

# APPENDIX

## When **GENERATIONS meet**

The productivity potential of multigenerational meetings

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This online appendix offers detailed information about the research in *When GENERATIONS meet: The productivity potential of multigenerational meetings*. This includes information about data collection and participant demographics (Appendix A), the variables that were collected from participants for analysis (Appendix B), and how the analysis that was conducted (Appendix C).

## Appendix A: Data Collection and Demographics

Data for this study was collected from a total of 3,430 participants between 25 January 2024 and 31 May 2024. Participants were recruited via the professional networks of LSE and Protiviti via partners and connections on LinkedIn. Further data was collected via the Prolific platform, with screeners for professional workers at large companies (250+ employees) in the following sectors: Business Management & Administration, Finance, Government

& Public Administration, Information Technology, and Legal. All participants completed the survey via Qualtrics administered by The Inclusion Initiative (TII) at the London School of Economics (LSE). Research questions were designed by the authors and members of The Inclusion Initiative at London School of Economics (LSE). This research received ethical approval from the LSE Department of Psychological and Behavioural Science (Reference: 184085).

Participants answered specific questions based on their role as either a professional employee or executive. Participants with a role of either HR leader, director, C-suite, executive or board member at a company with at least 250 employees were directed to answer 'Executive' questions.

**Table A1: Participant demographics (employees and executives)**

	Employees: 2,970 participants	Executives: 460 participants
Age	M = 40, SD = 11	M = 48, SD = 10
Generation	GenZ, 15%; Millennial, 49%; GenX, 29%; Baby Boomer, 6%; Silent Generation, 0%	GenZ, 5%; Millennial, 44%; GenX, 45%; Baby Boomer, 5%
Annual Salary (\$USD)	Mean Range = \$50,000-\$74,999 Less than \$25,000, 5%; \$25,000-\$49,999, 26%; \$50,000-\$74,999, 25%; \$75,000-\$99,999, 17%; \$100,000-\$149,999, 15%; \$150,000-\$250,000, 7%; \$250,000 or more, 1%; Prefer not to say, 2%	Mean Range = \$150,000-\$250,000 Less than \$25,000, 2%; \$25,000-\$49,999, 4%; \$50,000-\$74,999, 8%; \$75,000-\$99,999, 12%; \$100,000-\$149,999, 20%; \$150,000-\$250,000, 32%; \$250,000 or more, 18%; Prefer not to say, 3%
Gender	Women, 48%; Men, 51%; Other Gender Identity, 1%; Prefer not to say, 1%	Women, 43%; Men, 55%; Other Gender Identity, 0%; Prefer not to say, 2%
Education	No higher degree, 12%; Technical/Associate's degree, 9%; Bachelor's degree, 43%; Graduate degree, 34%; Doctoral degree, 2%	No higher degree, 8%; Technical/Associate's degree, 3%; Bachelor's degree, 38%; Graduate degree, 46%; Doctoral degree, 5%
Seniority	Entry-Level, 5%; Non-mgmt, 35%; Supervisor, 16%; Junior Mgmt, 21%; Department Mgmt, 19%; Other Senior Leader, 4%	HR Leader, 16%; Director, 57%; C-Suite/Executive, 8%; Other Executive, 18%; Board Member, 1%
Organisation Type	Government, 22%; Public-for-profit (publicly traded), 32%; Public-for-profit (privately held), 41%; Not for profit, 4%, Self-employed, 1%	Government, 7%; Public-for-profit (publicly traded), 51%; Public-for-profit (privately held), 38%; Not for profit, 5%
Company Size	10,000+ Employees, 35%; 2,501-10,000 Employees, 26%; 250-2,500 Employees, 27%; 51-250 Employees, 8%; < 50 Employees, 4%	10,000+ Employees, 42%; 2,501-10,000 Employees, 30%; 250-2,500 Employees, 28%
Sector	Technology, 23%; Government, 18%; Professional Services, 11%; Financial Services, 9%; Manufacturing, 5%; Others (various), 34%	Technology, 26%; Professional Services, 18%; Financial Services, 9%; Manufacturing, 9%; Consumer Goods, 6%; Government, 6%; Others (various), 26%
Race/Ethnicity	White, 66%; Latino/Hispanic, 11%; Black, 5%; South Asian, 4%; Southeast Asian, 2%; Other/Mixed, 10%; Prefer not to say, 2%	White, 66%; Latino/Hispanic, 14%; Black, 5%; South Asian, 2%; Southeast Asian, 2%; Other/Mixed, 9%; Prefer not to say, 2%
Country of Residence	United States, 40%; United Kingdom, 38%; Others, 23%	United States, 48%; United Kingdom, 20%; Others, 32%

Note: Table A1 shows the demographics of the employees who participated in the study.

