

# Who benefits from the minimum wage—natives or migrants?

There is no evidence that increases in the minimum wage have hurt immigrants

Keywords: minimum wage, immigrants, low-skilled workers

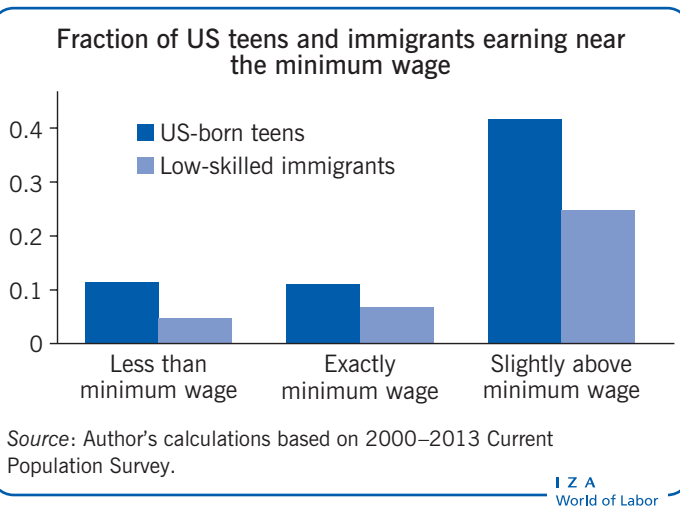
## ELEVATOR PITCH

According to economic theory, a minimum wage reduces the number of low-wage jobs and increases the number of available workers, allowing greater hiring selectivity. More competition for a smaller number of low-wage jobs will disadvantage immigrants if employers perceive them as less skilled than native-born workers—and vice versa. Studies indicate that a higher minimum wage does not hurt immigrants, but there is no consensus on whether immigrants benefit at the expense of natives. Studies also reach disparate conclusions on whether higher minimum wages attract or repel immigrants.

## KEY FINDINGS

### Pros

- + Although most evidence suggests that a minimum wage reduces employment among low-skilled workers, there has been no evidence of an adverse effect on immigrants.
- + A higher minimum wage increases average hourly earnings among low-skilled workers who remain employed, including immigrants.
- + Data suggest that employment of low-skilled immigrants increases when the minimum wage rises.
- + Several studies conclude that immigrants move away from areas with higher minimum wages, reducing adverse effects on native-born workers.
- + Compliance with minimum wage laws does not appear to be lower for immigrants than for natives.



### Cons

- No studies outside of the US have examined the effect of the minimum wage on immigrants and natives.
- Increased employment of low-skilled immigrants when the minimum wage rises may mean that employers substitute immigrants for native-born workers, to the detriment of natives.
- Unauthorized immigrants appear more likely to be paid below the minimum wage than other workers.
- Some evidence suggests that low-skilled immigrants are more likely to move to areas experiencing minimum wage increases, which could boost competition among immigrants and native-born workers at the same time that the number of jobs shrinks.

## AUTHOR'S MAIN MESSAGE

A higher minimum wage boosts average hourly earnings of low-skilled workers, including immigrants. Most evidence for the US indicates that a higher minimum wage has no appreciable effect on the employment of low-skilled immigrants, but the evidence is divided on whether it attracts or repels low-skilled immigrants. Little is known about the effects on unauthorized immigrants. The limited evidence to date does not give policymakers reason for concern that a higher minimum wage will attract more unauthorized immigrants, although it is unclear whether it will attract more low-skilled immigrants in general.

