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U.S. Economic History - ECON 1010-1000

How did average income vary for people during and after World War II based on birthplace?

Introduction

The question our group is looking to answer is how average income varied for particular immigrant groups during and after World War II, based on their country of origin. This is important to consider as war can displace people's livelihoods, and seeing how it affects immigrants in the context of jobs and income could help us understand how it could affect them in future conflicts. We hypothesize that it should more positively impact immigrant groups who are seen as allies, while being more neutral towards others, and negative towards enemies. For testing, the dataset from the "Integrated Public Use Microdata Series (IPUMS) USA" collects and documents U.S. census microdata, including income. The primary variables that we are measuring are annual income from 1940 to 1960 compared to their country of origin. For context for the data, we are using immigration policies such as the "War Refugee Board," Alien Registration Act, and more. Our units of observation are the average family incomes of people from the entire US, measured within the economic context of the respective years.

Historical Background and Related Literature

World War II ranged from 1939 to 1945, and its result had a profound impact on global immigration patterns. It was a period of immense upheaval, displacement, and movement of people, as the war's consequences rippled across continents. We were able to find several resources expanding on the context of this period. One of the papers discusses US immigration policies during World War 2 such as the Alien Registration Act of 1940 that affected foreigners'

liberties (Daniels 2006). This gave context in terms of how policies changed to take into account the new population and international tension. “Origins and Destinies: Immigration to the United States Since World War II” provides an overview of immigration to the United States since World War II, arguing for America's global reach and hegemony (Rumbat 1994). The article emphasizes the polarized socioeconomic origins of today's immigrants, from highly educated professionals to impoverished laborers and refugees. Finally, we were able to look into economic policies that allowed immigrants from countries such as Mexico to work in the US due to labor shortages and how they used contracts to bring people from places like the West Indies to work through the paper, “America's Migration Treaties during World War II” (Moore 1949).

Data and Empirical Strategy

We used census data from 1940, 1950, and 1960, sourced from IPUMS USA. The goal was to analyze the trends in average income over these three decades based on birthplace. The dataset included information on individuals' birthplaces, categorized into specific regions such as the USA, France, Germany, Mexico, Japan, and China. We compared their birth region to the annual average wage the different ethnic groups received to compare their earnings before and after the war to see if their income was disproportionately affected later on. The data, code, and results can be seen in Appendix 1. We created a data frame to store all the data and ran data preprocessing in order to categorize them into 5 fields, based on their self-reported birthplace (BPL) and self-reported race (RACE). Next, certain samples were excluded from the analysis as income values were missing, based on the IPUMS legend.

First, we calculated average income in different birthplace categories and generated separate bar graphs for each year. These graphs can be seen in Appendices 2-4. Next, we calculated the average income for each birthplace group across the surveyed years, and

documented this in a comprehensive file, 'average_income_per_year.csv'. This data was then used to plot a line graph to illustrate the longitudinal patterns of average income for each birthplace category. The data from this can be seen in Appendices 5-6.

There is some potential for error in this dataset. Firstly, the data was self-reported, increasing susceptibility to self-report bias as people may inflate their income. Next, IPUMS reports some possibility of non-response bias such as the excluded values. Our data preprocessor filtered this out, but it is possible that other values could have represented forms of non-response bias, negatively skewing some of the values. Also, this dataset does not include immigrants from the UK, a major country involved with the war, meaning we lose a group that has ties to the war like the ones we compared, such as France and Japan. Lastly, when it comes to sample size, we had 35,000 immigrants reporting their income while we had over 1,300,000 samples for US individuals. This drastic difference could significantly impact the statistical validity and generalizability of our findings. The larger sample size for US individuals provides a more representative dataset, allowing for more reliable trends. Conversely, the smaller sample size for immigrants may introduce higher variability and increase the risk of sampling bias.

