

Xometry | THOMAS | wim | women in manufacturing®

# 2025 Career Advancement in Manufacturing Report

Xometry | Thomas | The Women in Manufacturing Association

Joint Survey Report



## 2025 Key Insights

In collaboration with the Women in Manufacturing Association, Xometry and Thomas conducted the fifth joint annual survey on career advancement and women in the manufacturing sector, revealing the following key trends from 1,110 qualified responses:

- **80%** of women and **81%** of men recommend a manufacturing career, a high overall approval of manufacturing careers and an improving perception of manufacturing among women compared to previous years.
- **78%** of women believe significant progress has been made for women in manufacturing in the past five years and are optimistic about the progress made.
- **79%** of companies report experiencing labor shortages, a slight decrease from the previous year, which suggests potential improvement. This could be due to increased automation, reshoring efforts, or other factors impacting the labor market.
- **74%** of women and **49%** of men "fell into" manufacturing careers, highlighting a key difference in how genders enter the industry. Women are more likely to enter unintentionally, suggesting a need for greater awareness of manufacturing career paths among young women and more proactive recruitment efforts.
- **87%** of women and **56%** of men agree that workplace diversity improves business outcomes. Most people agree that male allyship in manufacturing workplaces is essential, but companies need to provide better resources and training to foster allyship and create a more inclusive environment.

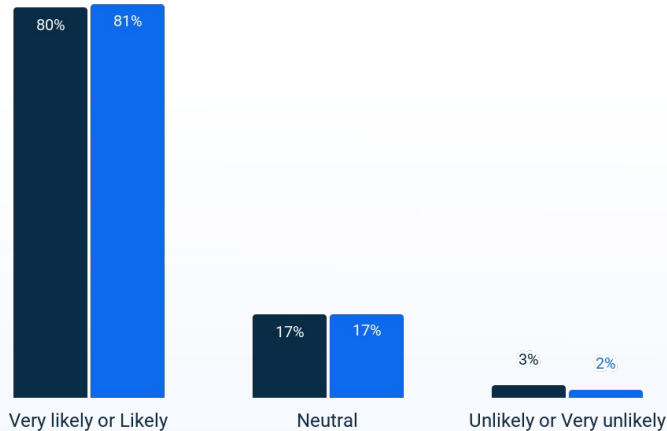
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# Key Insights



# Most People in Manufacturing Recommend a Manufacturing Career

How likely are you to recommend a career in manufacturing?



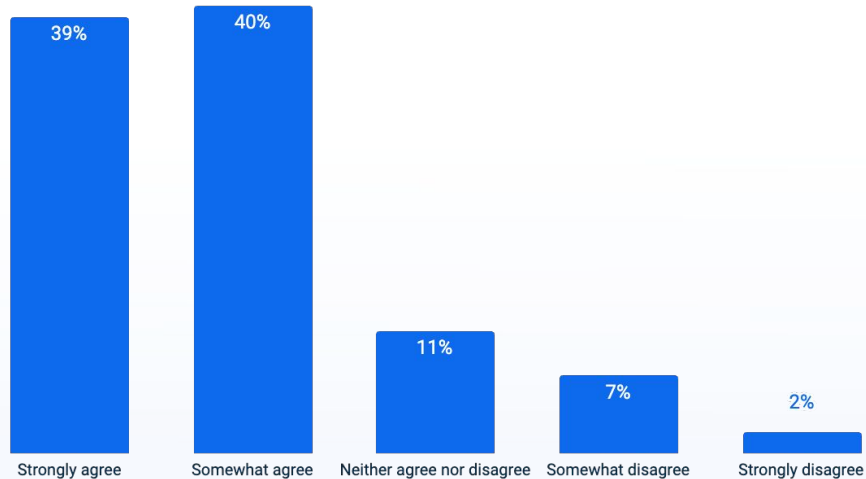
- 80% of women are likely or very likely to recommend a career in manufacturing, which is consistent with 2023 and 2024.
- 81% of men would recommend a career in manufacturing, an increase from 2024 (74%).
- Only 3% of women are unlikely to recommend a career in manufacturing, compared to 8% in 2023, showing that women are feeling more positively or neutral toward manufacturing careers over time.

■ Female ■ Male

Total Response Count: n=1018; Female n=841; Male n=161; Non-Binary n=1; N/A n=15; Sample size of <10 is omitted from report visualization.

# Labor Shortages Ease Slightly, But Remain Prevalent

Do you agree or disagree with the following statement:  
We are experiencing labor shortages.



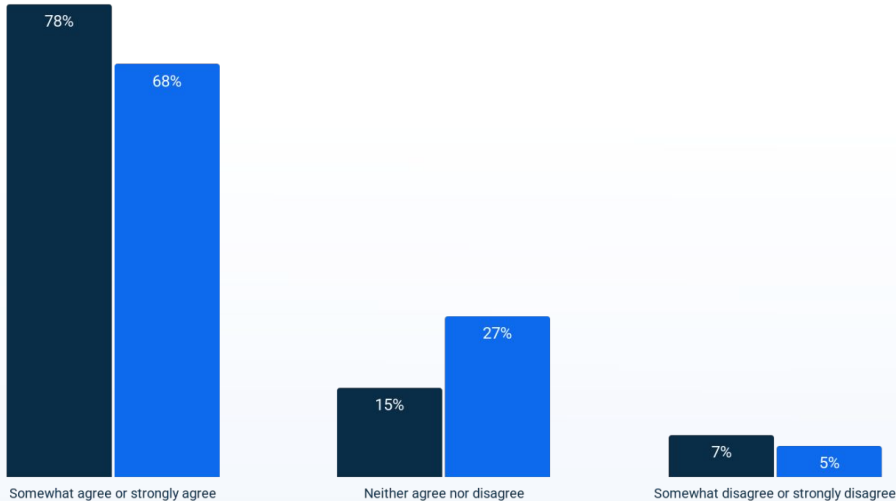
- While still a significant concern, the percentage of manufacturing companies reporting labor shortages has decreased slightly compared to 2024 (from 83% to 79%).
- Despite this decrease, a substantial majority (79%) of companies still acknowledge experiencing labor shortages.
- The proportion of companies strongly agreeing with the presence of labor shortages has also decreased (from 45% to 39%), suggesting a potential easing of the most severe shortages.

