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Construction Market Boom?: How Has Boise's Growth Affected the Industry & Economy

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Boise's Construction Market Boom: How Has Boise's Growth Affected the Industry & Economy

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



Research Objectives

Our service-learning research examines:

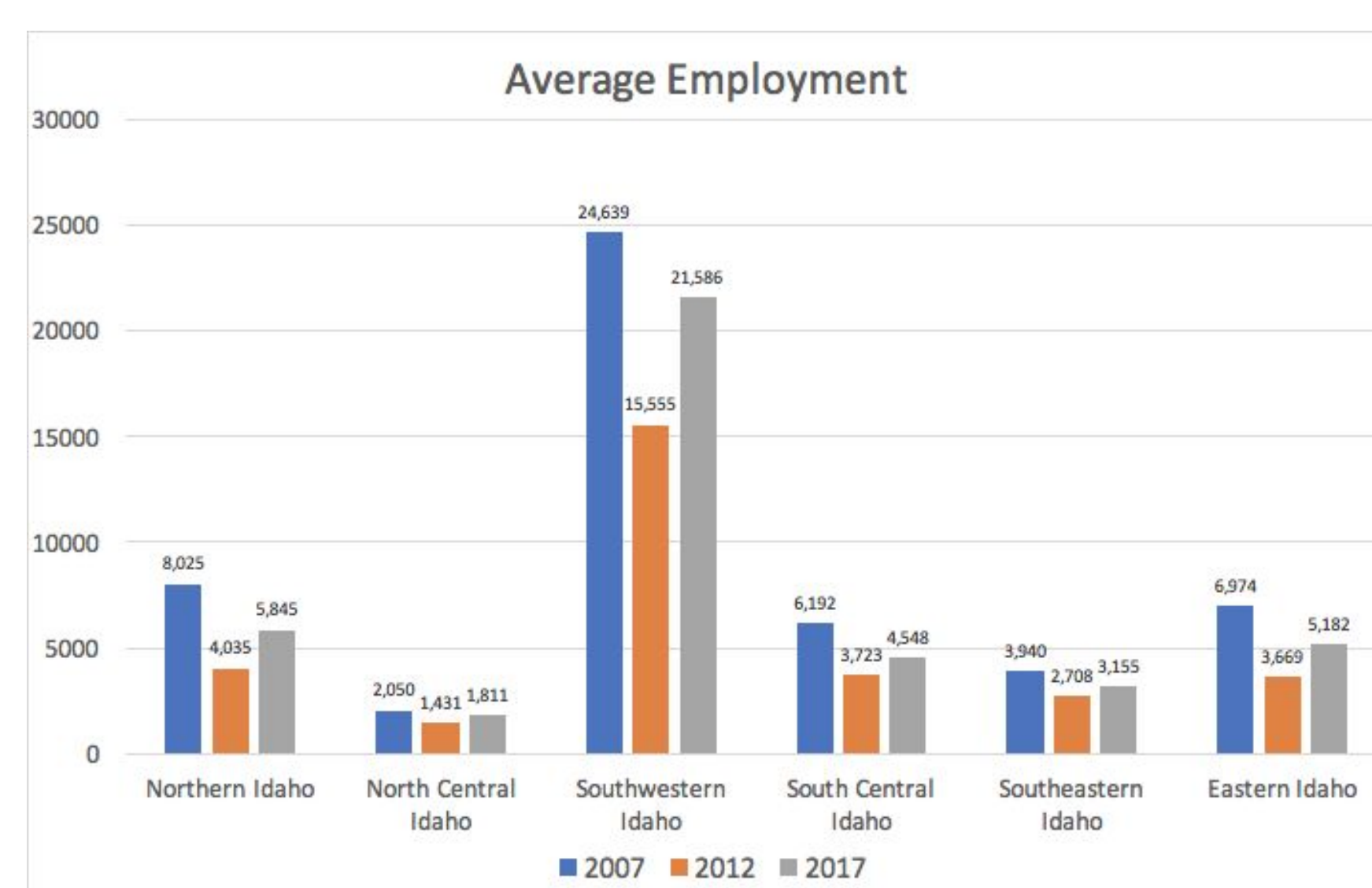
- The construction labor market growth and its relation to workers' wages in the area as well as its correlation to the cost of housing.
- The main source of labor for the construction industry, as well as the factors that go into changes in wage and advances in construction techniques.
- We will be researching how these construction techniques and changes in labor source have affected the competition in the labor market.

