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Wage Inflation and Demand for Skilled Labor Positions: A Closer Look at Boise's Construction Industry

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Abstract

Boise is experiencing high rates of construction development, land use and resource consumption. The skilled labor required to fill positions in real estate and commercial development are therefore increasingly in demand. Our research will determine if wage inflation trends correlate with demand for skilled workers as the labor shortage worsens, growth accelerates and resources (lumber) become more scarce. We will focus on the construction and extraction industries and examine data from the Bureau of Labor Statistics, Idaho Department of Labor and local construction firms in Boise. We will also research the reasons for the labor shortage by examining trends in the push for a college degree from local high schools based on state policies. For example, we will look into the Idaho Department of Labor's emphasis and investment in vocational programs, pushing workers towards skilled positions. As more highschool graduates are taught that a four year degree is their only avenue for success, the proportion of students entering vocational programs may be dwindling. We expect to find wage inflation for skilled laborers in the construction sector as a way to compete for workers due to the labor shortage.

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Overview

According to data from U.S. Bureau of Labor Statistics, in 2019, Boise had 19,360 jobs in construction and extraction, accounting for 5.8% of local employment. Eighty three percent of construction firms in Idaho reported that they have had a hard time filling hourly positions. The objective of this research is to examine the causes of this labor shortage and determine the trends in real wages in our construction industry.

Causes of Boise's Labor Shortage

- Competition from other industries
- Workers aging out of the industry
- Idaho's low unemployment rate
- Focus on higher education
- Lack of vocational programs
- Wage inflation not keeping up with growth in industry

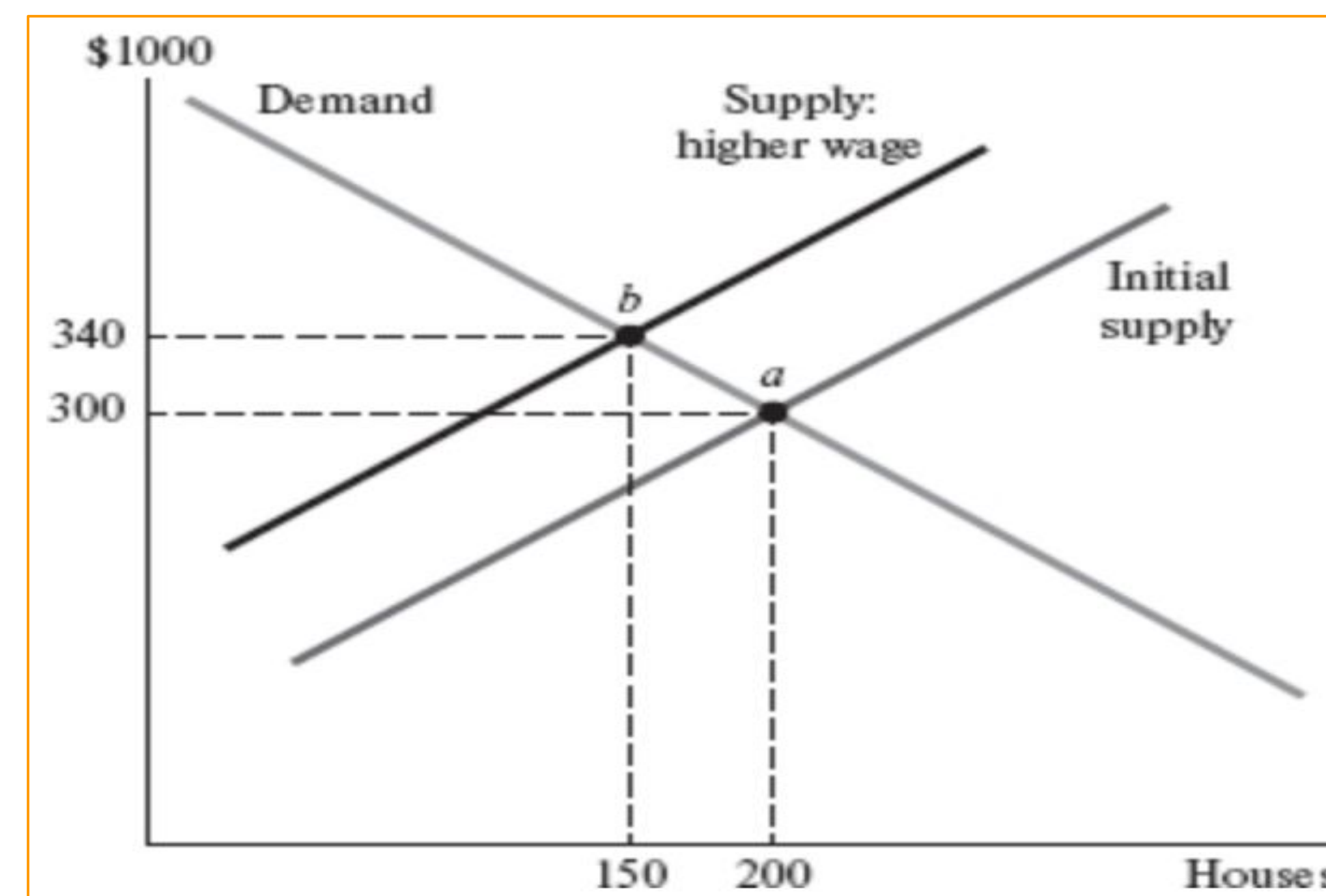
Figure 1. Average Income Per Worker in Boise Construction Industry: 2012 to 2019 (2012 dollars)