## Appendix B: Variables used in Analysis

### 1. Meeting Responses

All participants were given the following instructions prior to answering meeting-related questions:

*“Please take a moment to think about the last time at your organisation that you were in a meeting where important decisions were being made.*

*Important decisions are those that have a significant impact on your work or the work in your organisation in the present and/or future. Important decisions could be made in response to a range of situations, e.g., recruitment/resourcing, budgets, product or marketing, technology, design, client management, or logistics.*

*On the following pages, you will be asked some questions about this meeting.”*

**MEETING PRODUCTIVITY:** Employees were asked, “How productive do you consider the meeting to have been?” and responded from ‘1 = Very unproductive’ to ‘5 = Very productive’. Those who provided a response greater than ‘4’ were categorised as having perceived the meeting to be productive.

**MEETING GENERATIONAL DIVERSITY:** To measure the generational diversity reported for each meeting, we asked participants “As best as possible, please classify the people who attended the meeting into the following age categories...”, with categories of between 16 and 19 years, 20 and 27 years, 28 and 43 years, 44 and 59 years, 60 and 78 years, and above 79 years. The total had an auto-sum to 100% and participants were not able to proceed unless the sum of responses for each category was equal to 100%. This gave us the proportion of the meeting attendees from the different age groups associated with each generation.<sup>1</sup> The two youngest generations were combined (as they both pertain to Gen Z). We next calculated the Blau Index, a commonly used metric for assessing heterogeneity within categorical variables.<sup>2</sup> The index is defined as:

$$B = 1 - \sum_{i=1}^k p_i^2$$

$p$  is the proportion of team members belonging to each generational category

$k$  denotes the number of generational categories

The index ranges from 0 to 1, where 0 indicates perfect homogeneity (i.e., all team members belong to the same generation), and 1 reflects maximum diversity (i.e., team members are evenly distributed across all generations). To calculate the Blau Index, we squared the proportion of each generational category reported in meetings and summed the squared proportions. We then normalised the scale for the different generational categories,<sup>3</sup> measuring the extent to which team members are evenly distributed across generational categories.<sup>4</sup>

**MEETING GENDER DIVERSITY:** We followed the same process outlined for **MEETING GENERATIONAL DIVERSITY**, with participants asked to classify those who attended the meeting into 3 categories: men, women and other gender identity.

**MEETING FORMAT:** Participants were asked “How did this meeting take place?” and were able to select one option from “In person, Remote, Hybrid”.

**MEETING DURATION:** Participants were asked “How long did this meeting last? Please approximate the duration of the meeting” from a list of 10 possible responses from 1 = less than 15 minutes, 2 = between 15 and 30 minutes, 3 = between 30 and 60 minutes, 4 = between 60 and 90 minutes (1 to 1.5 hours), 5 = between 90 and 120 minutes (1.5 to 2 hours), 6 = between 120 and 150 minutes (2 to 2.5 hours), 7 = between 150 and 180 minutes (2.5 to 3 hours), 8 = between 180 and 210 minutes (3 to 3.5 hours), 9 = between 210 and 240 minutes (3.5 to 4 hours), 10 = more than 4 hours.

<sup>1</sup> There is no official taxonomy of generation start and end dates, however, these dates have shaped popular understanding and originate with the Pew Research Center, a US Think Tank. See more at [www.pewresearch.org/short-reads/2019/01/17/where-millennials-end-and-generation-z-begins/](http://www.pewresearch.org/short-reads/2019/01/17/where-millennials-end-and-generation-z-begins/)

<sup>2</sup> Blau, P. M. (1977). A macrosociological theory of social structure. *American journal of sociology*, 83(1), 26-54.