■ Total

Response Count: n=1,078

# Women's Progress in Manufacturing: Optimism Grows, Gender Gap Widens

Do you agree or disagree with the following statement: Women have made significant progress in the manufacturing industry over the last five years.



- A growing majority of women (78%) believe significant progress has been made in manufacturing over the past five years, with strong agreement more than doubling since 2020.
- While men also generally agree, their perception of progress has decreased since 2024 (from 82% to 68%), creating a widening gender gap in perceptions of women's advancement in the industry.

■ Female ■ Male

Total Response Count: n=986; Female n=817; Male n=154; Non-Binary n=1; N/A n=14; Sample size of <10 is omitted from report visualization.

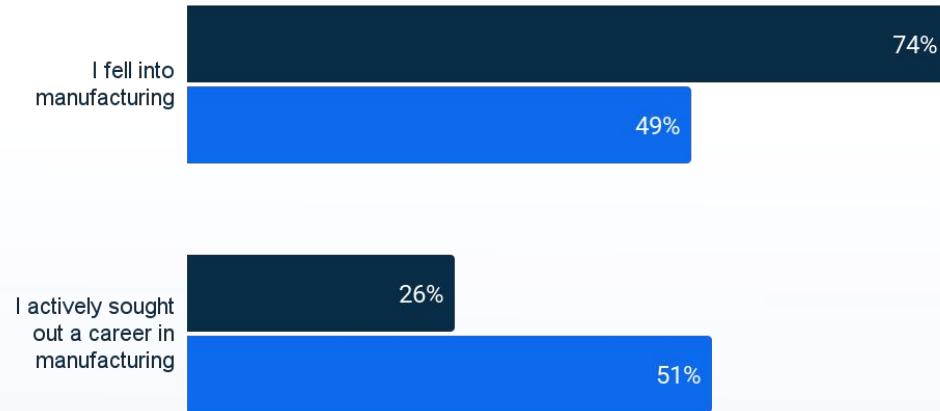
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# Recruiting in Manufacturing



# Most Manufacturing Workers Unintentionally Enter the Industry

How did you enter the manufacturing field?



- Women far more likely to "fall into" the industry (74%) than men (49%).
- The trend of women entering unintentionally has increased, while it has decreased for men since 2023.
- Overall, the majority of manufacturing workers (70%) did not actively seek a career in the field.

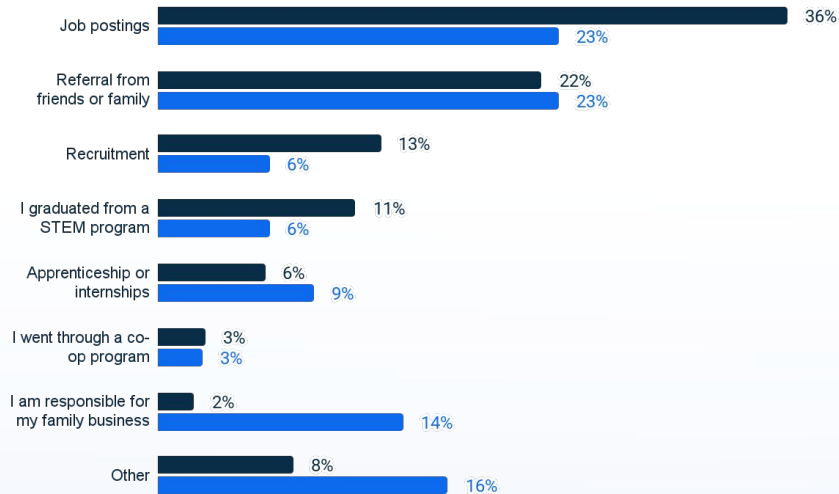
■ Female ■ Male

Total Response Count: n=1016; Female n=841; Male n=161; Non-Binary n=1; N/A n=13; Sample size of <10 is omitted from report visualization.



# How Manufacturing Workers Enter the Field

How did you end up in this industry?



- Women most often enter manufacturing through job postings (36%), referrals (21%), and recruitment (13%).
- STEM programs (11%) and apprenticeships/internships (6%) are notable entry points for women.
- Men cite job postings (23%) and referrals (23%), with family business responsibility also playing a key role (14%).
- Compared to 2024, family business responsibility remains a notable factor for men, but traditional recruitment methods are increasing in influence.

■ Female ■ Male

Total Response Count: n=713; Female n=624; Male n=79; Non-Binary n=1; N/A n=9; Sample size of <10 is omitted from report visualization.

# Quoted Responses: How to Recruit More Women into Manufacturing

*“Campaigning and educating through social media, in person events, etc., to raise awareness of the opportunities. Once you have the women in the industry, it’s all about creating a sense of belonging.”*

*“Intentionally seeking out young women in high school and college and making them aware of what opportunities exist. Making sure they see other women succeeding in manufacturing at all stages of professional careers.”*

*“We need to play the long game and start by getting girls interested in manufacturing careers as students. We need to show that you can make a difference in the world and also make a good living in a manufacturing career.”*

*“Recruit women in college through STEM programs. Not all manufacturing jobs are on an assembly line.”*

*“Social media advertising with pictorial of women in positions inside manufacturing.”*

The above represents a cross-section of responses.



Showcase what actual jobs there are in the industry. I know I wanted to be a chemical engineer by sophomore year because I was surrounded by engineers.