Our research objective is to present a comparative analysis of the local construction market of Boise and other similarly sized cities in the last five years.

Who Enters the Construction Industry?

- The average age for those employed in the construction industry is 42.6 years old [2,3]. About 1.7% of those employed are between 16-19 years old.
 - There is a shortage of qualified construction laborers observed nationwide
 - "Students currently attracted to technical fields are less likely to choose an emphasis in Civil Engineering or Construction than in competitive areas." [1]
 - Not enough push in highschool to go into trade school [3]
 - Seen as difficult and unskilled work ["ditch diggers"] [3]

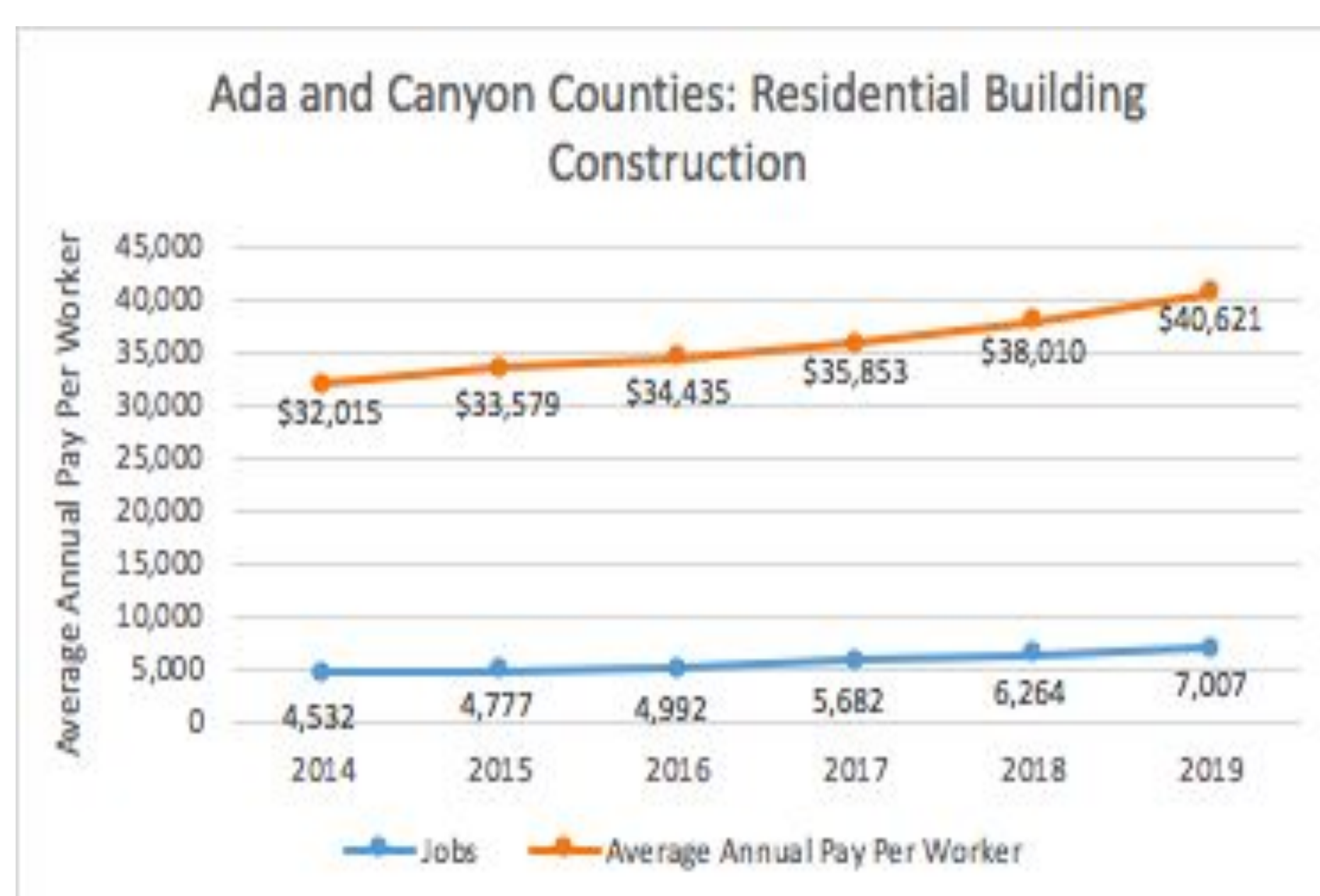
Figure 1. Average Employment Throughout Regions in Idaho



Effects of Lower Immigration

- Immigrants share great value in Idaho's economy
 - As consumers, immigrants add billions of dollars to Idaho's economy.
 - Immigrant entrepreneurs in Idaho generate a hundred million dollars in business revenue [8]
- Immigrants are an essential part of the industrial labor force
 - Around 1 in 12 workers in Idaho are immigrants
 - Immigrants make up over 10% of all industrial workers
 - Immigrants make up over 11% of the Construction market [8]

Figure 2. Number of Construction Jobs vs. Average Annual Pay



What does the Construction Worker Shortage mean?

