Revisiting the Bracero Guest Worker Reforms: A Comment on Clemens, Lewis, and Postel

Robert Kaestner[1]

LINK TO ABSTRACT

Michael A. Clemens, Ethan G. Lewis, and Hannah M. Postel (2018) report results of an impressive analysis of the effect of ending the bracero guest worker program on domestic farm workers' wages and employment. The authors are to be praised for the thoroughness with which they execute their analysis. Clemens, Lewis, and Postel (hereafter CLP) conclude that the ending of the bracero program had little effect on wages and employment of domestic farm workers. The finding is inconsistent with the idea that a decrease in guest-worker labor supply would raise wages and increase employment of comparable domestic workers. The authors suggest that the explanation for their finding is that employers responded to the end of the bracero program and the decrease in labor supply by altering the technology of production. If true, the conclusions of CLP (2018) might suggest directions for reform in immigration policy.

In this comment, I make three points. First, I discuss the quality of the data itself, as well as how that data were used, finding significant problems, such that, ex ante, it is unlikely that the empirical analysis would be able to identify reliably a labor market effect of ending the bracero program. Second, I assess the likelihood of whether the beginning or end of the bracero program had a significant effect on farm labor supply. Based on the evidence I review, I conclude that there was likely significant substitution between legal and illegal Mexican labor and a much greater increase in the pool of domestic farm labor that likely muted, if not completely

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1. University of Chicago, Chicago, IL 60637.

offset, any changes in labor supply associated with the bracero program. As a result, there is little likelihood that changes to the bracero program would have had an easily measurable effect on the wages and employment of domestic farm labor. Third, I assess the plausibility of CLP's argument that endogenous technological change, caused by ending the program, explains the absence of an effect of ending the bracero program. I report evidence that casts some doubt on this explanation. Overall, I find that the analyses of CLP (2018) are not sufficient to draw the conclusion that ending the bracero program had no effect on the wages and employment of domestic farm labor.

Clemens, Lewis, and Postel (2018) research design and results

The research design used by CLP to estimate the effect of bracero guest workers on domestic farm laborers' wages was the well-known difference-in-differences (DiD) approach. CLP compared the change (difference) in domestic farm workers' wages before and after the end of the bracero program among farm workers affected by the bracero program to the analogous change (difference) in wages among farm workers unaffected by the bracero program. The bracero program had brought a few hundred thousand Mexican farm workers into the U.S. to work in the agricultural sector. The prediction of basic economics is that ending the program would result in an increase in domestic farm laborers' wages because of the decreased supply of farm workers. Instead of this prediction being borne out, the comparison of wages conducted by CLP suggests that the increase in bracero guest workers had no effect on domestic farm laborers' wages. The result might seem surprising because it suggests that foreign workers may not drive down wages of counterpart domestic workers.

Problems with CLP's analysis

There are several problems with CLP's DiD analysis, and all the problems make it unlikely that they would find an effect of ending the bracero guest worker program even if there was a true impact.

Mis-measured treatment

One of the most important problems relates to how CLP identified domestic

farm workers more or less likely to be affected by the end of the bracero program. Getting this classification wrong will seriously bias estimates of the effect of ending the bracero program. If workers classified as more likely to be affected were not, or less, likely to be affected by the end of the bracero program, and workers classified as less likely to be affected were, or were more, likely to be affected, then the comparison of domestic farm workers' wages pre-to-post the end of the bracero program is likely to find no effect. As I now discuss, CLP's classification of workers was almost surely inaccurate and seriously so.

CLP defined risk of being affected (i.e., exposure) by the end of the bracero program as the share of bracero labor of all seasonal farm labor during the peak harvest season in a state in 1955. This state-specific share ranged from zero to 60 percent.[2] In 1955, there were 23 states with any bracero labor; 17 states with a share of 1 percent of more; 9 states with a share of 5 percent or more; and 6 states with a share of 20 percent or more. Remember that this 1955 bracero share of peak season labor is supposed to represent the change in labor supply brought about by the end of the bracero program in 1965. If the 1955 share does not measure accurately the change in labor supply before and after the end of the bracero program, then the comparison at the heart of CLP's DiD analysis will be correspondingly inaccurate.