<sup>3</sup> More than 99% of meetings did not have any representation from the Silent Generation (aged 79+ years). Therefore, this representation was combined with those of the Baby Boomer generation for the purpose of analysis (i.e., to prevent a favourable skew to this 1% of responses).

<sup>4</sup> Agresti, A., & Agresti, B. F. (1978). Statistical analysis of qualitative variation. *Sociological methodology*, 9, 204-237.

**MEETING TOTAL ATTENDEES:** Participants were asked “How many people attended this meeting in total?” Meetings were restricted to those with 3 or more attendees up to a limit of 100.

**MEETING VOICE:** Participants were asked “Thinking about your own contribution in the meeting, how much do you believe you spoke compared to your other colleagues in the meeting? Compared to other colleagues, you spoke...” from ‘1 = much less than others to 5 = much more than others.’

**MEETING SPOKE MOST AGE/GENERATION:** Participants were asked “Thinking about the person who spoke the *most* in the meeting, what was their age?” Age given was then categorised into relevant generation of the team member who spoke the most to provide frequencies.

**MEETING SPOKE LEAST AGE/GENERATION:** Participants were asked “Thinking about the person who spoke the *least* in the meeting, what was their age?” Age given was then categorised into relevant generation of the team member who spoke the least to provide frequencies.

**INCLUSIVE MEETINGS:** A 7-item measure of inclusive meetings. We tested the impact of specific, inclusive meeting behaviours on the perceived productivity of meetings. We tested 16 items in total. Three items came from a 3-item Meeting Inclusion Scale<sup>5</sup> for which

all participants were asked to “Please indicate the degree to which you personally agree or disagree with each of the following statements about your experience in this meeting” from ‘1 = strongly disagree to 5 = strongly agree’ for the following items: “Those in the meeting were open to hearing new ideas, Those in the meeting were ready to listen to everyone’s suggestions and requests, Everyone in the meeting had the opportunity to contribute to decisions.” Six items came from a 6-item Meeting Belonging Scale<sup>6</sup> for which all participants were asked to “Please indicate the degree to which you personally agree or disagree with each of the following statements about your experience in this meeting” from ‘1 = strongly disagree to 5 = strongly agree’ for the following items: “The meeting was a non-threatening environment in which people could reveal their “true” selves, Those who attended the meeting were valued for who they were as people, The meeting had a culture in which employees appreciated the differences that people brought, In this meeting, input was actively sought from team members, In this meeting, everyone’s ideas for how to do things better were given serious consideration, In this meeting, everyone’s insights were used to rethink or redefine the task.” Four items came from a 4-item Meeting Dissent Scale<sup>7</sup> for which all participants were asked to “Please indicate the degree to which you personally agree or disagree with each of the following statements about your experience in this meeting” from ‘1 = strongly disagree to 5 = strongly agree’ for the following items: “There were some team members who disagreed with others

in the meeting, At least one team member expressed ideas completely different to those of other team members, The views expressed by team members were consistently challenged by other team members, The opinions of at least one team member were different from the rest of the team.” Three items came from a 3-item Meeting Psychological Safety Measure<sup>8</sup> for which all participants were asked to “Please indicate the degree to which you personally agree or disagree with each of the following statements about your experience in this meeting” from ‘1 = strongly disagree to 5 = strongly agree’ for the following items: “I felt comfortable disagreeing with others, I did not feel excluded, My contribution was valued.” The full results of this test can be seen in **Appendix C7**. We next took the 7 items that significantly predicted meeting productivity (My contribution was valued, Those in the meeting were open to hearing new ideas, Those in the meeting were ready to listen to everyone’s suggestions and requests, The meeting had a culture in which employees appreciated the differences that people brought, In this meeting, input was actively sought from team members, In this meeting, everyone’s ideas for how to do things better were given serious consideration, In this meeting, everyone’s insights were used to rethink or redefine the task) to create a new scale of meeting inclusion. We found that scale showed good reliability (Cronbach’s  $\alpha = .93$ ). Participants who were reported an average across the scale items equal to or greater than ‘4’ were categorised as having experienced an inclusive meeting.