Wage Inflation Analysis: Wage Increase

- Wage for carpenters is high when demand for homes is "hot"
- Housing market reacts by moving demand prices of houses upward which
 - Shifting supply curve to the left and decreasing quantity of houses supplied (Fig. 2)

Figure 2. Supply and demand of housing and the response to changes in wage. With a higher demand for houses, the supply of wage shifts to the left, increasing the initial wage.



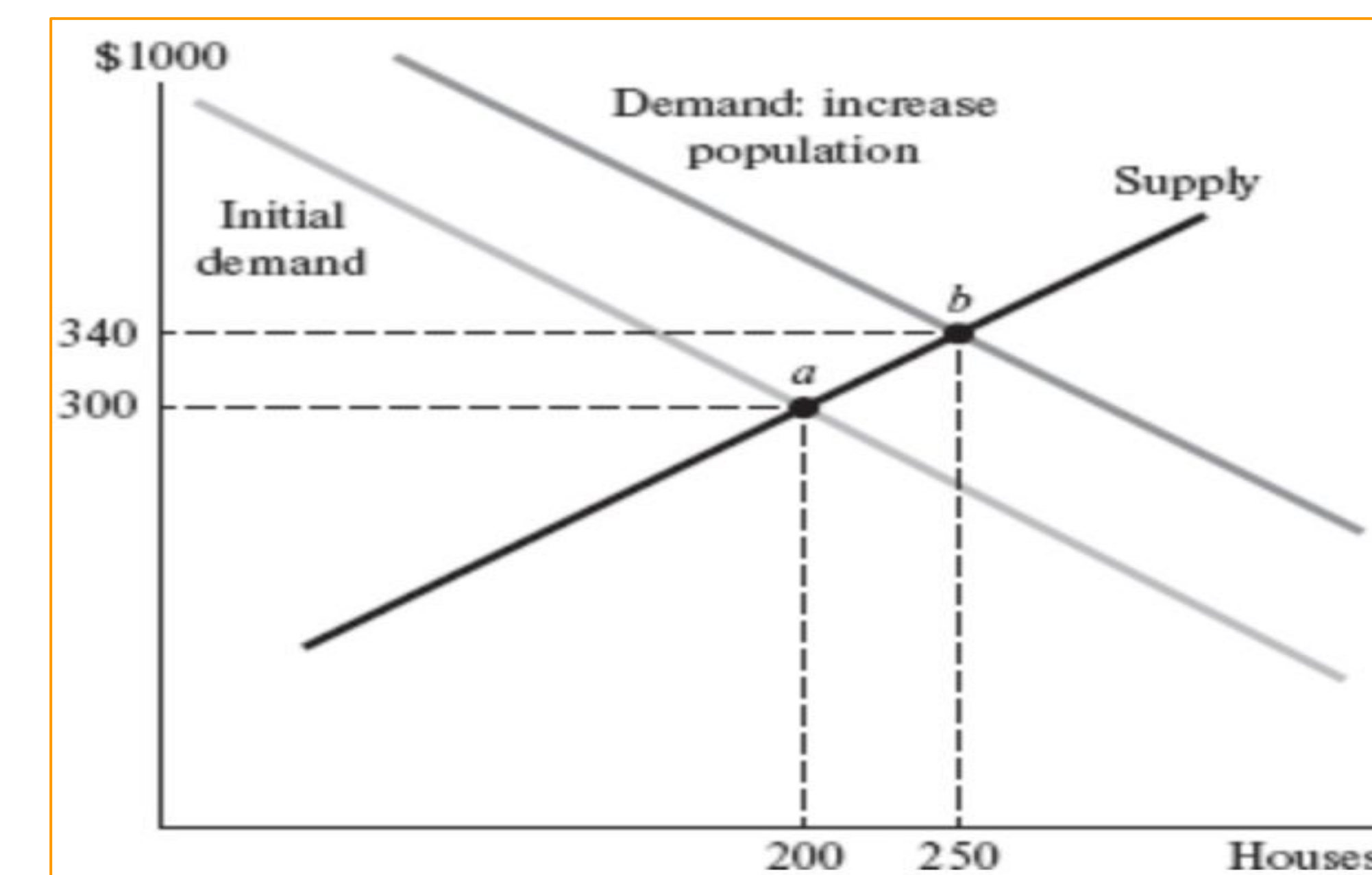
Increasing Pay

- Carpenters pay increasing across the United States by approx. 3.2%
- Pay increased more in public sectors than private union sector.
- Market corrections in the decade following the 2008 housing crash

Wage Inflation Analysis: Increase in Boise Population

- Increase of city population would shift the housing demand curve to the right
 - Increasing equilibrium price and quantity of houses (Fig. 3)

Figure 3. Supply and demand of houses in relevance to population. With a higher supply, the population increase along with the demand for houses. Changing the equilibrium price of available houses.



Findings: Policy Efforts to Reduce Labor Shortage

- Workforce Development Council tasked with developing diverse education paths
- Scholarships for vocational programs and trade schools

Improving Safety With Technology

- Artificial intelligence: tracks progress on site and errors that can be dangerous
- Virtual Reality: equipment training
- Wearables/Site sensors: helps limit high exposure of temperature, noise, and dust and alerts them when entering a hazardous/restricted area

Recommendations