Classifying a state by its 1955 share of bracero labor during the peak harvest season is likely problematic. The share of bracero labor in a state changed markedly over the calendar year and during the years that the bracero program was in effect (Bureau of Employment Security, Farm Labor Market Developments 1960; 1964). For example, in 1963, the year just before the end of the bracero program, the amount of bracero labor in states was substantially different than in 1955. In 1963 there were only 13 states with any bracero labor. In addition, the ranking of these states was much different than the ranking based on the 1955 share. The state with the highest share of bracero labor in 1963 was Arkansas with 46 percent. Arkansas's 1955 share was 8 percent and its 1960 share was 18 percent. The second highest share in 1963 was Colorado at 40 percent. Colorado's 1955 share was 4.5 percent and its 1960 share was 11 percent. South Dakota had no bracero labor in 1963 or 1960, but in 1955, the bracero share was 21 percent. The share of bracero labor in Texas, which often used either the most or second most amount of bracero labor, was 24 percent in 1955, 18 percent in 1960 and 7 percent in 1963.

To provide a summary of the variation in the bracero share of labor over time and by state, I calculated the correlation between the 1955 bracero share of labor and the actual bracero share of labor in a state for several years. In 1953, which is the first year of data provided by CLP, the correlation was 0.75 among all states

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2. In 1955, New Mexico is clearly an outlier at 60 percent share. The next closest state was Nebraska at 32 percent.

and 0.69 among states with a positive bracero share of labor in 1955. Analogous correlations in 1957 (1960) were 0.93 (0.92) and 0.92 (0.90), respectively. By 1963 the correlations were 0.77 for all states and 0.70 for states with a positive share of bracero labor in 1955.[3] These changes in the level of the share of bracero labor by year suggest that the use of the 1955 share of bracero labor would result in misclassification of states and attenuate DiD estimates. At its most basic level, the DiD approach used by CLP measured the change in the average wage from 1942 to 1964 and the average wage from 1965 to 1971 (or 1975 for a different wage measure) and correlated it with the 1955 share of bracero labor, which, because bracero labor was zero post-1965, measures the change in labor supply. As I have described above, the 1955 bracero share of labor does not reflect accurately the share of bracero labor in the period from 1953 to 1964, and as I describe below, is a poor measure of the share of bracero labor pre-1953. These issues make it likely that the DiD analysis would find no effect. It would be surprising to find anything but no effect because the comparison of farm workers' wages pre-to-post the end of the bracero program was not between workers more or less affected by the end of the program.

Also, there is significant variability in bracero labor over the year. For example, in May of 1955, there were 74,059 bracero laborers in the United States. In October of 1955, there were 135,600 bracero laborers in the United States (Bureau of Employment Security, Farm Labor Developments 1955–1956). Note how both of these numbers are much lower than the total number of bracero laborers admitted in 1955, which was 398,650. Similar figures from 1961 are: 78,400 in May and 208,500 in October. The October to May ratio of bracero labor was approximately two in 1955, but approximately three in 1961. This May-October difference shows the variability of bracero labor over the calendar year. This is important because the peak-month share of bracero labor in 1955 was used to indicate treatment—the variable to correlate with wages that are measured on a quarterly basis. Thus, even within the year 1955, the peak-share of bracero labor was not an accurate measure of the amount of bracero labor in other quarters in 1955. The variability over the calendar year and the previously documented variability over years mean that CLP's approach is likely to lead to significant measurement error in the treatment indicator and seriously biased estimates of the effect of ending the bracero program. Again, one might be surprised to find anything but no effect given the classification problems.

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3. Note that CLP also estimate a regression using wage data from 1960 to 1970. The low correlations between the bracero share in 1955 and 1963 are particularly problematic for this analysis.

Definition of before and after period

While 1965 was the official end of the bracero program, there had been large changes in the number of bracero workers admitted in years prior to 1965 that were as, or more, significant than the change that occurred in 1965 (Bureau of Employment Security, Farm Labor Market Developments 1964). From 1948 to 1955, the number of bracero laborers admitted increased from 35,345 to 398,650, or by a factor of 11.[4] Between 1950 and 1951, the number of bracero laborers admitted approximately tripled from 67,500 to 192,000. The period from 1956 to 1959 experienced the largest number of bracero workers admitted to the United States with approximately 440,000 Mexicans admitted each of these years. Between 1959 and 1960, the number of braceros admitted declined by 121,797, or 28 percent. Similarly, between 1961 and 1962, the number of braceros admitted declined by 96,442, or 33 percent. From 1962 to 1964, the number of bracero laborers admitted remained relatively constant at approximately 180,000 (177,736 in 1964). So, while the end of the program in 1965 brought about a significant decline in the number of braceros, the decrease was not that much larger than in other periods. In addition, the increase in bracero labor from 1948 to 1955 was as large as the decrease in bracero labor from 1959 to 1965.