## MOTIVATION

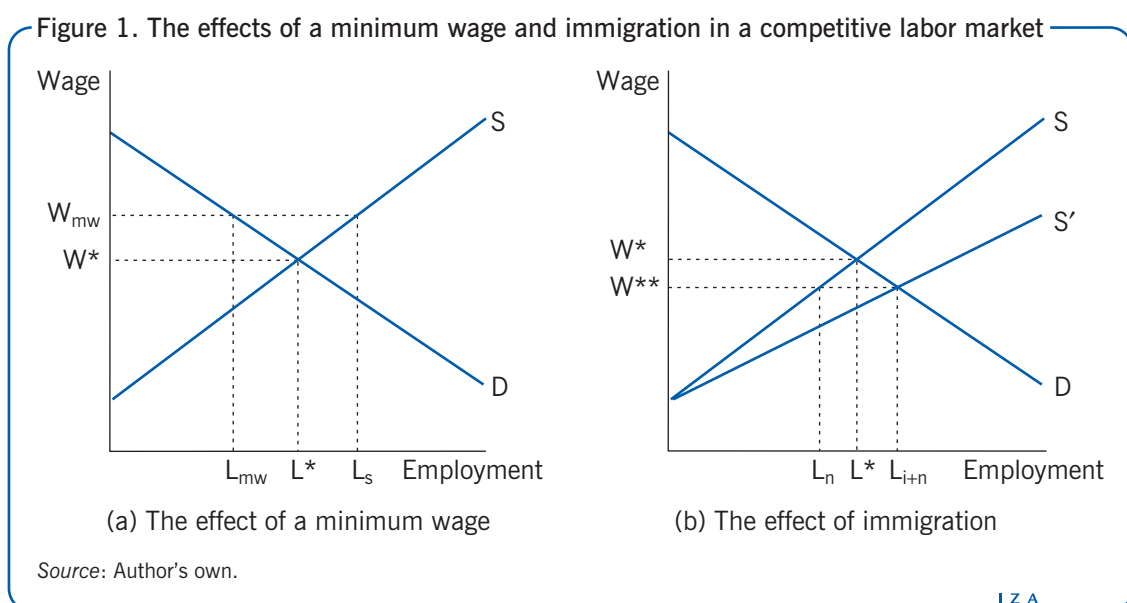
The main motivation for a minimum wage is to ensure that low-wage, low-skilled workers earn an adequate income and are not exploited by employers. However, a minimum wage may lead to adverse consequences that ultimately make some low-skilled workers worse off. Most importantly, a minimum wage may reduce the number of workers that employers hire and cause employers to shift away from the least-skilled workers toward more-skilled workers. The effect of a minimum wage may be different for immigrants than for native-born workers if the two groups do not have the same skill distribution. The effect also may differ if minimum wage coverage or compliance varies between immigrants and natives. Unauthorized or undocumented immigrants, in particular, may be paid less than the minimum wage. As immigrants' share of the labor force grows in many countries, it is important to understand whether a minimum wage has the same effect on immigrants as on natives. If a higher minimum wage benefits immigrants at the expense of natives or attracts more immigrants, policymakers may want to take such effects into account before raising the minimum wage.

## DISCUSSION OF PROS AND CONS

### Economic theory

Neoclassical economic theory predicts, under certain assumptions, that a minimum wage will reduce the number of workers hired while increasing unemployment. In its simplest form, the neoclassical model assumes that the market for labor is competitive and that there is a single type of labor. The demand for labor slopes down while the supply of labor slopes up. The more responsive, or elastic, labor demand and supply are to changes in wages, the flatter the curves.

Figure 1(a) depicts a “binding” minimum wage, or a wage floor,  $W_{mw}$ , above the market-clearing wage,  $W^*$ . When the wage floor is imposed, employment falls from  $L^*$  to  $L_{mw}$ . The more elastic labor demand is, the bigger the drop in employment. Meanwhile, the increase in the wage boosts the number of people willing to work from  $L^*$  to  $L_s$ . The more elastic labor supply is, the bigger the increase in the number of people willing to work. Because the number of jobs is less than the number of available workers, there is unemployment. Unemployment is equal to  $L_s - L_{mw}$ .



