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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:

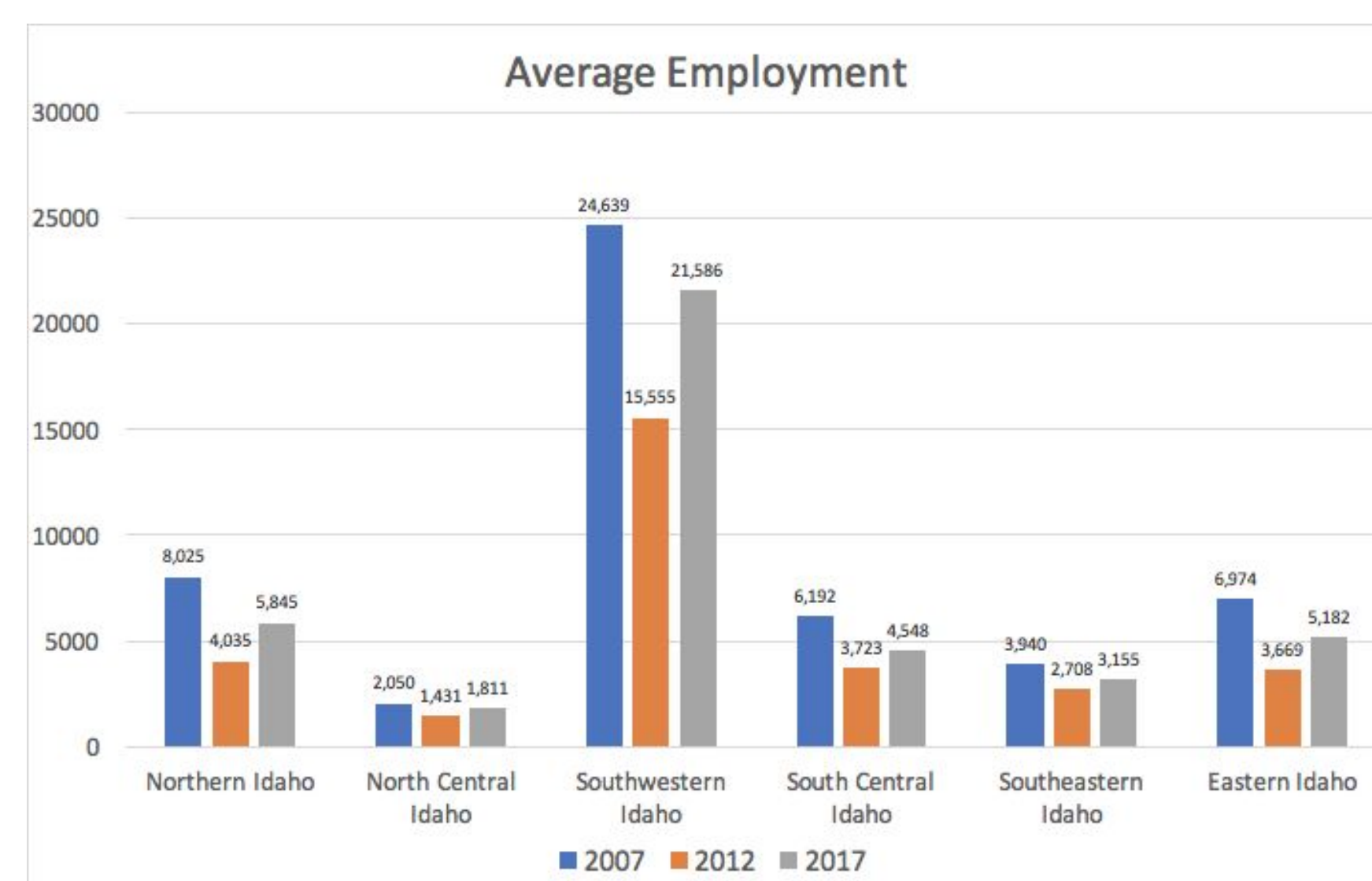
- The construction labor market growth and its relation to workers' wages in the area as well as its correlation to the cost of housing.
- The main source of labor for the construction industry, as well as the factors that go into changes in wage and advances in construction techniques.
- We will be 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 high school to go into trade school [3]
  - Seen as difficult and unskilled work ["ditch diggers"] [3]