The great rise and fall of bracero labor suggest that the end of the bracero program in 1965 was not particularly important in terms of changing farm worker labor supply. There was no singular 'event' that clearly marked the pre- and post-periods, although the end of the bracero program in 1965 did cause bracero labor to go to, and remain at, zero. Instead, as the data reveal, there were many large changes in bracero labor that may be considered 'events.' These events were mostly ignored. As already noted, treatment was defined by the bracero share of 1955 peak-season labor. However, wages were measured quarterly and in the DiD analysis the average wage in the pre-1965 (1962) and post-1965 (1962) are the key values. There is no reason to expect these average wages, particularly the wage during the period from 1942 to 1964 (1962), which includes huge changes in bracero labor, to be correlated with the 1955 bracero share of peak season farm labor.

Moreover, if changes in bracero labor during the pre-period had any effects, such as altering firm production technology as argued by CLP, then these effects would likely persist and affect demand and supply of labor in other years. For example, the large increase in bracero labor between 1948 and 1955 may have

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4. Much of the increase in bracero labor is likely to have been replacement of undocumented Mexican labor (Bureau of Employment Security 1961). Thus, there may have been little change in labor supply between 1948 and 1955. The large substitution of legal for undocumented labor also suggests that the end of the bracero program would increase illegal immigration again. See below for evidence.

delayed technological adoption. If so, then the wages in the pre-period were already affected and the difference in wages between the pre- and post-period do not represent solely the effect of the end of the bracero program, or the effect of a change in foreign worker labor supply.

Mis-measured wages

The wage used in CLP is problematic for several reasons. The distribution of bracero labor was not evenly distributed across geography of farms within a state. Bracero labor worked at only a small fraction of farms—mostly large farms. In 1960, approximately 70 percent of the farms that used bracero labor were in California and Texas. Only 11 percent of farms in the four top states for bracero labor, California, Texas, Arizona and New Mexico, used bracero labor (Bureau of Economic Security, Hired Farm Workers 1961). So, most farms, even in states with a high share or bracero labor such as California, used no bracero labor. And the farms that used bracero labor were different than the farms that did not. In 1960, Texas employed the largest number of bracero laborers and almost all of them were in cotton. California was the second greatest user of bracero labor and most bracero labor worked on farms growing lettuce, cucumbers, tomatoes and citrus.

This variation in the presence of bracero labor over the year and the variation in the types (e.g., crops) and locations of farms that used bracero labor seriously affects CLP's analysis because they used wages reported on all farms and for all hired labor. To measure wages, CLP used an average of wages across all types of hired labor and across all types of farms (crops, size) in a state in a quarter.

Several problems arise with this choice. First, seasonal farm labor is only part of all hired farm labor. While various sources list different numbers, seasonal (<150 days per year) farm labor made up approximately one-half of all hired farm labor in 1955 and in 1960.[5] It is likely that regular (>150 days) farm laborers earned a different wage than seasonal farm workers, particularly because approximately half of all seasonal farm labor worked 25 or fewer days per year, and seasonal farm labor was more likely to be paid a piece rate. Second, bracero labor in a state during the non-peak season was often a fraction (e.g., one-fifth) of its share in the peak season. Thus, there is little relationship between 1955 share of bracero labor in a state, which is the measure of treatment, and the amount of bracero labor in a year-quarter in which wages were measured. Third, as, noted, bracero labor was concentrated on a small share of farms that were larger, produced specific crops (e.g., cotton in Texas) and that employed more hired labor. Wages at these farms/

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5. These figures were calculated from figures in Bureau of Employment Security, Farm Labor Market Developments 1955; 1960; Bureau of Agricultural Economics, Farm Labor Report 1955; 1960.

crops differ from wages at other farms/crops.

