

The Economic Impact of the H-2B Program for the Seasonal Employment of Foreign-Born Landscaping Workers in Pennsylvania

Executive Summary

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May 10, 2018

Over the course of two weeks in April 2018, Edgeworth Economics conducted a survey of landscaping businesses in Pennsylvania that rely on the H-2B program for seasonal landscaping workers during their peak seasons. Our survey responses covered a statistically substantial portion of landscaping businesses and landscaping workers in Pennsylvania, including:

- 21 percent of landscaping businesses in Pennsylvania that rely on the H-2B program for seasonal workers
- 13 percent of the H-2B seasonal workforce for landscaping workers in Pennsylvania
- 5 percent of employment in landscaping businesses in Pennsylvania (including employment in companies that do not rely on the H-2B program)

The purpose of the survey was to provide data that can be used to assess the economic impact of H-2B seasonal employment on both landscaping companies in Pennsylvania and the overall Pennsylvania economy. Most survey respondents have been denied access to the H-2B program for the 2018 season due to the H-2B visa cap. Landscaping employers that rely on the H-2B program were asked how they would respond if they learned that none of their H-2B visas for seasonal landscaping workers would be approved:

- Landscaping companies indicated that revenues would decline by an average of 36 percent, or about \$658,000 per business per year, if seasonal H-2B workers could not be hired
- The 36 percent decline in revenue would equal a total direct revenue loss of about \$26.1 million to the businesses that responded to the survey.
- Using the 59 surveyed landscaping companies as a benchmark, the statewide decline in revenue for landscaping companies in Pennsylvania that would result from the elimination of all H-2B seasonal workers would be approximately \$178.4 million.
- 80 percent of landscaping companies said they would have to reduce services provided and see revenues decline if they were unable to hire H-2B workers due to the lack of available local workers.

The revenue losses sustained by landscaping businesses in Pennsylvania if H-2B visas could not be used will translate to statewide losses in output and earnings because of the decline in spending by businesses and households. Using the RIMS II economic multipliers, we find that:

- Employment would be expected to decrease by about 3,440 jobs in Pennsylvania if no seasonal H-2B foreign-born landscaping workers could be hired.

- Earnings (wages) in Pennsylvania (another component of output) would be expected to decline by about \$108.2 million per year if no seasonal H-2B foreign-born landscaping workers could be hired.
- Gross output in Pennsylvania (GDP) would be expected to decrease by \$353.7 million per year if no seasonal H-2B foreign-born landscaping workers could be hired.
- Value-added in Pennsylvania (a component of output) would be expected to decline by \$210.4 million per year if no seasonal H-2B foreign-born landscaping workers could be hired.
- H-2B landscaping workers in Pennsylvania contribute \$9.1 million per year to the Social Security and Medicare trust funds and these contributions would be lost if H-2B visas were curtailed.

The employment losses described above are the expected consequence of the decline in spending by businesses and households. Using the RIMS II economic multipliers, we find that:

- Each seasonal landscaping job in Pennsylvania supports about .9 full-time jobs in other industries
- Each H-2B seasonal landscaping job in Pennsylvania supports about 2.3 other jobs in the landscaping businesses that rely on the H-2B program.
- Seasonal landscaping workers in the H-2B program in Pennsylvania support:
 - over 3,000 Pennsylvania jobs outside the landscaping industry
 - over 7,700 Pennsylvania jobs in the landscaping industry

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Introduction

Edgeworth Economics conducted a survey of landscaping businesses in Pennsylvania that participate in the H-2B visa program and hire temporary seasonal foreign-born landscaping workers during their peak season. The survey instrument included questions about the size and revenue of the landscaping businesses being surveyed, the recruiting of domestic workers for landscaping jobs, the ways in which seasonal H-2B visa workers are used, the types of adjustments that businesses anticipate if they are unable to hire H-2B workers, and the magnitude of the decline in revenue and profit if surveyed businesses are unable to hire H-2B workers.

Landscaping workers account for the highest fraction of temporary labor certifications under the H-2B visa program compared to any other occupation. In Fiscal Year 2016 (the most recent year available), nationally more than 37 percent of all H-2B temporary labor certifications were for landscaping workers. Seasonal landscaping workers hired through the H-2B visa program are especially important in Pennsylvania. In Fiscal Year 2016 over 73 percent of all H-2B temporary labor certifications in Pennsylvania were for landscaping workers. Moreover, only Texas and Colorado had more H-2B temporary labor certifications for landscaping workers than Pennsylvania. In other words, landscaping businesses are the companies most likely to be impacted by reductions in H-2B visas, and landscaping businesses in Pennsylvania rely more heavily on the H-2B visa program than landscaping businesses in almost any other state. These facts make Pennsylvania landscaping companies an ideal sector to study the potential economic impact of a reduction in the size of the H-2B visa program.

Survey Coverage and Comparisons to All Pennsylvania Landscaping Businesses

The 59 landscaping businesses that responded to our survey include a substantial portion of landscaping businesses and landscaping workers in Pennsylvania that participate in the H-2B visa program, including:

- 26 percent of landscaping businesses in Pennsylvania that participate in the H-2B program
- 15 percent of the H-2B seasonal workforce for landscaping workers in Pennsylvania

Data from the Census Bureau (County Business Patterns) indicate that landscaping companies are primarily small businesses. In Pennsylvania the mean landscaping business has just over five employees and over 75 percent of landscaping businesses have four or fewer employees. While the landscaping businesses that responded to our survey are larger, on average, than the typical landscaping business in Pennsylvania, they are still small businesses. The median business that responded to our survey has 12 employees, and the mean landscaping business in our survey has just under 21 employees.

The following table presents the distribution of sizes of landscaping businesses in our survey and overall in the state of Pennsylvania (from County Business Patterns).

Comparisons of the Employment Sizes of Survey Respondents and all Landscaping Companies in Pennsylvania				
	Survey Respondents		All of Pennsylvania	
Employment Size	Number	Percentage	Number	Percentage
1-4 employees	8	13.5%	3,552	75.6%
5-9 employees	11	18.6%	600	12.8%
10-19 employees	21	35.6%	323	6.9%
20-49 employees	14	23.7%	170	3.6%
50 or more employees	5	8.5%	54	1.1%

Our survey covers firms that employ about 5 percent of the approximately 24,000 workers employed in landscaping businesses and just over 1 percent of landscaping businesses in Pennsylvania. However, the sample includes about one out of 12 of landscaping businesses that employ 20 or more workers in Pennsylvania.

The median landscaping business in our survey has annual revenue of \$1.2 million and the mean respondent has annual revenue of about \$2.4 million. The following table presents the distribution of sizes of landscaping businesses in our survey based on their annual revenue.