*on How to Recruit More Women into Manufacturing*

# Quoted Responses: How to Recruit More Women into Manufacturing

*“More outreach is necessary for women to be attracted to manufacturing, but I also think women need to be open to the requirements of manufacturing. It can be difficult and demanding work, but it can also be very rewarding, monetarily and otherwise. We have to be willing to put the work in.”*

*“Engineering is solving problems and organizing complex processes – not simply loving machines and the power of the machines. Emphasize the problem-solving and the organizing – women tend to be very good at those things.”*

*“Localized and woman-focused job postings, recruiting, high school programs, etc. People don't move across the country or state for a factory/manufacturing job, generally speaking. Your future hiring base is your local and surrounding communities. Get into the middle and high schools early and get these kids excited about manufacturing. Plenty of kids don't want to go to college and will enter the workforce right out of high school.”*

*“Normalize women in manufacturing, showcase its earning and advancement potential for all, allow flexibility in work schedules for parents (men and women).”*

The above represents a cross-section of responses.

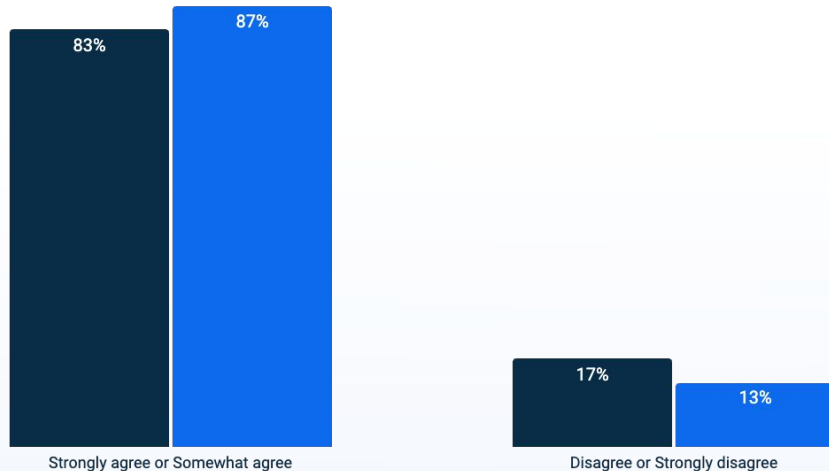
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# Recruiting in Manufacturing



# Most Manufacturing Employees Feel Valued, But Gender Gap Persists

Do you agree or disagree with the following statement:  
I believe my company values my contributions.



- A large majority of both men (87%) and women (83%) in manufacturing feel their contributions are valued by their companies.
- While overall sentiment is positive, a small gender gap exists, with men slightly more likely to feel valued than women.
- More than 8 in 10 employees in the manufacturing industry agree that their contributions are valued by their company.

■ Female ■ Male

Total Response Count: n=990; Female n=818; Male n=156; Non-Binary n=1; N/A n=15; Sample size of <10 is omitted from report visualization.

## Barriers to Advancement

*“None, I bought the company and am CEO to drive change.”*

*“I don't feel that there are barriers for women to advance at my company. (I know I am extremely fortunate!)”*

*“Family-owned small business but there is still potential for advancement in management roles. Especially for strong women.”*

*“None. I am a Vice President. I was promoted 3 years after joining this organization. The next role for me would be the CEO, which is a position I am not interested in pursuing.”*

The above represents a cross-section of responses.

## Barriers to Advancement

*“I work at a large company with over 100 locations across the country. Fortunately the only barrier for advancement for me is my willingness to relocate to a different or larger division - within each division and product group there is a focus on advancement.”*

*“Being seen as ‘too soft’ as a [woman]. But ‘too bossy’ when I speak up. The culture needs to change.”*

*“As a 30-year-old woman, I’ve noticed that, despite having the necessary qualifications and skills, age and gender can become barriers. The perception is often that if you don’t fit the traditional mold — typically older and male — you’re not ready for leadership. This bias can overshadow actual competencies, innovation, and fresh perspectives.*

*Addressing these biases is critical for creating a more inclusive environment where advancement is based on merit, skill, and potential, rather than age or gender.”*

The above represents a cross-section of responses.





“There are a limited number of company positions at this stage of my career. I’ve advanced to the highest level on this privately held business.”

*on Barriers to Advancement*

## Barriers to Advancement

*“I work for a very flat organization, so not many opportunities exist. I am ok with that.”*

*“Advancement at the factory level without having to leave and go to the corporate level.”*

*“Lack of time to pursue development opportunities, lack of available positions that do not require relocation.”*

*“There is less opportunity to advance in the technical, individual contributor track versus the managerial track.”*

The above represents a cross-section of responses.

## Barriers to Advancement

*“Still an ‘old boys club’ at the highest levels. No training programs for direct supervisors and mid-level managers.”*

*“Gatekeeping of knowledge and skills. Managing instead of leading. Lack of guidance and mentorship from direct leaders and managers.”*

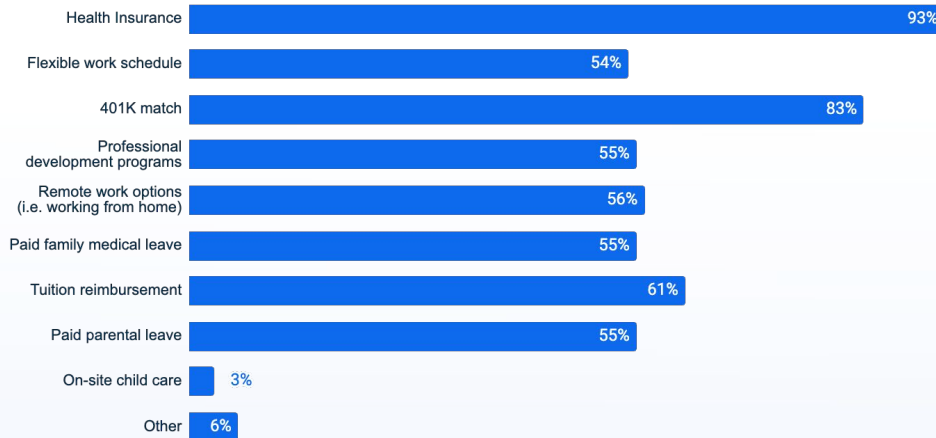
*“Being a high performer in your current role. You are now too difficult to replace, so won't be promoted.”*

*“The largest barriers for advancement at my company are tenure, set mindsets, and tribal knowledge of the industry.”*

The above represents a cross-section of responses.