Under similar assumptions, neoclassical economic theory predicts that immigration will lead to a decrease in the wage and in employment of native workers. Figure 1(b) depicts the effect of an increase in labor supply due to immigration. Suppose that initially there are no immigrants—all labor is supplied by natives. Immigration boosts the labor supply from  $S$  to  $S'$ . As a result, the market-clearing wage falls from  $W^*$  to  $W^{**}$ . The more elastic labor demand is, the smaller the drop in the wage. The decrease in the wage reduces the number of natives who are willing to work from  $L^*$  to  $L_n$ . The more elastic the native-born workers' labor supply is, the bigger the drop in the number of natives willing to work. At the lower wage, employers are willing and able to hire  $L_{i+n}$  workers. The number of immigrant workers is equal to  $L_{i+n} - L_n$ .

The presence of a binding minimum wage (a wage floor) lessens the adverse impact of immigration on wages while increasing the adverse effect on unemployment [1]. The existence of a minimum wage prevents the wage from falling in response to immigration. However, the number of unemployed workers rises since natives do not exit the labor market in response to immigration. Instead, the model predicts that natives will remain in the labor market in hope of earning the above-market minimum wage. If the minimum wage is not binding—the case when the market-clearing wage is above the wage floor—the presence of a wage floor limits how far the wage can fall in response to immigration.

### ***Multiple types of workers***

This basic model makes a number of simplifications. One important simplification is that there is a single type of worker. More realistically, there are multiple types of workers, with different skill levels. High-skilled workers are not directly affected by the minimum wage since market wages for high-skilled workers are typically well above the minimum wage. Among the pool of low-skilled workers, the minimum wage gives employers a profit incentive to substitute away from the least skilled. The increase in the number of available workers induced by the minimum wage allows employers to substitute more-skilled workers for the least-skilled workers. (Employers also have an incentive to substitute capital for labor as the wage increases.)

The minimum wage therefore creates winners and losers in the labor market. The more-skilled workers who are able to get or keep jobs at the minimum wage are winners, while the least-skilled workers who cannot get or keep jobs are losers. Any high-skilled workers who are complements with low-skilled workers are losers as well if a decrease in the total employment of low-skilled workers in response to the minimum wage leads to a decrease in the employment of high-skilled workers. Alternatively, high-skilled workers may benefit if they are substitutes for low-skilled workers, who become relatively more expensive as a result of the minimum wage. There are also winners and losers among consumers. Immigration reduces the price of goods and services produced by immigrants, thereby helping consumers, while a minimum wage increases the price of goods and services produced by low-wage workers, thereby hurting consumers.

Not all natives compete with all immigrants for jobs. Low-skilled natives compete with low-skilled immigrants, while high-skilled natives compete with high-skilled immigrants. The more substitutable immigrants are for natives, the tougher the competition and the more adverse the effect of immigration on natives' wages and employment. If most immigrants and natives are employed in different sectors or different geographic locations, there may be little substitution between them. At the sector level, immigrants and natives may work in different industries or occupations, and there may be little substitution across sectors because of specific skills. This is true in particular for high-skilled workers—architects are not readily substitutable for agronomists, for example, whereas construction laborers may be quite substitutable for farm workers.

At the geographic location level, immigrants may move to areas where relatively few natives live. This reduces the competition between immigrants and natives for jobs if labor markets are local, not national. Labor markets tend to be more local for low-skilled workers, who are less mobile than high-skilled workers. Of course, new immigrants usually travel long distances and are likely to go to areas where jobs are relatively abundant. This again reduces the competition between immigrants and natives for jobs.

Labor markets are thus defined by a combination of skill, sector, and location. Within a labor market, a binding minimum wage benefits the more-skilled workers at the expense of the least-skilled workers. If immigrants are less skilled than natives within a labor market, a binding minimum wage should shift employment from immigrants to natives. The opposite is true if natives are less skilled than immigrants.