Annual Revenue Distribution of Survey Respondents		
Annual Revenue	Number of Respondents	Percentage
Less than \$500,000	6	10.2%
\$500,000 to \$1,000,000	19	32.2%
\$1,000,000 to \$2,000,000	16	27.1%
\$2,000,000 to \$5,000,000	12	20.3%
\$5,000,000 or more	6	10.2%

For most (81 percent) survey respondents, at least half of revenue is from contracts with residential customers. The median survey respondent generates three quarters of revenue from residential customers and one quarter from commercial customers. However, larger landscaping businesses depend relatively less on residential customers than do smaller landscaping businesses. Among survey respondents with 20 or more employees, the median landscaping business generates half of revenue from residential customers and half from commercial customers. Among landscaping companies with fewer than 20 employees, the median business generates 80 percent of revenue from residential customers and 20 percent from commercial customers.

The Compensation and Tasks of H-2B Visa Landscaping Workers

The mean landscaping business that responded to our survey employed H-2B visa workers for 31.4 weeks in the most recent fiscal year. According to the most recent Occupational Employment Statistics survey (from the Bureau of Labor Statistics), the mean prevailing wage for landscaping workers in Pennsylvania is \$14.13 per hour.

Based on the length of employment in the most recent fiscal year the typical H-2B landscaping worker employed by a respondent is expected to earn about \$17,500. Across all companies responding to the survey H-2B landscaping workers are expected to earn about \$8.7 million. Across all landscaping businesses in Pennsylvania, H-2B landscaping workers are expected to earn almost \$60 million.

Seasonal H-2B visa workers account for a fairly substantial portion of the total employment of landscaping workers in the businesses that responded to our survey. Figure 1 shows that the 490 H-2B workers in our survey account for about 45% of the total employment of landscaping workers among survey respondents, overall. Figure 2, however, illustrates that the mix of landscaping workers differs substantially across businesses that responded to the survey. The percentage of a company's landscaping workers who are H-2B visa workers, full-time full-year workers, part-time full-year workers, and seasonal (non H-2B) workers varies among the landscaping businesses that responded to the survey. This means that respondents differ in the extent to which they rely on the H-2B visa program. Our calculations of the impact of a reduction in H-2B visas will likely differ across businesses because each respondent relies on the H-2B program to a different extent.

The average survey respondent hired 8.9 H-2B visa workers in the most recent fiscal year. According to disclosure data from the Office of Foreign Labor Certification (OFLC) there were an average of 15 H-2B temporary labor certifications per landscaping company in Pennsylvania in the most recent fiscal year. While survey respondents are somewhat larger than the average landscaping business in Pennsylvania, they hire fewer H-2B visa workers than the average landscaping business in Pennsylvania that participates in the H-2B program.

Figure 3 compares the number of H-2B visa workers per employer among survey respondents to the number of H-2B visa workers among all Pennsylvania landscaping companies that participated in the H-2B program in the most recent fiscal year. The most substantial difference between survey respondents and the population of Pennsylvania landscaping businesses that participate in the H-2B program is that there are relatively fewer respondents who employed 25 or more H-2B visa workers.

About 85 percent of survey respondents indicated that H-2B visa landscaping workers are on the same work crews as domestic workers. In addition, about 70 percent of surveyed landscaping

companies indicate that H-2B visa workers perform similar tasks to U.S. landscaping workers. About 26 percent of companies indicated that H-2B workers perform less skilled tasks than U.S. landscaping workers.

Adjustments to a Decline in H-2B Visas

Surveyed landscaping businesses were asked how they would adjust to a decline in H-2B visas. Figure 4 illustrates the share of businesses that anticipate different types of adjustments to a decline in H-2B visas. About 80 percent of respondents indicated that they would have to reduce services provided and would see a decline in revenues if they were unable to hire H-2B workers. About 35 percent indicated that they would attempt to hire more domestic workers if they were unable to hire H-2B visa workers, and about 27 percent indicated that they would increase the hours of U.S. workers and incur overtime costs if they were unable to hire H-2B visa workers.

Survey respondents were asked to quantify the loss in revenue that would occur if they were unable to hire H-2B visa workers. Figure 5 indicates the different magnitudes of the dollar reductions in annual revenue among surveyed businesses. Figure 6 presents the same annual revenue decline as a percentage of annual revenue. About 27 percent of surveyed businesses indicated that they would anticipate a 50 to 60 percent decline in annual revenue if they were unable to hire H-2B visa workers.

Landscaping businesses with more employees anticipate a smaller reduction in revenue from a decline in H-2B visas. Among respondents with 20 or more employees, the average anticipated decline in revenue if H-2B visa workers could not be hired is about 34 percent of annual revenue. Among respondents with fewer than 20 employees, the average anticipated decline in revenue if H-2B visa workers could not be hired is about 51 percent of annual revenue.

Survey respondents were also asked to quantify the loss in profits and that would occur if they were unable to hire H-2B visa workers. Figure 7 presents the anticipated percentage decline in monthly profits among survey respondents. More than 56 percent of surveyed businesses indicated that they would anticipate at least a 50 percent decline in monthly profits if they were unable to hire H-2B visa workers. This anticipated substantial decline in profits would threaten the survival of a majority of the surveyed landscaping businesses.

Figure 8 presents the anticipated decline in annual wage costs of hiring H-2B workers if survey respondents were unable to participate in the H-2B visa program. These costs are calculated assuming a prevailing wage of \$14.13 per hour, the current average prevailing wage for landscaping workers in Pennsylvania, a 40 hour work week, and the number of weeks that H-2B workers were employed by the landscaping business in the most recent fiscal year. About 70 percent of surveyed businesses would see a decline in wage costs of \$200,000 or less if they could not hire H-2B workers, but these businesses anticipate a decline in revenue of about \$479,000 on average.

Economic Impact of H-2B Visa Workers

I use the anticipated decline in revenue if surveyed businesses were unable to hire H-2B visa workers, and the anticipated reduction in H-2B wages paid, to estimate the economic loss to Pennsylvania if foreign-born seasonal landscaping workers were not hired. The anticipated revenue decline described in Figure 5 is equivalent to a decline in revenue per H-2B worker hired of about \$71,000 per year. Of course, about \$17,500 of this revenue would be paid in wages to the H-2B visa worker. I make the conservative assumption that all of the wages paid to foreign-born workers would be remittances to the workers' families in their home countries. This means that the \$17,500 in H-2B wage payments are assumed to have no economic impact on the Pennsylvania economy. However, the remaining \$53,500 in anticipated revenue decline (\$71,000 – \$17,500), which represents dollars that would have supported other employees of the landscaping business, expenditures on equipment and supplies, and profits, does have an economic impact on the Pennsylvania economy.

