

NOT ENOUGH OF A GOOD THING

Understanding the Relationship Between the Gender Composition of Technical Committees and Performance

By Michelle Parkouda and Diane (Xiaolu) Liao

Standards development is often based on a consensus model, yet the process of obtaining consensus is not without risks. Group dynamics can be tricky. In an ideal scenario, a group's performance will be a gestalt, where the collective output is greater than the sum of the individual parts. In a worst-case scenario, collaboration can lead to groupthink, resulting in decisions that are not fully thought through as the group coalesces too quickly around a solution. Groupthink has been blamed for a multitude of disasters, from the Salem witch trials to the collapse of Enron to the Boeing 737 Supermax disaster.

Not surprisingly, a substantial amount of research has been devoted to understanding how to maximize group performance. Diversity is frequently cited as a means to improve group performance. Within standards development there is an emphasis on balanced representation, which is intended to ensure a diversity of perspectives and that no single type of stakeholder will dominate the group. For example, the Standards Council of Canada (SCC) requires standards development organizations under its accreditation to ensure balanced representation, equal access, and effective participation of diverse stakeholders during the standards development process (Standards Council of Canada 2019).

Balanced representation undoubtedly is essential to developing standards that will be broadly applicable and useful. Increasingly,

attention is also being paid to how demographic factors, particularly gender, might influence standards development.¹ The question we wanted to explore was whether the gender composition of a technical committee influences the performance of that committee.

GENDER DIVERSITY AND ORGANIZATIONAL PERFORMANCE

To the best of our knowledge, the relationship between the gender profile and performance of a technical committee has yet to be examined. Gender diversity has been heavily researched when it comes to the performance of boards and organizations. Kamalnath (2017) referred to gender diversity as an antidote to groupthink for corporate boards, and boards with greater gender diversity have been found to have enhanced decision-making and oversight, which helps them function more effectively (Kamalnath 2017). This is in line with research that heterogeneous decision-making groups are better equipped to address complex problems than homogeneous decision-making groups because of their diverse perspectives (Kuliz and Metz 2017).

Specifically, research on the impact of gender diversity on boards has found that boards with more women have better internal board processes, improved oversight and monitoring, and fewer corporate social responsibility

concerns (Kuliz and Metz 2017). Additional research found that more women on boards is associated with improved ethics and better corporate social policies (Au, Tremblay and You 2022). There is also some evidence positively linking gender diversity to organizational financial performance (Hoobler, Masterson, Nkomo and Michel 2018) and innovation (Ruiz-Jiménez, del Mar Fuentes-Fuentes, and Ruiz-Arroyo 2016).

However, in terms of overall firm performance (broadly defined), the effects of improved gender diversity are less conclusive, likely due in part to the numerous outcome measures used. Meta-analysis results found the association between gender diversity and team performance to be small and nonsignificant (van Dijk, van Engen, and van Knippenberg 2012). And yet, the absence of a negative relationship between gender diversity and performance cannot be overlooked (Fine, Sojo and Lawford-Smith 2020). While critics of gender diversity have argued that increasing the representation of women will dilute quality and compromise merit, the fact that gender diversity is positively associated with some outcomes and has not been linked to negative outcomes undermines that argument.

Women are under-represented in standards development, and the lack of women in fields typically associated with standards development (e.g., STEM) has been used to explain their low levels of participation (UNECE 2022). Notwithstanding these lower levels of participation, we thought it was important to understand whether women's participation would have an impact on technical committees' performance, in line with some of the existing findings on the benefits of gender diversity.

REPRESENTATION AND TECHNICAL COMMITTEE PERFORMANCE

Each year, the Standards Council of Canada (SCC) evaluates the performance of Canada's technical committees. These committees are established by SCC to facilitate Canada's

participation in international standardization activities. In fiscal year 20/21, SCC participated on 454 technical committees and sub-committees at the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).

Committees are asked to complete a questionnaire that details their activities and the impact of their work. The responses are evaluated by SCC staff and given a score.² The evaluation informs decisions about how committees are resourced (among other things), which provides committee members with a vested interest in completing the form and showcasing their activities.

We wanted to explore whether having women on a technical committee would have an impact on the performance of the committee. While women represented 24% of technical committee members in fiscal year 20/21, they are not evenly distributed across committees. One-quarter of committees had no women, and for those committees that had women, the average share of women on the committee was 29%.

In assessing whether the presence of women on a technical committee was associated with the performance of the committee, it was important to control for potentially confounding variables. We accounted for two variables that we thought likely to impact performance: committee size and the number of ballots.³ Arguably, more active committees may attract more members, and more populous committees may perform better due to additional human resources. Ballots are an indication of the activity level of a committee.

