

# L2L 2019 Manufacturing Index

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Generation Z to The Rescue as Manufacturing  
Faces a ‘Silver Tsunami’



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# Introduction

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## About L2L

At Leading2Lean (L2L), we are dedicated in helping manufacturers be their best at producing the goods that businesses and consumers use every day. We understand and appreciate the importance of manufacturing to the U.S. economy as well as the intense pressure on manufacturers to remain competitive in the global economy. It is for these reasons that we launched the annual L2L Manufacturing Index.

L2L is focused on manufacturing operational excellence through digital transformation. The company works with manufacturers of all industries to provide a suite of software solutions that resolve production, quality and maintenance abnormalities and manage shop floor processes. We felt it was our responsibility to understand general perceptions of the industry in order to move it forward.

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## Our Goal

With the L2L Manufacturing Index, we will annually measure and report on the American public's perception of manufacturing in the U.S. We will look at key metrics and track trends over time so, as the manufacturing sector evolves, the public's understanding of it can be assessed.

# Press Release

## Generation Z to The Rescue as Manufacturing Faces a ‘Silver Tsunami’

*2019 L2L Manufacturing Index reveals Generation Z’s interest in manufacturing, but the industry needs to fight for their attention and participation*

July 9, 2019 – SPARKS, Nevada – U.S. Manufacturing has a workforce problem. But a new survey conducted by [Leading2Lean \(L2L\)](#) reveals that there is an unlikely hope for a new generation of workers that will spur industry-wide innovation.

The [2019 L2L Manufacturing Index](#), an annual measurement of the American public’s perceptions of U.S. manufacturing, found that adults in Generation Z (those aged 18-22) are 19% more likely to have had a counselor, teacher or mentor suggest they look into manufacturing as a viable career option when compared to the general population. One-third (32%) of Generation Z has had manufacturing suggested to them as a career option, as compared to only 18% of Millennials and 13% of the general population.

Better still, the survey also found that Generation Z is intrigued by careers in manufacturing. They are 7% more likely to consider working in the manufacturing industry and 12% less likely to view the manufacturing industry as being in decline, both compared against the general population. These findings may be in relation to Generation Z having a larger exposure to the industry compared to previous generations with one-third (32%) having family members or friends working in the manufacturing industry, compared to 19% for Millennials and 15% for the general population.

*“For many years, manufacturing has struggled to introduce and entice new workers to the industry,” said [Keith Barr](#), President and CEO of [L2L](#), the lean manufacturing software company behind the survey. “The industry has failed to compete with technology for their interest. Unfortunately, the industry hasn’t fully explained the dynamic, technology-driven environment of the modern plant floor. With Gen Z just moving into the workforce, we need to encourage their participation in modern manufacturing. If we don’t, I’m afraid the industry will be hit with the negative effects of the Silver Tsunami.”*

U.S. Manufacturing peaked in the 1970s when Baby Boomers started entering the workforce. Now, Boomers are retiring and with them goes vast institutional knowledge and experience. According to the latest government data, there are now 522,000 open manufacturing jobs in the United States (an all-time high)<sup>1</sup>, and a recent report from Deloitte and The Manufacturing Institute (the National Association of Manufacturer’s social-impact arm) projects that 2.4 million manufacturing jobs will go unfilled over the next decade.<sup>2</sup>

Unfortunately, vast misconceptions about the industry persist. For example, the 2019 [L2L Manufacturing Index](#) revealed that over half (53%) of the general population assumes the average salary of a mid-level manufacturing manager is under \$60,000. In reality, the average salary for a manufacturing manager in 2018 was \$118,500, [according to IndustryWeek](#).<sup>3</sup>

While Generation Z appears to have had greater overall exposure to manufacturing, misperceptions around the highly technical and modern nature of the industry still remain. A majority (56%) of Generation Z would consider working in the tech industry, while only 27% would consider working in the manufacturing industry. Additionally, they are more likely to consider manufacturing jobs boring when compared to Millennials and the general population.

Leading2Lean though has reason to believe that the industry is making positive moves towards a better-informed public. Last year's [2018 Leading2Lean Manufacturing Index](#) measured that 70% of people believed that the American manufacturing industry was in decline. When the same question was asked in this year's survey, only 54% of people believed the industry is in decline, showcasing a surprisingly better understanding of the present state of the industry.

*“With Gen Z we have an opportunity as an industry to build a new workforce, but it will be a challenge that the industry is going to have to take seriously in order to get their attention and participation,” said Barr. “We know that the workforce crisis is a top concern with a majority of manufacturers.<sup>4</sup> Instead of hoping new workers will appear, the industry needs to make changes that will attract the workforce. Gen Z is incredibly tech savvy. The industry needs to consider developing and deploying plant-floor technology that utilizes gamification and transparency to take advantage of Gen Z’s unique skills. The greatest opportunity for manufacturing is to have an engaged, empowered workforce that is constantly innovating.”*

Education is the key, and it is an area that manufacturing continues to struggle in. When surveyed about alternative types of education, the 2019 L2L Manufacturing Index found that a vast 75% of people have never had a counselor, teacher or mentor suggest they look into attending trade or vocational school as a means to a viable career option. The number was slightly lower with Generation Z (59%) and Millennials (67%), but still showcases an extreme disconnect in consideration of alternatives outside of traditional 4-year institutions.

When surveyed about the likeability and availability of work, 54% of Generation Z respondents agreed that there is a shortage of skilled manufacturing workers in the U.S., and 43% agreed that manufacturing jobs are an attractive option to younger workers and the next generation of workers. A majority (59%) of Generation Z also agreed that trade schools offer promising career opportunities for high school students graduating in 2019.

Generation Z grew up in the midst of the Great Recession, watched their older peers accumulate student debt, then struggle to pay it off with low-paying jobs right out of college. They are seeking higher paid jobs in a more transparent and open learning environment, and they're increasingly open to alternative types of education and training.<sup>5</sup> Barr believes manufacturing jobs can meet their needs and provide the diverse and rewarding work experience they crave.

To learn more about the [2019 L2L Manufacturing Index](#), view more survey results, and download data visualizations, please visit [www.l2l.com/leading2lean-manufacturing-index](http://www.l2l.com/leading2lean-manufacturing-index).

## Survey Methodology

The 2019 L2L Manufacturing Index findings are sourced from two online omnibus surveys conducted by Engine in May of 2019 and initiated by Leading2Lean (L2L). The first survey was conducted May 6-8, 2019 and distributed to a sample of 1,003 adults demographically representative of the U.S. at a 95% confidence level. The second survey was conducted May 9-13, 2019 and distributed to a sample of 225 respondents aged 18-22 at a 95% confidence level. A total of 303 respondents were aged 18-22 from the two surveys, providing a 6% margin of error for the total Generation Z (18-22) audience. Leading2Lean has defined “Generation Z” as those born between 1997 and 2012 as defined by Pew Research Center.<sup>6</sup>

## About Leading2Lean

Founded in 2010, Northern Nevada based Leading2Lean (L2L) unifies manufacturing plants toward the common goal of production performance. The company works with manufacturers of all industries to provide a suite of software solutions that break down the silos that inhibit communication, alignment, and efficiency by enabling the right data to the right people at the right times. The company’s Lean Execution System (LES) software, CloudDISPATCH, provides critical real-time and actionable data to create a problem-solving, engaged workforce through L2L’s Manufacturing 4.0 solution. For more information, visit [www.L2L.com](http://www.L2L.com).

## Sources:

### <sup>1</sup> NAM Manufacturers’ Outlook Survey – Q4 2018

[www.nam.org/wp-content/uploads/2019/05/NAM-Q4-2018-Manufacturers-Outlook-Survey.pdf](http://www.nam.org/wp-content/uploads/2019/05/NAM-Q4-2018-Manufacturers-Outlook-Survey.pdf)

### <sup>2</sup> Deloitte - 2018 Skills Gap in Manufacturing Study

[www2.deloitte.com/us/en/pages/manufacturing/articles/future-of-manufacturing-skills-gap-study.html](http://www2.deloitte.com/us/en/pages/manufacturing/articles/future-of-manufacturing-skills-gap-study.html)

### <sup>3</sup> 2018 IndustryWeek Salary Survey

[www.industryweek.com/talent/2018-industryweek-salary-survey-pay-takes-dip-morale-stays-high](http://www.industryweek.com/talent/2018-industryweek-salary-survey-pay-takes-dip-morale-stays-high)

### <sup>4</sup> National Association of Manufacturers’ 2018 Manufacturers’ Outlook Survey

[www.themanufacturinginstitute.org/News-Articles/2018/11/14-Skills-Gap-Report.aspx](http://www.themanufacturinginstitute.org/News-Articles/2018/11/14-Skills-Gap-Report.aspx)

### <sup>5</sup> Deloitte Insights – Gen Z Enters the Workforce

[www2.deloitte.com/insights/us/en/focus/technology-and-the-future-of-work/generation-z-enters-workforce.html](http://www2.deloitte.com/insights/us/en/focus/technology-and-the-future-of-work/generation-z-enters-workforce.html)

### <sup>6</sup> Pew Research Center - Defining Generations: Where Millennials end and Generation Z begins

[www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins](http://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins)

# Methodology

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The findings of the 2019 L2L Manufacturing Index are the result of two online omnibus surveys conducted in May of 2019 by Engine. The first survey was conducted among a sample of 1,003 adults comprising of 501 men and 502 women 18 years of age or older between May 6-8, 2019. The sample size is demographically representative of the U.S. and reflects a 95% confidence level.

The second survey was conducted among a sample of 225 adults comprising of 114 men and 111 women aged 18-22 between May 9-13, 2019. The findings reflect a 95% confidence level.

Both online omnibus surveys included the same exact questions with the same selection of answers for all survey takers. Respondents for this survey were selected from among those who have volunteered to participate in online surveys and polls. All sample surveys and polls may be subject to multiple sources of error, including, but not limited to sampling error, coverage error, error associated with nonresponse, error associated with question wording and response options, and post-survey weighting and adjustments.

L2L has defined “Generation Z” as those born between 1997 and 2012 as defined by the Pew Research Center in 2019.\* The use of “Generation Z” in any subsequent messaging material regarding this survey comprises of 303 total respondents between the ages of 18-22: 78 respondents from the May 6-8 survey and 225 respondents from the May 9-13 survey. Combined, the audiences reflect a 95% confidence level and 6% margin of error.

L2L has defined “Millennials” as those born between 1981 and 1996 as defined by the Pew Research Center in 2019.\* The use of “Millennials” in any subsequent messaging material regarding this survey refers to 331 total respondents between the ages 23-38 from the May 6-8 survey. This audience reflects a 95% confidence level and 6% margin of error.

