

Do guest worker programs give firms too much power?

Guest worker programs requiring employer sponsorship can expand global opportunity—and grant employers market power

Keywords: guest workers, migration, firms, monopsony, mobility

ELEVATOR PITCH

Guest worker programs allow migrants to work abroad legally, and offer benefits to workers, firms, and nations. Guest workers are typically authorized to work only in specific labor markets, and are sponsored by, and must work for, a specific firm, making it difficult for guest workers to switch employers. Critics argue that the programs harm host country citizens and permanent residents (“existing workers”), and allow employers to exploit and abuse vulnerable foreign-born workers. Labor market institutions, competitive pressures, and firm strategy contribute to the effects of migration that occur through guest worker programs.

KEY FINDINGS

Pros

- + Guest worker programs give migrants legal opportunities to earn higher wages abroad.
- + Firms have advantages in recruiting better workers, and adapting quickly to changing environments.
- + Nations can fill worker shortages in specific occupations and sectors, attract highly-skilled workers, and benefit from a global workforce.
- + Destination country taxpayers bear few direct costs.
- + Guest worker programs regularize migration and offer higher labor standards compared to unregulated migration.

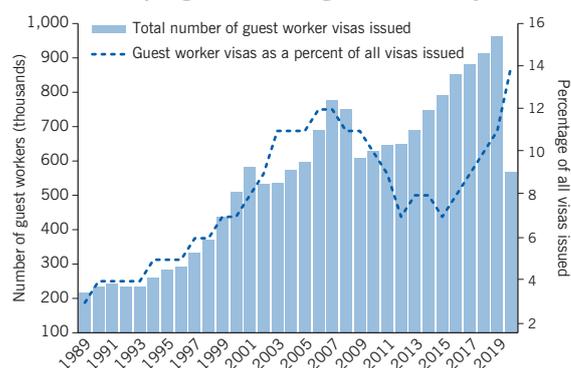
Cons

- Guest workers are unable to quit their employer easily without risking their legal status in the destination country, granting firms some power over them.
- Firm market power over guest workers can harm citizens or permanent residents (“existing workers”).
- Firm market power can lead to exploitation and abuse of guest workers.
- Firm strategy may not align with national policy aims.
- Some firms may take advantage of workers in sending countries via fees, deception, and fraud in recruitment.

AUTHOR’S MAIN MESSAGE

Guest worker programs increase opportunities for people to work globally, benefitting migrant workers and the firms and countries that receive them. Concerns about these programs are often related to the potential for firms to hold power over workers. Such power allows firms to earn higher profits by paying guest workers lower wages, and depresses the employment and wages of host nation citizens and permanent residents. The potential negative effects of guest worker programs can be countered by weakening the attachment between guest workers and their sponsors, and by setting and enforcing high wage and labor standards.

Guest worker programs have grown steadily in the US



Source: Author's compilation based on Non-Immigrant Visa Statistics. Online at: <https://travel.state.gov/content/travel/en/legal/visa-law0/visa-statistics/nonimmigrant-visa-statistics.html>

MOTIVATION

The advantages of global mobility for potential migrants are often compelling: an Indian construction worker who travels to work in the United Arab Emirates (UAE) earns roughly five times more than an observationally similar worker who remains in India [1]. Large gains for workers extend to firms and nations that take advantage of global opportunities for their labor needs. Many countries legally authorize temporary migration for employment purposes if workers obtain firm sponsorship as part of a guest worker program. However, giving firms the power to select who is admitted to work in a country can tie guest workers to their sponsoring employer, and grant the employer the power to extract some of the large gains from migration that might otherwise belong to the worker. Excessive employer power could shift program conditions away from a win-win-win for workers, firms, and nations, and toward conditions of discrimination, exploitation, and abuse.