The \$53,500 in anticipated decline in "net revenue" (net of H-2B wage costs) per H-2B visa worker, summed across the 490 H-2B visa workers that were hired in the most recent year by surveyed businesses, yields an anticipated decline in net revenue of about \$26 million for surveyed landscaping businesses. Because the 490 H-2B visa landscaping workers hired by surveyed landscaping businesses represent about 15 percent of H-2B visa landscaping workers in Pennsylvania, the anticipated decline in net revenue for the landscaping industry in Pennsylvania is about \$178 million. This decline in net revenue would be the direct economic loss that would occur if no H-2B landscaping workers could be hired in Pennsylvania.

The direct economic loss that would occur if no H-2B workers could be hired in Pennsylvania is augmented by the regional multiplier effects from the associated reduction in economic activity including spending by businesses and households. Using the Bureau of Economic Analysis' RIMS II multiplier¹ for industries within the "services to buildings and dwellings" industry sector in Pennsylvania, I find that the total annual economic loss in gross output in Pennsylvania from the elimination of H-2B visa landscaping workers is \$353.7 million. This loss in gross output can be divided into component parts including a loss in annual earnings/wages of U.S. workers of \$108.2 million and an annual loss in value-added of \$210.4 million.

The economic multipliers also indicate that annual employment of domestic workers in Pennsylvania would be expected to decline by about 3,440 jobs if no seasonal H-2B landscaping workers could be hired. In addition, H-2B landscaping workers in Pennsylvania contribute \$9.1 million per year to the Social Security and Medicare trust funds and these contributions would be lost if H-2B visas were curtailed. A reduction in H-2B landscaping workers will cause job losses for U.S. workers because, according to the RIMS II economic multipliers, each seasonal landscaping job in Pennsylvania supports about 0.9 full-time jobs for domestic workers in industries outside of landscaping. In addition, each H-2B seasonal landscaping job in Pennsylvania supports about 2.3 other jobs in the landscaping industry among businesses that participate in the H-2B program.

Recruitment of Domestic Seasonal Workers

The calculations described above indicate that temporary seasonal workers are vital to landscaping businesses in Pennsylvania. If foreign-born seasonal landscaping workers could not be hired through the H-2B visa program the economic losses to businesses that rely on the program far exceed the wages paid to H-2B seasonal workers. This raises the question, why wouldn't landscaping businesses hire domestic workers to take the place of foreign-born workers if the H-2B visa program was curtailed?

Our survey included questions about the recruitment of domestic seasonal workers. Figure 9 describes the different methods used by landscaping companies to advertise jobs and recruit domestic workers. All surveyed businesses used newspaper ads (as required by law) and over

¹ RIMS is an acronym for Regional Input-Output Modeling System and is the standard economic methodology for assessing the multiplier effects of increases or decreases in regional economic activity.

half used Monster.com (or Indeed.com) as a way to recruit U.S. workers. Our survey also included a question about the recent recruitment of U.S. landscaping workers. Figure 10 shows that 56 percent of businesses did not hire any U.S. landscaping workers, and only 9 percent hired six or more U.S. workers.

Respondents to our survey indicated that the recruitment and hiring of U.S. workers into landscaping jobs lead to problems of absenteeism and high turnover. Across all 59 landscaping companies in our survey, only 62 percent of U.S. workers who were hired for the 2018 season showed up for their first day of work. Moreover, across all surveyed businesses, only 37 percent of the U.S. workers hired for the 2018 season were still with the business as of the date of the survey. The problems of absenteeism and high turnover experienced by surveyed landscaping businesses indicates that reductions in H-2B visa workers cannot be easily offset by hiring domestic workers. The unavailability of a reliable source of temporary seasonal labor from U.S. workers is one of the primary reasons why landscaping businesses anticipate substantial declines in revenue if the H-2B visa program was scaled back.

Conclusion

Our survey of Pennsylvania landscaping businesses indicates that the anticipated outcome if H-2B visa landscaping workers could not be hired would be a decline in revenue among Pennsylvania landscaping businesses of \$178 million per year. Accounting for the secondary and multiplier effects of this anticipated decline in revenue, there would be a reduction in output in the Pennsylvania economy of almost \$354 million. This decline in revenue in output would also be expected to reduce employment of U.S. workers in Pennsylvania by 3,440 jobs.