**About Engine:** A data-driven marketing solutions company, Engine is a collaborative and consultative research partner to hundreds of organizations around the globe. The company conducts an online omnibus study twice a week among a demographically representative U.S. sample. [www.enginegroup.com](http://www.enginegroup.com)

\*[www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/](http://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/)

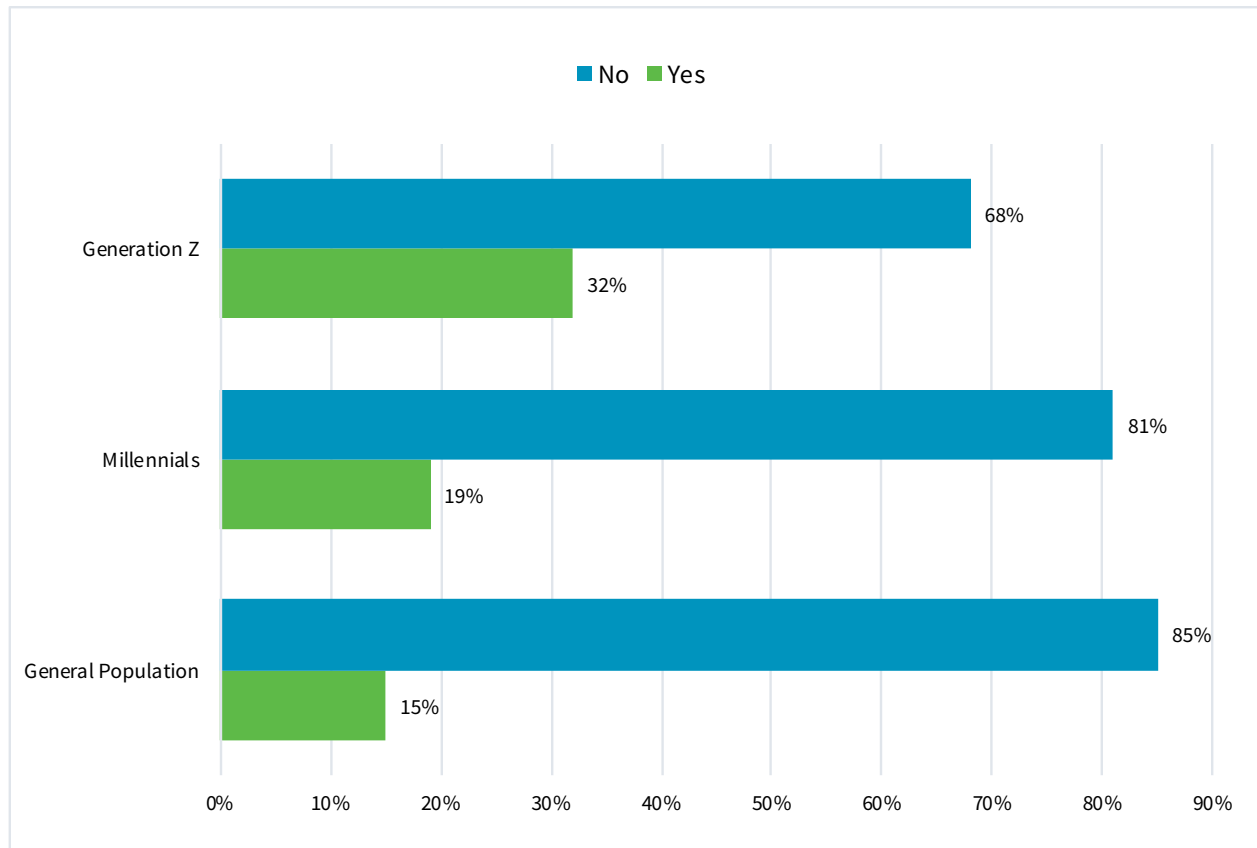
# Leading2Lean (L2L) 2019 Manufacturing Index Survey Results

The following results are a sample of the full surveys conducted in May 2019.



M1

## Do you have any family members or friends who work in manufacturing?



### Total Respondents

General Population (1,003) responses

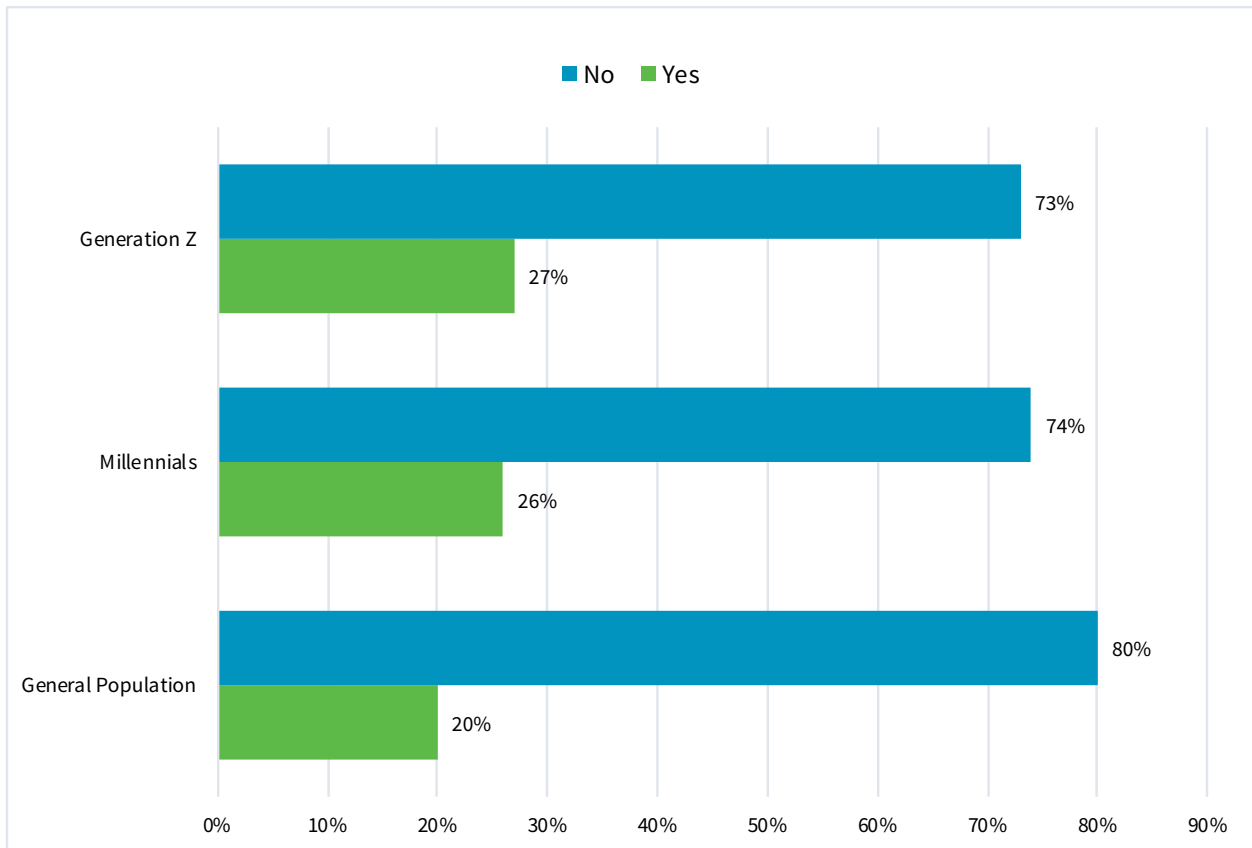
Generation Z (303) responses

Millennials (331) responses

M2

## Have you ever considered working in the manufacturing industry?

All Audience Base: Have never worked in the manufacturing industry.