Guest worker programs

Guest worker programs are legal mechanisms for migrants to travel internationally because of their attachment to the workforce in a destination country. Such programs authorize the temporary migration of foreign-born workers in fields that need additional labor. Distinct from undocumented or unauthorized migration, refugee programs, family-reunification, investor, tourist, health, and educational visa programs, as well as immigrant or permanent resident programs that lead to citizenship, guest worker programs enable a temporary match between workers who want international opportunities and employers who want to hire from an international labor market. Because these programs authorize migrants to work for a specific duration, they are also referred to as temporary worker or seasonal employment programs, and because most of these guest worker programs require employer sponsorship, they are also referred to as employer-sponsored visas.

DISCUSSION OF PROS AND CONS

Guest workers win: Individuals benefit

Guest worker programs offer workers in developing countries unparalleled opportunities to increase their earnings by working abroad and are thus popular, with intense competition among prospective migrants for a limited number of spots. Survey evidence finds that Indian construction workers have favorable views of wages and working conditions for guest workers in the UAE [1]. Even though they have little bargaining power and are underpaid compared to Emirati nationals, guest workers who go to the UAE are more likely to recruit family members for the same opportunity, and earn more compared to Indian nationals who remain in India [1].

As an indication of the popularity of these programs, the number of workers admitted to the US in visa programs requiring employer sponsorship has more than quadrupled in the 30 years since 1989, growing from 216,863 admissions in 1989 to 962,517 in 2019, according to the US State Department. In the US high-skill H-1B program, the use of random lotteries to assign visas, and variations in quota policy, has provided a basis for many researchers to examine program effects. The number of applicants for H-1B visas regularly exceeds the number of visas available (fixed at 65,000 visas for private employers since 2004). To handle such applicant surplus, individual applications for

visas are entered into a randomized lottery [2]. Such random assignment has led to high-quality natural experiments that can help determine the effects of these programs on guest and existing workers, and firms.

Firms win: Competitive advantage

In guest worker programs, firms select migrants in an origin country and determine who is authorized to lawfully work in a destination country. Firms can thus access a global supply of labor, and in the absence of regulations, profit from the difference between the wage at which a migrant worker is willing to work and the going wage rate for labor in a destination country. Guest worker programs often target specific labor markets that face annual seasonal worker shortages, such as agriculture and hospitality, as well as professional occupations such as medical and information technology professionals where firms require highly specialized workers. Insufficient worker availability in critical roles can have serious negative consequences for firms; having a globally mobile workforce thus carries many advantages.

For firms that operate in industries where a scientific and engineering workforce is important, highly-skilled workers provide a competitive advantage. A study using the lotteries of H-1B visas shows that firms facing shortages of guest workers had reduced employment, sales, and profits [2]. Firms unable to hire guest workers due to visa rationing also had reduced market value, R&D investments, and capital expenditures relative to firms that did not face visa rationing. Firms that are heavier users of the visa reported a smaller negative impact due to visa rationing than less intensive users, as heavy users must have a backup plan for the possibility that they will face a shortfall of guest workers [2]. With access to guest workers, firms have a pool of labor that otherwise would not be available, and can more rapidly grow and expand their operations. In matched employer–employee data, overall employment of skilled workers, including existing workers, increases inside a firm as more skilled guest workers are employed [3].

Nations win: Meeting labor needs, attracting talent

The policy goals of guest worker programs often include providing the destination country with a competitive advantage in the global economy through an adequate labor supply in critical occupations and industries. High-skill guest worker programs can help nations attract the “best and the brightest” of global talent. There is evidence that firms often want to keep the best high-skilled workers in the destination country during economic downturns, not the cheapest [4]. Guest workers are often just as essential to nations in other contexts: as an extreme example, guest workers make up 90% of the private workforce in the UAE, working primarily as domestic laborers and in the construction industry [5]. In a world without guest workers, many nations might see their fruits and vegetables rot in the field, seasonal tourist industries collapse, and construction work grind to a halt.