A few figures provide some of the variation within state for the same crop and within state between crops.[6] In October of 1960, the piece rate for picking tomatoes in Alameda County, California was between $0.17 and $0.20 per 50-lb. box. The wage rate for picking tomatoes in the San Joaquin Valley, California in October of the same year was $0.15 per 50-lb. box. In the San Joaquin Valley, the piece rate for fig harvest was $0.25 per 40-lb box. In November of 1960 in Texas, the piece rate for picking cotton in East Texas was $2.50 per cwt., whereas in the same month and year, the piece rate for cotton in the High Rolling Plains region of Texas was between $1.50 and $1.75 per cwt. Cabbage pickers in Texas in October of 1960 received $0.50 per hour. As these illustrative figures suggest, wages varied significantly within a state for the same crop and within a state between crops. There was also variation in whether a laborer was paid an hourly wage or piece rate by crop and state. Given this variation in wages, the widespread use of piece rates, and the fact that bracero laborers worked on a small fraction of farms, the average wage for all hired farm laborers in a state in a quarter is apt to be a quite inaccurate measure of the wage for seasonal farm laborers in the same labor market as braceros.

Finally, it is also the case that the wage data is quite incomplete and crude as the following statement indicates:

> State agencies affiliated with the Bureau of Employment Security are required to delineate crop-wage areas and survey a sample of farms and workers to find the prevailing wages paid to domestic workers in each of the activities at which Mexican nationals are employed. The findings—in the form of single rates, ranges, or schedules—are considered by the Department of Labor in making determinations. *Since they relate only to prevailing wages, they do not necessarily include all rates found to be paid in the area.* (Bureau of Economic Security, Farm Labor Market Developments July 1960, 17, my emphasis)

Overall, the average, composite wage measure used by CLP (2018) as a dependent variable is unlikely to reflect accurately wages paid to seasonal, farm laborers that compete with bracero labor. Here too, the implication is that it would have been surprising to find anything but no effect of ending the bracero program on domestic farm workers' wages.

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6. The wage figures are from various issues of Bureau of Economic Security, Farm Labor Market Developments.

Do CLP's robustness analyses address these points?

CLP conducted several sensitivity analyses. However, none uses a different measure of treatment/exposure and only one uses a different measure of wages, but the same measure of exposure. In addition, the different measure of wages is still not what is conceptually correct—the wage earned by farm workers competing (crop, geography, firm type) with bracero workers. Similarly, adding state-specific trends, as CLP (2018) do in some sensitivity analyses, and using the same measure of exposure is not, in my view, a compelling response to the problems in the measurement of exposure. Controlling for potential state-specific trends accounts for the correlation between those trends and the (mis-measured) exposure variable, and those trends and (mis-measured) wages. These changes do not address the issues raised above. Finally, the analyses that regress measured wages on the natural logarithm of the stock of bracero workers are problematic in three ways: first, as noted wages are poorly measured; second, including a measure of labor supply on the right side of a wage (price) regression is econometrically problematic (simultaneity bias); and third, there is no justification for using the natural logarithm of bracero labor. Overall, while the robustness analyses seem thorough, they do not address the underlying problems I have noted and mostly proceed along the lines of the original analysis. Not surprisingly, the sensitivity analyses find a null effect.

Substitution between illegal and legal Mexican labor

The effect of changes in the amount of bracero labor admitted to the United States on the domestic, farm laborer market would be moderated if there was a coincident, but opposite, change in illegal Mexican farm labor. CLP suggest this is not the case and one of their pieces of evidence is border apprehensions: "And border apprehensions of Mexicans did not substantially rise in the years immediately after exclusion, while measured border enforcement effort did not fall" (CLP 2018, 14).

Data from the period do not support the assertion (Vialet and McClure 1980). The data shown in Figures 1 and 2 show that the approximate doubling of bracero labor admitted from 1953 to 1956 coincided with a huge drop in alien apprehensions.[7] Also evident is the substantial rise in alien apprehensions in the post-bracero period of 1965 to 1970. There was a 26 percent increase in alien apprehensions in 1965, and alien apprehensions rose significantly in the years fol-

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7. Figure A4 in CLP's appendix (2018, A-26) is similar to Figures 1 and 2 with one important difference. CLP use different Y axis scales, and those scales are misleading suggesting that alien apprehensions were much lower vis-à-vis the quantity of bracero labor.