<sup>5</sup> Based on Carmeli, A., Reiter-Palmon, R., & Ziv, E. (2010). Inclusive leadership and employee involvement in creative tasks in the workplace: The mediating role of psychological safety. *Creativity Research Journal*, 22(3), 250-260.

<sup>6</sup> Based on items from Climate for Inclusion, Integration of Differences from Nishii, L. H. (2013). The benefits of climate for inclusion for gender-diverse groups. *Academy of Management Journal*, 56(6), 1754-1774.

<sup>7</sup> Based on items and theory from De Dreu, C. K., & West, M. A. (2001). Minority dissent and team innovation: the importance of participation in decision making. *Journal of Applied Psychology*, 86(6), 1191.

<sup>8</sup> Adapted from Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350-383.

## 2. Executive Responses

All participants that were identified as being 'Executives' provided the below variables.

**INTELLECTUAL CAPITAL:** A 6-item measure of human and social capital (the sum of which is defined as intellectual capital).<sup>9,10</sup> Executives were asked to "Please indicate the extent to which you agree with the below statements" from '1 = strongly disagree to 5 = strongly agree' for 3 statements related to Human Capital, "Our employees are highly skilled, Our employees are widely considered the best in our industry, Our employees develop new ideas and knowledge" and 3 statements related to Social Capital, "Our employees interact and exchange ideas with people from different areas of the organisation, Our employees are skilled at collaborating with each other to diagnose and solve problems, Our employees apply knowledge from one area of the organisation to problems and opportunities that

arise in another". Those who responded as either '4 = Somewhat agree or 5 = Strongly agree' to *Our employees develop new ideas and knowledge* were categorised as developing new ideas and knowledge.

**FIRM PERFORMANCE:** A 5-item measure of firm performance.<sup>11</sup> Executives were asked to "Please rate your organisation's performance in comparison with your competitors on the following dimensions" from '1 = much worse than the competitors to 5 = much better than the competitors' for the following 5 measures: "Overall financial performance, Revenue per employee, Company mission and purpose beyond financial measures, Company Diversity Equity & Inclusion, Overall ESG performance." Those who responded as either '4' or

'5' to *Overall financial performance, Overall ESG Performance, and/or Company mission and purpose beyond financial measures* were categorised as outperforming the competition.

**DEI MATURITY:** Executives were asked to "Please indicate the maturity of your DEI strategy for each of the below diversity aspects" from '0 = not monitored/measured, 1 = undeveloped, 5 = expert' for the following 7 characteristics: "Gender, Race/Ethnicity, Age, Disability, Sexual Orientation, Neurodiversity, Socio-economic Status". Those who responded as either '4 = advanced' or '5 = expert' to maturity for any given characteristic were categorised as having a mature strategy.

## 3. Employee Responses

All participants that were identified as being 'Employees' provided the below variables.

**INDIVIDUAL PRODUCTIVITY:** Based on a 5-item measure of job performance focused on supervisor ratings to reduce inflated self-evaluations.<sup>12</sup> Employees were asked, "How do you feel your performance is viewed by your supervisor/manager? What does your supervisor/manager (i.e., not you) think of the following aspects of your performance?" and responded from '1 = Very poor' to '5 = Excellent' to the following five areas: "Your overall work performance, The quality of your work, Your ability to complete work on time/meet deadlines, The amount of work you accomplish, The frequency of errors/mistakes you

make." The mean score of the 5 items was used as an overall measure of productivity. Those who provided an overall mean score response greater than '5 = Excellent' were categorised as highly productive in their role.

**TURNOVER INTENTIONS:** A 2-item measure asked employees, "Please indicate the degree to which you personally agree or disagree with each of the following statements" and responded from '1 = Strongly disagree' to '5 = Strongly agree' to the following: "I am happy with my

job, I will look for a new job in the next 12 months". The mean score of the 2-items was used as an overall measure of turnover intention (intention to leave the firm). Those who responded as either '1 = Strongly disagree or 2 = Somewhat disagree' to *likely that I will look for a new job next year* were categorised as unlikely to look for a new job in the coming year. Those who responded either '4 = Somewhat agree or 5 = Strongly agree' to *I am happy with my job* were categorised as happy in their job.