# Health Insurance and Retirement Benefits Most Common in Manufacturing

Please select the employee benefits that your company offers today: (select all that apply)



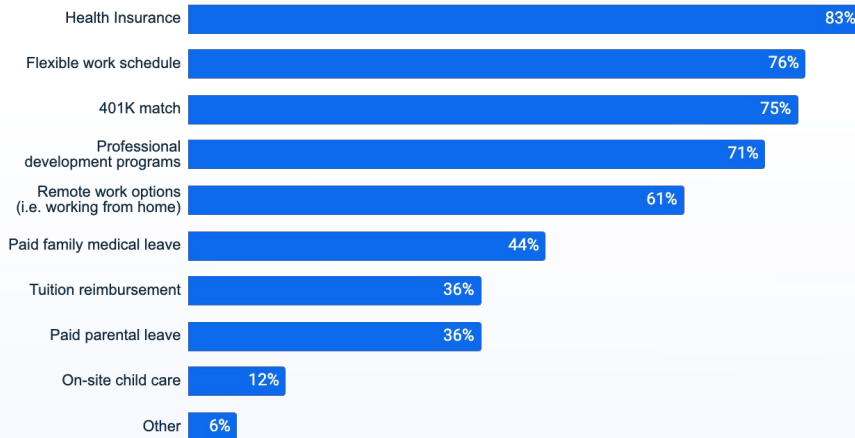
- Health insurance (93%) and 401(k) matching (83%) are the most commonly offered benefits, consistent with 2024 data.
- While still prevalent, tuition reimbursement (61%), remote work options (56%), and flexible work schedules (54%) are offered slightly less frequently than in 2024, though still by a majority of employers.
- On-site childcare (3%) remains a rare benefit.

■ Total

Response Count: n=1188

# Top Desired Employee Benefits: Health, Flexibility, and Retirement

Please select the employee benefits that are the most important to you: (select all that apply)



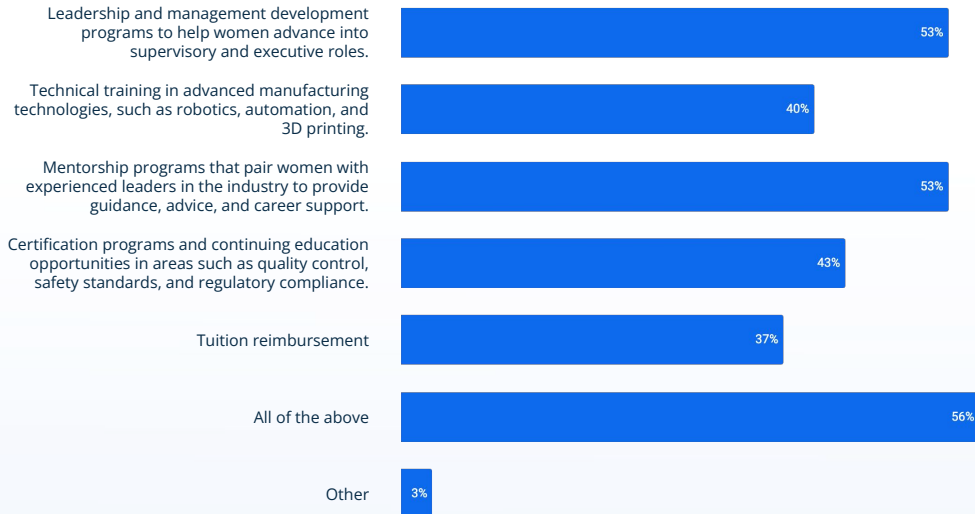
- Health insurance (83%) and flexible work schedules (76%) are the most desired benefits.
- Retirement plans (401k match, 75%) are also highly valued.
- Benefits like on-site childcare (12%) and tuition reimbursement (36%) may be less popular due to limited applicability.

■ Total

Response Count: n=1042

# Workers Prioritize Skills Training Over Tuition Aid

What kind of worker upskilling or professional development would be most valuable? (Select all that apply)



- Leadership and management development (53%) and mentorship programs (53%) are top choices for upskilling.
- Technical training in advanced manufacturing (40%) is also highly valued.
- Tuition reimbursement (37%), while still desired, is less of a priority compared to other development opportunities.

■ Total

Response Count: n=1009

# Quoted Responses: How to Retain More Women in Manufacturing

*“Be present and vocal when there is an opportunity to discuss your career. There should be a lot of one on one encouragement. Current women leaders need to be an example and role model making sure other women in the organization see them being decisive and having an impact.”*

*“We need to actively break down the structures in society that hold women back, especially the motherhood penalty and the overwhelming amount of work that it takes to run a dual-career family, by ensuring we address gender pay gaps across age groups and parental status, and provide more support to families through offering paid leave, childcare support, and through policy advocacy. ”*

*“Cultivate a senior management team who want women to have a seat at the table, and are aware of different needs and communication styles that men and women have.”*

*“Take a strong stance against sexual harassment and improving company culture. Promote female and non-binary leaders and make sure they have the training and support to be successful.”*

*“Some females need to be promoted early or put in a fast track program to be promoted. None of this waiting around to see how it pans out. By then, she'd be bored and leave.”*

The above represents a cross-section of responses.



“Fostering an inclusive environment. It is not simply a matter of hiring. We must ensure equal pay while performing the same positions. We must ensure equitable reviews and advancements. What does it matter if you hire women, if you judge and bill their performance against a male standard of height and strength versus effort and dependability.”