### ***Responsiveness to job market opportunities***

The basic model also assumes that immigration occurs regardless of labor market opportunities. However, immigrants may be responsive to labor market opportunities. More people may immigrate when opportunities are favorable, and they may choose to go to the regions of a country with the best opportunities. This is true to a greater extent for economic immigrants—people who immigrate to find work—than for family-based or humanitarian immigrants [2].

A minimum wage is predicted to have two effects on labor market opportunities: it raises the wage, and it reduces employment. When the minimum wage is binding, immigrants who move in response to labor market opportunities are trading off a lower probability of being employed for a higher wage if employed [3]. If the first effect is bigger, a minimum wage reduces immigrants' expected earnings. If the second effect is bigger, a minimum wage means higher expected earnings for immigrants. If expected earnings increase, more immigration is likely to occur. The adverse employment impact on natives will then be larger. But if expected earnings fall because the adverse employment effect outweighs the positive wage effect, less immigration is likely to occur. A smaller inflow of immigrants means less competition between immigrants and natives for jobs. This reduces the adverse impact of a minimum wage on natives' employment.

### ***Existence of uncovered sectors***

The basic model further assumes that all workers are covered by the minimum wage. If there is a sector where the minimum wage does not apply (an “uncovered” sector), some workers who cannot get jobs in the covered sector will move to the uncovered sector. This movement causes the wage in the uncovered sector to fall. The adverse impact on employment is smaller, however, since workers can move to jobs in the uncovered sector. Immigrants may be more willing than natives to move to those jobs, particularly if they are jobs that tend to be perceived more negatively by natives because they are more demeaning, dirtier, or more dangerous than covered jobs [4]. In equilibrium, the expected wage (the probability of employment times the wage if employed) should be the same across the two sectors.

### ***Incomplete compliance***

Similarly, incomplete compliance with a minimum wage law will reduce the law's impact. If some employers do not pay employees the minimum wage, the increase in wages will

be smaller. The adverse impact on employment will be smaller as well. Compliance with a minimum wage law may be lower among employers who hire more immigrants, particularly unauthorized immigrants. Employers who already violate the law by (knowingly) hiring unauthorized immigrants may not be concerned about violating a minimum wage law. In addition, immigrants may be less aware of minimum wage regulations than natives. And even if they are aware of such laws, they may not pursue any right they have to be paid at least the minimum wage. This is true in particular for unauthorized immigrants, who may fear revealing their presence and being fired or deported. In fact, a minimum wage may increase employers' demand for unauthorized workers if these workers earn less than the minimum wage. This increase in demand might boost wages for unauthorized workers, although to no more than the minimum wage.

### **Overall impact**

In sum, economic theory predicts that a minimum wage will reduce employment and boost unemployment. More-skilled workers will benefit at the expense of the least skilled. Immigrants may be more likely to work in sectors that are not covered by the minimum wage and to work for employers who do not comply with the law. Immigrants therefore may benefit less than natives from a minimum wage in terms of higher earnings.

### **Evidence on employment and earnings effects**

Economists who study the effects of the minimum wage usually focus on low-wage, low-skilled groups of workers. In practice, this often means looking at teenagers or workers in low-wage sectors, like fast food. Studies have typically found that a 10% increase in the minimum wage reduces employment among teens by about 1–3%. Research has found negative effects on employment in Canada, Portugal, the UK, and the US, among other countries. However, some studies for the UK, the US, and elsewhere have concluded that a higher minimum wage does not necessarily reduce employment among teens or at fast-food restaurants. Potential explanations for such findings—which are inconsistent with the basic neoclassical model—focus on market imperfections, such as frictions in matching available workers with jobs. For example, a higher minimum wage may reduce turnover and job vacancies by reducing wage differences across employers.