<sup>9</sup> Adapted from Li, Y., Gong, Y., Burmeister, A., Wang, M., Alterman, V., Alonso, A., & Robinson, S. (2021). Leveraging age diversity for organizational performance: An intellectual capital perspective. *Journal of applied psychology*, 106(1), 71.

<sup>10</sup> See also Subramaniam, M., & Youndt, M. A. (2005). The influence of intellectual capital on the types of innovative capabilities. *Academy of Management journal*, 48(3), 450-463.

<sup>11</sup> Based on similar measures used in Li, Y., Gong, Y., Burmeister, A., Wang, M., Alterman, V., Alonso, A., & Robinson, S. (2021). Leveraging age diversity for organizational performance: An intellectual capital perspective. *Journal of applied psychology*, 106(1), 71.

<sup>12</sup> Adapted from Laguerre, R. A., Barnes-Farrell, J. L., & Hughes, J. M. (2023). An examination of the predictive validity of subjective age and core self-evaluations on performance-related outcomes. *Work, Aging and Retirement*, 9(1), 95-117.

**Table B1: Summary of Variables**

Variable Name	Variable Description	Employee	Executive	N	M	SD
<i>Primary Variables of Interest</i>						
Meeting Productivity	A single item, self-reported measure of meeting productivity	Y	Y	3,430	3.70	0.96
Meeting Generational Diversity	Reported proportion of attendees from each generational age group					
<i>Generational Diversity (4 Generations)</i>	<i>Blau Index of meeting generational diversity (0 = no diversity, 1 = maximum diversity)</i>	Y	Y	3,430	0.43	0.20
<i>Generational Diversity (5 Generations)</i>	<i>Blau Index of meeting generational diversity (0 = no diversity, 1 = maximum diversity)</i>	Y	Y	3,430	0.45	0.21
Meeting Gender Diversity	Reported proportion of attendees of each gender (men, women, other gender identity)	Y	Y	3,430	0.36	0.16
Meeting Total Attendees	Self-reported number of meeting attendees	Y	Y	3,430	3.70	0.96
Intellectual Capital	A 6-item measure of executive reported human and social capital in the firm		Y	460	3.80	0.77
Inclusive Meetings	A 7-item measure of inclusive meetings created based on meeting productivity predictors	Y	Y	3,430	3.85	0.89
Individual Productivity	A 5-item measure of how individuals believe their performance/productivity is viewed by their manager	Y		2,970	4.24	0.56
Turnover Intentions	A 2-item measure of how committed employees are to the firm					
<i>Happy with job</i>	<i>Single item self-report measure of how happy employees are in their job</i>	Y		2,970	3.85	1.10
<i>Likely to look for a new job</i>	<i>Single item self-report measure of employee intention to look for a job in the coming year</i>	Y		2,970	2.67	1.44
Firm Performance	A 5-item measure of firm performance vs competitors, executive rated		Y	460	3.69	0.65
<i>Control Variables Used in Analysis</i>						
Age	Age of participant	Y	Y	3,430	40.96	11.53
Education	Level of education (1 = no formal qualifications, 7 = doctoral degree)	Y	Y	3,430	5.09	1.05
Years with Firm	Number of years working for firm	Y	Y	3,430	7.90	7.96
Years in Occupation	Number of years working in occupation	Y	Y	3,430	12.22	9.86
Role/Seniority	Level of seniority in company	Y	Y	3,430	3.84	1.99
Company Size	Size of the company (employees/grouped, 1 = Less than 50, 5 = 10,000 or more)	Y	Y	3,430	3.85	1.08

Note: Table B1 shows the N (number), M (mean) and SD (standard deviation) for key measures used in the study and if these were taken from executive/employee participants (or both).