As countries age and experience severe labor shortages, guest worker policies have been explored as a way to meet labor needs and could be designed to help nations meet fiscal obligations for an aging population. Because visa fees typically cover the costs of administering these programs, and firms pay the costs of recruitment and round-trip

travel, taxpayers are sheltered from the costs of running a guest worker program. During business cycle downturns, firms typically cannot stop paying a guest worker, or rely on the social welfare system, and must instead pay for idle time or for the costs of repatriation. Tax treaties and policies shape the fiscal impact of guest worker programs, but such programs are likely to have a positive fiscal impact if they require guest workers to pay for government services and benefit programs that they are then unable to access. Such inequities do raise ethical concerns; economists often respond that regardless of such inequities, there is evidence that guest workers still benefit from working abroad and are better off as a result [1].

While most programs ban guest workers from citizenship entirely, some guest workers on temporary visas eventually immigrate to a destination country and become citizens. Immigrants who first arrived in the US on a temporary work visa or student trainee visa have been shown to patent, publish, earn, and found companies at higher rates than native-born workers, while immigrants who arrive with permanent residence (and have never been guest workers) do not [6]. Temporary work visa holders who immigrate to the US also out-earn existing US workers and immigrants who arrive on student trainee visas [6]. This is likely because firms are better than nations at selecting talented individuals, often by relying on educational credentials and observed productivity. Skilled guest worker programs with firm sponsorship are also argued to be especially effective at increasing productivity growth in the long term. As one study concludes, “within this complex system, firms, universities and teaching hospitals are the most successful in attracting and selecting immigrants engaged in activities likely to increase US total factor productivity” [6], p. 445.

There is evidence that benefits of guest worker programs spill over to existing workers, and that host nations would be worse off in a world with less regulated migration. As firms in the US hire more highly-skilled guest workers, who must have at least a college degree and often work in Science, Technology, Engineering, and Mathematics (STEM) occupations, nearby existing workers experience wage gains and no loss in employment [7]. A 1% increase in the number of foreign-born guest workers in STEM fields was found to increase college-educated wages of existing workers by 7%–8% and non-college educated workers’ wages by 3%–4% [7]. In a world of global trade in goods and services without global labor mobility, firms also have the option to move operations abroad if they cannot bring workers to a host country. US-based multinational firms that are unable to hire H-1B workers due to visa rationing increase investments in offshore facilities and hiring, particularly in Canada, India, and China [8]. In the absence of regulated guest worker programs, irregular migration and non-existent or lower labor standards might take the place of lawful temporary migration, harming both existing and migrant workers.

Guest worker programs are regulated

While guest worker policies are largely set by national law and international bilateral treaties between countries, the ILO’s 2006 multilateral framework on migration contains minimum global labor standards. The ILO states that guest worker programs should respond to established labor market needs, respect the principle of equal treatment between migrants and existing workers, and not serve as a means to lower labor standards, wages, or working conditions for existing workers, or to undermine decent work in general.

ILO standards seek to prohibit coercion and deception in recruitment, and ban workers' payment of recruitment fees, but national policies create the specific terms of guest worker programs, and are quite varied. Guest worker program policies vary even within nations depending on the specific program, with separate programs often having different rules with respect to eligibility, duration of the visa, the role of firms, the availability of visas, and wage regulations. While regulations can influence and even increase employer power by making switching employers difficult, many countries recognize that the existence of regulated, lawful migration programs is attractive compared to alternatives.

In order to respond to labor market needs, guest worker visas are often restricted to certain labor markets, with skills-based, seasonal, regional, sector, or occupational requirements for what jobs migrants can work in. In a comparative legal analysis of guest worker programs in 13 countries, researchers at the US Library of Congress found that nearly every country has a separate visa category for highly-skilled workers, and that there has been a growing emphasis on the use of guest worker programs to attract highly-skilled workers. Australia, Canada, Israel, Norway, South Korea, the US, and the EU also prioritize industries with specific seasonal temporary worker needs such as agriculture and tourism, or chronic shortages, such as nursing care and construction.