Research for the UK suggests that the country's national minimum wage reduces any adverse impact of immigration on the wages of low-wage natives, particularly women. One study notes, "Immigration over this period [1996–2005] tended to increase numbers of non-immigrant workers at the low end of the distribution below levels where the minimum wage is binding. This suggests that the minimum wage performs an important role to secure wages of workers who otherwise may lose out from immigration" [5].

Only a few studies have looked at the effect of the minimum wage on immigrants. Research has been limited exclusively to the US. The first question of interest is whether the minimum wage affects immigrants' earnings. If not, the minimum wage is unlikely to affect their employment. Here, the evidence indicates that the minimum wage is binding for large numbers of immigrants. One study found that a \$1 increase in the minimum wage causes a 17–23 cent increase in the earnings of low-skilled immigrants [6]. Another study found that increases in the minimum wage have a similar effect on hourly earnings among low-skilled immigrants and teens [7]. A 10% increase in the real minimum wage boosts average hourly earnings by 1.5–2.2% for low-

skilled immigrants and teens. Other research showed that increases in the federal minimum wage led to similar increases in immigrants' and natives' earnings [8].

Given that the minimum wage raises the earnings of low-skilled immigrants (and teenage natives), the basic neoclassical model, as discussed in the previous section, predicts a negative effect on employment. However, research to date has not found evidence of an adverse employment effect among low-skilled immigrants. One study that found a negative effect on employment among teens did not find a negative effect among low-skilled immigrants [7]. In fact, it suggested that higher minimum wages may even boost employment among low-skilled immigrant men. Another study, in contrast, found that the relationship between the minimum wage and employment is not statistically different from zero among either low-skilled recent immigrants or native-born teens [9]. That study concluded that living in a state with more immigrants shelters native-born teens from the minimum wage's adverse employment effects: teens' employment falls more when the minimum wage increases if they live in a state with relatively few low-skilled immigrants. This suggests that employers do not substitute immigrants for native-born teens when the minimum wage increases. A third study likewise did not find conclusive evidence of negative employment effects on low-skilled immigrants and suggested that this is due to movement by workers into agricultural and informal sectors not covered by the federal minimum wage [6].

Indirect evidence for the US also suggests that any employment losses associated with increases in the minimum wage are not concentrated among the least skilled. A study that examined the average education level among native and immigrant workers found that education levels remained essentially the same among both groups when the minimum wage rose [8]. If employers substitute more-skilled workers for the least skilled when the minimum wage rises, the average education level of workers should rise. The evidence to date suggests that this is not the case for immigrants or natives.

The evidence that increases in the minimum wage lead to little, if any, substitution between immigrants and native-born workers is consistent with a number of recent studies that find little evidence that immigration in general leads to adverse wage or employment effects among native-born workers. Studies of Germany, the UK, and the US, among others, have concluded that immigration, even by low-skilled workers, has relatively little effect on native-born workers. Labor markets appear to adjust quickly to absorb immigrant inflows. In addition, most natives do not appear to compete directly with immigrants for jobs. Natives typically work in more communication-intensive jobs than immigrants do, and they often live in different areas.

The failure to find adverse employment effects among immigrants does not appear to be due to lower coverage or less compliance with minimum wage laws for immigrants as a whole. In the US, low-skilled immigrants are less likely than teens to be paid below the minimum wage [7]. Immigrants are also less likely than US natives of similar age, sex, and race/ethnicity to be paid below the minimum wage [10]. Similarly, immigrants who work in immigrant-intensive industries, where compliance might be expected to be lower, are not more likely than immigrants in other industries to be paid less than the minimum wage [8].

However, coverage or compliance does appear to be lower for unauthorized immigrants. Within the US agricultural sector, unauthorized workers are more likely than legal workers to be paid less than the minimum wage (12% versus 8%) [11]. Further, following an increase in the minimum wage, earnings rise less among unauthorized immigrants working in the agricultural sector than among other US farm workers. This suggests that employers may want to substitute toward unauthorized immigrants when the minimum wage rises. However, there is no clear evidence to date that employers actually do so.