**Table B2: Meeting Productivity by Employee/Executive responses and Inclusion**

	Total		Employee		Executive	
	N	%	N	%	N	%
Unproductive	1,209	35%	1,068	36%	141	31%
Productive	2,221	65%	1,902	64%	319	69%
Total	3,430		2,970		460	
	Total		Employee		Executive	
	N	%	N	%	N	%
Non-Inclusive	1,586	46%	1,379	46%	207	45%
Inclusive	1,844	54%	1,591	54%	253	55%
Total	3,430		2,970		460	
Non-Inclusive						
	Total		Employee		Executive	
	N	%	N	%	N	%
Unproductive	924	58%	813	59%	111	54%
Productive	662	42%	566	41%	96	46%
Total	1,586		1,379		207	
Inclusive						
	Total		Employee		Executive	
	N	%	N	%	N	%
Unproductive	285	15%	255	16%	30	12%
Productive	1,559	85%	1,336	84%	223	88%
Total	1,844		1,591		253	

Note: Table B2 shows the N (number) and % of meetings that were categorised as productive/unproductive for employees and executives, and for meetings that were inclusive/non-inclusive.

## Appendix C: Analysis

### 4. The cost of unproductive meetings across generations

#### a. The cost of unproductive meetings

**Table 1** in the report shows the total estimated cost of unproductive meetings in the United States and United Kingdom. This estimate is based on a combination of data from this study and data from US (Bureau of Labor Statistics) and UK (Office for National Statistics).

#### US Data

US data is taken from the Bureau of Labor Statistics (BLS) [Usual Weekly Earnings of Wage and Salary Workers Third Quarter 2024](#). This data was used to calculate:

- I. The number of professional employees in the US
- II. The average annual salary of professional employees in the US

To calculate these figures, we used the total employees from three occupational categories, 1) Management, business, and financial operations occupations, 2) Professional and related occupations, 3) Office and administrative support occupations. We also looked at the [average weekly earnings](#) and multiplied these by 52 weeks for each of the categories. Specifically, we used the executive average salary (\$89,492) based on those in

the Management, business, and financial operations occupations (24,018,000 executives), and the weighted average salary (based on proportion of professionals) across those in Professional and related occupations (31,549,000 employees) and Office and administrative support occupations (12,021,000 employees) for the employee average salary (\$70,412).

*Note: In our data, participants were asked to provide a salary range in \$USD. The median range given by executives was \$100,000-\$149,999 and \$75,000-\$99,999 by employees*

**Table C1: Number of employees and earnings from BLS (US)**

Type	Occupation	Employed (000s) Q2 24	Employed	Weekly Earnings Q2 24	Annual Earnings	% of Type	Average Executive Salary	Average Employee Salary
Executive	Management, business, and financial operations occupations	24,018	24,018,000	\$1,721	\$89,492	100%	\$89,492	
Employee	Professional and related occupations	31,549	31,549,000	\$1,505	\$78,260	72%		\$56,668
Employee	Office and administrative support occupations	12,021	12,021,000	\$958	\$49,816	28%		\$13,744
		<b>67,588</b>	<b>67,588,000</b>				<b>\$89,492</b>	<b>\$70,412</b>



### UK Data

UK data is taken from the Office for National Statistics (ONS) [Employee earnings in the UK: 2023](#) for the average annual salary of professional employees in the UK, and [Nomis official census and labour market statistics](#) for the number of professional employees in the UK.

To calculate these figures, we used the total employees from four occupational categories ([Employment by occupation Apr 2023-Mar 2024](#)): 1) Managers, directors and senior officials, 2) Professional occupations, 3) Associate professional occupations, and 4) Administrative and Secretarial occupations.

We next looked at the [annual full-time gross pay by occupation](#) (this can be found by downloading the data accompanying [Figure 10 via the ONS link](#)). This data lists the median salary for each occupation within the category, indicated by a category code, i.e., occupation of ‘Chief executives and senior officials’ is listed within the category of 1) Managers, directors and senior officials and is denoted by the prefix ‘1’ in the code. We used the mean of the median salaries for each of the occupations under the relevant code to give an indicative average annual salary. Executive average salaries (£49,468/\$62,824)<sup>13</sup> were based on those in the occupations of

Managers, directors and senior officials (3,151,250 executives). Employee salaries were based on the weighted average salary (based on proportion of professionals) across those in the remaining professional occupation categories, 2) Professional occupations (8,707,000 employees), 3) Associate professional occupations (4,987,000 employees), and 4) Administrative and Secretarial occupations (3,158,600 employees), for an employee average salary (£36,524/\$46,385)<sup>14</sup>.

