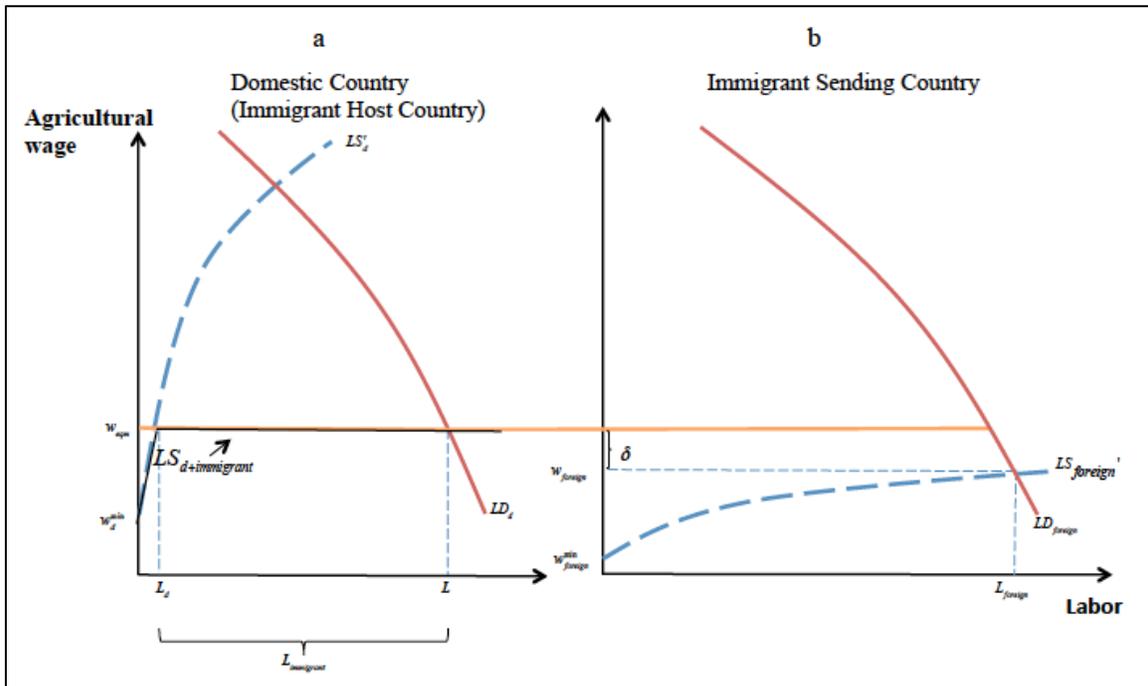


1. Equilibrium Between an Immigrant Sending Country and a Host Country

Figure 1 outlines a typical scenario between an industrialized country like the US and a developing country that sends workers to the industrialized country. The labor supply (demand) of the sending country is inelastic and is represented by $LS_{foreign}$ ($LD_{foreign}$) below. The labor supply is elastic in the sending country as there are many poor individuals living in rural areas who are willing to work in the agricultural sector for low wages. The market clears in the sending country at a wage of $w_{foreign}$. In order to be induced to work in the host country, they must earn a wage of at least $w_{foreign} + \delta$ to cover their costs of migrating. This is also the market wage that farmers in the host country can pay to hire workers. In the host country, the labor supply is inelastic and is represented by LS'_d and the labor demand curve is represented by LD_d . The market clears at an equilibrium wage of $w_{eqm} = w_{foreign} + \delta$ inducing L_d domestic workers to work in the agricultural sector and $L_{immigrant}$ immigrant workers to work in the ag sector in the host country.