Results and Discussion

Looking at the graphs, we can see that, across all three decades, the average US family makes more than immigrants from Mexico. Moreover, Mexican immigrants made the least out of the countries we looked at from 1940 to 1960 (Appendices 2-4). Mexican immigrants worked here in the 1940s based on contracts made by the US and Mexico for a large amount of unskilled jobs predominantly in the railroad industry with little chance of promotion and other unskilled jobs in agriculture (Moore 1949). This could explain why Mexican workers in the US made less money over time due to being contracted to predominantly work in unskilled jobs with little

advancement, so it is reflected in the data. However, the wage that they received was to be on par with an American in that job, and this could be overseen by both countries' governments (Moore 1949). This may explain the trend seen in Appendix 6 as people who originated from Mexico saw a 299% increase in income compared to the 280% increase an American received. Even though Americans were making more, it does indicate the wage-increasing effect of these contracts. This requirement for equivalent wages could explain why there is a larger increase for Mexican workers as it puts their wages in a better position had it not been for the war contracts.

People who originated from Japan also made considerably less than American workers and suffered consequences due to World War II. Looking at Appendix 2 and 5, the earnings between a Japanese immigrant and a US citizen in 1940 were very similar, with the difference between the two average incomes being approximately 12 dollars in 1940s currency. However, this close average drastically changed in the 1950s as the two differ in 1950s currency by almost 400 dollars as Appendix 4 and 5 show. During that time, the US government put into law that non-citizen Japanese residents were considered "alien enemies" and could be taken into custody in or deported in 1941, with the Smith Act of 1940 making stricter rules for registering as aliens and deportation easier. There were tens of thousands of people placed in internment camps all along the western coast of the US (Daniels 2006). These restrictions may have demotivated immigration from Japan, and it would have had a strong impact on the earnings residents had here as their freedoms were taken away. Being in these camps or in constant scrutiny may have limited their access to work, so, as a result, Japanese individuals wouldn't see a huge increase in income since living in America would be challenging. This weak income growth is reflected in the data as they have the least amount of growth among all the studied groups (Appendix 6).

In contrast, Chinese immigrants saw the strongest increase in income from 1940 to 1960 at approximately 349.10% while Americans saw only a 280.88% increase (Appendix 6), which can be attributed to various reasons. Firstly, Franklin Roosevelt repealed the Chinese Exclusion Act, respecting their alliance with China and easing access for people of Chinese descent to become US citizens and bring their families through the War Brides Act. Also, the government allowed Chinese immigrants to study in the US (Daniels 2006). This advancement in education could have allowed them to work in more skilled positions, and these acts helped incentivize Chinese immigrants to come to the US, providing more people to fill out job opportunities. When looking at the data, immigrants from China made less than people from the US in 1940 (Appendix 2), which could be explained by the Chinese Exclusion Act limiting opportunities. However, as time went on (Appendix 6), their incomes became more comparable.

French and German immigrants were generally the highest earning of the immigrant groups, oftentimes earning more than workers from the United States. The U.S. Census of 1910 reported that French Americans were generally middle-class and held skilled jobs (Haines 2001). They were most likely to be employed as artisans or merchants as they were more focused on working in industries predominantly in New England or New Orleans. Immigration also did increase from 1940 to 1960 (Haines 2001). This sheds light on why the French immigrant population made around the same as US wages in 1950 and 1960 as they worked in industries that would give them a higher income than working in agriculture like Mexican immigrants (Appendix 3-4). The difference in income between German immigrants and US citizens is interesting considering they were enemies in the war. However, before the war began, German immigrants established themselves well in skilled and different trade industries like brewing, meat, clothing, and other artisan jobs. It is worth noting that they made up almost half of the

male workers in the clothing industry, and 70% of the brewing industry in the 1880s (Kamphoefner 2018). As a result of their roles in skilled labor, they were able to make much more money in the US compared to other immigrants who may be working in labor contracts or unskilled work like the natives from Mexico on a consistent basis from 1940 to 1960 (Appendix 2-4). Moreover, their establishment here meant they could make their money more freely and not have to rely on the borders opening up for them during the war like China did, demonstrating their significant difference in 1940 (Appendix 2).