Base: Have never worked in the manufacturing industry

### Total Respondents

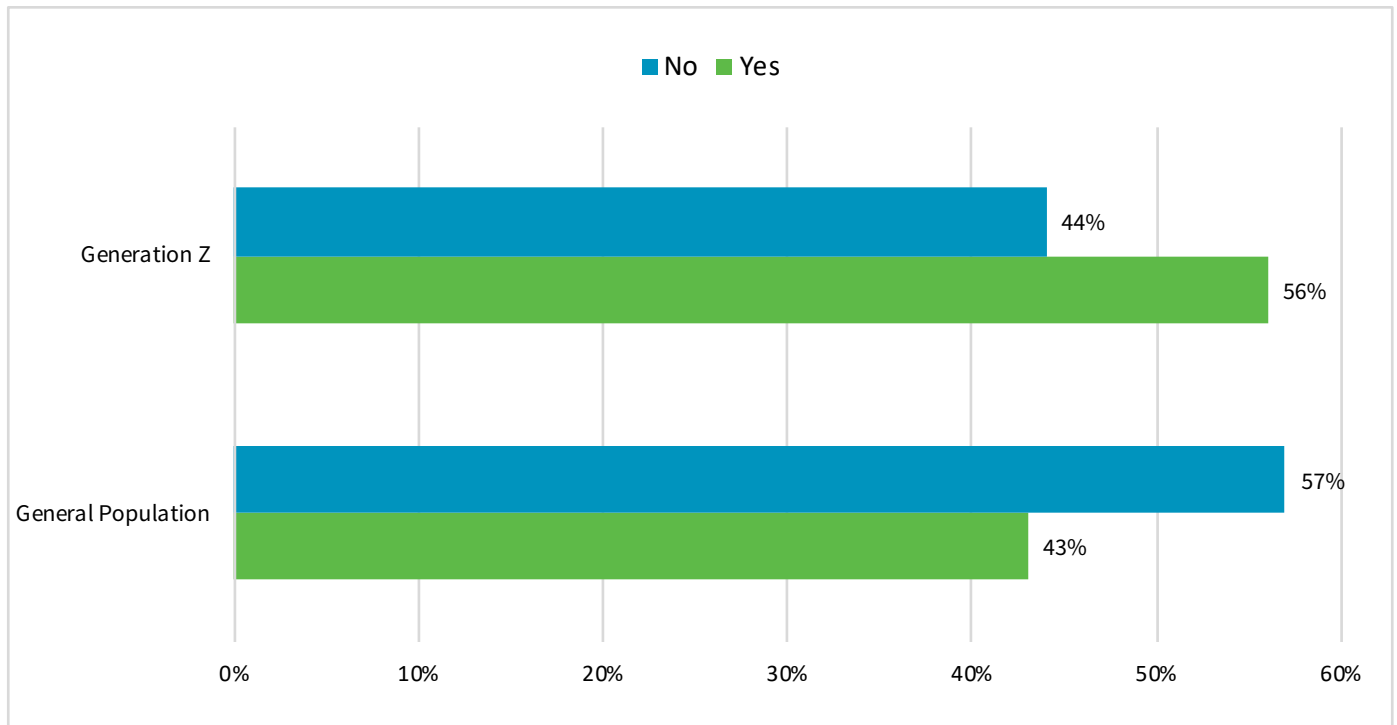
General Population (731) responses

Generation Z (223) responses

Millennials (233) responses

M3

## Have you ever considered working in the tech industry?



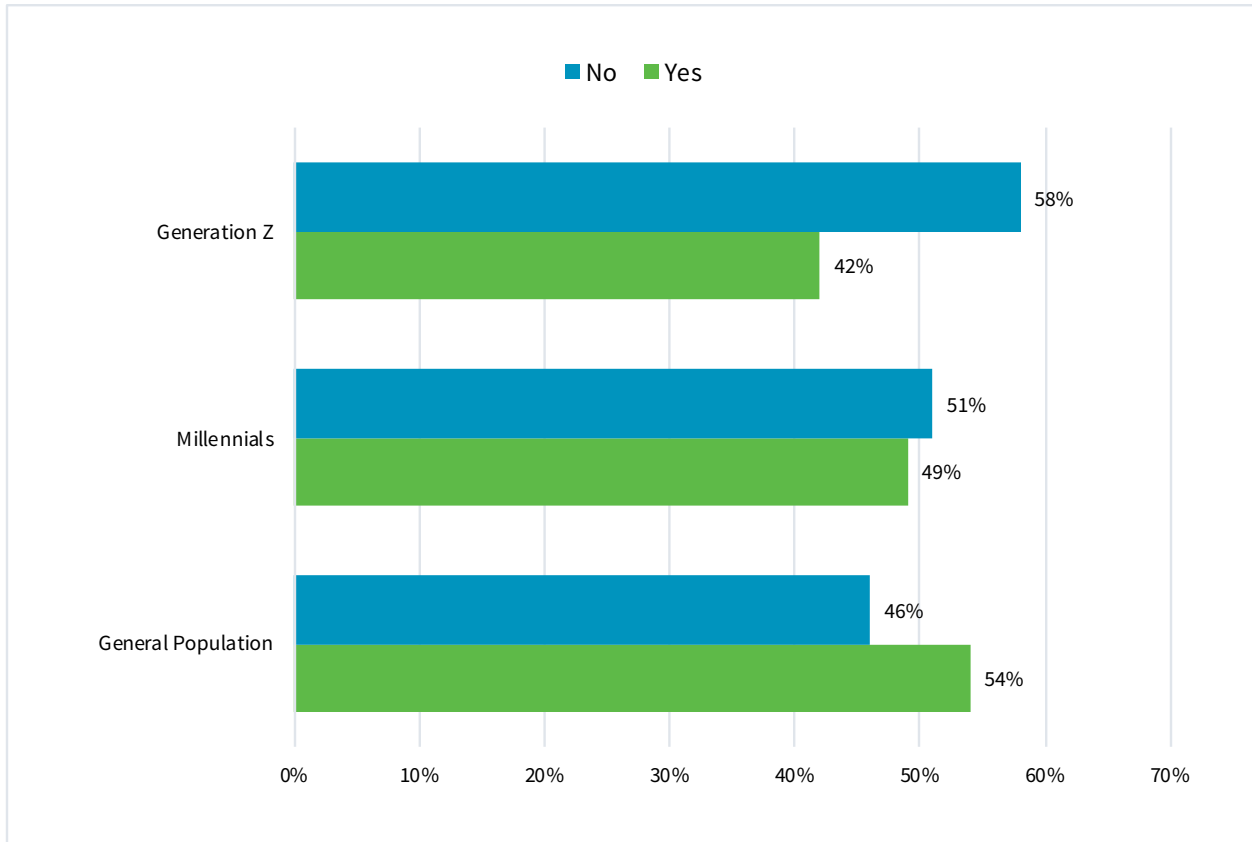
### Total Respondents

General Population (1,003) responses

Generation Z (303) responses

M4

## Do you believe the American manufacturing industry is in decline?



### Total Respondents

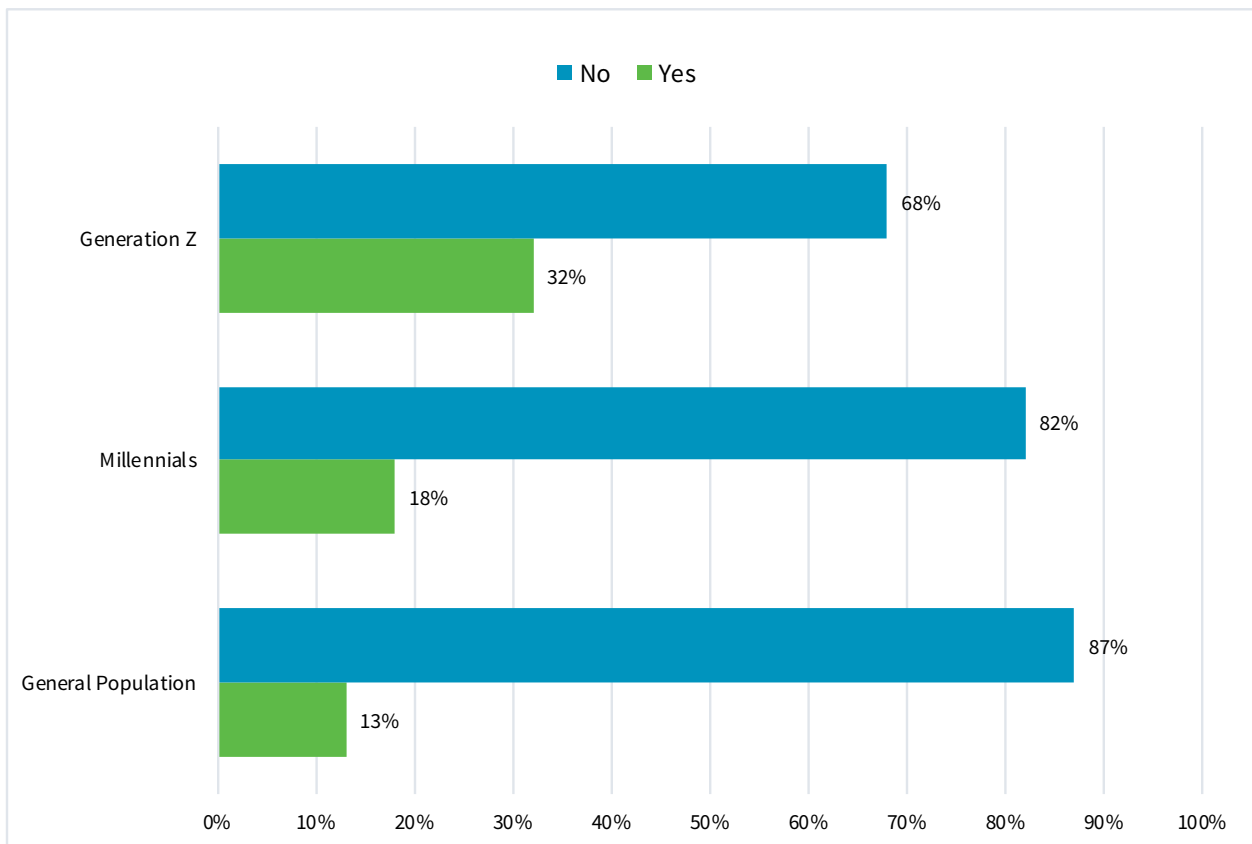
General Population (1,003) responses

Generation Z (303) responses

Millennials (331) responses

M5

## Have you ever had a counselor, teacher, or mentor suggest you look into manufacturing as a viable career option?



### Total Respondents

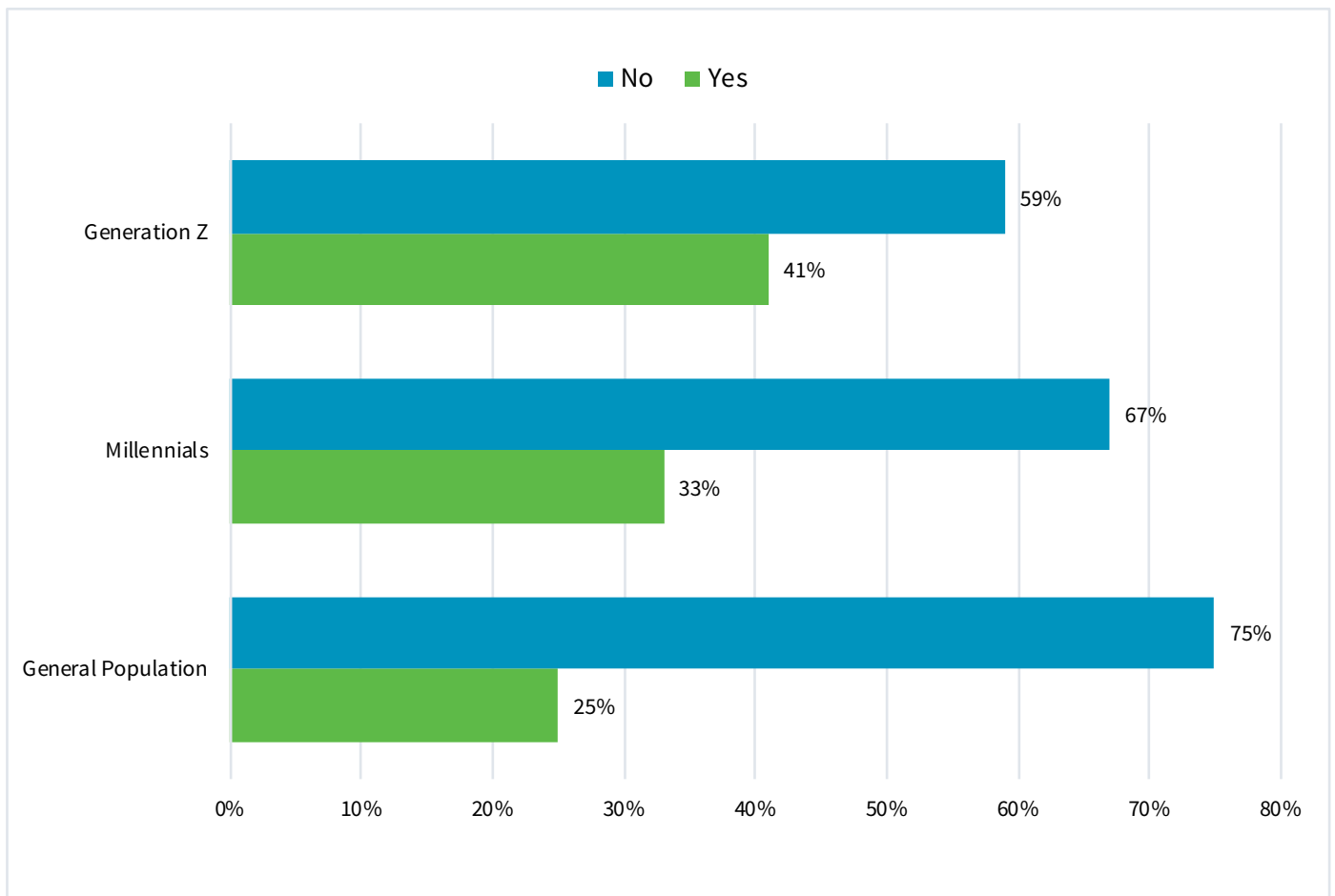
General Population (1,003) responses

Generation Z (303) responses

Millennials (331) responses

M6

Have you ever had a counselor, teacher, or mentor suggest you look into attending trade or vocational school as a means to a viable career option?