## Effects on migration flows

One possible reason why the minimum wage does not appear to have a negative effect on immigrants' employment is that immigrants may not move to areas with a high minimum wage. Smaller immigrant inflows into areas with a high minimum wage may also diminish the negative employment impacts of the minimum wage and immigration on native-born workers. Immigrants tend to be more responsive than natives to labor market opportunities. This responsiveness helps reduce wage and unemployment differences across regions.

Puerto Rico offers a prime example of migration in response to the minimum wage. The extension of the US minimum wage to Puerto Rico in the 1970s led to a substantial outflow of low-skilled workers [12]. (As US citizens, Puerto Ricans face no legal restrictions on migrating to the US.) An estimated 4.4% of employed men and 7.5% of unemployed men migrated to the US. Migrants tended to have fewer years of education and were more likely to be unemployed than people who remained in Puerto Rico. This outflow cushioned the effect of the minimum wage on unemployment in Puerto Rico.

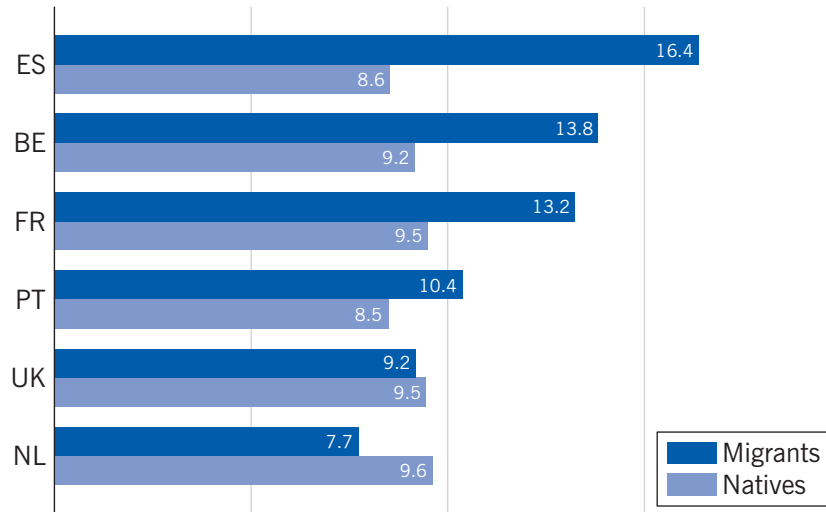
Evidence for the US indicates that immigrants' location choices are quite responsive to the minimum wage. However, findings are mixed on whether a higher minimum wage attracts or repels low-skilled immigrants. One study found that a 10% increase in a state's minimum wage leads to an 8% decrease in the number of low-skilled recent immigrants in that state [9]. Another study found that an increase in a state's minimum wage reduces the fraction of that state's population comprising low-skilled adult immigrants [7]. Research also indicates that during the 1990s, Mexican and Central American migrants were less likely to go to states that had implemented minimum wages that were higher than the federal minimum wage [13]. However, a study of the effects of the 1996–1997 and 2007–2009 federal minimum wage increases found that the number of low-skilled immigrants grew more in areas where more immigrants were affected by the minimum wage increases [3]. Another study showed that relatively recent low-skilled immigrants—those who have been in the US for only two or three years—are attracted to states with high minimum wages [6]. Evidence on Mexico–US migration suggests that higher minimum wages attract legal immigrants but not unauthorized immigrants [3].

## Minimum wages among natives and migrants in Europe

Measuring the number of employees covered by the minimum wage in Europe is difficult since some countries do not have a minimum wage while others have minimum wages that vary across industries. However, as the minimum wage is usually just below the 10th percentile of the income distribution, the number of employees in the first decile of the earnings distribution serves as a proxy for the number of workers covered by a national minimum wage.

