



Effect of Labor Market Conditions on Human Capital During World War I

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Introduction

- During World War I, fields in Europe were unexpectedly destroyed. The intensity of this decline in output was massive and unexpected due to the fast recovery of Europe after the Treaty of Versailles.
- U.S. agricultural exports doubled in the late 1920s with prices more than doubling, farm receipts increasing by more than 70 percent, and agricultural land prices increasing by an average of 170 percent nationally. This also meant that the wages of farmers would drastically rise as farmers quickly increased in demand.
- This meant that for children who are close to high school completion, rising wages may incentivize students to drop out, enter the labor force, and take advantage of the booming agricultural economy. However, for those who are not of the age to work, this can mean that rising wages allow parents to have more money to invest in their education.
- As a result, these patterns can be critical to analyze when understanding the effect of rising wages on long term educational outcomes. The research presented here helps examine the role of wages on overall investment in human capital, specifically during the World War I era through the analysis of enrollment and funding statistics.

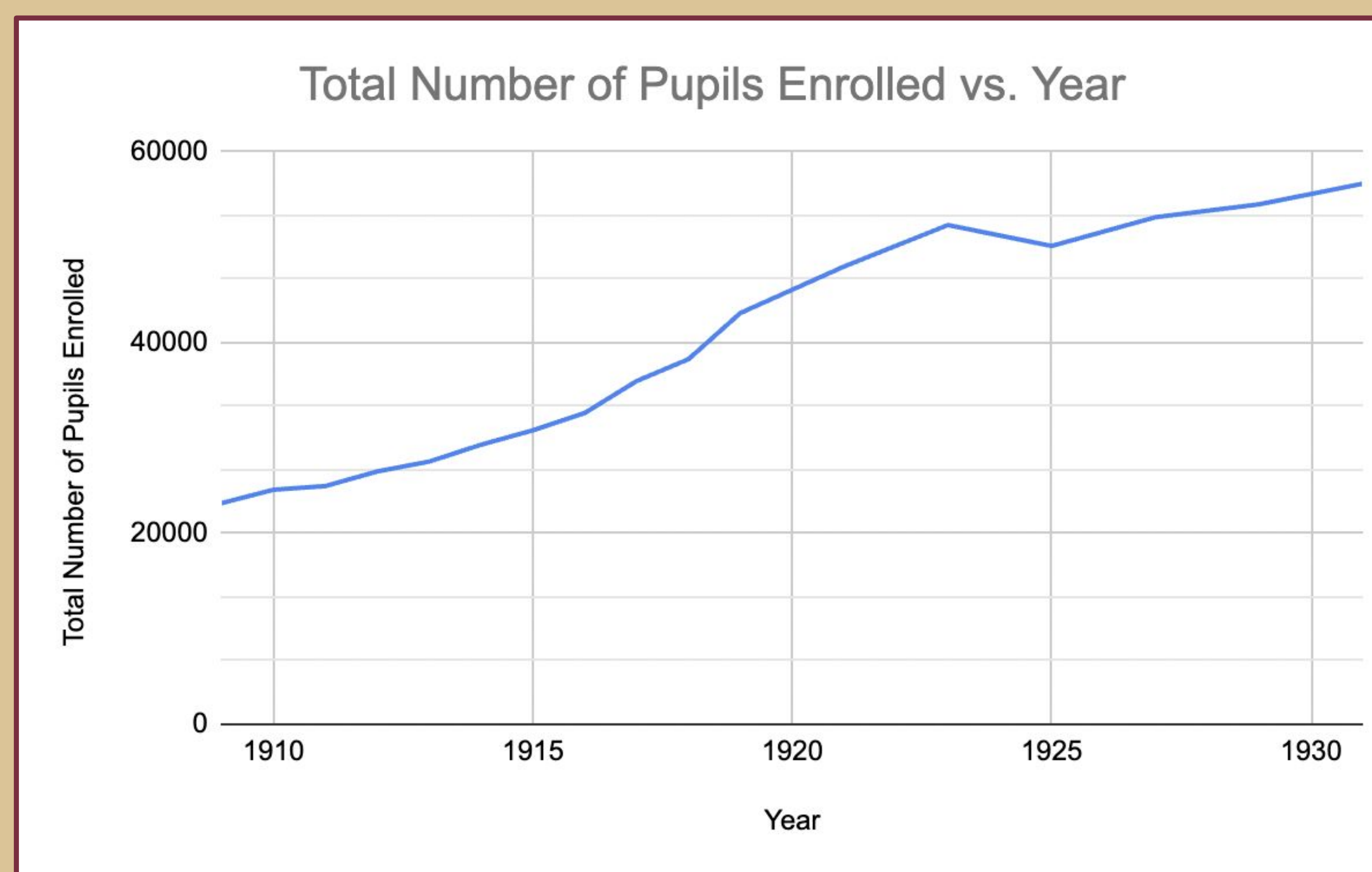


Figure 1: Line graph for the total number of pupils enrolled for all 13 counties in Wyoming from 1909-1931.

Results

- In 1909, Wyoming had 23,182 pupils enrolled across all 13 counties.
- This number steadily inclined until 1924-1925 when Wyoming had 50,138 pupils enrolled, which was 2,192 pupils less than the previous 1922-1923 school year.
- However, from 1926-1927, the number increased again to 53,148 pupils and continued its steady incline. This brief decline shows that there was a period, shortly following the end of World War I, where the number of pupils enrolled significantly dropped, which is highlighted by the drop in the graph.

This data point symbolizes the beginning of the agricultural boom that occurred in the United States. Additionally, it begins to confirm the preliminary research conducted and the research question asked whether wages could influence investment in human capital.



Discussion

- By understanding that there was a clear decline in pupils enrolled, it becomes clear that the wages of farmers impacted the drop-out rates for pupils as they began to leave school.
- This study shows that during the agricultural boom, civilians prioritized wages as opposed to investing in human capital.
- On the other hand, the data from 1926-1927 show that investing in education is more common after civilians received more money from the boom, which is evident from the sharp increase in pupils enrolled.