Conclusion

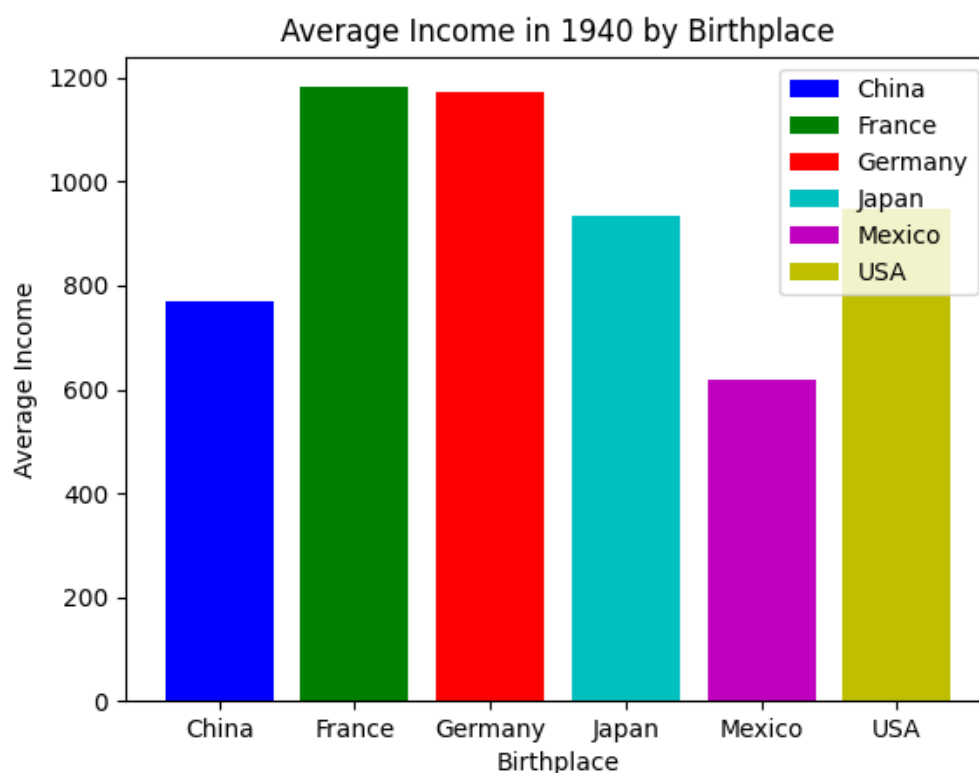
With our analysis, we wanted to see how average income varies for people during and after World War II based on their country of origin. Looking at our results, some were in agreement with things we believed. Japan, being an enemy, did not see a strong positive change during and after the war while an ally like China benefited with more freedoms and access to the country. It also showed that countries like Mexico also benefited from the war with the potential for more equitable incomes and opportunities through labor contracts. We were surprised with people from Germany as they made more than Americans due to them being enemies, but their establishment in the US allowed them to escape its effects more so than the Japanese when looking at our data. Again, these findings may not be statistically significant due to the discrepancies in sample size and self-reporting, but this analysis contributes to a broader understanding of economic dynamics, showcasing how income levels varied among distinct birthplace categories during the mid-20th century. The findings may be valuable for researchers, policymakers, and historians seeking to explore the socio-economic landscape and its evolution over these critical decades or even how wars affect income for immigrants.