Figure 1. Alien apprehensions and braceros admitted, 1948–1970
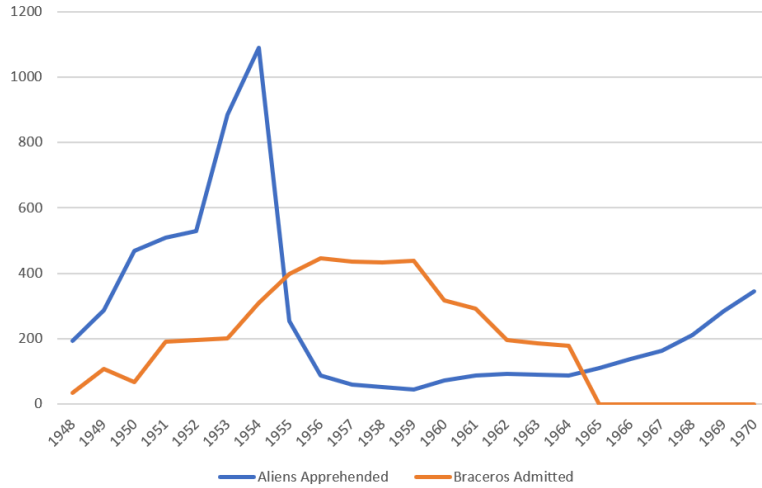
Numbers represent thousands of persons. *Source*: Vialet and McClure 1980.

Figure 2. Alien apprehensions and braceros admitted, 1960–1970
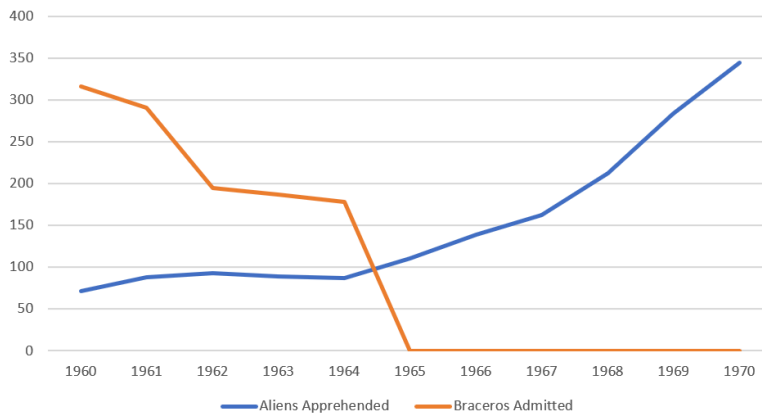
Numbers represent thousands of persons. *Source*: Vialet and McClure 1980.

lowing the end of bracero program. The average annual increase in apprehensions was 22 percent between 1964 and 1970. By 1970, apprehensions were the equivalent of bracero stock in 1960—full replacement by 1970. These figures suggest strongly that there was a non-trivial substitution of legal for illegal (and reverse) Mexican labor during the entire period of analysis in CLP (2018). These flows of legal and illegal Mexican farm laborers suggest that the beginning and end of the

bracero program would have little effect on wages because there was little change in actual labor supply.

How likely is CLP's explanation that technological progress mediated effects of the end of the bracero program?

CLP argue that the absence of an effect of the end of the bracero program on wages is consistent with theoretical models that allow for firm responses. CLP review these models, and describe how allowing for capital, technology, and output responses to the decrease in labor supply moderates the positive effect of the labor supply decrease on wages. Most of these models still predict that a decrease in labor supply will raise wages, although by varying amounts. There is one exception, and this is the model in which there is a cone of diversification. In this case, firms use different technologies that are more or less labor-intensive, but despite this heterogeneity wages are constant across firms. A decrease in labor supply has no effect on wages in an industry that is characterized by a cone of diversification (although it would still affect the quantity of labor employed). The decrease in supply causes more firms to adopt the less labor-intensive technology. CLP's overall point, however, is that a decrease in labor supply such as that brought about by the ending of the bracero guest worker program may have a relatively minor effect on wages of domestic workers because firms adopt labor-saving technology.

The foregoing evaluation of the data and CLP's empirical analysis raises doubts about the validity of their conclusion that ending the bracero program had no effect on wages of farm laborers, and therefore, tends to render moot the analysis that seeks to explain the null finding. Nevertheless, I assess some of the evidence available and some of CLP's evidence on whether the bracero program resulted in a significant change in farm technology.

The first piece of evidence relates to farm labor productivity. There is overwhelming evidence that technological change was substantial and ongoing long before the end of the bracero program, and that this technological change was drastically reducing the demand for farm labor. Between 1940 and 1960, farm output per man-hour worked nearly doubled every ten years (Bureau of Economic Security, Hired Farm Workers 1961). Changes in the nature of farms coincided with this rise in productivity. Between 1950 and 1970, the average size (acres) of a farm increased by almost 100 percent, the number of farms decreased by approximately 50 percent, and farms became more specialized producing fewer crops (Dimitri et al. 2005).