**Total Respondents**

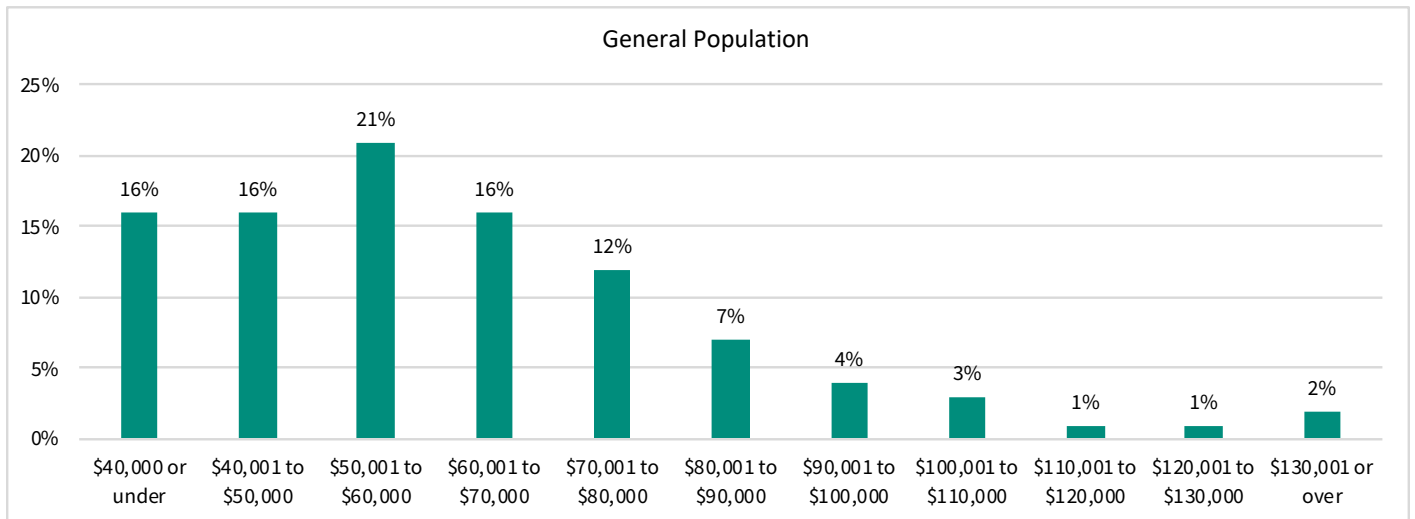
General Population (1,003) responses

Generation Z (303) responses

Millennials (331) responses

M7

## What do you think the national average salary of a mid-level manager in a manufacturing role is in the U.S.?

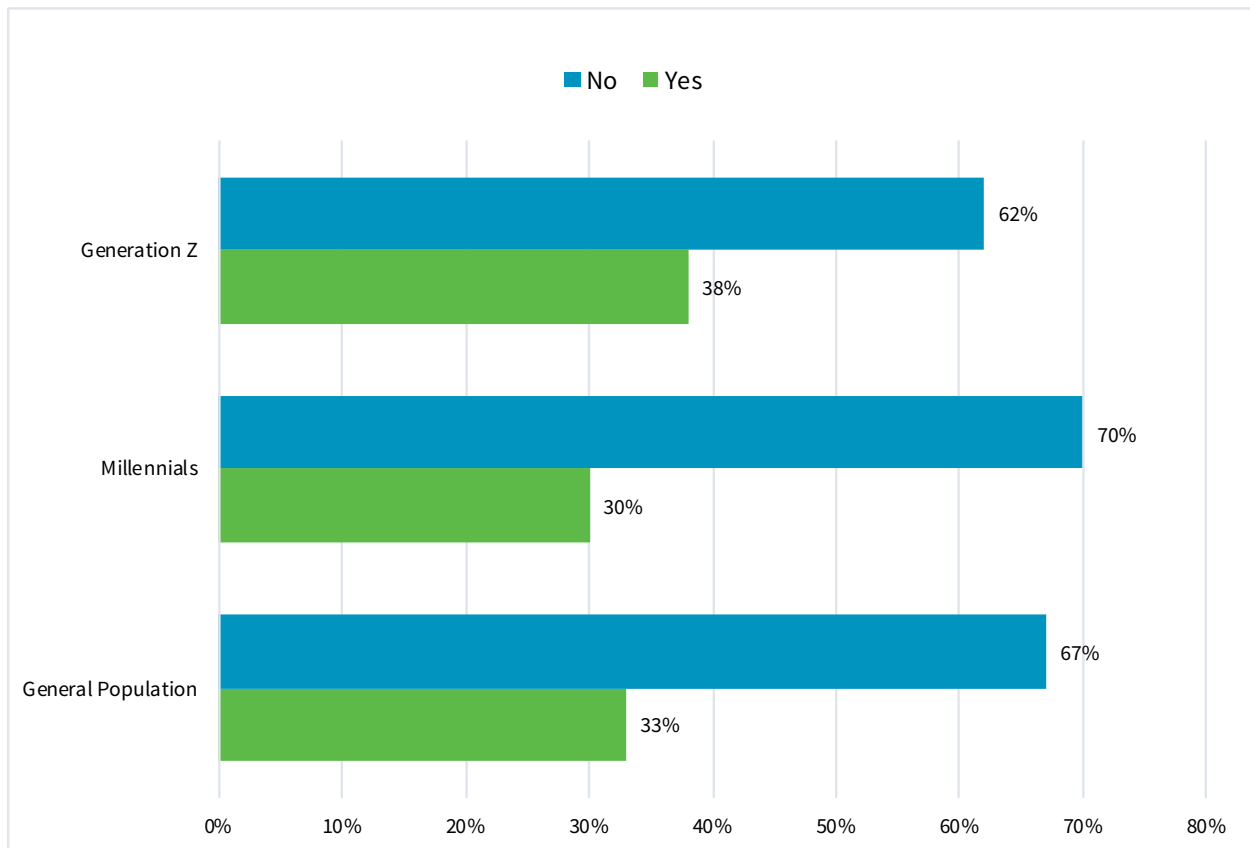


**Total Respondents**

General Population (1,003) responses

M8

## Do you think typical manufacturing jobs are boring?



### Total Respondents

General Population (1,003) responses

Generation Z (303) responses

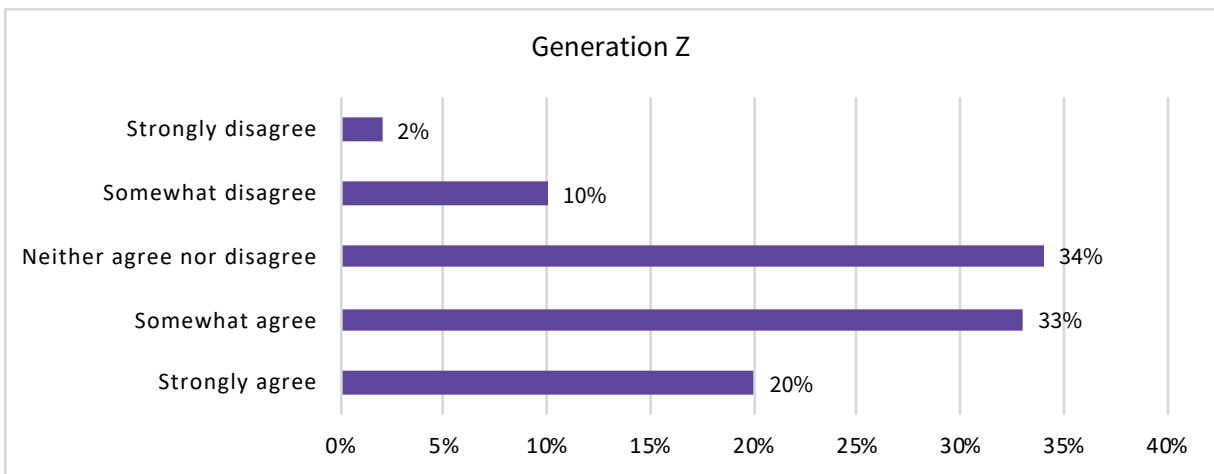
Millennials (331) responses



M9

Please indicate how strongly you agree or disagree with the following statement.

There is a shortage of skilled manufacturing workers in the U.S.