**Note:** In our data, participants were asked to provide a salary range in \$USD. The median range given by executives was \$100,000-\$149,999 and \$25,000-\$49,999 by employees.

**Table C2: Number of employees and earnings from ONS (UK)**

Type	Occupation	Employed Apr23-Mar24	Annual Earnings £ Mean of Category Median	% of Type	Average Executive Salary	Average Employee Salary
Executive	1 Managers, directors and senior officials	3,151,250	£49,468	100%	£49,468	
Employee	2 Professional occupations	8,707,000	£42,151	52%		£21,778
Employee	3 Associate professional occupations	4,987,000	£33,137	30%		£9,806
Employee	4 Administrative and secretarial	3,158,600	£26,352	19%		£4,939
		<b>16,845,250</b>			<b>£49,468</b>	<b>£36,522</b>
					<b>USD \$62,824</b>	<b>USD \$46,384</b>

<sup>13</sup> UK to US exchange rate of 1.27 was used, which was indicative of rates in early August 2024: [www.xe.com/en-gb/currencycharts/?from=GBP&to=USD](http://www.xe.com/en-gb/currencycharts/?from=GBP&to=USD).

<sup>14</sup> See note 11.

### Average meetings per week

The average number of meetings attended per week can vary considerably by employee, with some professionals estimated to spend up to 23 hours per week in meetings.<sup>15</sup> To understand the number of meetings per week, we surveyed a subset of our participants across generations (N = 208). We asked how many meetings they attended per week (*What is the total number of meetings you attend in a typical week in your current job? Please consider only meetings attended by 3 or more people*). We found that the average number of meetings per week was 7 for both

executives and employees (M = 7.00, SD = 6.50; 95% CI: 7.00±0.885 (±12.6%) [6.115 – 7.885]).

### Average meeting duration (minutes)

The average meeting duration was based on a range selected by participants (See **Appendix B, MEETING DURATION**). The meeting duration used was based on the mean range selected, adjusted based on the fraction of the mean within the range,

$$d = (M_u + M_l) \times M_f + M_l$$

M is the mean range (e.g., between 60 and 90 minutes)

M<sub>u</sub> is the upper boundary of the mean range (e.g., 90 minutes)

M<sub>l</sub> is the lower boundary of the mean range (e.g., 60 minutes)

M<sub>f</sub> is the fraction of the mean range (e.g., a mean of 4.22 has a fraction of .22 or M<sub>f</sub> = )

In the above example the mean duration used was 66.60 minutes. The mean meeting duration for all participants was 55.80 minutes. This was calculated for both employees and executives in the US and UK for the purposes of estimating the cost of unproductive meetings.<sup>16</sup>

## 5. Does generational diversity make meetings more productive?

### 1. Can bringing more generations into the room and giving them voice reduce the likelihood of an unproductive meeting?

#### a. The effect of meeting generational diversity on meeting productivity

We performed a linear regression predicting the binary outcome variable **MEETING PRODUCTIVITY** (team member reported productive vs unproductive) from **MEETING GENERATIONAL DIVERSITY** and meeting-level control variables (**MEETING GENDER DIVERSITY, MEETING FORMAT, MEETING DURATION, MEETING TOTAL ATTENDEES**), company size, and individual-level control variables (age, gender, seniority). Greater generational diversity was a significant predictor of more productive meetings (**MEETING GENERATIONAL DIVERSITY**, b = .09, p = .050).

$$y_i = \beta_0 + \sum_{i=1}^p \beta_i X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \varepsilon_i$$

Thus, each increment (from 0 to 1 on the Blau Index) is equal to a 9% increase in the likelihood of having an inclusive meeting. 9.85% of meetings had no generational diversity at all (i.e., 100% of participants were from a single generation); these meetings had a Blau Index score of '0'. Meanwhile the top 1% of meetings reported had a Blau Index score of .74 or higher. A score of '1' would imply equal representation across generations.