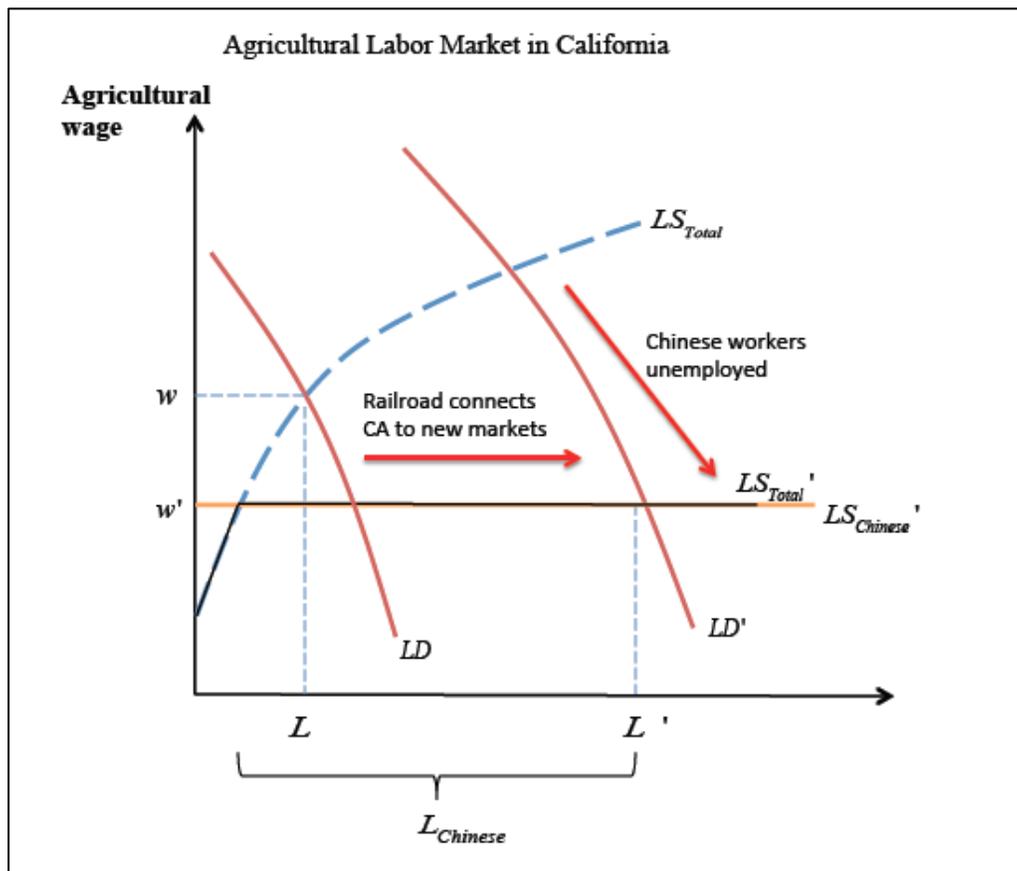
Figure 1. Connected Farm Labor Markets across Countries



2. Shifts in Labor Supply and Demand After Completion of the Transcontinental Railroad

In 1869 the Great Transcontinental Railroad was completed which connected California to eastern parts of the US. More than 12,000 Chinese workers came to the US to work on the railroad between 1863 and 1869. After the railroad was completed, they needed to find work. Because of discrimination, they had trouble finding jobs in cities. Having no other option, they were willing to work for very low wages in the agricultural sector. Figure 2 illustrates what the California agricultural labor market looked like at the completion of the transcontinental railroad. Initially California was farming wheat and other grain crops that required few workers. When farmers gained access to markets in the eastern parts of the US, they began planting orchards and other perishable crops, and the demand for farm workers shifted outward from LD to LD' . Concurrently, the completion of the railroad left thousands of Chinese workers unemployed. Consequently, the total labor supply curve rotated outward from a relatively inelastic supply of domestic workers, illustrated by curve LS_{Total} to a very elastic supply of Chinese workers, illustrated by the illustrated by curve LS'_{Total} . Farm labor employed after the completion of the transcontinental railroad increased from L to L' with $L_{Chinese}$ amount of Chinese workers being employed.

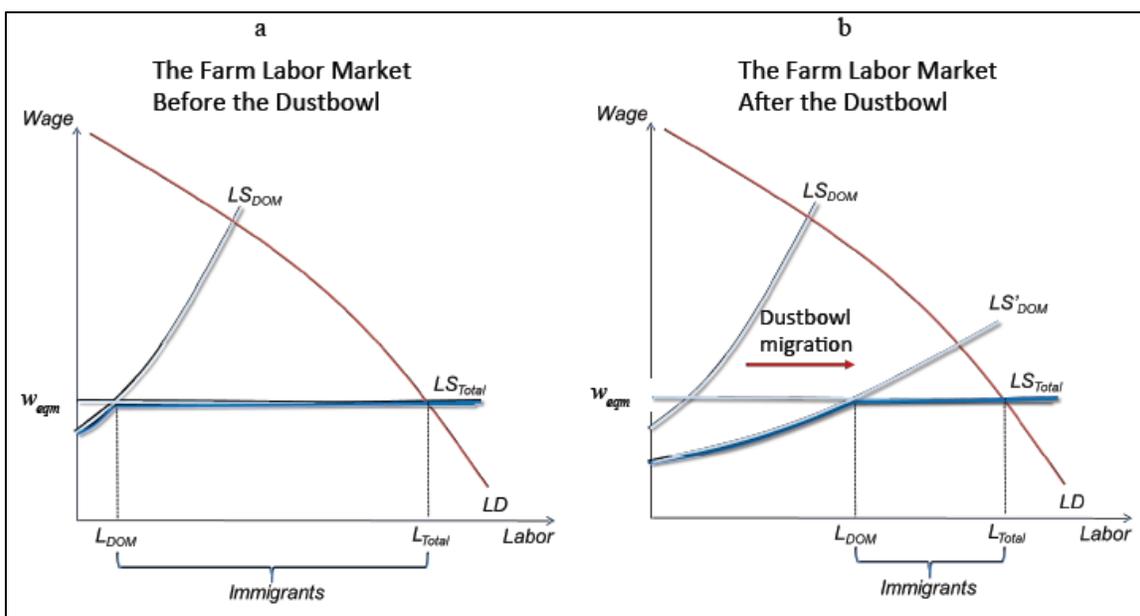
Figure 2. Illustration of the Impact of the Completion of the Transcontinental Railroad on Farm Labor Supply and Demand in California