- Increase funding in vocational degrees and in-job training programs
- Increase the average salary for workers in construction in response to labor shortage
- Provide more scholarship and training opportunities in trade programs
- Improve safety with technology and regulations
- Increase incentives for workers to join unions

Conclusion

- The labor shortage in Boise's construction industry has led to wage inflation and an increase in demand for skilled workers.
- If policy changes, increase in pay, technological safety improvements and education initiatives take place, we can expect to see a reduction in the labor shortage over time.

Sources:
<https://www.idahoagc.org/blog/construction-workers-harder-find-idaho-rest-nation>
https://www.idahopress.com/news/local/tech-construction-firms-continue-to-struggle-to-fill-openings-in-idaho/article_d27c1b1e-d7c9-5802-a9aa-943489e067e1.html
<https://idahonews.com/news/local/constructing-idahos-future-how-the-labor-force-keeps-up-with-demand-for-growth>
https://labor.idaho.gov/publications/workforce_taskforce_final_report.pdf
 Figure 1: <https://www.labor.idaho.gov/dnn/Portals/0/Publications/Labor%20Market%20Report%202017%20-%20FINAL.pdf>
<https://www.familyhandyman.com/article/wages-skyrocket-for-us-construction-workers/>
 Figure 2 and Figure 3: https://bookshelf.vitalsource.com/#/books/chapter_2, <https://wde.idaho.gov/>, https://wde.idaho.gov/wp-content/uploads/sites/62/2018/06/Final-WD_TF-Report.pdf
<https://www.constructionconnect.com/blog/technology-reshaping-construction-industry>

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