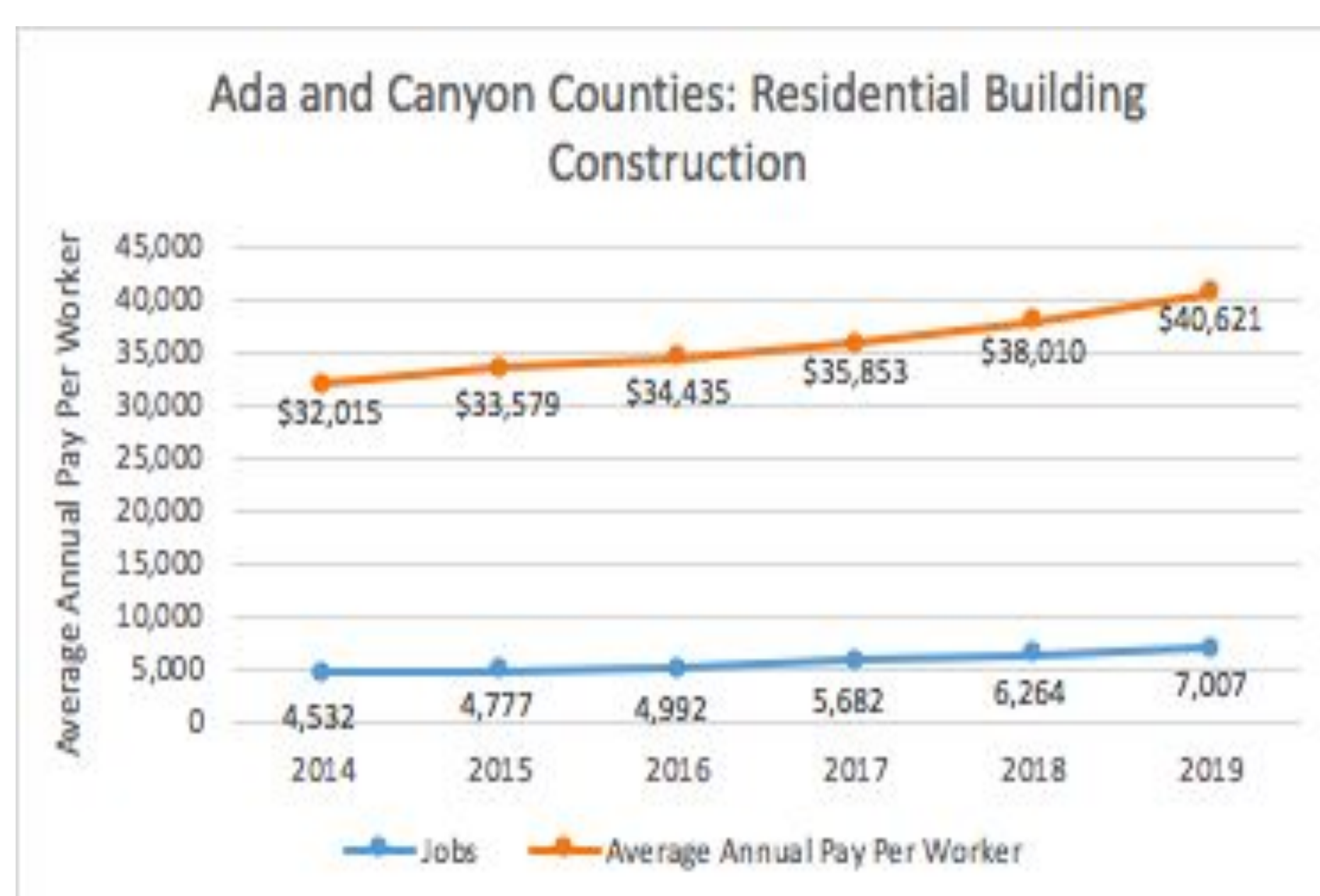
Figure 1. Average Employment Throughout Regions in Idaho