FIGURE 1: OVERALL DISTRIBUTION OF EMPLOYEES AT PENNSYLVANIA LANDSCAPING BUSINESSES PARTICIPATING IN SURVEY

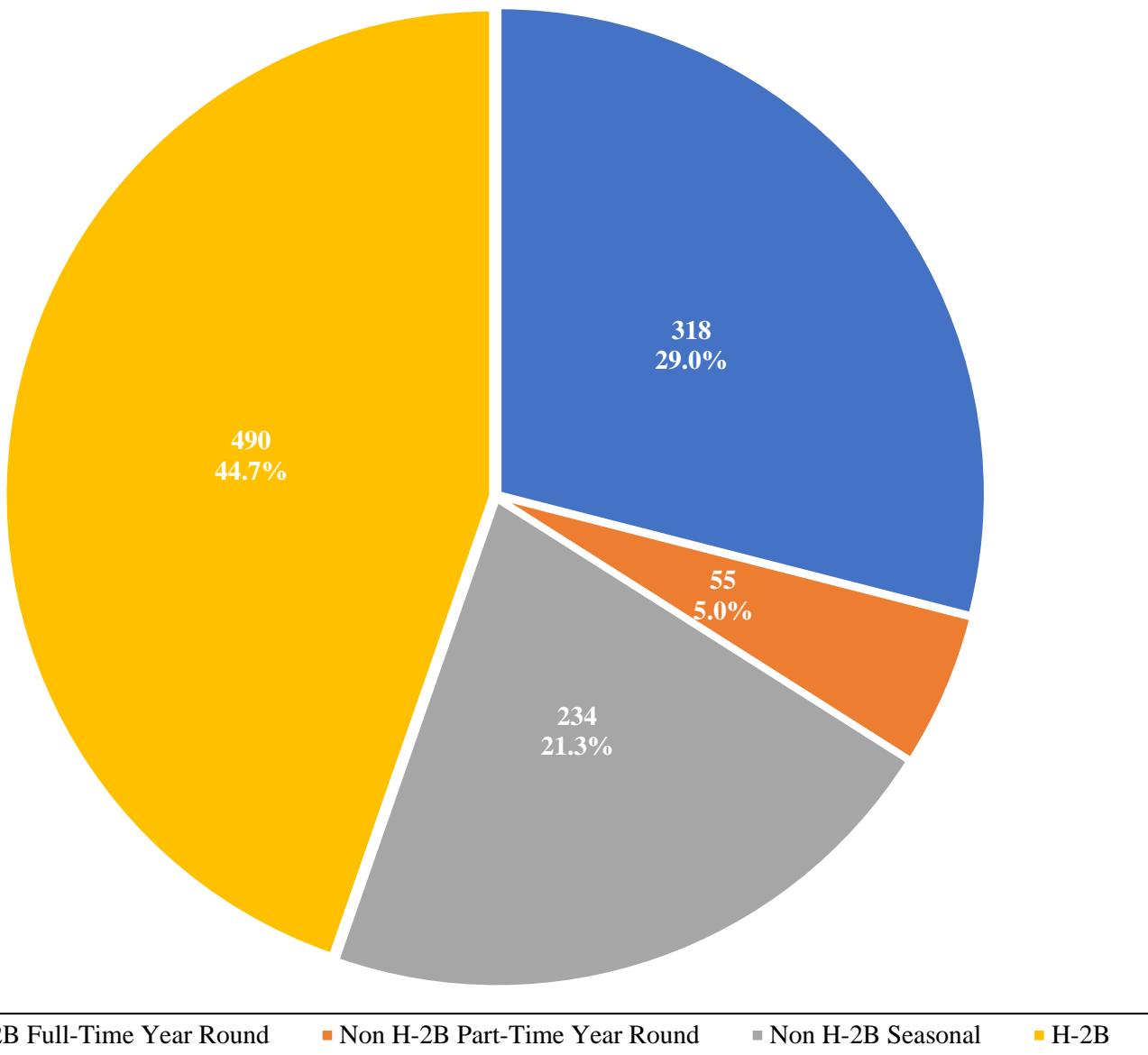