Using data from the 2011 European Labor Force Surveys of six countries (Spain, Belgium, France, Portugal, the UK, and the Netherlands), Figure 2 reports the number of immigrants in the 10th percentile of the wage distribution as a share of the total number of immigrants. The same share is shown for natives. Migrants are overrepresented at the bottom of the wage distribution in all countries but the UK and the Netherlands. The proportion of immigrants among low-wage employees is also higher than the share of immigrants in the total working-age population (see Figure 3). The only exceptions are again the UK and the Netherlands.

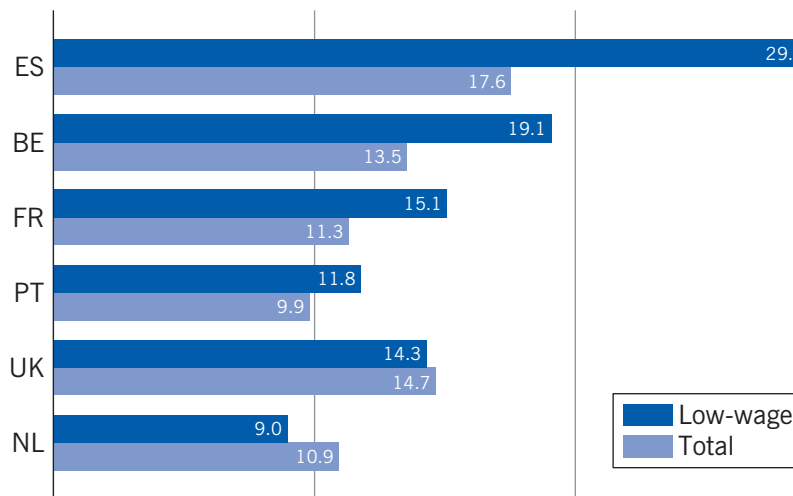
Figure 2. Migrant and native employees in the 10th percentile of the wage distribution as a fraction of the population (%)



Notes: The sample includes all employees aged 16–64. Countries covered: Spain (ES), Belgium (BE), France (FR), Portugal (PT), the United Kingdom (UK), and the Netherlands (NL).

Source: Author’s calculations based on 2011 labor force surveys.

Figure 3. Migrant workers in the population, share (%)



Notes: The sample includes all foreign-born employees aged 16–64. Low-wage workers are employees in the 10th percentile of the wage distribution. Countries covered: Spain (ES), Belgium (BE), France (FR), Portugal (PT), the United Kingdom (UK), and the Netherlands (NL).

Source: Author’s calculations based on 2011 labor force surveys.

### LIMITATIONS AND GAPS

Knowledge about how the minimum wage affects immigrants relative to native-born workers is still sparse. This is a critical gap. Research has focused exclusively on the US, in part because of the large number of low-skilled immigrants there and the variation in state minimum wages.



These studies reached disparate conclusions, though the reasons for the discrepancy are unclear. Economists and policymakers alike need a better understanding of how the minimum wage affects immigrants' employment and earnings, not only in the US but in other countries as well. Understanding the effects is important for developing countries as well as industrialized countries since many developing countries impose wage floors, although compliance may be lower than in industrialized countries.

In addition to more research on the employment and earnings effects of the minimum wage among immigrants compared with natives, more research is needed on how the minimum wage affects immigrants' location choices. Findings on whether the minimum wage attracts or repels immigrants are particularly disparate. Knowing the direction of the effect is important for policymakers, who may want to use the minimum wage to increase or decrease immigrant inflows. It is also unclear whether employers turn to unauthorized immigrants in greater numbers when the minimum wage rises. The effect of minimum wages on emigration in source countries—the number or share of people who leave—is another area needing attention.