To address concerns that firms use guest workers as a substitute for existing workers, national policies limit the supply of guest workers and require firms to pay equivalent wages. In the US, quotas limit the number of high-skilled H-1B visas available, but universities and research institutions are exempt from the quota, while other US programs have no quota at all. The federal governments in Norway and Russia administratively set and revise quotas, and in Australia, quotas are determined in labor agreements between the government and industrial sectors. Limiting supply is of special concern during economic downturns when the unemployment rate is high, but even without regulations, firms respond to changing conditions rapidly. In recessions, not only do initial admissions of guest workers decline, but many guest workers return to their home country as the unemployment rate increases, mitigating some concerns about the negative effects of migration on existing workers during downturns [4].

Even if guest workers are willing to work for less than existing workers, guest worker programs often set high wage requirements meant to ensure guest workers are not paid less than existing workers in similar roles. Some nations also set various labor market "tests" to ensure existing workers are not displaced. In Canada, employers must first demonstrate that they have sought to hire existing workers, and must pay wages that are equivalent to what existing workers are paid. With some significant exceptions, the US visas for seasonal (H-2B), agricultural (H-2A), and high-skill specialty (H-1B) workers require that employers attempt to hire domestically first. For these H visas, the US Department of Labor legally binds employers of migrants to pay an amount that is at least the local prevailing wage within the workers' occupation and region. Other programs in the US, such as the L visa for intracompany transfers and J visas for au pairs and cultural exchange workers, do not require employers to go through a similar process. While firms in the US visa programs have the power to pay workers less than their worth to the firm, prevailing wage regulations substantially limit employers' ability to do so [9]. National regulations of recruitment practices, sectors, occupations, wages, education levels, the quantity of visas available, and durations of lawful employment all limit the potential for guest workers to impact existing workers detrimentally.

Guest worker programs are not primarily intended to lead to citizenship or permanent residence, or to re-unite families. While most programs around the world do not offer guest workers a pathway to permanent residence status, some exceptions exist for highly-skilled workers in Australia and the US. Foreign-born Jews in Israel, foreign-born Koreans in South Korea, and foreign-born Japanese in Japan on temporary work visas can become permanent residents and citizens of those countries. Additional restrictions in most countries forbid guest workers to bring family members, and if family members can come, few authorize family members to work.

The US Library of Congress finds that most guest worker programs grant firms a critical role in recruiting workers abroad, sponsoring workers for visas, and paying associated costs. In Australia, both the worker and the firm must be approved. Many countries impose costs on job-to-job mobility for guest workers, or completely ban migrants from changing jobs while in the destination country. For example, in the US, Norway, Russia, South Korea, and the UAE, guest workers are either tied to their employer or must find another visa sponsor and pay fees to transfer a visa, thereby raising the costs for workers to switch employers. The same is true in the Canadian, Australian, and UK's seasonal worker programs. The Israel Supreme Court in 2006 and 2009 removed limitations on the number of transfers a guest worker can make among employers, and thus reduced the power of employers to block a guest worker's ability to join another firm. The central role of firms in sponsoring guest workers leads to many of the concerns about the attachments between these workers and the employers who hire them.

Exploitation and abuse

National regulations typically require firms to assume responsibility for workers they sponsor and to meet high labor standards. However, weak enforcement and rules that actually or effectively tie guest workers to their employers can lead to exploitation and abuse. Incidents of labor abuses including indentured servitude and forced labor occurring under guest worker programs are routinely documented by advocacy organizations such as Human Rights Watch and by the US State Department. Cases of fraud and deception in recruitment, and discrimination and inequitable wages compared to existing workers, have also been reported in ILO publications. High labor standards in the form of prevailing wage requirements should limit employers' ability to exercise such power. However, employers may be willing to break the law if there is little enforcement, if punishments are weak, and if the gains from cheating are especially large.

