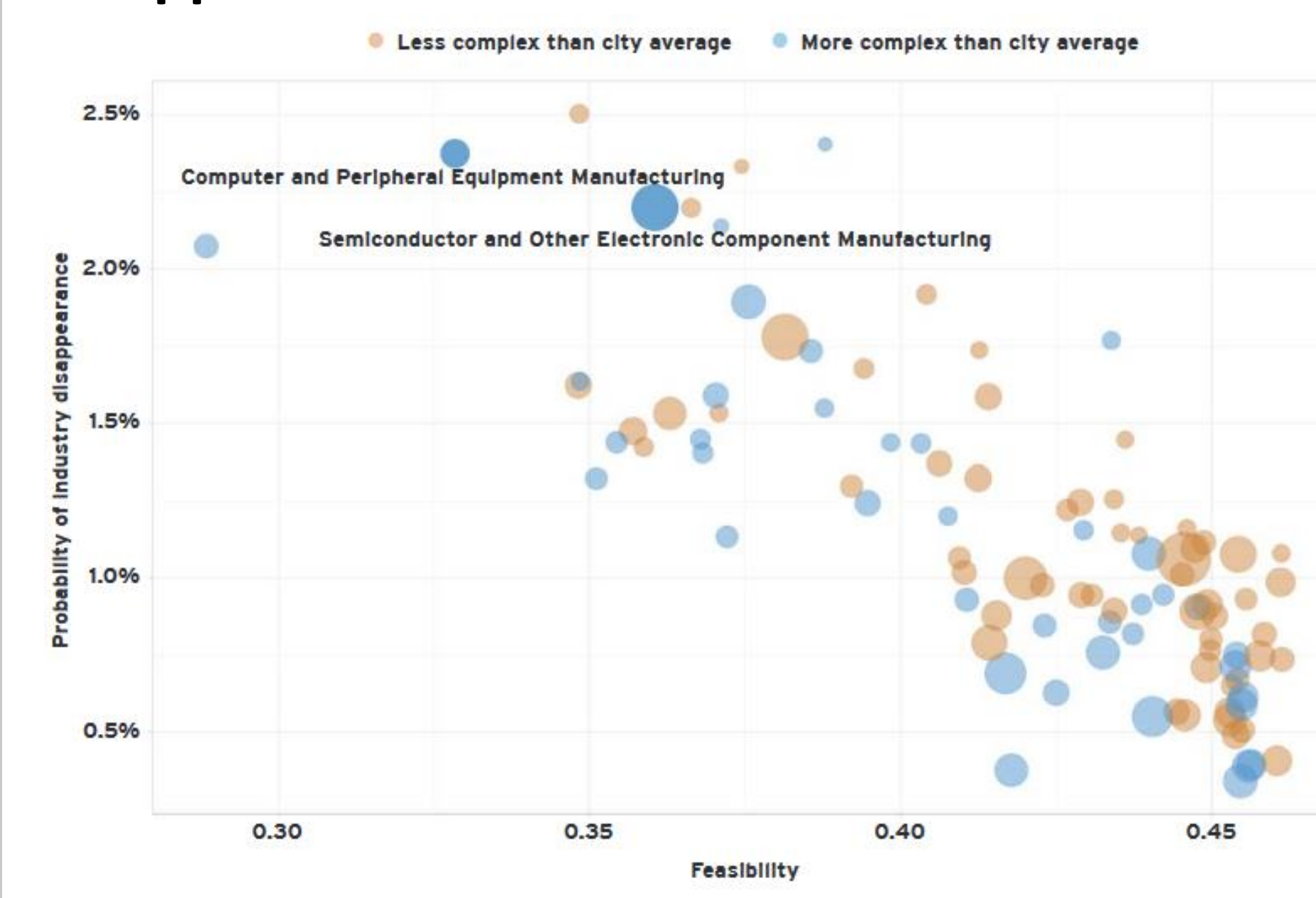
Figure 3. Median Income and House Price- Ada County, ID vs National



The Future for Businesses in Boise

- Figure 4 highlights two Boise STEM-related industries that, given enough development resources to acquire greater comparative advantage, would provide the city with large strategic gains. These gains benefit other Boise industries through innovation and resource spillover [5].
- However, because these industries are very complex comparatively, failing to properly support them through adequately trained workers is one important factor that positions them at a higher level of risk for probability of disappearance.[5]