FIGURE 2: DISTRIBUTION OF EMPLOYEES BY INDIVIDUAL PENNSYLVANIA LANDSCAPING BUSINESS PARTICIPATING SURVEY

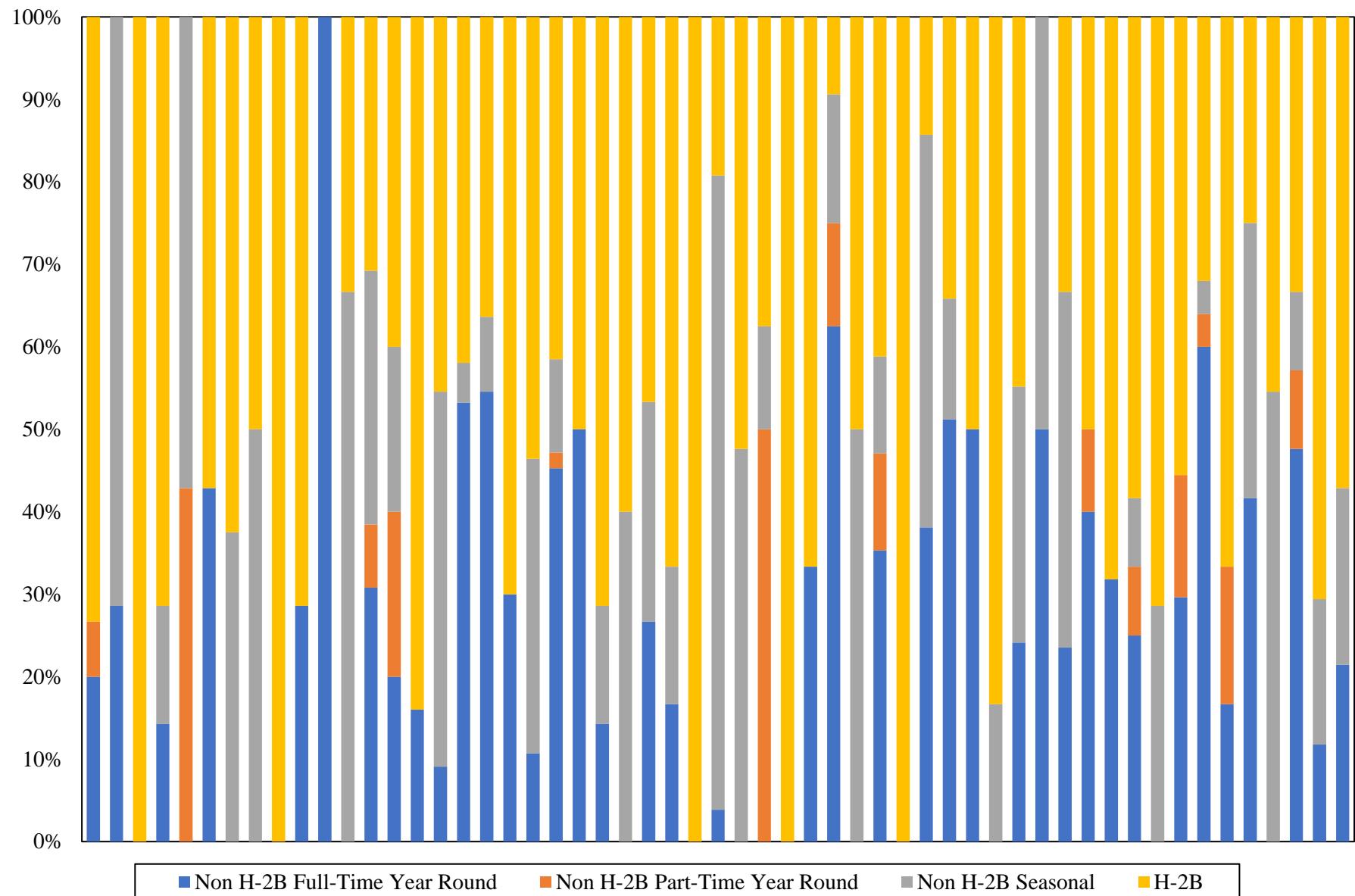
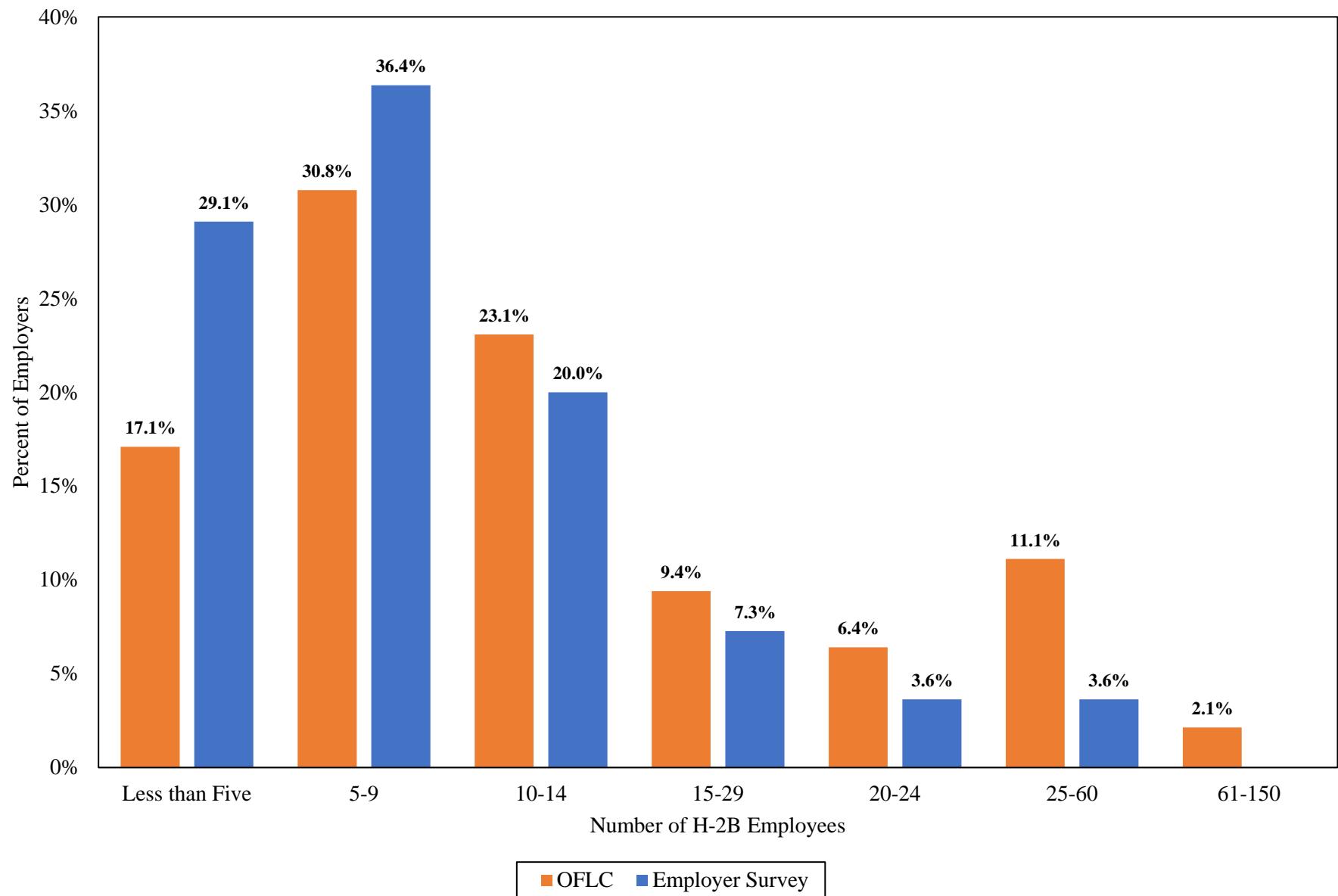


