

The Long-Run Effects of Immigration

Evidence across a Barrier to Refugee Settlement

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Some 280 million people around the world are first-generation immigrants; in Organisation for Economic Co-operation and Development countries, first-generation immigrants make up around 14 percent of the population. The economic effects of immigration have become better understood in recent decades. A new focus of research on the effects of immigration is its long-run impact on productivity, wages, and income. We contribute to this research by examining the long-run economic effects of the arrival of refugees in what would become West Germany after the end of World War II (WWII) in 1945. This period was characterized by one of the largest population movements in modern times. Between 1945 and 1949, millions of people from Czechoslovakia, Hungary, Poland, Romania, and eastern parts of prewar Germany were displaced westward. When

the Federal Republic of Germany (West Germany) was founded in 1949, these refugees made up around 15 percent of the country's population.

A large majority of the refugees arrived during the period in which Germany was divided into four occupation zones. While the British, Soviet, and U.S. occupation zones admitted refugees, the French zone restricted access. Our study finds that this led to more refugees settling on the U.S. side of the border between the French and U.S. occupation zones in the southwest of postwar Germany. We focused on the border between the French and U.S. occupation zones in southwest Germany because it is the only longer border segment where municipalities on both sides ended up in the same state of the Federal Republic of Germany. The occupation-zone border we focused on existed until the Federal Republic of Germany was founded in 1949.



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Comparing today's economic outcomes on opposite sides of the 1945–1949 occupation-zone border, we find higher productivity, wages, rents, education, and population density in municipalities on the side where refugees were admitted than those on the side where access was restricted. There are several potential explanations for these differences.

It may be that municipalities on opposite sides of the 1945–1949 occupation-zone border were already different before WWII and that modern economic differences are the result of these historical differences. It is also possible that today's economic differences are the legacy of differences in social and economic policies, regulations, laws, or institutions during the 1945–1949 period of French and U.S. occupation.

After examining the evidence for these and other potential explanations, we rule them out and conclude that the reason for today's differences across the 1945–1949 occupation-zone border is that the U.S. zone admitted refugees while the French zone restricted access. By 1950, the admission of refugees had raised population density on the former U.S. side of the 1945–1949 border 20 percentage points more than the density on the former French side. The greater density on the former U.S. side of the border persists today, some 75 years after the arrival of the WWII refugees. A well-understood explanation for the persistence of greater population density—and its coincidence with higher productivity, wages, and rents—is agglomeration economies: the benefits that come when people and businesses locate near one another.

Our analysis focuses on the municipality level with a narrow bandwidth around the border between the 1945–1949 French and U.S. occupation zones in southwest Germany. We used this approach to examine whether economic outcomes depend on the side of the former border where municipalities are located. If agglomeration economies do not spill across municipality borders, this research design allows us to see whether today's economic outcomes across the 1945–1949 border are consistent with agglomeration economies triggered by the arrival of WWII refugees in the U.S. occupation zone.

If agglomeration economies do, instead, spill across municipality borders, what matters for today's productivity,

wages, income, and rents is not just whether a municipality is in the 1945–1949 U.S. occupation zone admitting refugees or the 1945–1949 French zone restricting access. It also matters whether neighboring municipalities are in the former U.S. zone or the former French zone. We therefore extend our analysis to include a wider measure of municipalities' exposure to the arrival of refugees in the 1945–1949 U.S. occupation zone.

In particular, for each municipality we measured wider exposure to refugee arrival by the share of the pre-WWII population within a certain radius around the municipality center that lived in what became the U.S. occupation zone in 1945. We used prewar population, as this captures basic determinants of where refugees could potentially settle but avoids biasing our results given that refugees may have chosen where to actually settle within the occupation zones based on the economic conditions. If agglomeration economies range beyond municipality borders, higher levels of wider exposure to the arrival of refugees in the 1945–1949 U.S. occupation zone should result in higher levels of productivity, wages, income, rents, and education today. We find this to be the case. Our estimates imply substantial long-run economic effects of the arrival of refugees. The effect on gross domestic product per worker and income per capita today is around 13 percent and the effect on hourly wages is around 10 percent.

When we accounted for wider exposure to the arrival of refugees in the 1945–1949 U.S. occupation zone, the differences in productivity, wages, rents, and education today at the former border between the French and U.S. occupation zones disappeared. Put differently, our research indicates that the economic differences across the former border today are driven by wider exposure to the arrival of refugees in the U.S. occupation zone and not by the side of the border on which municipalities were located.

NOTE

This research brief is based on Antonio Ciccone and Jan Nimczik, “The Long-Run Effects of Immigration: Evidence across a Barrier to Refugee Settlement,” CESifo Working Paper no. 9679, April 2022.



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