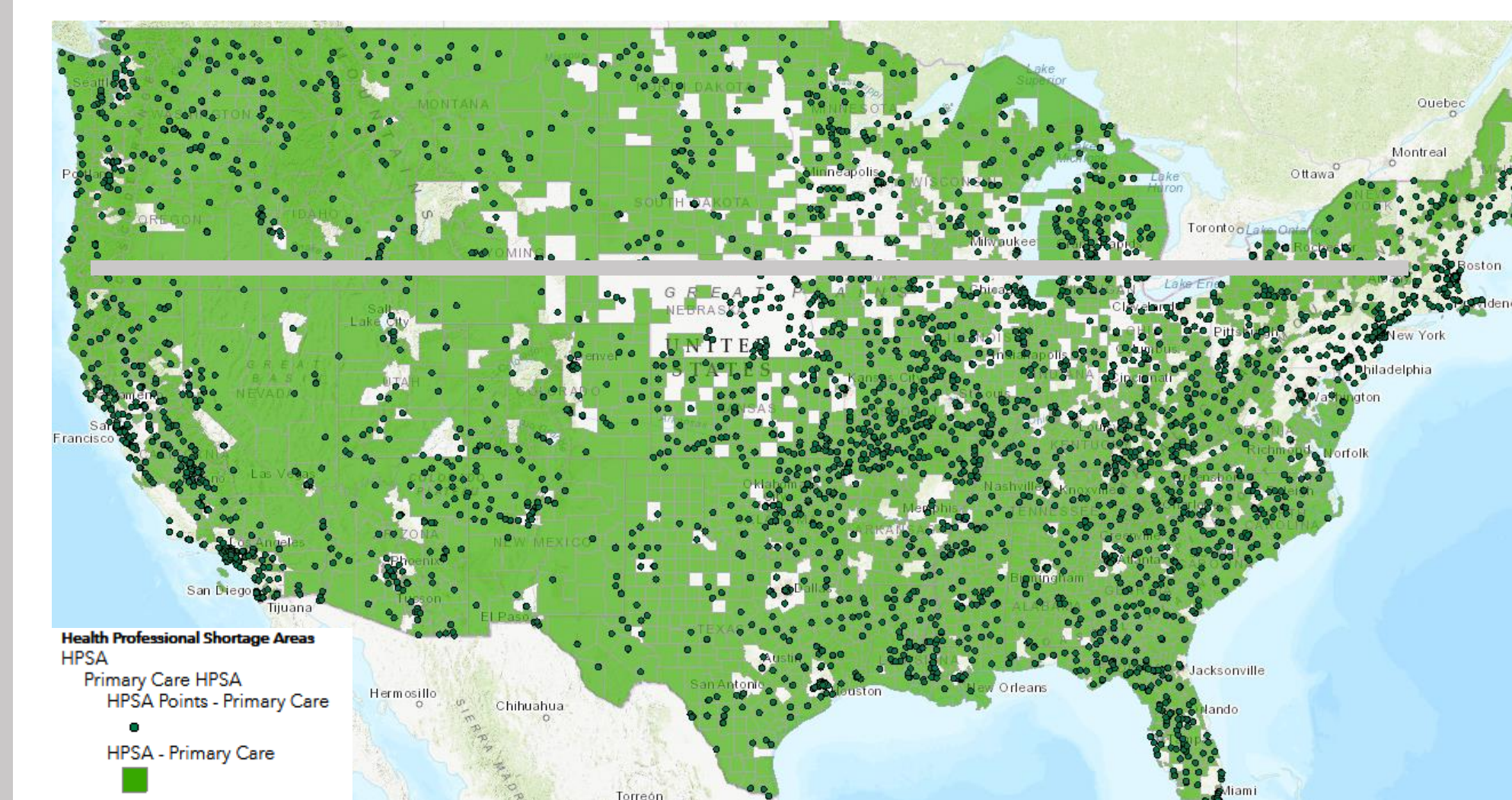
Figure 4. Industries Most Likely to Disappear From Boise



Similar Problems Occurring Nationally

- There appears to be shortages of STEM employees nationwide because “40% of employers reported a shortage of STEM graduates as being a key barrier in recruiting appropriate staff.”[9]
- Healthcare also appears to be having a shortage of employees due to the same aging population that Boise is experiencing.[8]
- Healthcare shortages are occurring regionally and nationally as can be seen on Figure 5

Figure 5: Map of Primary Care Health Professional Shortage Areas (HPSAs)



Conclusion

Our analysis reveals that the shortage in hiring markets appear to be caused by:

- Insufficient amount of applicants hold the required college degrees
- Boise's wage gap in comparison to the national average
- Increase in demand for healthcare workers causing resource to reallocate in a new direction
- Increase in demand of support staff required to care for the ageing workforce
- Lack of support for inclusive growth, the city will need to foster firms that can employ Boise's workers, provide benefits, and pay a living wage.

[1] Hemingway, A., & Harrison, T. (2020). Idaho's Unfilled STEM Jobs Double in Three Years. Boise, ID: Idaho STEM Action. Retrieved from https://stem.idaho.gov/wp-content/uploads/Press-Releases/IdahosUnfilledSTEMJobsRising_FINAL.pdf

[2] Idaho Department of Labor. (2018, July 16). Labor Market Projections for Idaho. Retrieved from <https://labor.idaho.gov/publications/2024-Idaho-Projections.pdf>

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[9] Slane, R. (2019, January 7). Major New Report on the STEM Skills Shortage. Retrieved from <https://www.economicmodelling.co.uk/2019/01/07/major-new-report-on-the-stem-skills-shortage/>

Figure 1. [5]

Figure 2. U.S. Bureau of Economic Analysis, Real Personal Income for Boise City, ID (MSA) [RP14260], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/RP14260>, April 15, 2020; Computations Conducted by Group

Figure 3. Source: Intermountain Multiple Listing Service, Ada County Quarterly Reports; Computations Conducted by Group

Figure 4. [5]

Figure 5. Health Resource and Services Administration. (2016). Primary Care Health Professional Shortage Areas. Retrieved from <https://data.hrsa.gov/maps/quick-maps/config-mapconfig/HSPAC.json>