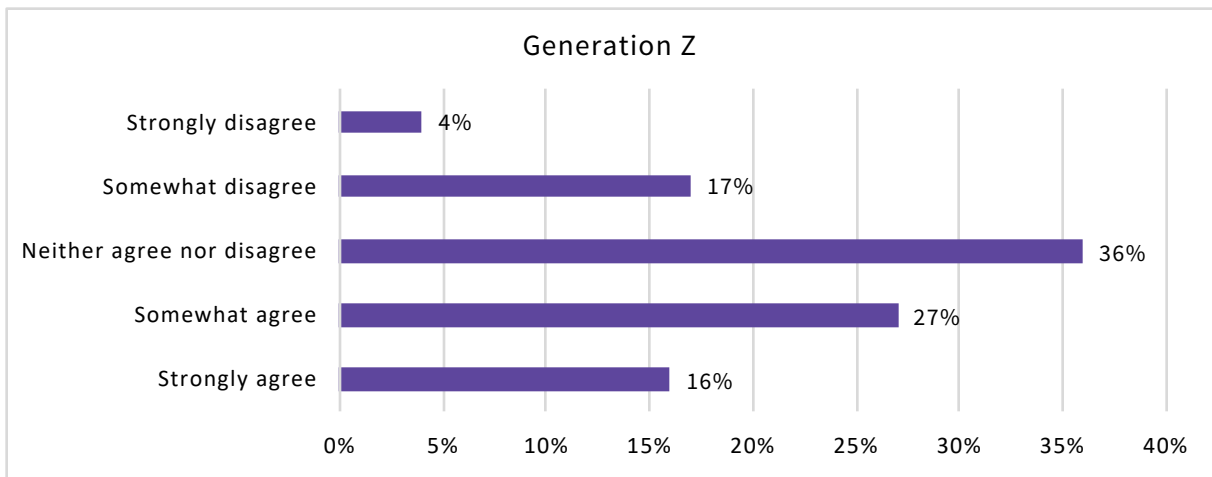
Total Respondents

Generation Z (303) responses

M10

Please indicate how strongly you agree or disagree with the following statement.

**Manufacturing jobs are an attractive option to younger workers and the next generation of workers**



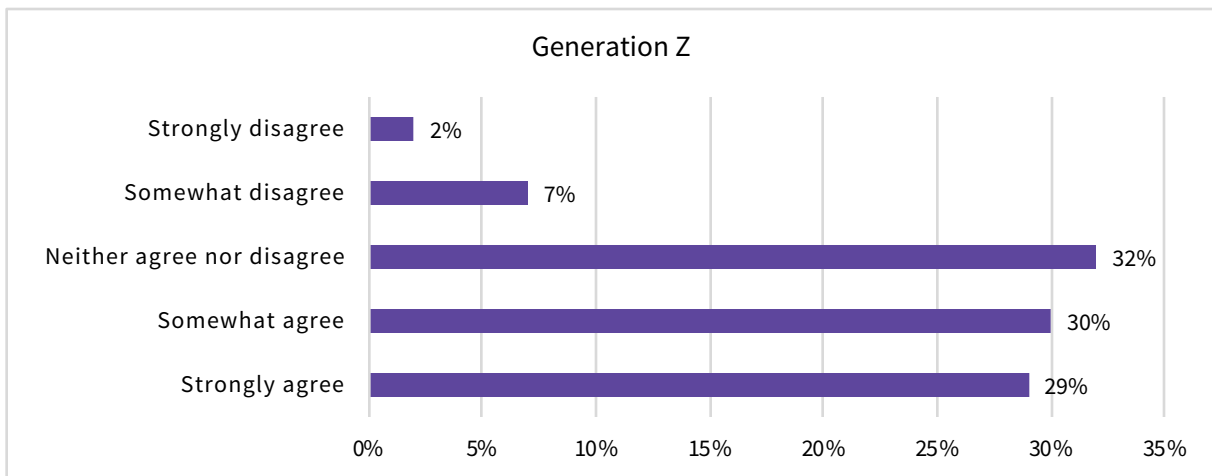
**Total Respondents**

Generation Z (303) responses

M11

Please indicate how strongly you agree or disagree with the following statement.

Trade schools offer promising career opportunities for high school students graduating in 2019



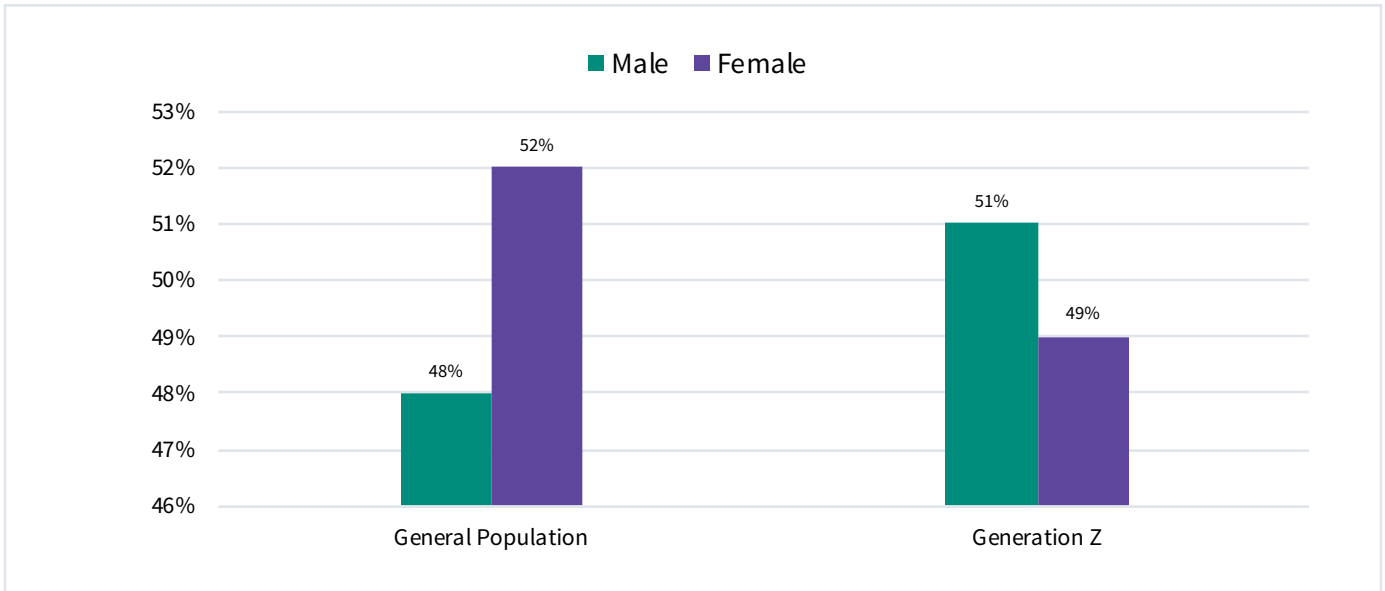
Total Respondents

Generation Z (303) responses

# Demographics

## Demographic 1

### Are you...?



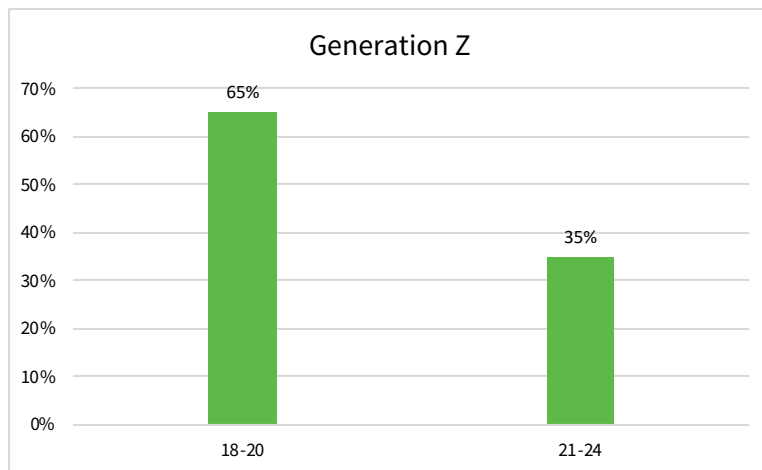
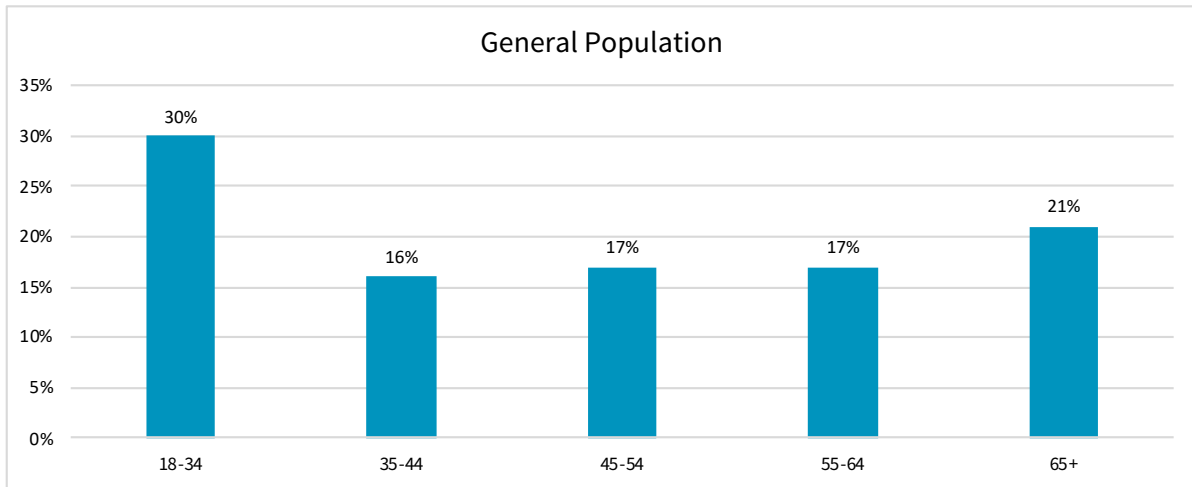
#### Total Respondents