We assumed that more active committees would outperform less active committees, and indeed we found that the size of the committee⁴ and the number of ballots⁵ were both significantly correlated with performance. By controlling for these variables, we have a more stringent test to determine whether the gender composition of the committee makes an impact.

The results confirmed that committees with at least one woman outperform committees

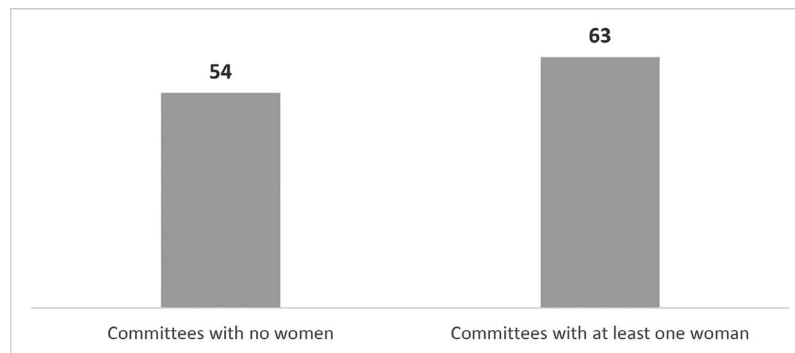


Figure 1. *Average Technical Committee Score.*

with no women. The average score for committees with no women was 54, while the average score for committees that had at least one woman participating was 63 (see Figure 1). The difference was statistically significant even after controlling for the size and activity level of the committees.⁶ The analysis was repeated using the previous year's data and, once again, the presence of women was associated with a higher evaluation score.⁷ These findings indicate that gender diversity is positively associated with performance for technical committees.

BEYOND PERFORMANCE: THE IMPLICATIONS FOR STANDARDS

Improving the performance of technical committees is just one benefit of increasing women's participation. Research in other domains points to additional potential benefits. For example, greater representation of women in fields like academic medicine that historically have been dominated by men has focused more attention on women's health (Rosser 2002). When it comes to research in medicine, management, and economics, women have been more likely to consider the implications of sex and gender. It has been argued that women contribute to a broadening of perspectives that has resulted in research that better addresses societal needs and expectations (Nielsen and Börjeson, 2019).

Increased attention to sex and gender is particularly important for standards. There is growing concern that standards do not serve women as well as men. Currently, most standards would not be considered gender-

responsive (see, for example, European Commission 2024). Gender-responsive standards have been defined as "standards which acknowledge the distinct needs of different genders and take concerted action to ensure the efficacy of the standard for all" (UNECE 2022).

The lack of gender-responsiveness in standards has consequences. Research has shown that when it comes to health and safety, standardization is associated with a reduction in the number of men who die as a result of unintentional injuries, but there is no similar benefit for women (Parkouda 2020). In other words, standards are not protecting women as well as they protect men.

The UNECE Declaration for Gender-responsive Standards and Standards Development has argued that increasing women's participation in standards development is important to addressing the gender gap in standards. Research has found that improving women's representation can help to counter androcentrism, the tendency to prioritize men's experience, and lead to more gender-responsive products and services (Fine, Sojo and Lawford-Smith 2020). Thus, involving more women in standards development can be instrumental to ensuring that gender will be considered by the committee and that the standards will better serve the entire population.

Notably, as signatories of the UNECE Gender Declaration, organizations such as the SCC, ISO, and IEC have been tracking the gender composition of their technical committees and are making efforts to increase the representation of women. One initiative that has demonstrated

success has been the IEC's young professional program. It has higher rates of participation by women than among the general membership, and it has also demonstrated success in retaining these young women (IEC 2023).

CONCLUSION

Current research demonstrates that increasing the participation of women is a worthwhile goal that will reap benefits for organizations. As of December 2023, there were 86 signatories of the UNECE Gender Declaration (UNECE 2023). To help national standards bodies and standards development organizations make progress toward the commitments made in the declaration, the UNECE, ISO, and IEC have released guidance on how to develop gender-responsive standards.

As emphasized by the Declaration, an important step toward developing standards that work for everyone is to ensure better representation of women in standards development. This research provides evidence that increased representation of women will also have benefits for the performance of technical committees overall.

Diversity of perspectives is fundamental to standards development. Balanced representation is highlighted as a means of ensuring that the standards development will meet the needs of diverse categories of users (e.g., manufacturers, consumers, and regulators). Diversity of perspectives has also been shown to lead to better quality outputs.