*On How to Retain More Women into Manufacturing*



# Quoted Responses: How to Retain More Women in Manufacturing

*“After getting the role in manufacturing, it is difficult to stay when [your] ideas [are] ignored or dismissed, different work for you vs other employees, comments or jokes that make you uncomfortable, always being the ‘secretary’ or person to bring the snacks, etc. Picking the times to take it vs. going to HR is often a choice of alienating yourself from the rest of the crew. It’s easier to leave the situation and find other work.”*

*“Flexible schedules, show a career path that offers ways to achieve without compromising family time, create cultures focused on common goal achievement rather than sustaining the old boys club.”*

*“By putting the best people in leadership roles regardless of gender. This will inevitably lead to more women being promoted into leadership roles where they can leverage their experience and title to be an example to other women. It would also be prudent to have mentorship programs to help coach women in career development and working in a male-dominated industry.”*

*“Mentorship, especially to build connection and help women navigate inequitable situations; training for advancement into leadership roles; equal parental leave for both women and men to demonstrate that parenting roles are equally shared and valued.”*

*“Reach out to women within the organization to ask if they are interested in opportunities for advancement. Many women think that if they work hard and do a good job that their efforts will be noticed which will translate into opportunities for advancement. And if the opportunities do not present themselves then it must have been something they did wrong. Do not assume that all women will self-advocate.”*

The above represents a cross-section of responses.

# Quoted Responses: How to Retain More Women in Manufacturing

*“There needs to be a culture change within manufacturing workplaces. Get more female floor operators, ensure they feel safe and [are] able to excel, provide career development opportunities, and coach them into leadership roles. Get more women in at the ground level and make sure they have the opportunity to succeed.”*

*“It starts with internal culture shift. My company does a great job of promoting from within. However, most entry level employees start on the manufacturing floor. Though not spoken, it is common belief that women do not belong on the floor. There isn't even a women's locker room. Most of the women who do work here are in “traditional female roles”, i.e. HR, Payroll, A/P, A/R, receptionist.”*

*“Have more female leaders at the top of the organization. It feels disingenuous to say you value female leadership but hire none at the top of the organization.”*

*“Part-time opportunities so women can keep their career simmering during early childhood/elder care periods rather than feeling they have no choice but to quit.”*

The above represents a cross-section of responses.

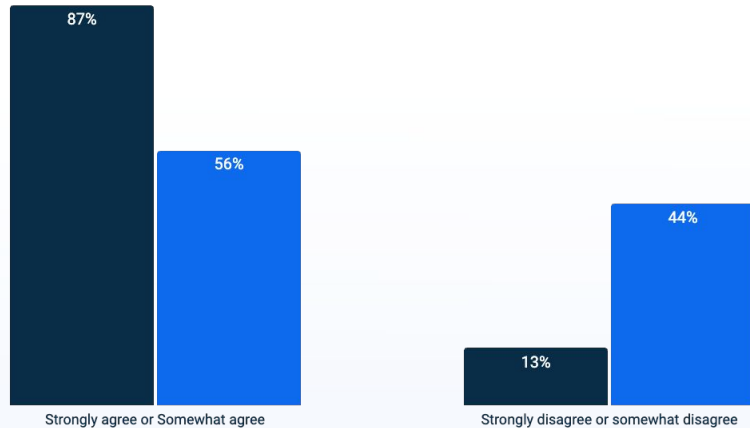
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# Workplace Perspectives



# Most People Agree that Workplace Diversity Improves Business Outcomes

Do you agree or disagree with the following statement: Workplace diversity improves business outcomes (i.e. improved products, increased revenue, less staff turnover, etc.)



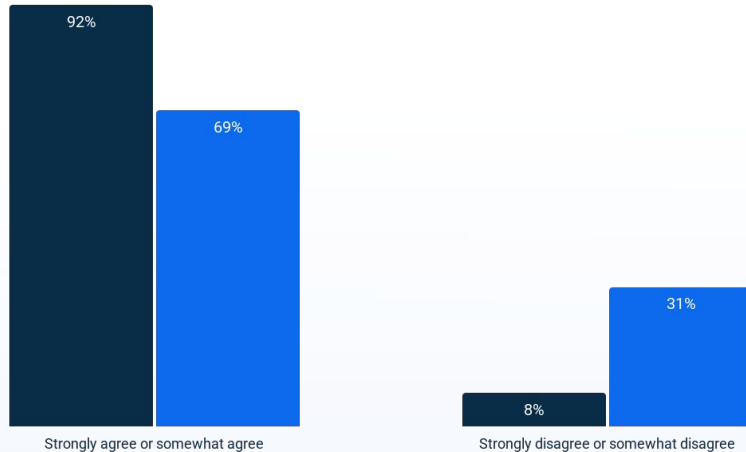
- A significant gender gap exists regarding the perceived impact of workplace diversity on business outcomes. 87% of women agree or strongly agree that diversity improves business, compared to 56% of men.
- Overall, a large majority (82%) of respondents agree or strongly agree that workplace diversity improves business outcomes.

■ Female ■ Male

Total Response Count: n=981; Female n=812; Male n=154; Non-Binary n=1; N/A n=14; Sample size of <10 is omitted from report visualization.

# Women, Men Agree: Allies Key in Manufacturing

Do you agree or disagree with the following statement: It is crucial that men act as allies to actively support and champion women in the manufacturing industry.



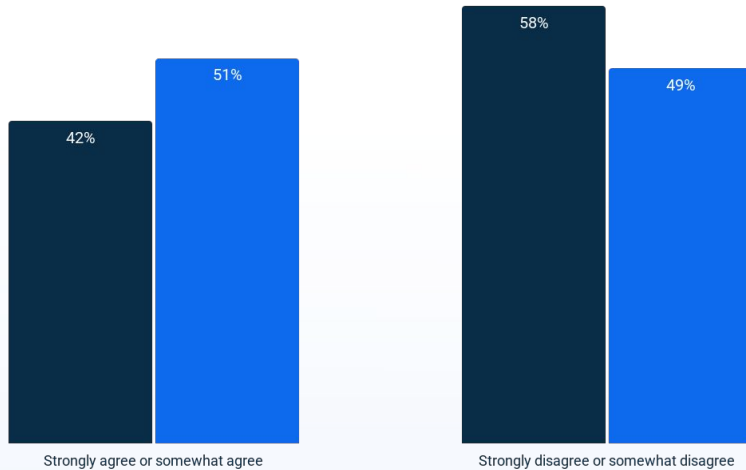
- 92% of women agree or strongly agree that it is crucial that men act as allies to actively support and champion women in the manufacturing industry.
- 81% of men agree or strongly agree with the same statement.