General Population (1,003) responses

Generation Z (303) responses

## Demographic 2

### What is your age?



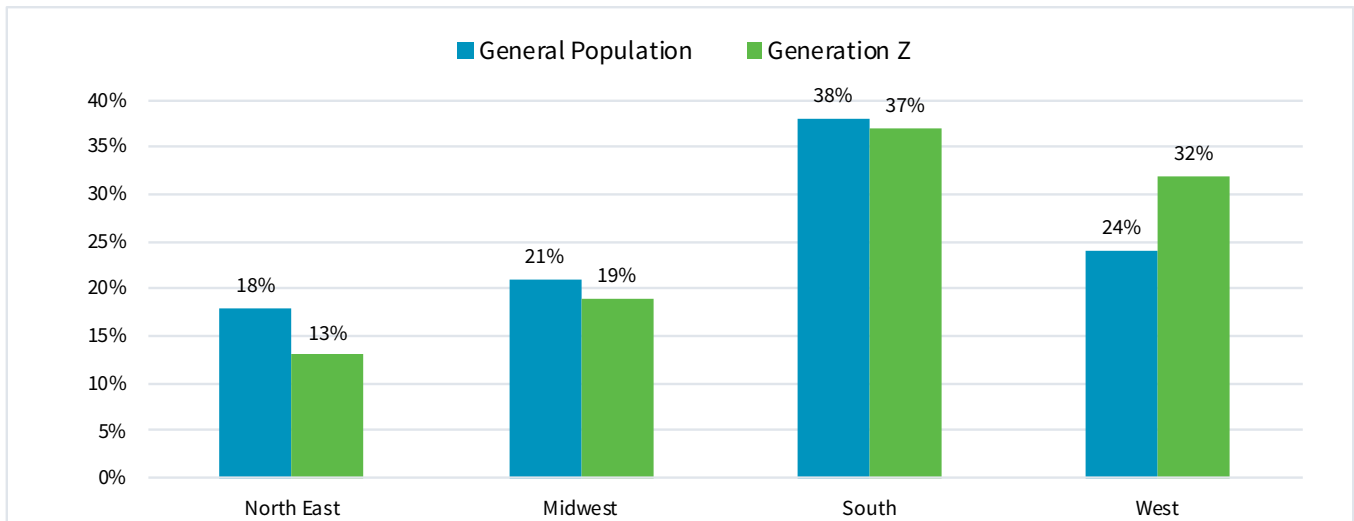
#### Total Respondents

General Population (1,003) responses

Generation Z (303) responses

### Demographic 3

## What state do you live in? (Region)



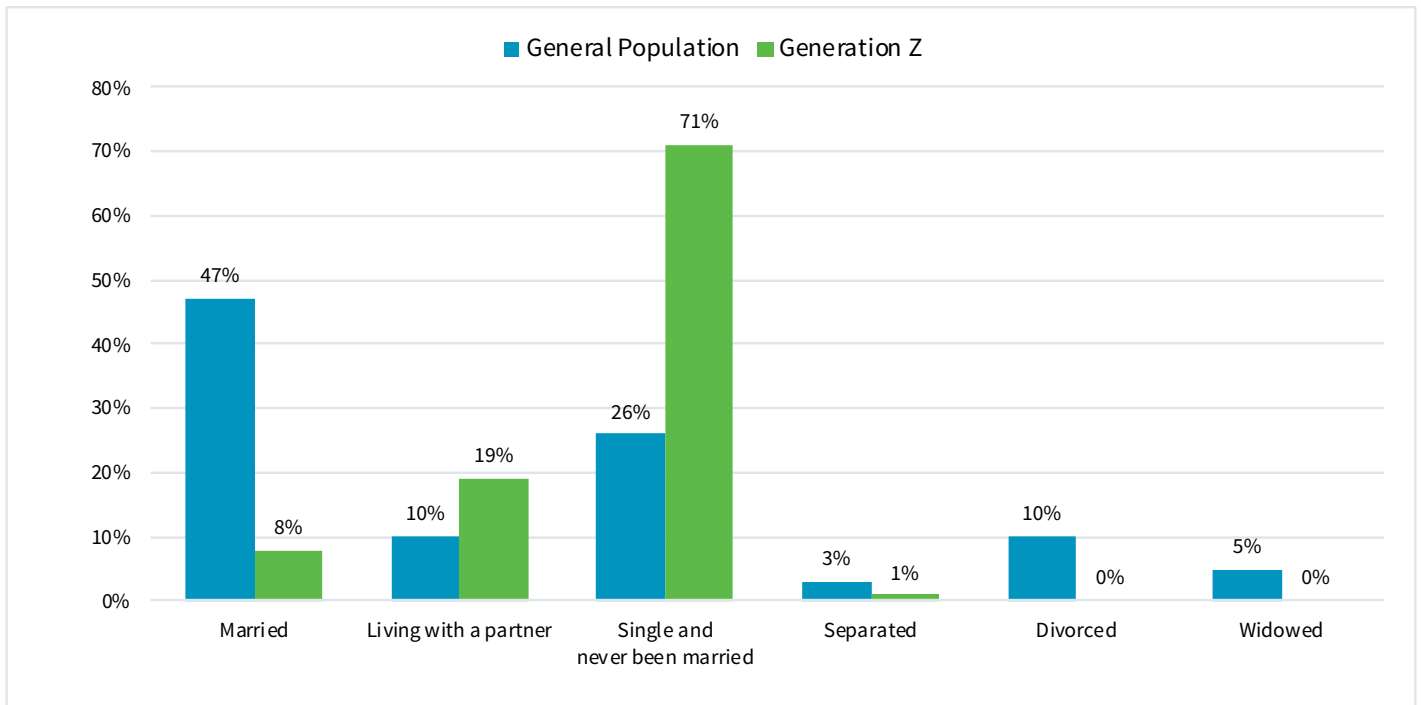
#### Total Respondents

General Population (1,003) responses

Generation Z (303) responses

## Demographic 4

### What is your marital status?



#### Total Respondents

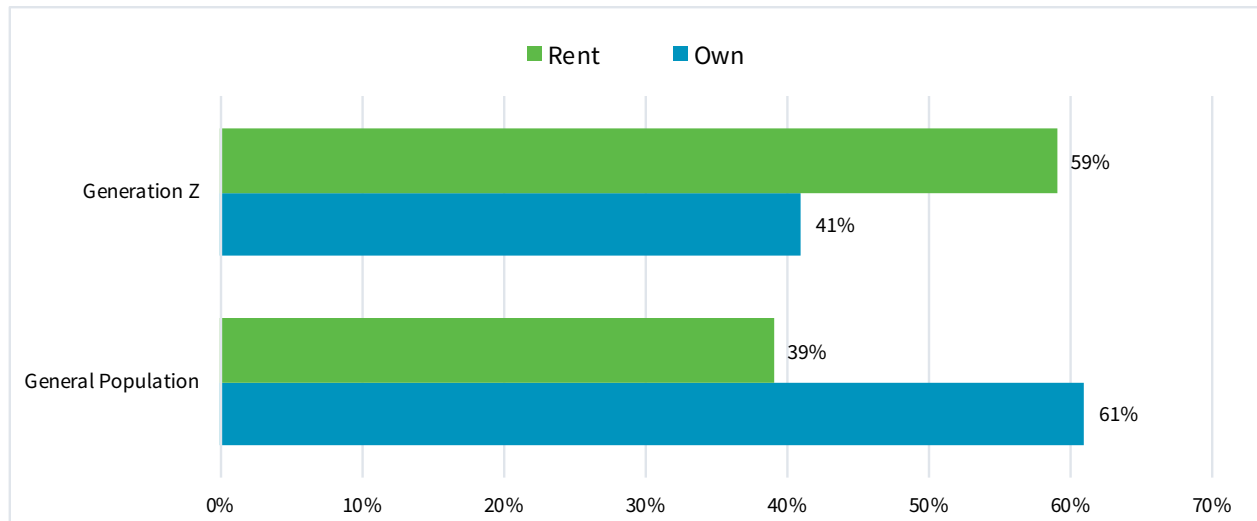
General Population (1,003) responses

Generation Z (303) responses



## Demographic 5

### Do you own or rent the dwelling in which you live?



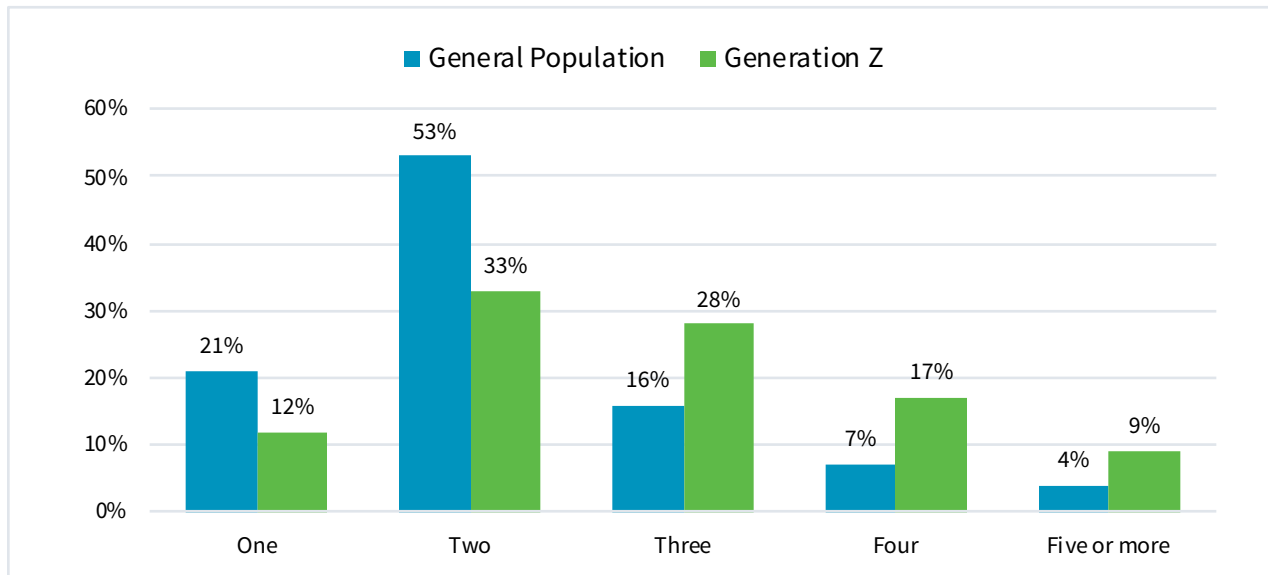
#### Total Respondents

General Population (1,003) responses

Generation Z (303) responses

### Demographic 6

Including yourself, how many adults 18 years of age and older are currently living in your household?