In some countries, such as Australia, Norway, and Russia, a guest worker is barred from switching employers. In the US, employees on certain visas such as the L-1 for intracompany transfers may not change employers. Many programs allow employees to switch employers, but only through a costly and burdensome visa transfer process. For firms wishing to hire a guest worker already in the US, administrative costs in the H-1B program add an additional \$2,301–\$6,301 to hiring costs, depending upon firm size [9]. Critics have argued that these programs specifically create conditions of indentured servitude [4]. However, an analysis of H-1B guest workers finds that there is substantial job-to-job mobility among workers at large employers of information technology workers in the US: 20% of such workers quit and remain in the US with a new employer [4]. Separate studies have found that guest workers on H-1B visas can change jobs at similar

rates to existing workers, but when they apply for permanent residence (a step that requires employer sponsorship from a single firm), mobility declines significantly. While waiting for permanent residence to be granted, a process that can take up to ten years, a worker who quits their sponsoring employer would lose their place in the waiting line and have to start a new application with a new employer. Estimates of the wage effect of receiving permanent residence differ, and high-skilled guest workers may not receive a large pay increase when their status becomes permanent.

The guest worker system in the Arab states has had numerous reported abuses, including theft of workers' passports and conditions of indentured servitude. UAE regulations tie workers to one employer for the duration of a two-year contract. Reforms implemented in 2011 permitted a worker to change employers after the completion of their contract, without obtaining approval from their prior employer. This reform increased guest workers' real wages by over 10% [5]. Migrant workers already in the UAE were more likely to stay in the UAE and less likely to quit their employment at the end of the contract. As higher wages retained migrant workers, and reduced the need to recruit more migrant workers, the number of new entrants to the UAE fell, and newer arrivals were paid lower wages [5].

Monopsonistic labor markets

Economists have scrutinized guest worker programs as sources of potential monopsony power, or the power to set wages below competitive levels [10]. In comparison to a competitive labor market, in which firms are unable to recruit with wages below the market rate and where workers quit bad employers, workers in a monopsonistic labor market have difficulty quitting for better opportunities. Job-to-job mobility is impeded when an employer must pay to sponsor a visa for a worker to change jobs [4]. It is also likely that some employers in the destination country discriminate against guest workers and will only hire them at lower wages or will not hire them at all, thereby reducing competition and increasing firm power. Another reason to suspect monopsony power is the concentration of employers in the market for guest workers: several studies show that large firms and labor market intermediaries employ a disproportionate share of guest workers [9], [11]. In the US high-skilled guest worker program, payroll data from large employers of Indian guest workers suggests firms have the power to pay workers approximately 37% below their worth to the firm, a significant departure from what firms would pay in a competitive market [4].

Exceptional financial returns to migration due to a worker changing location create large incentives for firms if they can control the migration opportunity. When a monopsony model of migration is used, firms reap many of the rents involved in guest worker programs. Both existing and migrant workers may suffer lower wages as a consequence of firm power over migrant workers in the absence of labor market institutions [10]. High prevailing wage regulations and other policies that constrain firms' ability to use their monopsony power can counteract negative effects and retain the positive program aspects [10]. Indeed, evidence supports the view that while firms have the power to pay workers below competitive levels in the US visa programs for seasonal, agricultural, and high-skilled workers, regulations largely block them from doing so [9]. Limiting immigration could be self-defeating as migration has the potential to increase the total

income gains of existing workers under a system that limits firms' ability to use their monopsony power [10].

The policy of setting quotas on visas may drive smaller firms away from direct recruitment of foreign workers, and instead reward larger firms and intermediaries that can specialize in managing the complex process of hiring guest workers [11]. While requiring firms to sponsor and pay the additional costs involved in hiring guest workers may protect taxpayers by putting the cost on employers, this limits the number of employers who will hire guest workers. The limited number of employers engaged in sponsoring guest workers, in turn, can reduce wages. In the H-1B program, firms facing no competitors in a labor market set wages approximately 13% below what firms in a market with many competitors would pay [9].