An important consequence of these changes in farming was that there was an increase in the potential pool of hired farm labor, as small, owner-operators of farms and their family moved into the hired farm labor market. Between 1950 and 1960, the number of family farm workers declined by approximately 20 percent (Bureau of Economic Security, Hired Farm Workers 1961). This is a large decrease relative to hired farm labor because family farm workers as a group were approximately three times the size of hired farm labor (Bureau of Agricultural Economics 1960). So, the 20 percent decline in family farm labor represents an increase in the potential pool of hired labor of 60 percent. This trend in family farm labor is unlikely to be the same across states and crops and is likely to be correlated with the use of bracero labor that also differs by state and crop. This large, state-specific, time-varying change in labor supply would create difficulties for an analysis of the effect of the bracero program on the farm labor market, and CLP do not address the issue. Note too, that the analyses in CLP (2018) that include state-specific trends do not address this issue because of the way treatment is measured.

The change in farm technology and decrease in demand for farm labor were particularly important in cotton and for bracero labor. Cotton was also, by far, the single largest sector using Mexican labor (Bureau of Economic Security, Hired Farm Workers 1961). For example, in November of 1960:

> Practically all of the 152,000 Mexican nationals at work in mid- November were in Texas, California, Arizona, Arkansas and New Mexico. About three-fifths of them were harvesting cotton. … Mexican-worker employment declined about 22,000 from the November 1959 level largely because the increased use of cotton-harvest machinery had reduced the need for hand harvesters. (Bureau of Economic Security, Farm Labor Market Developments, July 1960, 5)

Another report from the period says:

> In 1958, when 34 percent of the cotton crop was machine-harvested, 627,000 seasonal workers (455,000 domestic and 172,000 foreign) were employed at the peak of harvest. In 1963, 72 percent of the crop was machine-harvested and 366,000 workers (350,000 domestic and 16,000 foreign) were employed at the peak. This change amounted to a decline of 261,000 (105,000 domestic and 156,000 foreign) for an annual decline of about 52,000. Foreign workers used in 1963 were less than 10 percent of the number employed 5 years earlier. (McElroy and Gavett 1965, 21)

The concentration of bracero labor in cotton and the rapid technological change in cotton that occurred well before the end of the bracero program suggests that

technological change by firms was not an important explanation of the absence of an adverse wage effect from ending the bracero program. Indeed, the mechanization in cotton may have been an important cause of the decline in bracero labor. As noted earlier, the bracero share of seasonal farm labor in Texas went from 24 percent in 1955, to 18 percent in 1960 and finally to 7 percent in 1963.

CLP used the tomato crop in California as an example of how technology changed with the end of the bracero program. However, in 1960, a relatively small share or bracero labor was employed harvesting tomatoes. Cotton employed three times as much bracero labor (a figure that was already lowered by technological change; see above). Also, bracero labor made up a larger share of seasonal farm labor in the lettuce and cucumber crops combined than in tomatoes (Bureau of Employment Security, Hired Farm Workers, 1960).[8] In 1963, during the peak harvest season, half of all bracero laborers in California were harvesting tomatoes. This concentration of bracero labor in one crop underscores earlier points about the inadequacy of using an average wage in a state to measure the effect of ending the bracero program (McElroy and Gavett 1965). Moreover, as noted, relatively few firms employed bracero labor even in California tomato farms. Finally, there was evidence of rapid technological change in tomato harvesting prior to the end of the bracero program:

> California produces over half of the U.S. tomato crop, about 60 percent of which is used for processing. In 1963, when about 34,000 braceros were employed in the California tomato harvest, 25 machines harvested about 5 percent of the State's processing tomato crop. In 1964, there were about 100 machines in operation, harvesting about 20 percent of the processing crop. As more machines become available and the quality of the mechanizable-processing tomato is improved, machine harvesting will expand; but harvest labor will continue to be needed for some processing tomatoes and for all fresh-market tomatoes, which cannot now be machine-harvested. (McElroy and Gavett 1965, 18–19)[9]

Other than the example of the tomato crop in California, CLP provide little other evidence to support the claim that the absence of a wage effect from ending the bracero program was due to technological change.