■ Female ■ Male

Total Response Count: n=976; Female n=808; Male n=153; Non-Binary n=1; N/A n=14; Sample size of <10 is omitted from report visualization.

# Allyship at Work: Are Companies Doing Enough?

Do you agree or disagree with the following statement: My company provides effective resources to help men act as allies for women in the industry.



- 42% of women agree or strongly agree that their company provides effective resources to help men act as allies for woman in the industry.
- About half (51%) of men agree or strongly agree the same statement.

■ Female ■ Male

n=957; Female n=797; Male n=146; Non-Binary n=1; N/A n=13; Sample size of <10 is omitted from report visualization.

## How Men Can Ally with Women

*“You can celebrate excellence wherever you see it and if you are in a position to showcase a good idea / product / solution you should do so. Leaders specifically should develop their team with the goal of each member moving up and being the leader that they wish they had.”*

*“I would just like to be treated fairly and paid fairly. I don't want a hand-out or a hand-up, just fair treatment. A formal ‘male ally’ seems forced and awkward to me.”*

*“We are all people and coworkers, period. Treating anyone differently based on a statistic is part of the problem. Just treat everyone as colleagues and people will rise to the occasion.”*

*“Support each other by building quality relationships in the workplace. Mentorship should not be judgmental but rather strength-building until deltas occur. Approach those with grace and learn to overcome those deltas.”*

*“Be open to listening to their experiences and not brush them off. Actively engage with women at the company and on their team to the same level they do with their male counterparts. Make space for them in meetings where their opinions and ideas add value.”*

The above represents a cross-section of responses.



“My boss is the perfect example: he works with me not only on the day-to-day tasks required for business but also takes the time to mentor me and supports me in every way possible both professionally and personally. He understands that any worker, especially a woman, needs to be successful personally in order to [be] successful professionally and vice versa. We know working together is [an] unbreakable force in comparison to just a man or a women working alone.”

*On How Men Can Ally with Women*



## How Men Can Ally with Women

*“In our workplace, some men have strong egos, making it challenging for them to accept a woman in a leadership position. While the younger generation is generally supportive and open to change, the older generation often struggles with this shift. It’s crucial to help them understand that supporting one another benefits everyone and strengthens the team as a whole.”*

*“Being a support system and advocating when you can. Create and promote safe spaces for women.”*

*“I’ve attended conferences with ‘Women in (business)’ breakfasts, and one of the manufacturers I worked for would only send the women to those breakfasts. All male senior managers should be made to attend to show their support and learn about the topics that are important to women in their industry.”*

*“Talk about their contributions even if they are not in the room. Asking them for their opinion in a meeting, making sure they they are heard.”*

The above represents a cross-section of responses.

# Forecast: What Will Manufacturing Look Like in 2030?

The manufacturing industry is experiencing rapid change with the advent of new technologies, supply chain disruptions, and materials availability. Respondents pointed to a significant shift in manufacturing by 2030, including:

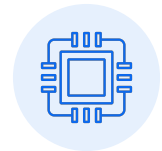
- **Automation and Robotics:** The most frequently mentioned trend was the move toward automation and robotics to increase efficiency, improve precision, and address labor shortages.
- **AI:** From optimizing processes and predicting maintenance needs to enhancing quality control, respondents indicate that AI-related roles will increase, requiring AI skills across the manufacturing landscape.
- **Technical Skills:** With an increase in automation and AI, technical skills will be increasingly important, with a strong emphasis on programming, data analysis, and IT skills, as well as the ability to work with complex machinery and digital systems.
- **Upskilling and Reskilling:** Respondents know that manufacturing jobs will require continuous learning. Companies will need to invest in upskilling and reskilling their workforce so they can adapt to new technologies.
- **Digital Transformation:** Manufacturing will continue to adopt technologies like IoT, digital twins, and advanced data analytics. Respondents anticipate more connected systems and smarter factories.



Adaptable



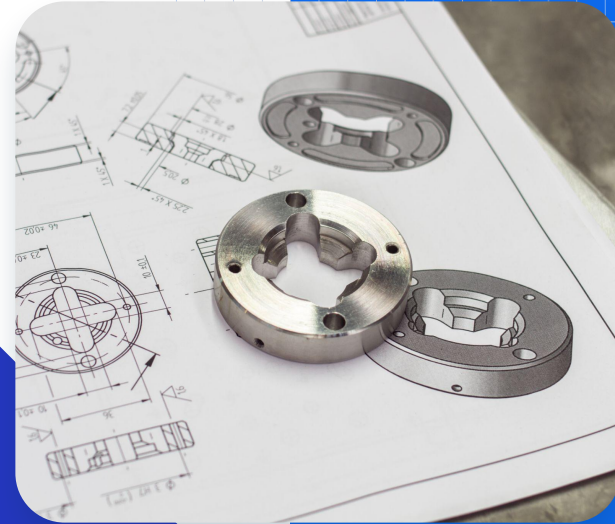
Problem Solver



Tech Savvy

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# Methodology



# Methodology

This survey was conducted over a 26-day period from January 13 to January 29, 2025.

A total of 1,188 respondents participated, and 1,110 were qualified for the survey. Due to the conditional and multiple choice nature of the survey, some datasets may contain a different respondent number which is annotated in the footnotes for clarity.