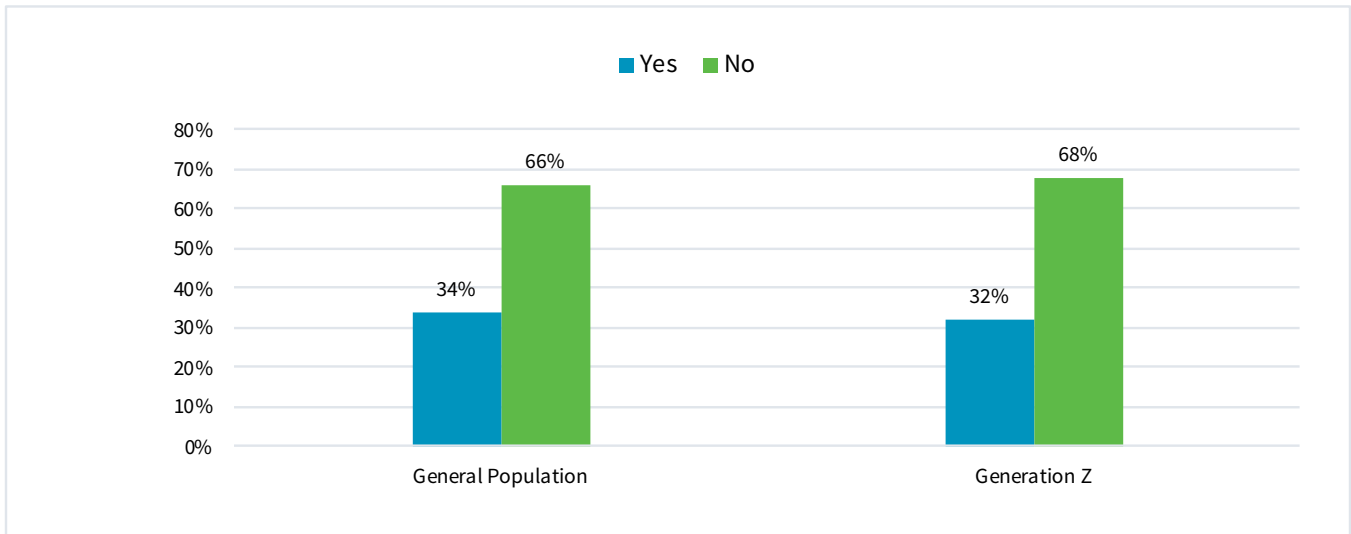
#### Total Respondents

General Population (1,003) responses

Generation Z (303) responses

Demographic 7

Do you have any children under the age of 18 living at home?