Construction worker shortage means it will take longer and the price will raise on the home.

- The reason is that many were laid off in the recession and got retrained in manufacturing.
- We need people to get education in electrical, plumbing, masonry and other construction fields. Need to encourage more students into this field. [5]

Impacts of Zoning and Density on Housing Prices

- High housing spending of top-earners reduces housing choices for medium and low income housing leads to them spending a higher portion of income on housing expenditures.
- Houses are being built on smaller lots, this helps contains the sizes of houses.
- The association between lot size and home price is a lot weaker than between home size and price.
- 10% increase in lot size ~ 5.5% increase in price
- 10% decrease in lot size ~ 1.6% decrease in price [7]

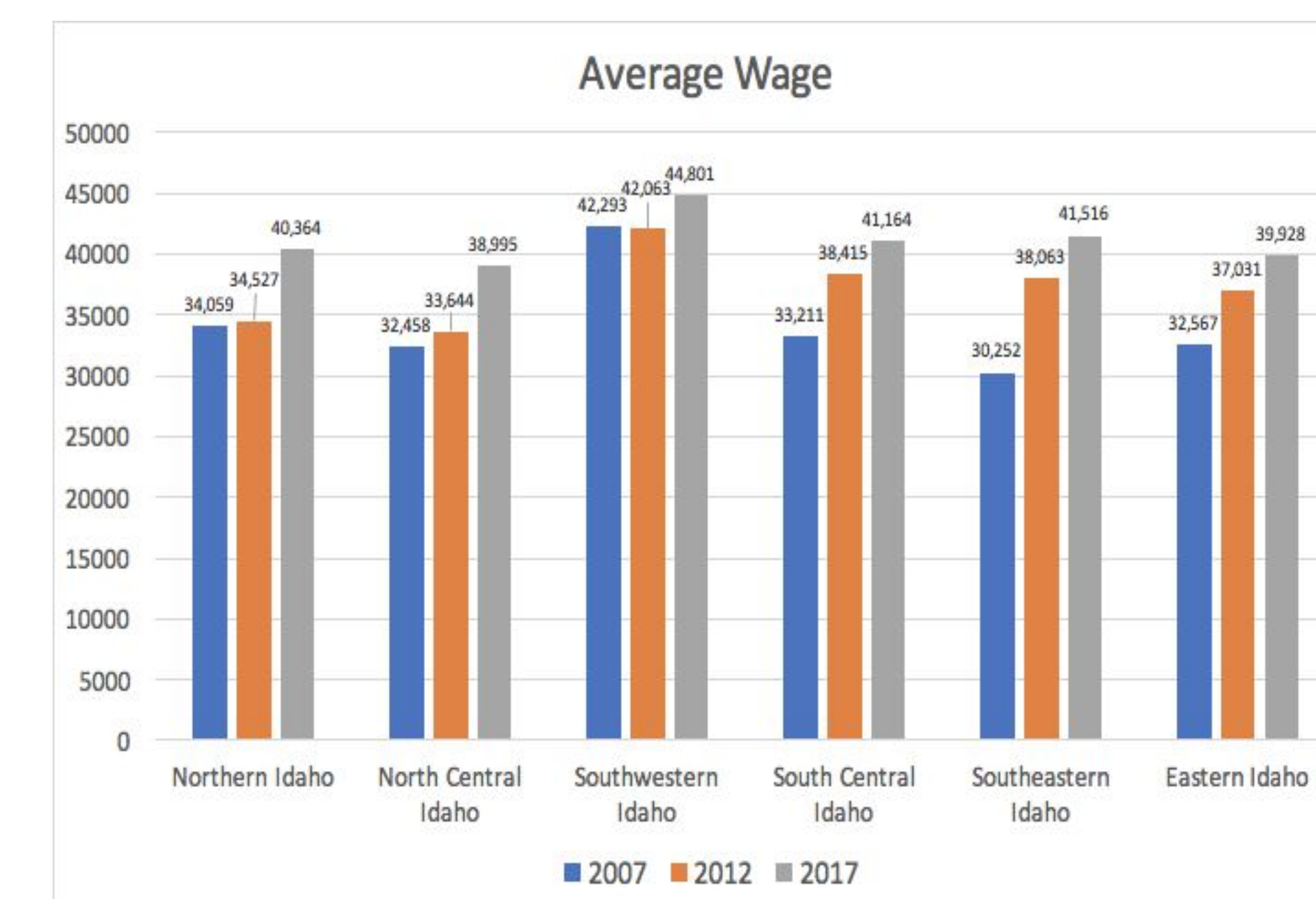
New Manufacturing/Technology Improvements