FIGURE 3: DISTRIBUTION OF NUMBER OF H-2B WORKERS AT PENNSYLVANIA LANDSCAPING BUSINESSES PARTICIPATING IN SURVEY



**FIGURE 4: HOW WOULD YOU ADJUST YOUR OPERATIONS IF YOU LEARNED
YOU COULD NOT HIRE ANY H-2B LANDSCAPING WORKERS IN THE NEXT
FISCAL YEAR? (ANSWER ALL THAT APPLY)**

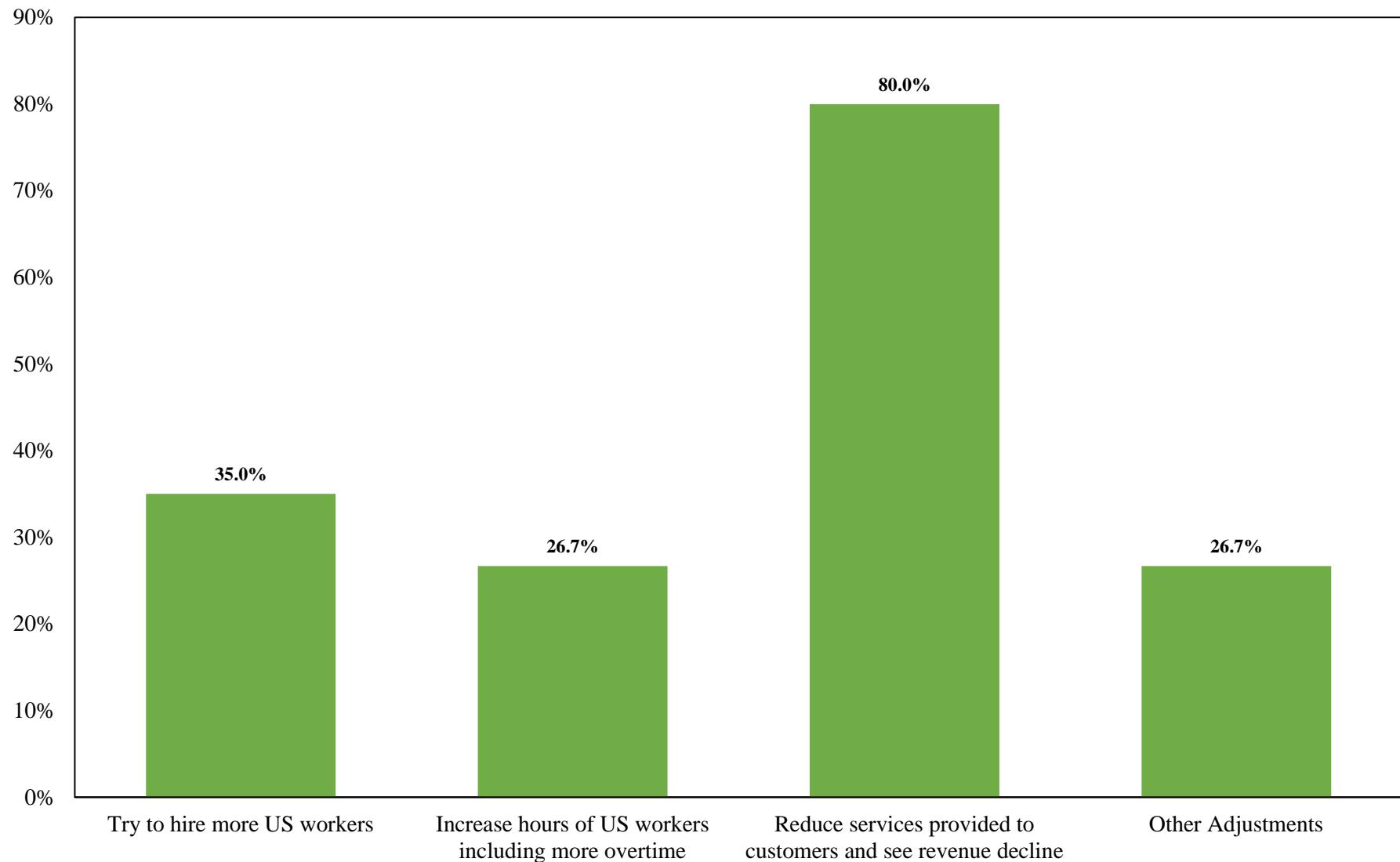


FIGURE 5: PROJECTED ANNUAL REVENUE LOSS WITHOUT H-2B WORKERS

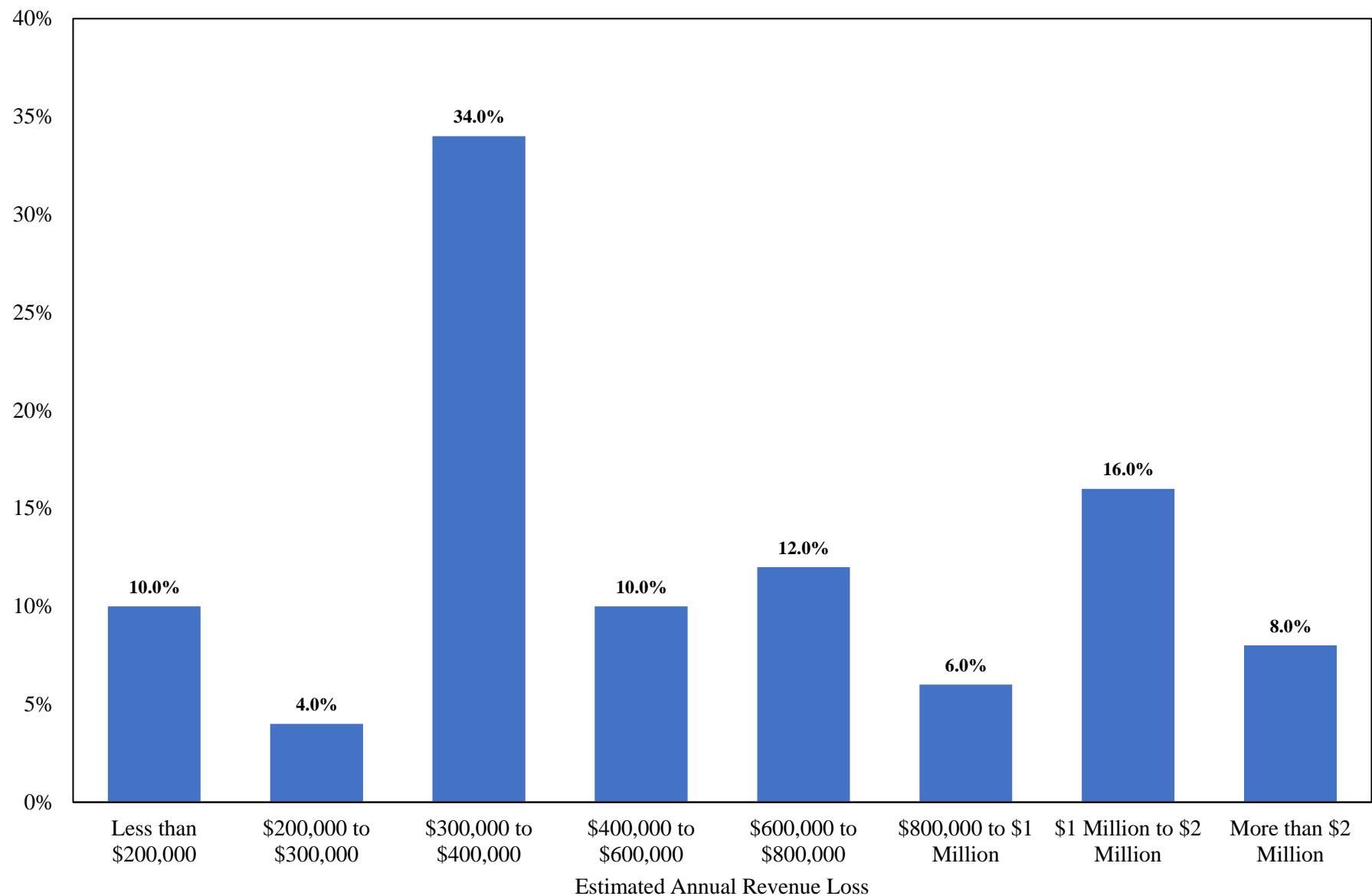


FIGURE 6: PROJECTED PERCENT ANNUAL REVENUE DECLINE WITHOUT H-2B WORKERS

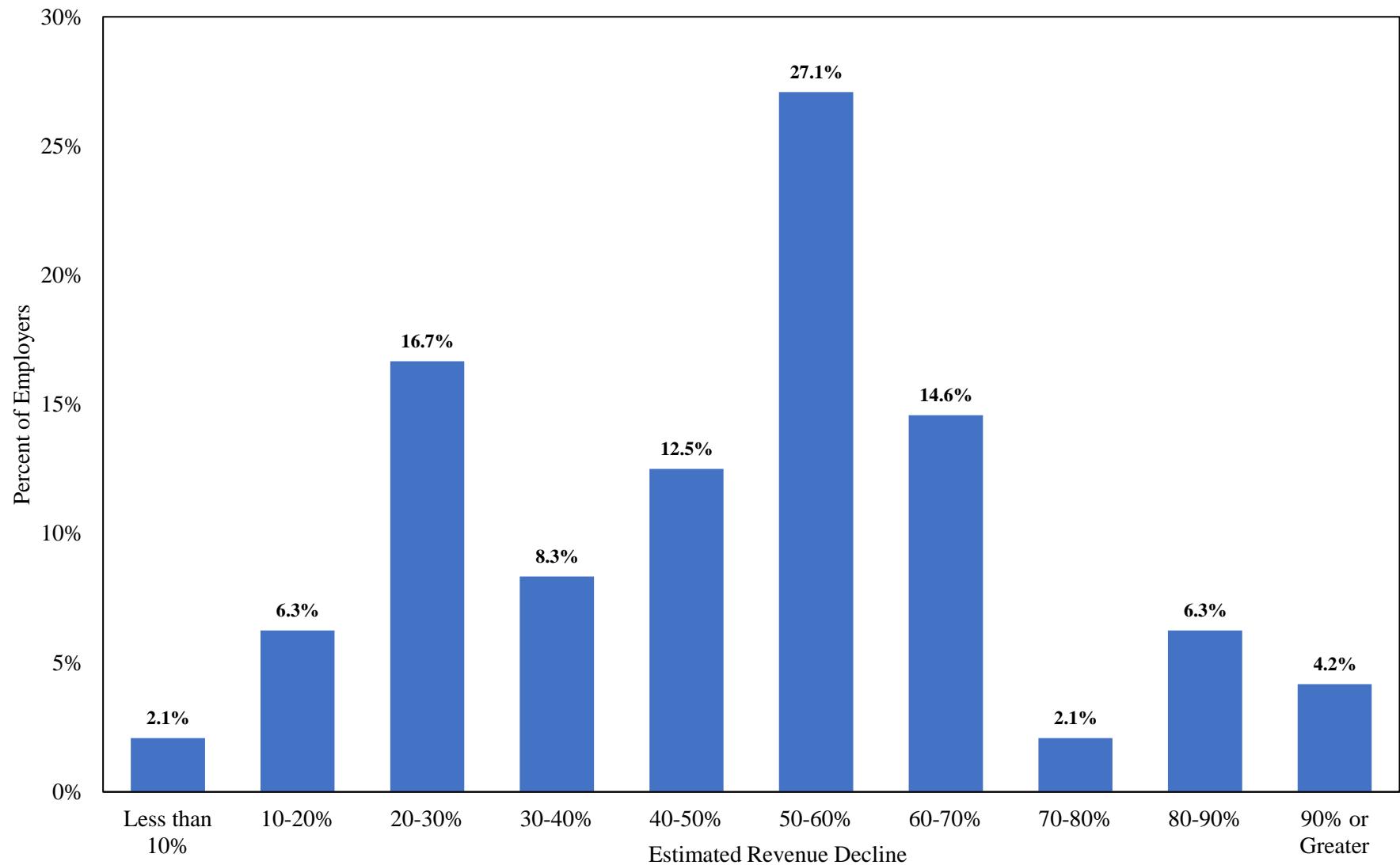
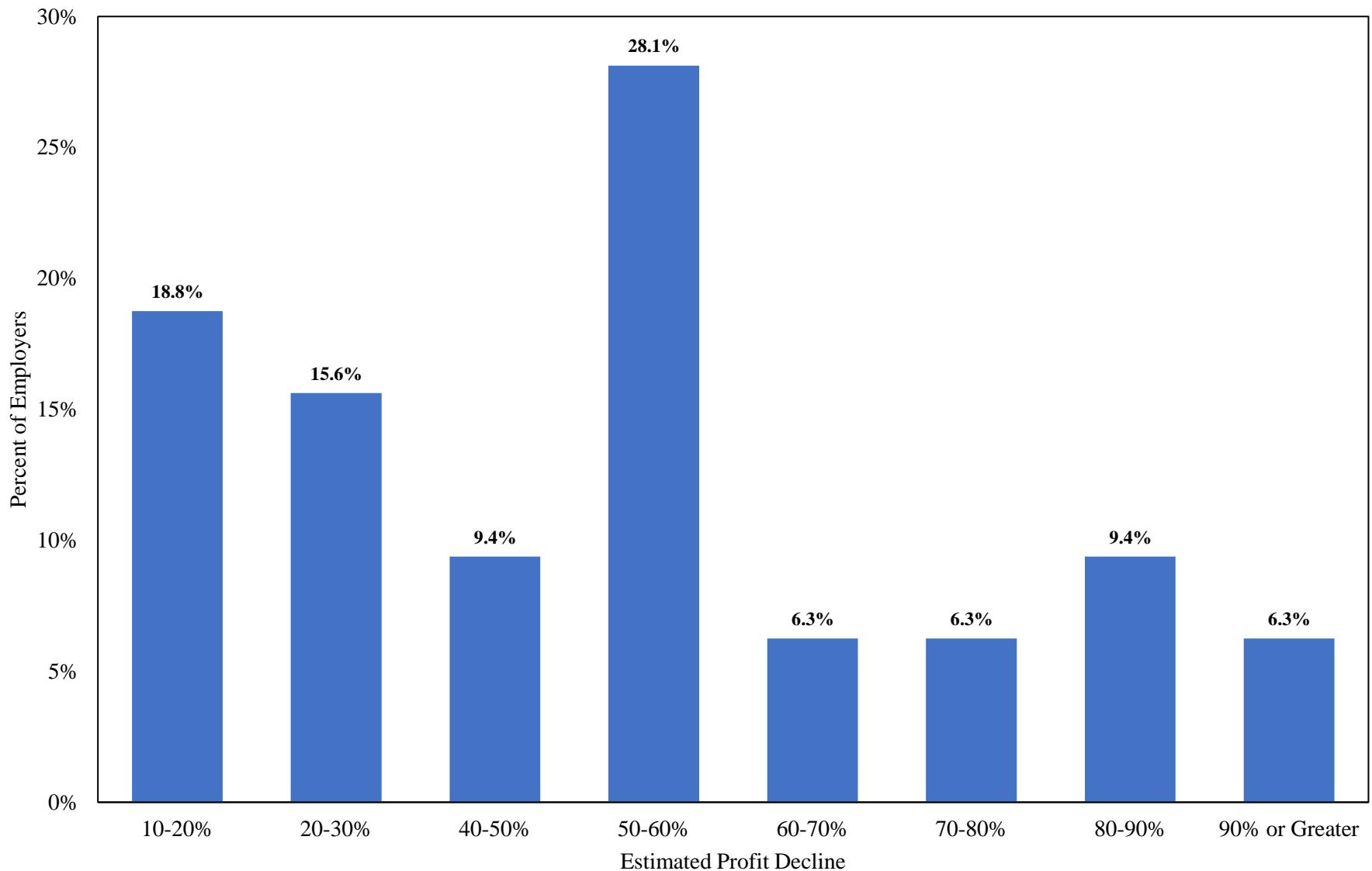