3. Dustbowl Migration

In 1935, parts of the US were affected by severe drought that led to huge dust storms that destroyed farms in some US states. Because of this, thousands of farmers had no other choice but to migrate to California to work on farms. The influx of domestic “Dustbowl workers” into the farm labor market is illustrated in Figure 3. The share of immigrant workers decreases in response to this large and short-lived migration of American farm workers. Prior to the Dustbowl, most farm workers were immigrants (panel a), but during the Dustbowl thousands of domestic workers crowded immigrants out of the farm labor market (panel b). Even though the workforce was mostly American, wages remained low because the domestic workers were willing to work at much lower wages than they previously would have taken. Consequently, the domestic farm labor supply during the Dustbowl was very elastic, illustrated by a flatter labor supply curve, LS'_{DOM} in Figure 3. Panel a shows the farm labor market before the Dustbowl, and panel b shows the farm labor market after the Dustbowl migration. The dustbowl resulted in a large rise in domestic farmworkers and a decline in immigrant workers, though wages remained low.

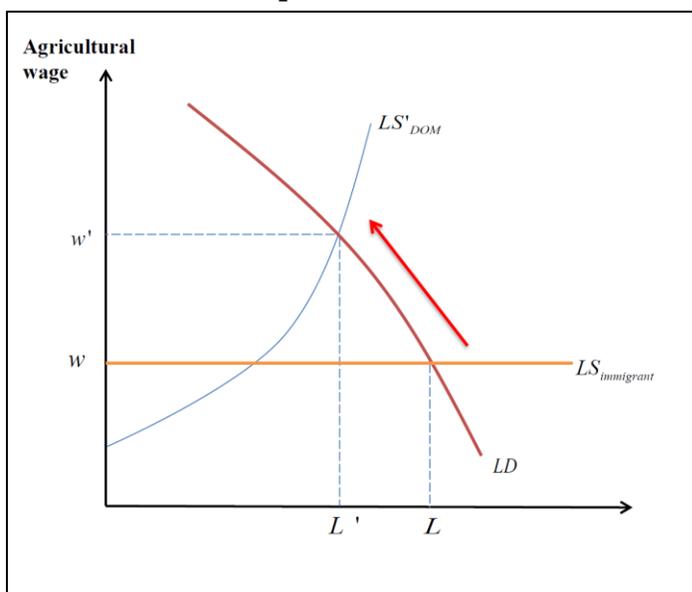
Figure 3. The Impact of the Dustbowl Migration on the Farm Labor Market



4. The Bracero Program

World War II required able-bodied American men to fight in Europe and women to work in US factories to support the war effort. Because of this, the domestic supply of farm workers once again declined. In 1942, US President Franklin D. Roosevelt and Mexican President Manuel Camacho signed the second Bracero Program agreement which allowed Mexican workers to fill farm labor shortages during the war years. However, the agreement did not end after the war. In fact, between 1942 and 1964 over 4.5 million authorized Mexican workers came to work on US farms (in addition to many unauthorized workers). After a fatal truck accident killed over 30 Bracero workers in 1963, Congress revisited the Bracero Program legislation, and it was ended in 1964. Unlike after other immigration policy shifts, there was no readily available alternative to Mexican workers at the demise of the Bracero Program in 1964. Figure 4 illustrates the expected impact of a sudden disappearance of immigrant agricultural workers. The Braceros had provided an elastic supply of labor at wage w . However, if the immigrant labor supply is removed from the figure, the total labor supply is only the supply of domestic workers to agricultural work, represented by curve LS'_{DOM} . A small share of the U.S. workforce worked in agriculture in the 1960s, and the domestic farm labor supply was inelastic compared with the farm labor supply from Mexico. Without an immigrant workforce, the equilibrium agricultural wage in Figure 4 rises to w' , and the number of workers employed in agriculture decreases from L to L' . Consequently, domestic agricultural production must decrease as well.

Figure 4. Potential Consequences of the End of the Bracero Program



Nevertheless, the drastic decline in immigrant farm labor depicted in Figure 4 did not occur. Instead, Bracero workers were replaced by a workforce of largely undocumented immigrants (Chapter 8) from Mexico. Ultimately, the end of the Bracero Program did spell the end of abundant farm labor from rural Mexico.