## 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]

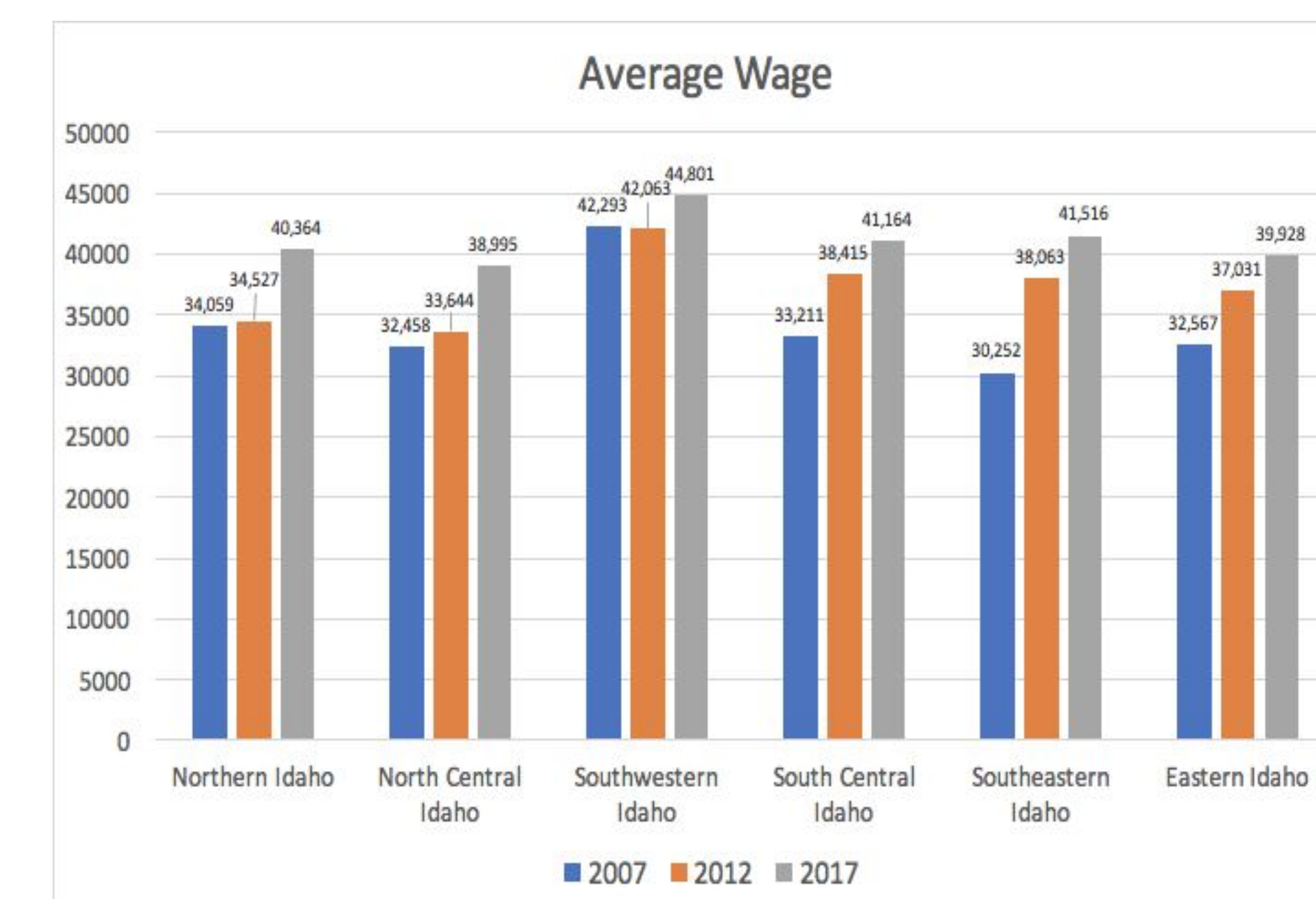
## New Manufacturing/Technology Improvements

- 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](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>