While women are still under-represented in standards development, our research shows that their participation is associated with improved performance as measured through annual committee evaluations. Gender is not the only form of diversity that needs to be considered, a robust standards system needs to reflect the diversity of the population it hopes to serve. By reflecting this diversity, the committee can position itself to broaden its perspective, improve the quality of its standards, and better address the needs of the entire population.

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NOTES

1. In this study we are limited to examining the participation of men and women; future research should extend beyond the binary definition of gender, as data becomes available.
2. In fiscal year 20/21 the scores ranged from 20 to 97, with an average score of 62.
3. Submitting ballots using the ISO or IEC balloting platform is a formal process whereby members of the technical committee can provide responses and comments to a variety of standardization activities and documents. Thus, the number of ballots can be used as an indicator of the level of activity.
4. $r=0.52, p<0.001$.
5. $r=0.18, p<0.001$.
6. $F=4.87, p<0.05$.
7. $F=4.94, p<0.05$.



Michelle Parkouda is manager, research at the Standards Council of Canada (SCC), Where she is responsible for leading research to demonstrate the economic and social value of standardization. She also chairs the Team of Specialists on Gender-Responsive Standards within the United Nations Economic Commission for Europe's (UNECE) Working Party 6. At the UNECE, she led the working group that developed the Guidelines on Developing Gender-Responsive Standards. Michelle has published research on the topics of gender, diversity, and trade. She has a PhD in experimental psychology from McGill University.



Diane (Xiaolu) Liao is a senior researcher at the Standards Council of Canada. Her work focuses on applying quantitative and qualitative methodologies to demonstrate the social and economic value of standardization and assess program performance and public policies.

What I've Learned since Changing Careers to Become a Standards Professional

By Bradley Wilder

I became a full-time standards professional about 15 years into my career. I first encountered standards as an engineering student using design manuals for class projects, but I never thought much at first about how those standards were created or maintained. I got involved in standards development out of necessity, joining committees to help improve the standards that affected my work projects. That opened doors to take on committee leadership roles and now a career change to a staff position with a standards development organization (SDO).

I'll share a few things I've learned after about 18 months in my role. The first is, you may not be a subject matter expert on all your standards, and that's okay.

I thought I understood what I was getting into, having been a volunteer in our program before joining the staff. But I had led only a couple of projects, contributed to about a dozen others, and chaired one committee. In a program with 25 committees and well over 300 standards, my experience paled in comparison to the breadth of topics covered in our program. Another lifetime of work in industry would never provide enough experience to learn the nuances of every standard.

Fortunately, lack of deep expertise with any particular standard won't keep you from doing a great job managing a standards program. Focus instead on understanding the

constituencies you serve and how and why they use standards, then structure your program to respond to their needs. Your volunteers will fill in the details.

Which brings me to another lesson I've learned: Your volunteers may not be experts in standards development, and that's okay as well. Volunteers show up because they are deeply invested in the topic. They understand the need for standards and want to contribute to something worthwhile. They may value participation to grow their business, solve pressing problems, or develop their careers. They likely are experienced users of standards.

But none of these things necessarily translates to understanding the standards development process or writing a new standard. The most motivated and knowledgeable task group may need help navigating committees and ballots. The best technical writers may need coaching when they're faced with the blinking cursor of a blank document.

My advice? Be available to answer questions about the process. Provide practical training and advice. Make resources, examples, and peer support accessible. For most volunteers, this is not their day job. A patient and supportive approach will go a long way toward a positive volunteer experience and will lead to better standards.

Another thing I've learned is that standards development is both a competitive business

and a close-knit, supportive community. When an industry needs a standard, more than one SDO may be able to respond. Competition for opportunities is healthy. It motivates the whole standardization community toward innovation and continuous improvement.

That doesn't make any of us enemies. I attended my first World Standards Week soon after starting my new job. A colleague turned to me before a session and said, "Of all the people in the country doing a job like yours, about half of them are in this room right now." The

implication was clear: These are your people, get to know them.

I've always found that the best way to build a strong professional network is to find a need and get to work alongside others to meet it. Join a committee. Present at a conference. Write an article. Ask someone to mentor you. Offer to mentor someone else.

Even if your background is unconventional, you have something to offer our community from day one. Jump in!



Bradley Wilder, P.E., AStd, is director of standards at AMPP, the Association for Materials Protection and Performance. AMPP represents the largest global community of corrosion and protective coatings professionals. Before joining AMPP, he worked for 13 years as a construction engineer. He is a member of the Standardization Editorial Board and the education committees of both SES and ANSI. Connect at <https://www.linkedin.com/in/bradwilder/>.