FIGURE 7: PROJECTED PERCENT MONTHLY PROFIT DECLINE WITHOUT H-2B WORKERS



**FIGURE 8: PROJECTED PERCENT DECREASE IN COSTS (H-2B WAGES)
WITHOUT H-2B WORKERS**

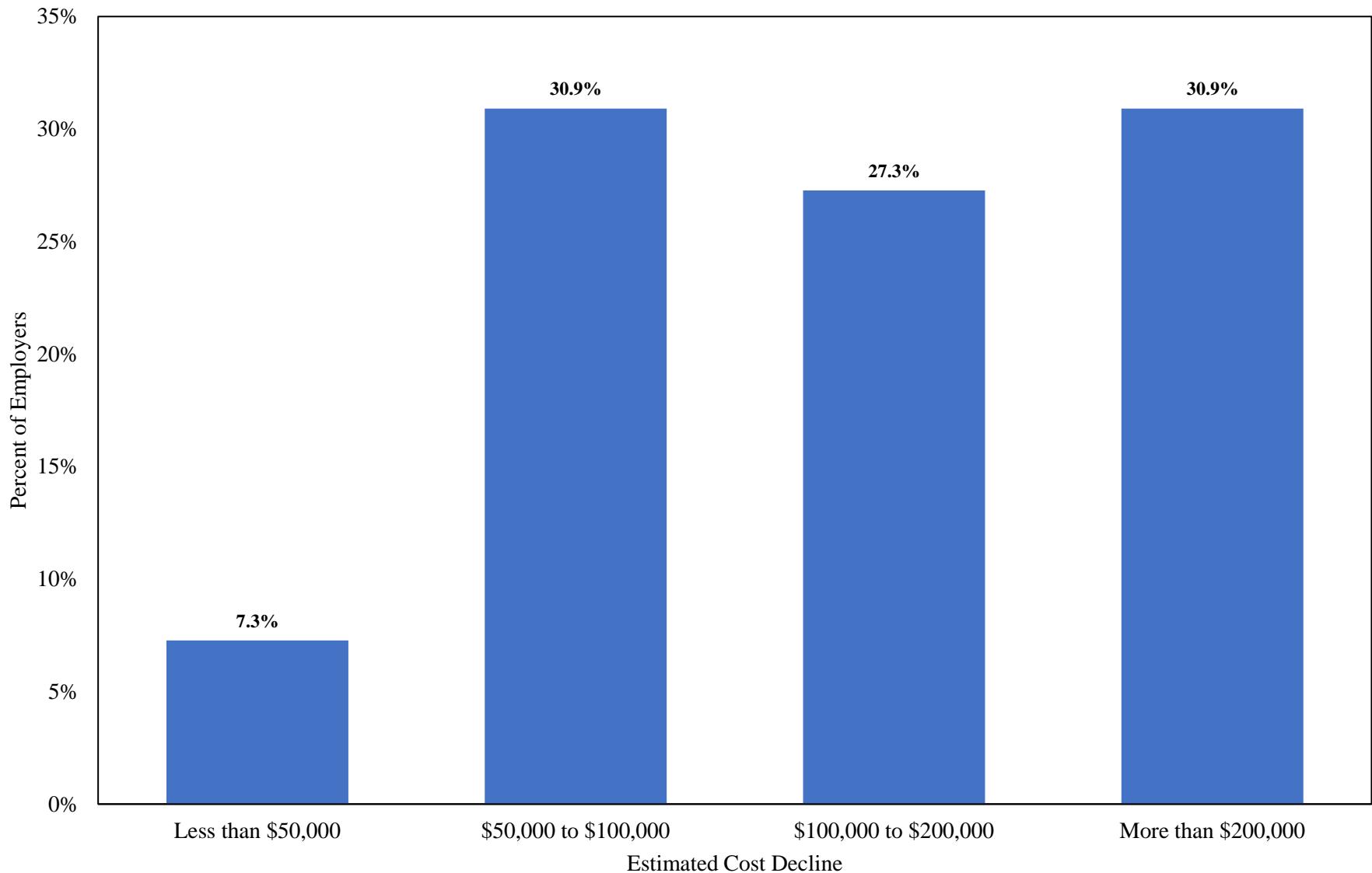


FIGURE 9: WHAT SERVICES DO YOU USE TO TRY TO RECRUIT U.S. WORKERS (CHECK ALL THAT APPLY)?

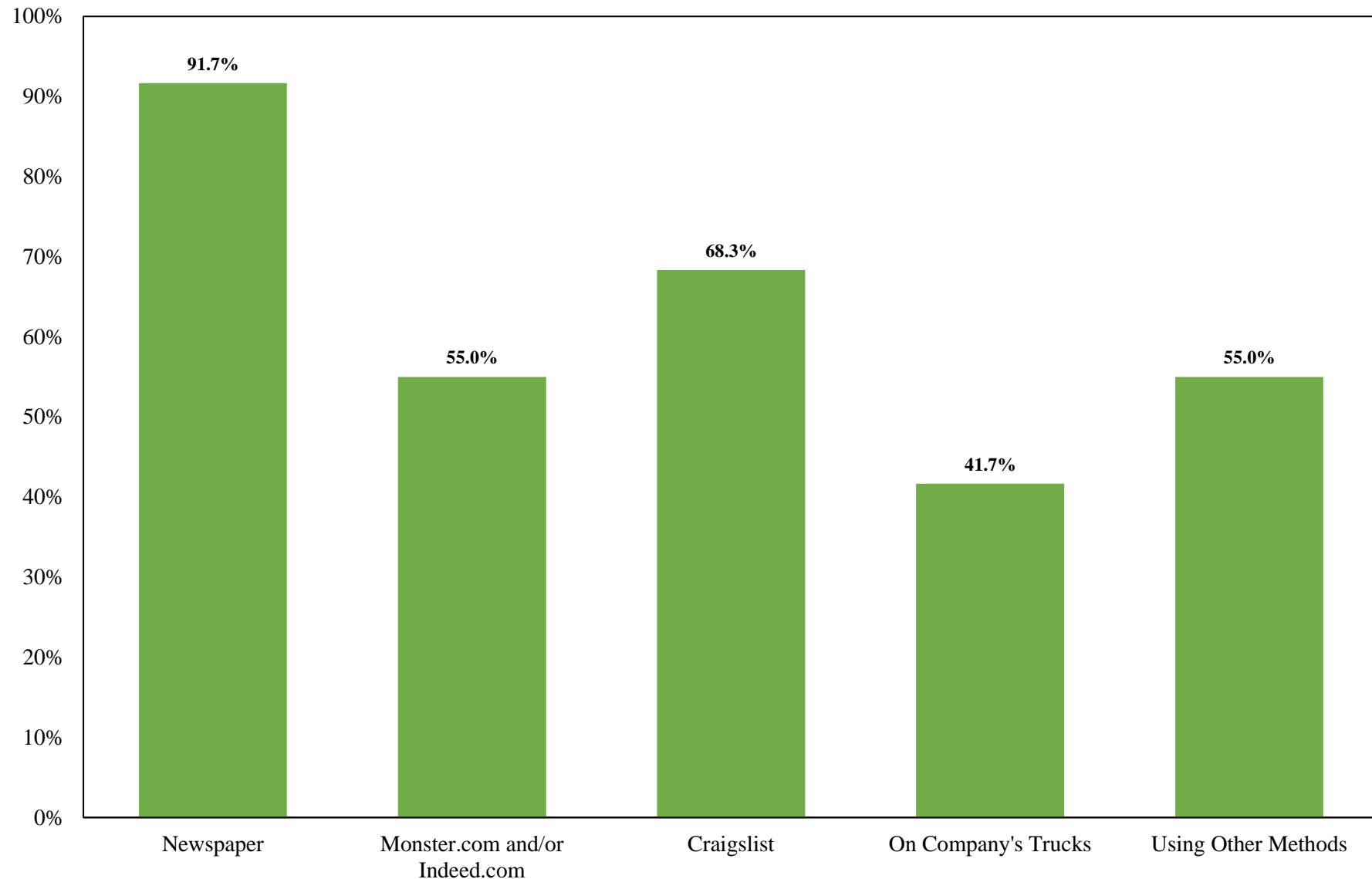


FIGURE 10: HOW MANY U.S. WORKERS HAVE YOU HIRED?