Firm and national strategy misalignment

When nations permit firms to sponsor workers, firm-level strategies select the migrant population, and contribute to the effects of migration in a receiving country. Firms may lobby destination country governments to seek additional visas or lighter regulations, distorting the aims and operations of the programs. Many large users of guest worker programs are international labor market intermediaries that serve as brokers between demand in destination countries and supply in sending countries. Firms that are heavy sponsors of H-1B guest workers patent less and earn higher revenue per employee, contrary to program goals [12]. Moreover, firms in particular industries may not align with program objectives. While the semiconductor industry and universities show correlation between sponsoring H-1B guest workers and increased patenting and R&D investment, software companies and hardware companies do not [12].

While studies highlighted earlier emphasize positive results from the H-1B program, within-firm estimates of the effect of firm sponsorship of H-1B visa guest workers that are matched with federal tax records suggest otherwise. An important study finds sponsoring H-1B workers had no effect on use of the research and development tax credit or patenting [13]. The same study shows firms had higher profits, lower average employee earnings, and that higher overall employment was mitigated by evidence of guest workers crowding out existing workers [13]. Addressing a concern that guest workers replace older workers, another study finds that while overall employment increased as firms sponsored more H-1B workers, older workers' employment levels increased less than younger workers', and there is mixed evidence regarding the effects of guest workers on the absolute level of older workers' employment [3].

Distorting labor markets in sending countries

When firms have the power to screen and select incoming migrants, firms hold power over aspiring migrants in sending countries. Given the potential to earn higher wages in a destination country, aspiring migrants may become tied to firms in their origin nation in the hopes of traveling abroad. For example, under the US L-1 visa for intracompany transfers, a worker must be employed abroad continuously by their sponsor for at least one year prior to sponsorship. A promise of a much greater reward later in the destination country can be used to exploit aspiring migrants and require them to pay

recruitment fees, kickbacks, or bribes, or acquire debt as a means to travel abroad. The ILO's Fair Recruitment Initiative seeks to end the worst abuses globally, and in reporting on 90 national policies and 18 bilateral agreements on recruitment fees and related costs available in 2020, the ILO highlights that 63 countries ban charging workers recruitment fees and related costs, while 36 regulate fees.

LIMITATIONS AND GAPS

One limitation of the research on guest worker programs is the US-centric focus of the existing evidence. In addition, while there are several recent studies using firm-level data to study high-skilled guest worker programs, few have examined seasonal or temporary worker programs. Contradictory findings also leave important questions open for future research, especially from other countries and settings. For example, while the bulk of studies conclude that the H-1B program has positive effects, one notable empirical study offers evidence of negative effects regarding firm-level employment and innovation [13]. The different samples used in various studies could explain such discrepancies, and it would be useful for policymakers to have more studies in more countries, with a focus on programs with different worker occupations, skill levels, and firm industries. Likewise, it would be helpful for such studies to include indications of whether the firms are international labor market intermediaries, hospitals, or universities, in order to understand the effects of firm sponsorship.

With the exception of the UAE study [5], there are few causal estimates of how specific guest worker program regulations affect guest workers' pay and working conditions. Further studies of institutional variation and change, with a focus on guest worker and existing worker wages would be important. More studies that examine different policy features around the world would improve the understanding of how and when firms can exploit guest workers. Empirical research should also examine the extent of wage theft, or the violation of wage requirements, and the factors associated with employers' violations of guest worker wage regulations.