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8. As described earlier, the number and share of bracero labor in a state, year and crop changed significantly over time, so it is difficult to characterize the states and crops that relied on bracero labor.
9. This information on changes in harvesting technology differs from that used by CLP in Figure 5. Their data show much less pre-1965 changes in technology.

Conclusion

The conversation of whether immigration policies can be used to affect the wages and employment of domestic workers is longstanding and controversial. The controversy extends to the scientific community, as evidenced by the continued analysis and re-analysis of the effect of the Mariel Boatlift on the Miami labor market (Card 1990; Borjas 2017; Clemens and Hunt 2017; Peri and Yasenov 2019). The political and scientific prominence of this research question, and the historical prominence of the bracero guest worker program, makes CLP (2018) notable. The conclusions of their study may have an impact on both policy and theory.

I have argued that there are significant problems in the data and analyses used by CLP, and that the problems are such that it would be surprising if such analysis were to find anything but no effect of ending the bracero program. I also show that there is a strong likelihood that illegal migration via Mexico, a dramatically rising pool of domestic labor, and ongoing (exogenous) technological change were much more important influences on wages and employment in the farm labor market, and that these forces made it highly unlikely that ending the bracero program would have a measurable effect.

References

Borjas, George J. 2017. The Wage Impact of the Marielitos: A Reappraisal. *ILR Review* 70(5): 1077–1110.

Bureau of Agricultural Economics. Various years. *Farm Labor Report*. Washington, D.C.: Agricultural Marketing Service; Crop Reporting Board; Agricultural Statistics Board.

Bureau of Employment Security. Various years. *Farm Labor Market Developments*. Washington, D.C.: U.S. Department of Labor, Manpower Administration.

Bureau of Employment Security. 1961. *Hired Farm Workers in the United States*. Washington, D.C.: U.S. Department of Labor.

Card, David. 1990. The Impact of the Mariel Boatlift on the Miami Labor Market. *ILR Review* 43(2): 245–257.

Clemens, Michael A., and Jennifer Hunt. 2017. The Labor Market Effects of Refugee Waves: Reconciling Conflicting Results. *NBER Working Paper* 23433. National Bureau of Economic Research (Cambridge, Mass.). **Link**

Clemens, Michael A., Ethan G. Lewis, and Hannah M. Postel. 2018. Immigration Restrictions as Active Labor Market Policy: Evidence from the Mexican Bracero Exclusion. *American Economic Review* 108(6): 1468–1487. **Link**

Dimitri, Carolyn, Anne Effland, and Neilson Conklin. 2005. The 20th Century Transformation of U.S. Agriculture and Farm Policy. EIB-3. June. U.S. Department of Agriculture, Economic Research Service (Washington, D.C.). **Link**

McElroy, Robert C., and Earle E. Gavett. 1965. *Termination of the Bracero Program: Some Effects on Farm Labor and Migrant Housing Needs*. Washington, D.C.: U.S. Department of Agriculture, Economic Research Service,

Peri, Giovanni, and Vasil Yasenov. 2019. The Labor Market Effects of a Refugee Wave: Synthetic Control Method Meets the Mariel Boatlift. *Journal of Human Resources* 54(2): 267–309.

Vialet, Joyce, and Barbara McClure. 1980. Temporary Worker Programs, Background and Issues: A Report. Washington, D.C.: U.S. Government Printing Office.

About the Author

Robert Kaestner is a Research Professor at the Harris School of Public Policy of the University of Chicago. He is also a Research Associate of the National Bureau of Economic Research, an Affiliated Scholar of the Urban Institute and a Senior Fellow of the Schaeffer Center for Health Policy of USC. Prior to joining Harris, Kaestner was on the faculty of the University of Illinois, University of Illinois at Chicago, University of California, Riverside, the CUNY Graduate Center and Baruch College (CUNY). He received his Ph.D. in Economics from the City University of New York. He received his BA and MA from Binghamton University (SUNY). His research interests include health, demography, labor, and social policy evaluation. He has published over 125 articles in academic journals. Recent studies have been awarded Article of the Year by AcademyHealth in 2011 and the 2012 Frank R. Breul Memorial Prize for the best publication in *Social Services Review*. Dr. Kaestner has also been the Principal Investigator on several NIH grants focused on Medicare and Medicaid policy. Kaestner is an Associate Editor of the *Journal of Health Economics* and the *American Journal of Health Economics*, and on the Editorial Board of *Demography* and *Journal of Policy Analysis & Management*. His email is kaestner.robert@gmail.com.

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