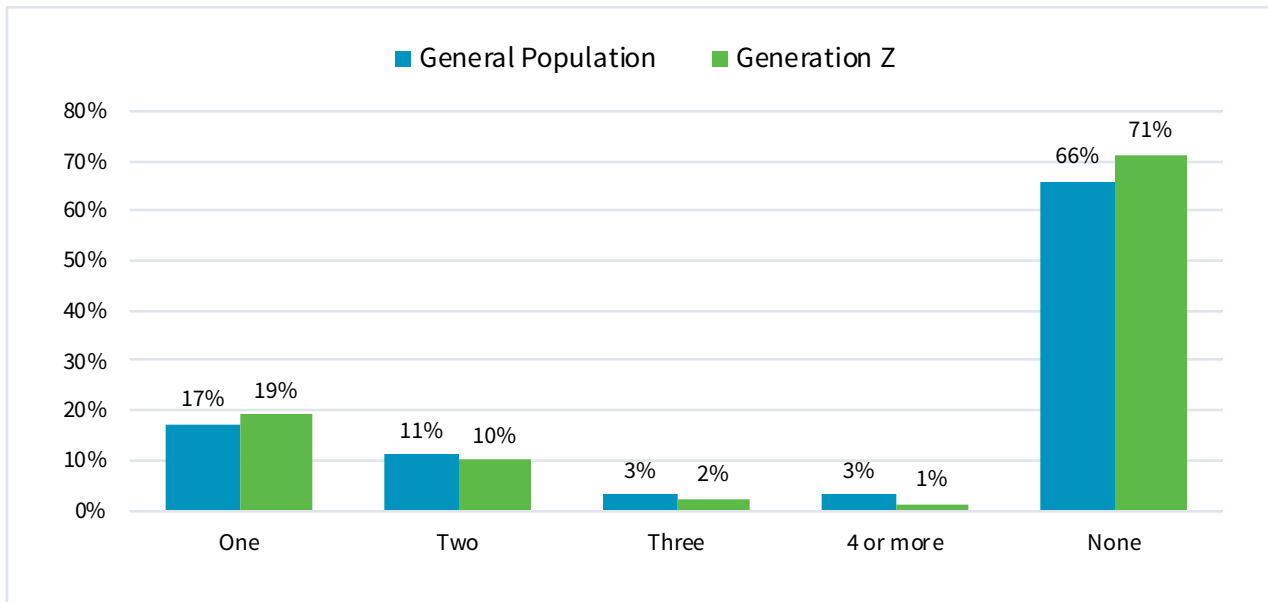
Total Respondents

General Population (1,003) responses

Generation Z (303) responses

Demographic 8A

Total Children in the Household



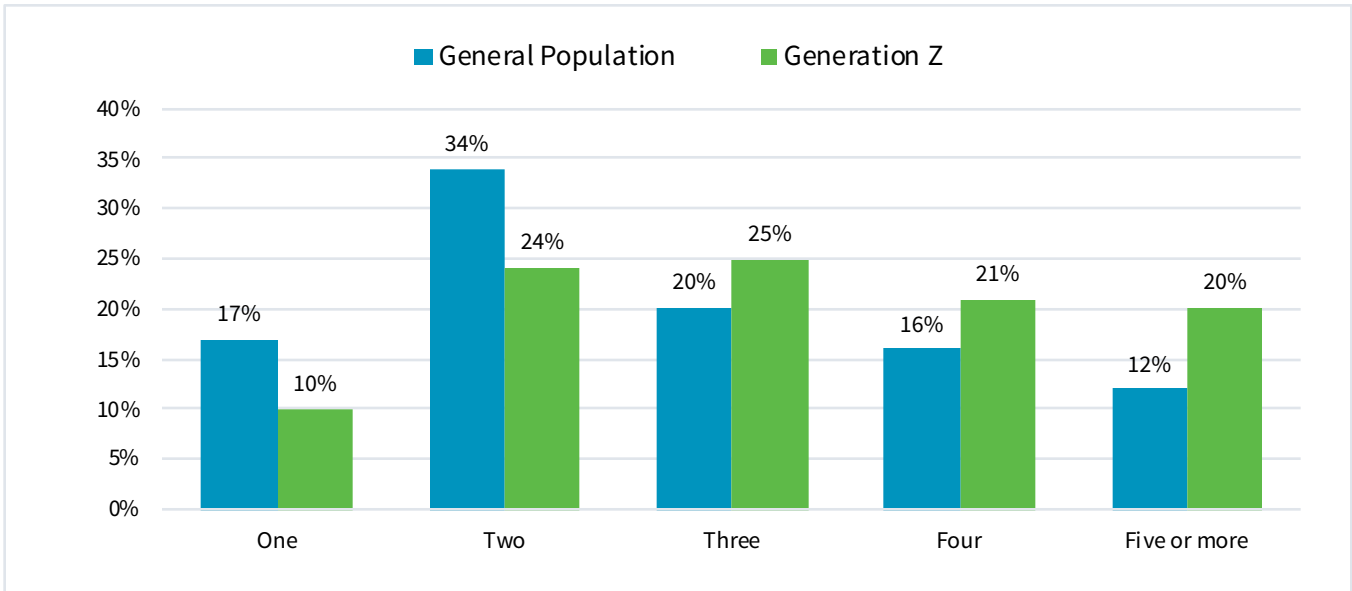
Total Respondents

General Population (1,003) responses

Generation Z (303) responses

Demographic 8B

# Household Size



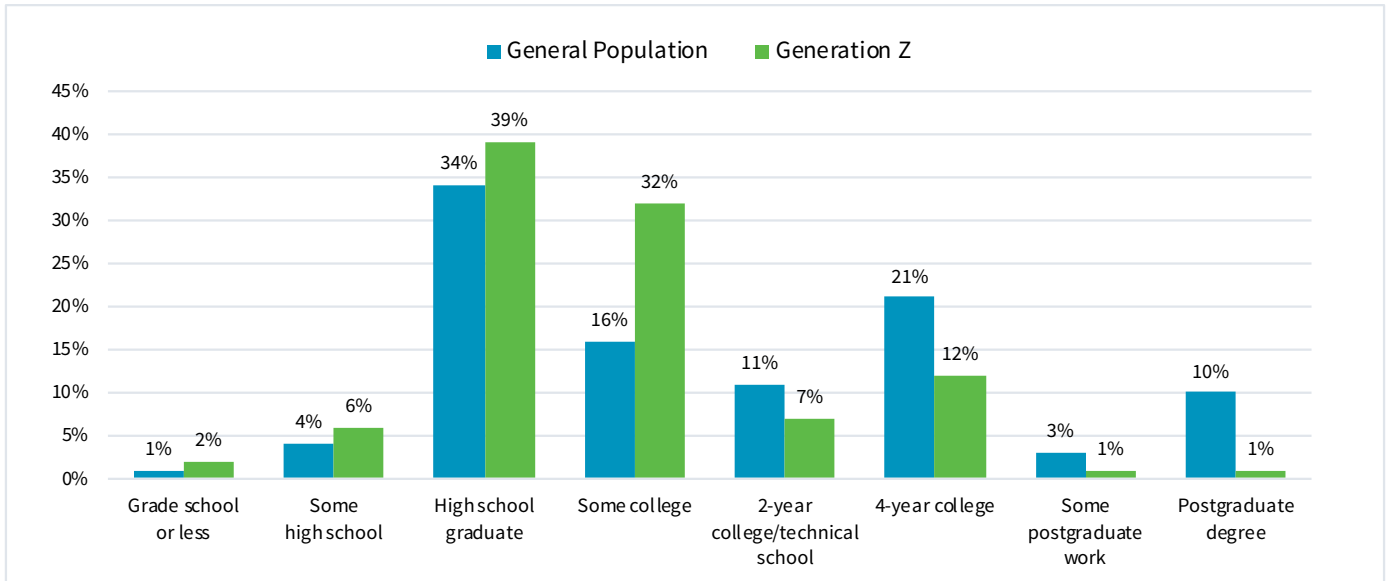
**Total Respondents**

General Population (1,003) responses

Generation Z (303) responses

## Demographic 9

### What is the highest level of formal education you have completed?



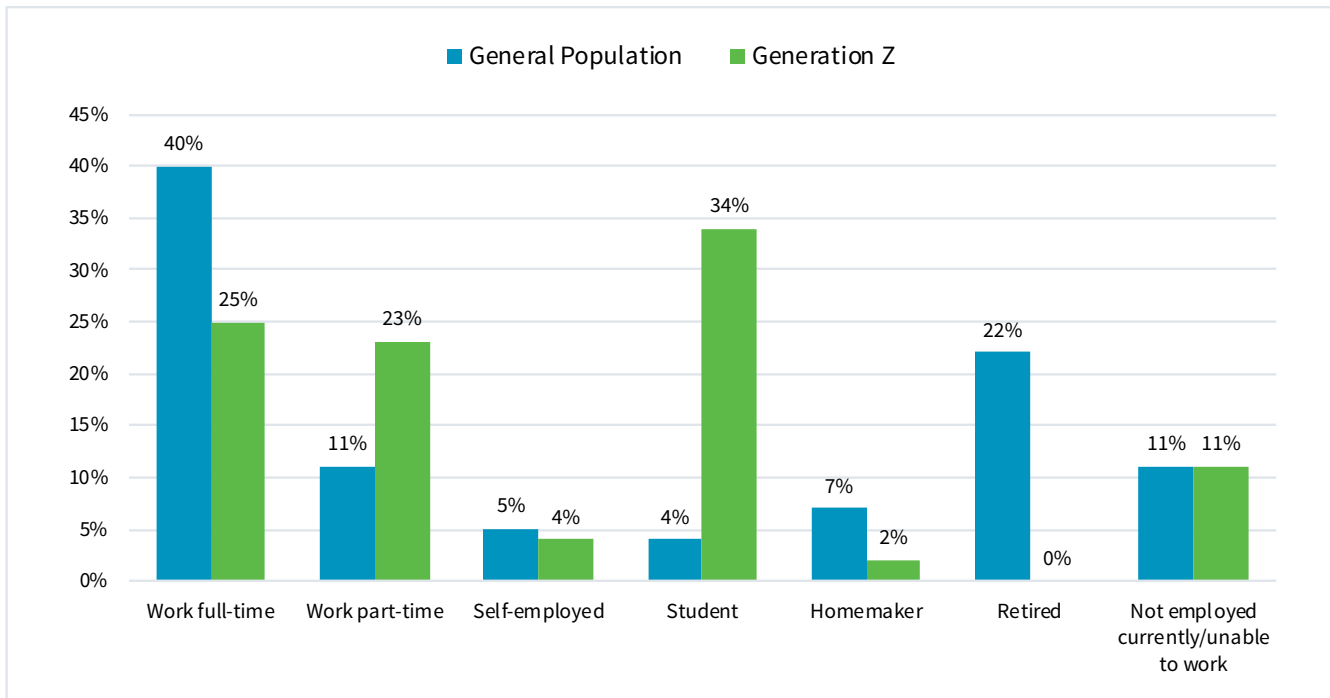
#### Total Respondents

General Population (1,003) responses

Generation Z (303) responses

## Demographic 10

Which of the following best describes your current employment status?



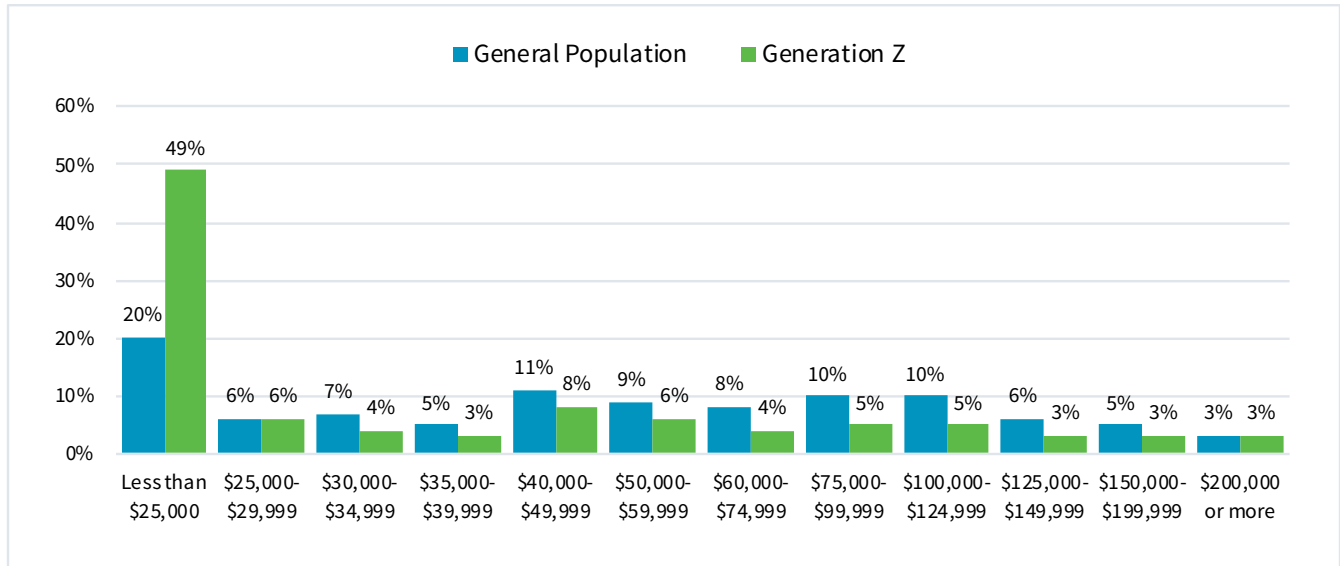
### Total Respondents

General Population (1,003) responses

Generation Z (303) responses

## Demographic 11

Which of the following includes your TOTAL household income before taxes in 2018?



### Total Respondents

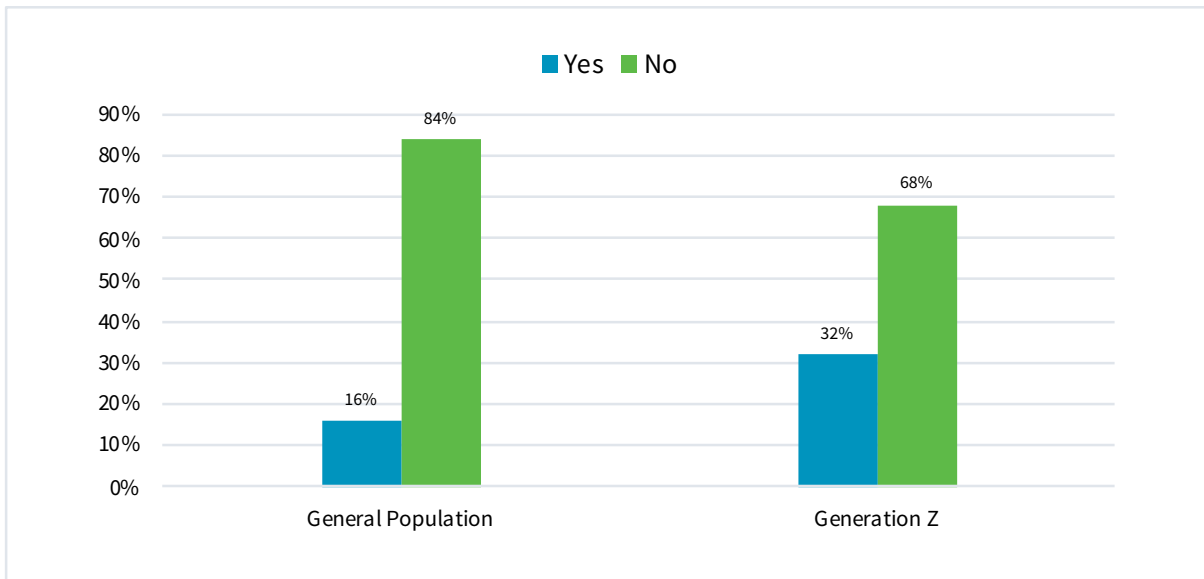
General Population (1,003) responses

Generation Z (303) responses



Demographic 12

Do you consider yourself to be of Hispanic/Spanish/Latino descent?



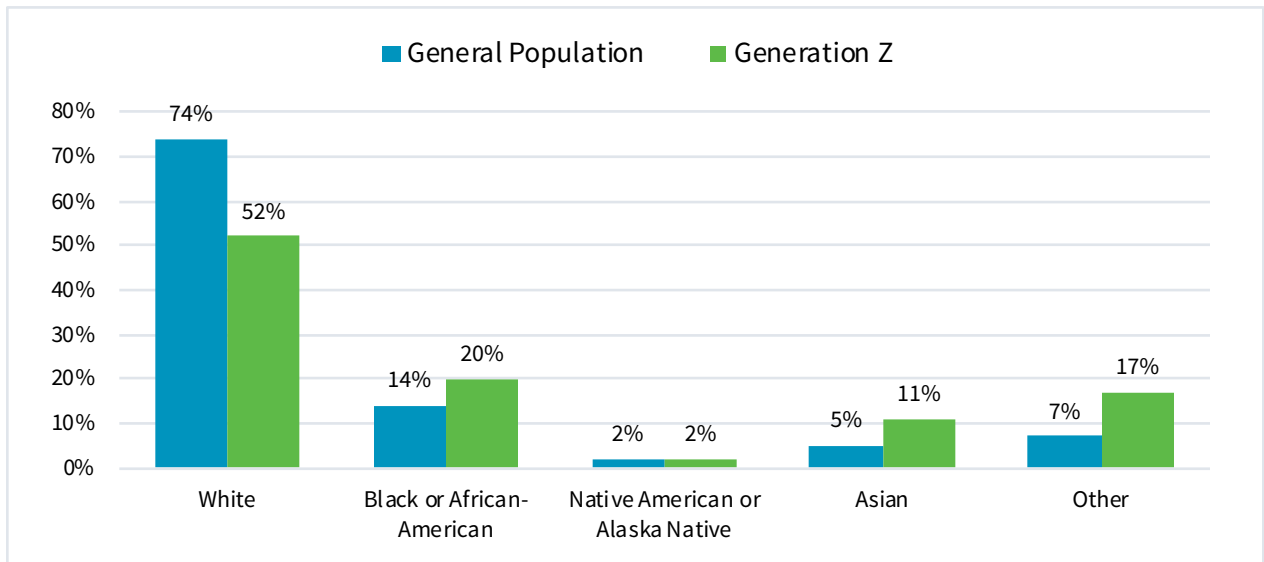
**Total Respondents**

General Population (1,003) responses

Generation Z (303) responses

### Demographic 13

## What race do you consider yourself?



#### Total Respondents

General Population (1,003) responses

Generation Z (303) responses

# About L2L

Manufacturers across all verticals and around the globe use L2L's Lean Execution System (LES) software, CloudDISPATCH, to improve operations, reduce costs, and maximize plant efficiency. The software delivers real-time visualized data and intuitive tools that engage workers at all levels to own and drive continual improvement.

L2L's software has helped create highly efficient plants at Autoliv, Goodyear, Bose, and Energizer. It seamlessly works across disparate systems, uniting them in a way that helps manufacturing plants win the day, every day. It's more than a CMMS, more than an MES, and more than an ERP. It is an efficiency engine that drives plant floor success.

If you are a media outlet or manufacturing trade association that is interested in learning more about L2L and the Manufacturing Index, our senior leadership would be glad to speak with you.

If you are looking to book speakers, the L2L team can speak with confidence and experience about how the manufacturing industry must move forward in order to be sustainable.

[CONTACT US](#)