- It is important to note that the above graph only addresses Wyoming's data, meaning that the results from the rest of the 49 states could be vastly different. Depending on Wyoming's environmental characteristics, the data could have been skewed. Although, compiling the data from all 13 counties in Wyoming gives the graph credibility as it gives a more accurate overview on Wyoming.
- This data can be used to emphasize the role of income in education, helping drive education-shaping policy during economic shocks. For future research, it could be helpful to understand specific educational policies that were put in place during this time that influenced the rising of human capital investment.
- By recognizing trends in this data, a broader understanding of the American impact of World War I's agricultural boom on education will be achieved. These trends will extend to the research question as it will show how the number of students in school reacted to the political and economic atmosphere at each point during the World War I era.
- However, this research is still in progress, as the demographics (race and gender) are still being analyzed.

Year	Total Number of Pupils Enrolled
1909	23182
1910	24584
1911	24967
1912	26502
1913	27536
1914	29301
1915	30816
1916	32630
1917	35979
1918	38271
1919	43112
1921	47988
1923	52330
1925	50138
1927	53148
1929	54505
1931	56670

Figure 2: Data table for the total number of pupils enrolled for all 13 counties in Wyoming from 1909-1931.

Methods

- The study measures changes in school enrollment in the United States before and in the aftermath of World War I with the boom in agricultural exports and increased demand for farm workers. It analyzes the number of students attending school in each state's counties throughout the World War I era.
- The subject of the study is students across the country. In a typical sheet that the researchers were given, the data was broken up into smaller groups (ex: black and white, boy and girl).
- The researchers collected data from state records recording the total enrollment of students in each county, year by year.
 - The data was inputted into Microsoft Excel manually or with the assistance of Amazon OCR.
- Once the data was in Excel, a linear regression was analyzed for the data, using wages as the explanatory variable and education enrollment as the response variable in order to test the relationship between people's wages following the World War I era agricultural boom and their human capital decisions regarding education.
- Additionally, literature concerning human capital supplemented the understanding of the trendline by explaining potential causes for dropout, like the incentive to earn more money in the booming agricultural economy.