- Modular/Prefabricated Homes
 - This is where each piece of the home is fabricated to scale in a facility, and is direct fit.[4]
- Drones
 - Provides a major edge when it comes to aerial views/footage, tracking progress of the sight, and monitoring progress. [5]
- 3D Printing/ BIM (Business Information Modeling)
 - Allowed this industry to experience the project before its built. [5]
 - This includes finding errors early in the process rather than after the sight is under way. [5]
- Employee Experience allows for each of the topics stated above to be done in an efficient manner. The knowledge of the employee will determine the efficiency of the task. [5]



Figure 4. A Modular Site-Built Hybrid

Figure 3. Average Wage Throughout Regions in Idaho



Conclusion

Our analysis reveals the following:

- Shortage in labor supply due to:
 - Lower immigration
 - Fewer young people joining the industry
 - New manufacturing techniques
 - Not enough trained laborers
- Wage increase due to labor shortage
 - Demand for higher wages means inefficiency in the market
 - Consumers will need to pay more to compensate
 - Leading to an increase of home prices in the area
- Average wages in Idaho are similar in each region
 - Since 2012 wages have begun to increase back to their pre-2007 / pre-recession peak.



Figure 5. A Construction Worker Overlooks a Job Site

[1] Jones, R. C. (1990). Technical personnel shortages in construction industry. *Journal of professional issues in engineering*, 116(1), 16-26.

[2] Employed persons by detailed industry and age. (2020, January 22). Retrieved from <https://www.bls.gov/cps/cpsaat18b.htm>

[3] Chini, A. R., Brown, B. H., & Drummond, E. G. (1999, April). Causes of the construction skilled labor shortage and proposed solutions. In *ASC Proceedings of the 35th Annual Conference* (pp. 187-196).

[4] Parsons, G. (2017, June 12). Shortage of construction labor in Treasure Valley. Retrieved from <https://www.ktvb.com/article/news/local/shortage-of-construction-labor-in-treasure-valley/448150029>

[5] HOME. (2020, February 3). Retrieved February 5, 2020, from <https://www.bigrentz.com/blog/construction-technology>

[6] Automated Volumetric Modular Construction. (retrieved February 4, 2020, from <https://autovol.com/>). Re

[7] Dong, H., & Hansz, J. A. (n.d.). Zoning, density, and rising housing prices: A case study in Portland, Oregon. Retrieved from <https://journals.sagepub.com/doi/pdf/10.1177/0042098018813251>

[8] Immigrants in Idaho. (2018, May 9). Retrieved from <https://www.americanimmigrationcouncil.org/research/immigrants-in-idaho>

Figure 1. Idaho Department of Labor. (2018, July). *2017 Idaho Labor Market and Economic Report*. Labor.idaho.gov. <https://www.labor.idaho.gov/dnn/Portals/0/Publications/Labor%20Market%20Report%202017%20-%20FINAL.pdf>

Figure 2. Kathryn Tacke (email communication, March 31, 2020)

Figure 3. Idaho Department of Labor. (2018, July). *2017 Idaho Labor Market and Economic Report*. Labor.idaho.gov. <https://www.labor.idaho.gov/dnn/Portals/0/Publications/Labor%20Market%20Report%202017%20-%20FINAL.pdf>

Figure 4. (n.d.). Retrieved April 14, 2020, from https://www.builderonline.com/greenbuild-kb-home-project-sponsor-pavilion/a-modular-site-built-hybrid_o

Figure 5. U.S. Up 200,000 while Canada Down 50,000 in August Jobs Reports - constructconnect.com. (2018, September 7). Retrieved from <https://canada.constructconnect.com/dcn/news/economic/2018/09/u-s-200000-canada-50000-august-jobs-reports>