Appendices

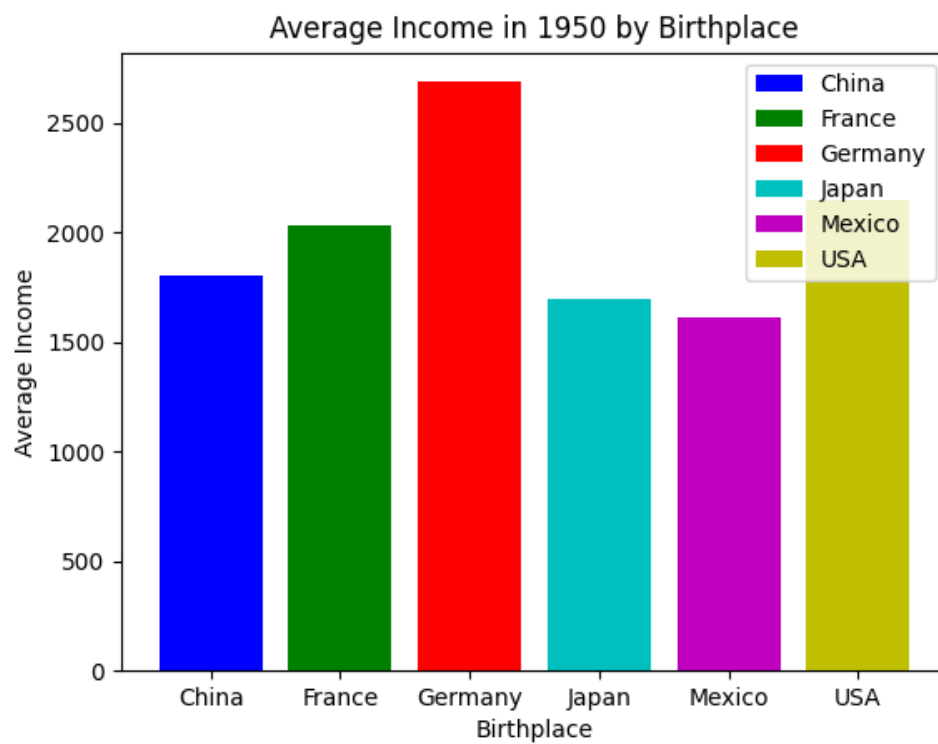
Appendix 1 - Source Code, Data, and Results

<https://github.com/anirudhi89/Econ1010Project>. The source code, data, and results are hosted in this repository. Specific instructions to reproduce the experiment can be seen in the README.MD.

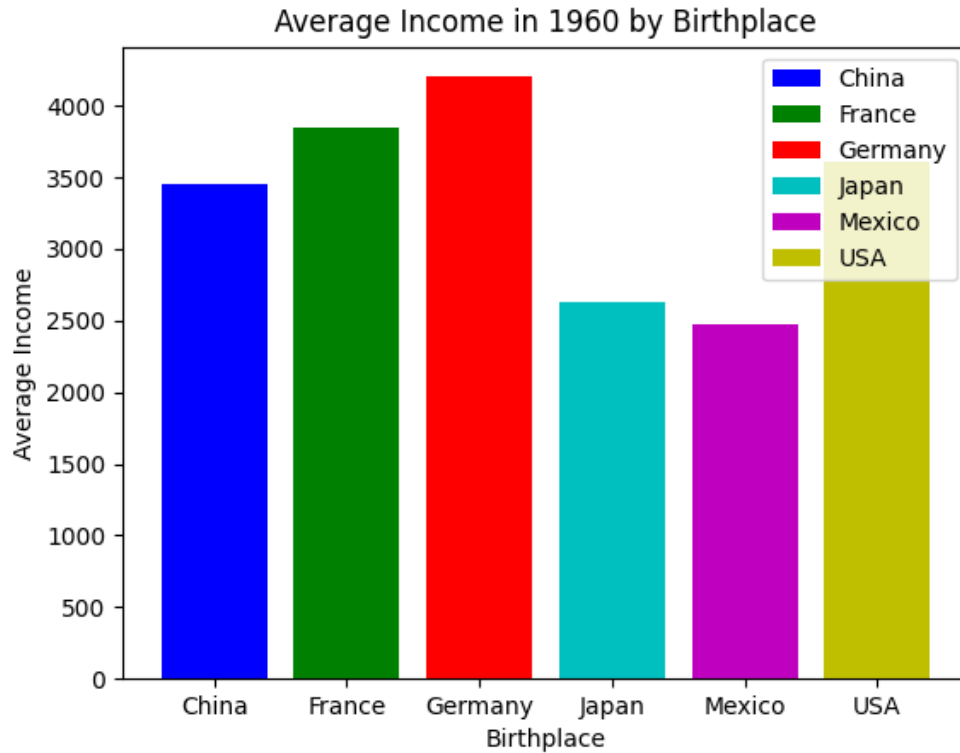
Appendix 2: Average Income in 1940, by Birthplace