## Invited Participants:

- **Qualifiers:**
  - ◆ Complete, non-duplicate entry
  - ◆ Required to work in the manufacturing or industrial sector globally
- **Recruitment:**
  - ◆ Respondents were invited to participate via Thomas, Women in Manufacturing, and Xometry emails. The invitation pool was incentivized with an executive summary report of the survey findings.

## Respondents' Firmographics:

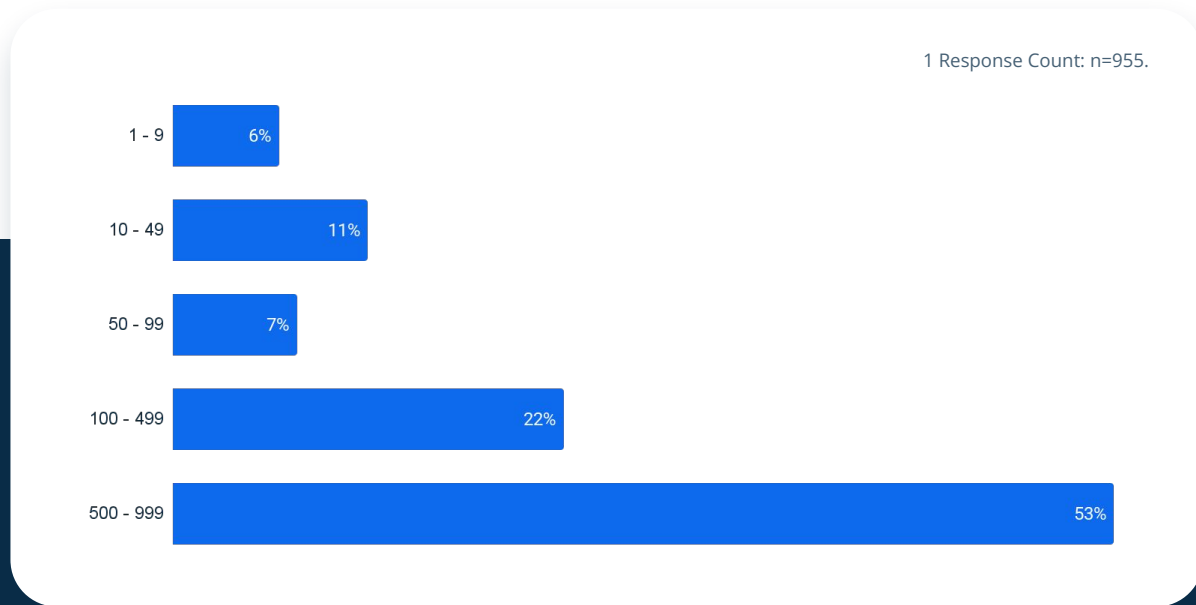
- **Revenue:** Business revenues span from less than \$1 million to more than \$1 billion.
- **Employees:** Company size spans from 1 to more than 15,000 employees.
- **Company Location:** Identified by country and state/province.

## Survey Information:

- **Survey Administration:** Qualtrics, online survey
- **Survey Language:** English
- **Questions:** 26 questions were included

# Participating Organizations by Company Size

How many employees does your organization have?



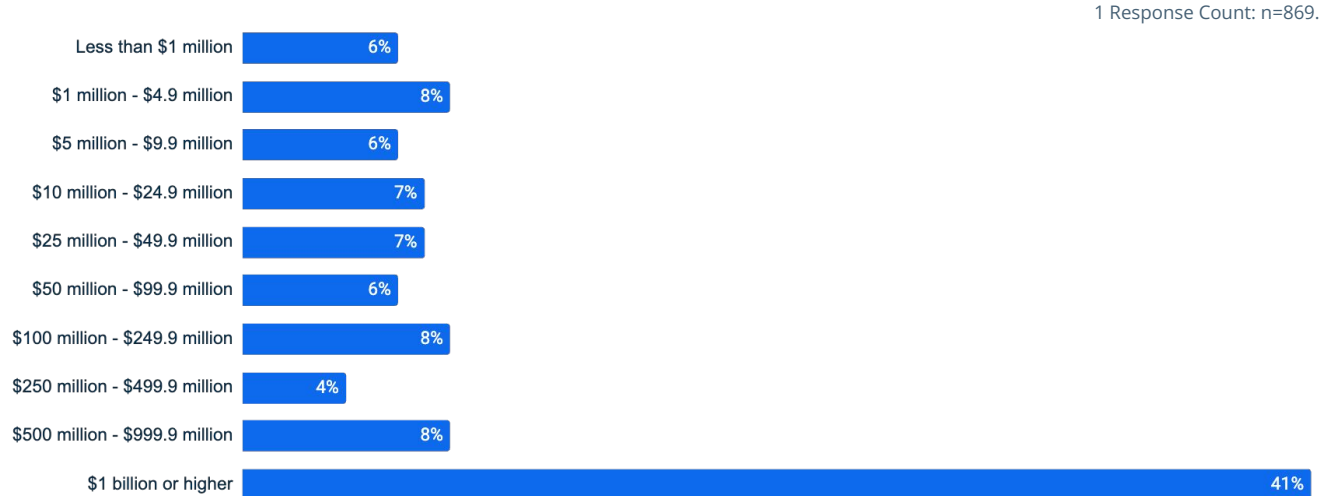
# Participating Respondents by Job Level

Which option best describes your job level?