SUMMARY AND POLICY ADVICE

Rather than restricting or ending guest worker programs, there are many opportunities for policy changes that regulate firm sponsorship to have large positive impacts. Visas that do not permit workers to find another employer while maintaining lawful status should be reformed to enable job-to-job mobility. Likewise, visas that do not require employers to pay prevailing wages could be reformed to include wage requirements meant to ensure parity with existing workers. Easing quotas, or creating separate allotments for small firms, could reduce employer concentration. To reduce monopsony power in sending countries, programs could be revised to permit firms to sponsor any guest worker, not just those who have worked for the firm abroad for a specific duration. Funding for the guest worker program's operating expenses could be raised through a regular payroll tax, rather than the status quo fees (or taxes) assessed each time a guest worker is hired or changes employers. Reducing paperwork burdens on job mobility could increase the number of employers who participate. Finally, ending "quitting taxes" on job mobility, and requiring firms to pay competitive wages, would preserve and increase the benefits of these programs for workers in both origin and destination countries.

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Competing interests

The IZA World of Labor project is committed to the IZA Code of Conduct. The author declares to have observed the principles outlined in the code.

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REFERENCES

Further reading

Kerr, W. R. *The Gift of Global Talent: How Migration Shapes Business, Economy & Society*. Stanford, CA: Stanford Business Books, 2018.

Library of Congress. *Guest Worker Programs: Comparative Analysis*. Washington, DC: Library of Congress, 2013.

Key references

- [1] Clemens, M. A. “Testing for repugnance in economic transactions: Evidence from guest work in the Gulf.” *The Journal of Legal Studies* 47:S1 (2018): S5–S44.
- [2] Mayda, A. M., F. Ortega, G. Peri, K. Y. Shih, and C. Sparber. *Coping with H-1B Shortages: Firm Performance and Mitigation Strategies*. NBER Working Paper No. 27730, 2020.
- [3] Kerr, S. P., W. R. Kerr, and W. F. Lincoln. “Skilled immigration and the employment structures of US firms.” *Journal of Labor Economics* 33:S1 (2015): S147–S186.
- [4] Depew, B., P. Norlander, and T. A. Sørensen. “Inter-firm mobility and return migration patterns of skilled guest workers.” *Journal of Population Economics* 30 (2017): 681–721.
- [5] Naidu, S., Y. Nyarko, and S. Y. Wang. “Monopsony power in migrant labor markets: Evidence from the United Arab Emirates.” *Journal of Political Economy* 124:6 (2016): 1735–1792.
- [6] Hunt, J. “Which immigrants are most innovative and entrepreneurial? Distinctions by entry visa.” *Journal of Labor Economics* 29:3 (2011): 417–457.
- [7] Peri, G., K. Shih, and C. Sparber. “STEM workers, H-1B visas, and productivity in US cities.” *Journal of Labor Economics* 33:S1 (2015): S225–S255.
- [8] Glennon, B. *How do Restrictions on High-skilled Immigration Affect Offshoring? Evidence From the H-1B Program*. NBER Working Paper No. 27538, 2020.
- [9] Gibbons, E. M., A. Greenman, P. Norlander, and T. A. Sørensen. “Monopsony power and guest worker programs.” *The Antitrust Bulletin* 64:4 (2019): 540–565.
- [10] Amior, M., and A. Manning. *Monopsony and the Wage Effects of Migration*. CEP Discussion Paper No. 1690, 2020.
- [11] Sharma, R., and C. Sparber. *Buying Lottery Tickets for Foreign Workers: Search Cost Externalities Induced by H-1B Policy*. IZA Discussion Paper No. 13892, 2020.
- [12] Norlander, P., and A. Varma. “H-1B and L-1 visa-sponsored guest workers in the USA: An analysis of the strategic impact of Indian and other firms.” *Thunderbird International Business Review* 61:4 (2019): 565–579.
- [13] Doran, K. B., A. Gelber, and A. Isen. *The Effect of High-Skilled Immigration Policy on Firms: Evidence from H-1B Visa Lotteries*. NBER Working Paper No. 20668, 2014.

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