Appendix 3: Average Income in 1950, by Birthplace



Appendix 4: Average Income in 1960, by Birthplace

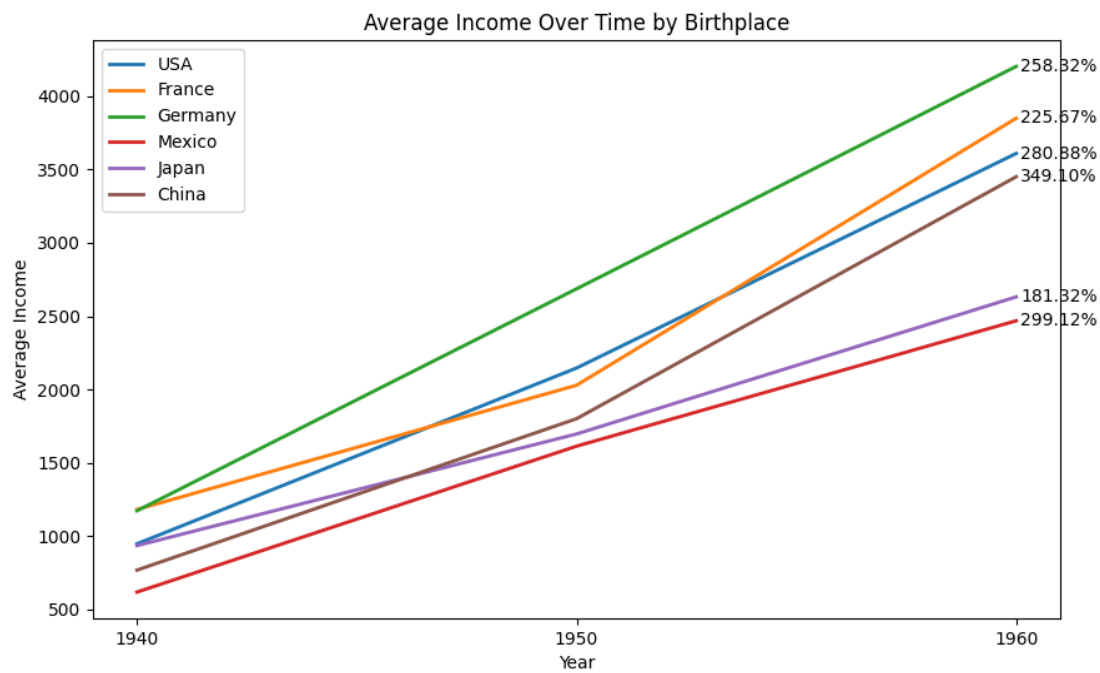


Appendix 5: Average Income per year, per Birthplace Group

Average Income per Year per Birthplace Group						
Birthplace	China	France	Germany	Japan	Mexico	United States
1940 Income (\$)	768.4754098	1182.156652	1173.078882	935.5512195	618.5799443	947.7533547
1950 Income (\$)	1801	2029.166667	2686.720751	1696.969697	1613.709677	2146.682203
1960 Income (\$)	3451.2	3849.882075	4203.433256	2631.891026	2468.882228	3609.768263

Note: This data is measured in the context of the specific years under consideration, reflecting the economic conditions and monetary values prevalent during those periods.

Appendix 6: Average Income over time, by Birthplace



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