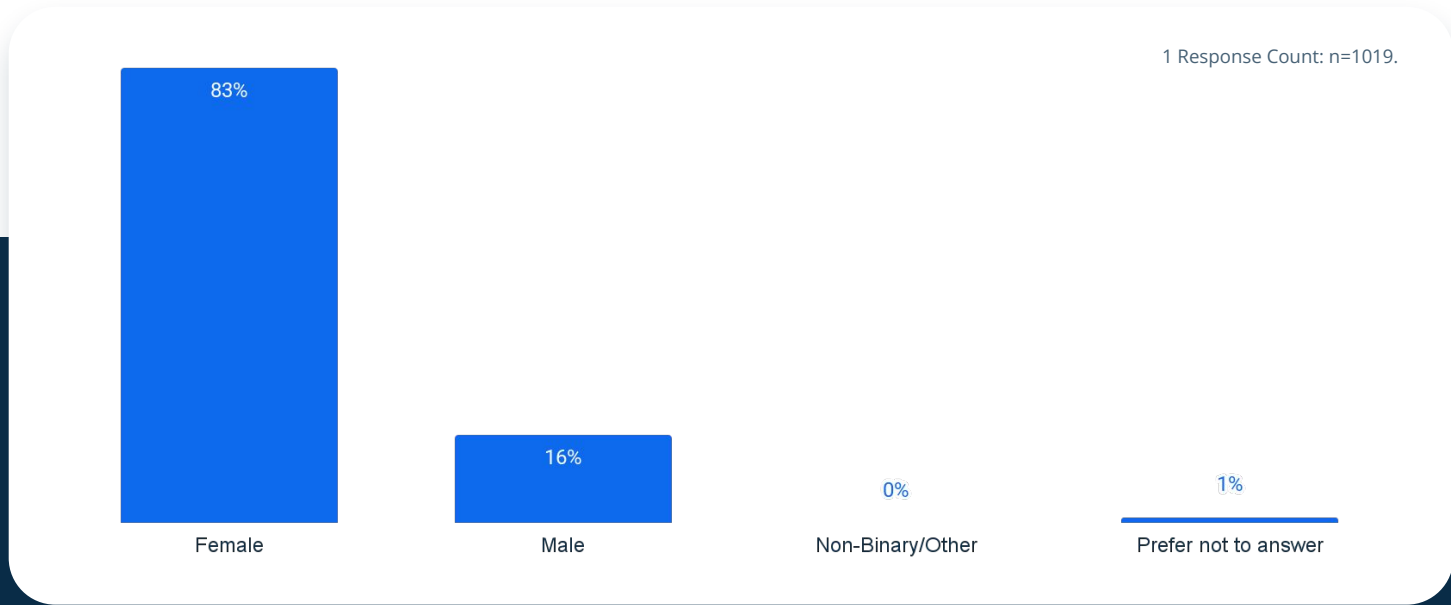
# Participating Companies by Annual Gross Revenue

What is the annual gross revenue of your business? (entire company)



# Respondent Count by Gender

What is your gender?





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# About Xometry, Thomas, and the Women in Manufacturing Association





Women in Manufacturing (WiM) is the only national trade association dedicated to providing year-round support to women who have chosen a career in the manufacturing industry.

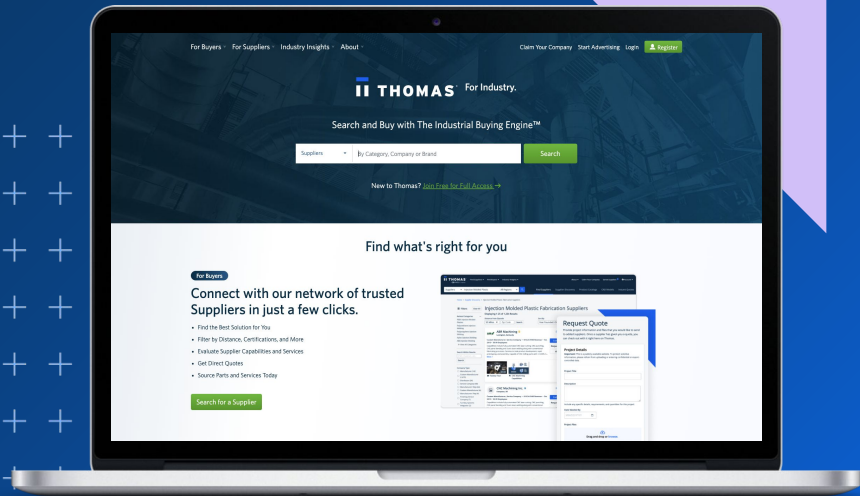
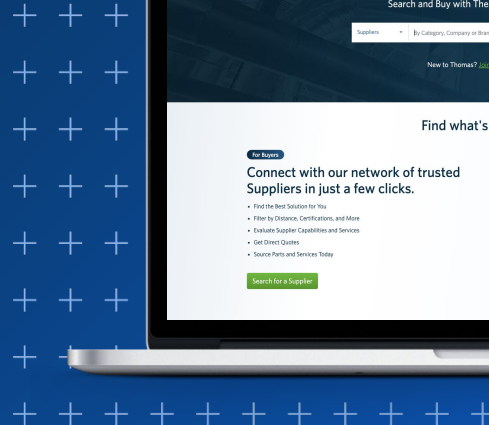
WiM members benefit from exclusive access to educational programming, networking opportunities, bimonthly webinars, a customized job board, a robust searchable directory, and much more.

[womeninmanufacturing.org](https://womeninmanufacturing.org)

# Thomas: A Supplier Discovery Platform

Our mission is to connect industrial suppliers with qualified buyers by **enabling discovery** of your products and services.

- 1,400,000+ registered professionals
- 500,000 North American suppliers, custom manufacturers, MRO providers, and service companies.
- 75,000 categories



# Unlock Global Capacity & AI-Powered Efficiency with Xometry



**10K+ vetted and verified supplier network**

located across **5** countries and **3** continents

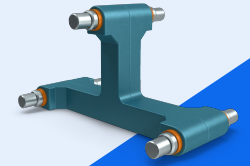


**1K+ local and global engineers and manufacturing experts**



## Regional Headquarters

- North America**  
*North Bethesda, MD, USA*
- Asia**  
*Shanghai, China*
- Europe**  
*Munich, Germany*



**48K+ Active Buyers**

Across all transformative industries

**Nasdaq: XMTR**

Founded in 2013, HQ in MD, USA

**Managed Services**

Full production lifecycle expertise

Home of  
**THOMAS**

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