## SUMMARY AND POLICY ADVICE

The scarcity of research on the minimum wage and immigrants combined with the contradictory findings of some research limit the conclusions that policymakers can draw about whether natives or immigrants benefit (or lose) from the minimum wage—and what that means for policy. One conclusion is that there is no evidence to date that increases in the minimum wage have an adverse effect on low-skilled immigrants. There is evidence that increases in the minimum wage reduce the employment of low-skilled workers in general, although some research finds no evidence of negative employment effects. The failure to find negative employment effects among low-skilled immigrants may be due to low-skilled immigrants moving away from areas experiencing a minimum wage hike. However, some evidence suggests that low-skilled immigrants are attracted to areas where there has been a rise in the minimum wage. The failure to find negative employment effects among immigrant workers does not appear to be due to greater noncompliance with the minimum wage, with the possible exception of some negative effects for unauthorized immigrants. Policymakers considering an increase in the minimum wage thus do not need to be overly concerned about adverse effects on immigrants but may want to consider the possibility that a higher wage floor will attract more low-skilled immigrants. An increase in low-skilled immigrants may have an adverse effect on low-skilled native workers, as would an increase in the minimum wage.

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## Competing interests

The IZA World of Labor project is committed to the *IZA Guiding Principles of Research Integrity*. The author declares to have observed these principles.

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## REFERENCES

### Further reading

Borjas, G. J. *Immigration Economics*. Cambridge, MA: Harvard University Press, 2014.

Neumark, D., and W. L. Wascher. *Minimum Wages*. Cambridge, MA: MIT Press, 2008.

### Key references

- [1] Zimmermann, K. F. “Tackling the European migration problem.” *Journal of Economic Perspectives* 9:2 (1995): 45–62.
- [2] Jaeger, D. A. “Green cards and the location choices of immigrants in the United States.” *Research in Labor Economics* 27 (2007): 131–184.
- [3] Giulietti, C. “Is the minimum wage a pull factor for immigrants?” *Industrial and Labor Relations Review* 67:Supplement (2014): 649–674.
- [4] Zavodny, M. “Do immigrants work in worse jobs than U.S. natives? Evidence from California.” *Industrial Relations* 54:2 (2015): 276–293.
- [5] Dustmann, C., T. Frattini, and I. Preston. *A Study of Migrant Workers and the National Minimum Wage and Enforcement Issues that Arise*. Report commissioned by the Low Pay Commission. London: Low Pay Commission, 2007.
- [6] Boffy-Ramirez, E. “Minimum wages, earnings, and migration.” *IZA Journal of Migration* 2:17 (2013).
- [7] Orrenius, P. M., and M. Zavodny. “The effect of minimum wages on immigrants’ employment and earnings.” *Industrial and Labor Relations Review* 61:4 (2008): 544–563.
- [8] Cortes, K. E. “Wage effects on immigrants from an increase in the minimum wage rate: An analysis by immigrant industry concentration.” IZA Discussion Paper No. 1064, March 2004.
- [9] Cadena, B. C. “Recent immigrants as labor market arbitrageurs: Evidence from the minimum wage.” *Journal of Urban Economics* 80 (2014): 1–12.
- [10] Fry, R., and B. L. Lowell. “The incidence of subminimum pay among native and immigrant workers.” *Population Research and Policy Review* 16:4 (1997): 363–381.
- [11] Pena, A. A. *Do Minimum Wage Laws Affect People Who Are Not Covered? Evidence From Documented and Undocumented, Hourly and Piece Rate Workers in U.S. Agriculture*. Upjohn Institute for Employment Research, Working Paper No. 13–194, April 2013.
- [12] Castillo-Freeman, A. J., and R. B. Freeman. “When the minimum wage really bites: The effect of the U.S.-level minimum on Puerto Rico.” In: Borjas, G. J., and R. B. Freeman (eds). *Immigration and the Workforce: Economic Consequences for the United States and Source Areas*. Chicago, IL: University of Chicago Press, 1992; pp. 177–211.
- [13] von Scheven, E., and I. Light. “Minimum wage and Mexican and Central American influx.” *Sociological Perspectives* 55:4 (2012): 613–636.

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