#### b. Achieving proportionate representation

The US Bureau of Labor Statistics (BLS) does not provide generational breakdowns of employed persons. Rather, it provides age categories: 16 to 19 years; 20 to 24 years; 25 to 34 years; 35 to

44 years; 45 to 54 years; 55 to 64 years; 65 years and over. At the time of data collection, the generations were aged as follows: *Generation Z under 27 years; Millennials 28-43 years; Generation X 44-59 years; Baby Boomers 60-78 years; Silent Generation above 78 years.*

*Axios* and *Glassdoor* have used US Census data to estimate the proportion of workers from each generation in the workforce today, which has a Blau Index score of .70 (see **MEETING GENERATIONAL DIVERSITY** above).<sup>17</sup> This means that a meeting with proportionate representation, i.e., 13% Gen Z, 34% Millennial, 39% Gen X, and 14% Baby Boomer would have a diversity score of .70.<sup>18</sup>

<sup>15</sup> Perlow, L., Hadley, C., & Eun, E. (2017, June 26). *Stop the Meeting Madness*. Harvard Business Review. <https://hbr.org/2017/07/stop-the-meeting-madness>.

<sup>16</sup> This figure is slightly more conservative than the average meeting duration reported by the subset of participants across generations (N = 208) when asked differently. We asked subset participants "How many hours do you estimate you spend in meetings in a typical week in your current job? Please estimate only meetings attended by 3 or more people." The average number of hours was seven and a half hours per week in meetings (M = 7.56, SD = 6.52). This equates to an average of 65 minutes per meeting. The median range reported by all study participants was *Between 30 and 60 minutes*.

<sup>17</sup> Given the especially small number of workers from the Silent Generation, there is no meaningful difference in the Blau score for 4 Generations (merging Silent and Baby Boomer, *Blau* = .699) and 5 Generations (keeping Silent as a separate category, *Blau* = .701).

<sup>18</sup> To illustrate, a meeting of 10 team members with 3 Millennials and 4 Gen X members (or vice versa), and 1 Gen Z and 2 Baby Boomers (or vice versa) would have a diversity score of 0.72.

**Table C3: Number of employees and proportion US (Glassdoor via US Census Current Population Survey)**

Generation	Population (millions)	Proportion
Gen Z	17.1	13%
Millennial	42.8	34%
Gen X	49.5	39%
Baby Boomer	17.3	14%
Silent	1	1%

We found that only 7% ( $n = 240$ ) of meetings surveyed had a diversity score of .70 or higher, while 93% ( $n = 3,190$ ) had a score less than .70. Of these, 29% of meetings with a diversity score equal to or greater than .70, just 28.75% ( $n = 69$ ), were unproductive, compared to 35.74% ( $n = 1,140$ ) of meetings with a score less than .70.<sup>19</sup>

As just 29% of meetings were unproductive when they had a Blau Index score equal to or greater than 0.70 compared to 35% on average, proportionate representation (as measured by a Blau Index score equal to or greater than 0.70) has the potential to reduce unproductive meetings from 35% to 29%.

In the context of the average firm of 2,500 employees,

- 35% of meetings are unproductive, representing a cost of \$9.58M per year in wasted meetings (US).
- The total cost of meetings (productive and unproductive) is \$29.51M per year.
- Reducing the proportion of unproductive meetings by 6% represents a saving of \$1.77M.

This would represent \$35.41 million per year for a listed company of 50,000 employees.

## 2. The potential for generational diversity at the top

*a. Executive leadership meetings tend to have lower levels of generational representation as compared to wider firm meetings*

We compared executive and employee reported meetings using an independent samples t-test. We found that executive leadership meetings ( $M_{exec} = 0.41, SD = .20$ ) have lower levels of generational diversity compared to wider firm meetings ( $M_{emp} = 0.43, SD = .20$ ;  $t(3,428) = 2.46, p = .014, d = 0.12$ ).

*b. For executive leadership meetings, higher generational diversity among team members makes for more productive meetings.*

We next performed the same linear regression as **5.1a** above, predicting the binary outcome variable **MEETING PRODUCTIVITY** (team member reported productive vs unproductive) from **MEETING GENERATIONAL DIVERSITY** and meeting-level control variables (**MEETING GENDER DIVERSITY, MEETING FORMAT, MEETING**

**DURATION, MEETING TOTAL ATTENDEES**), company size, and individual-level control variables (age, gender, seniority) for executives only. Greater generational diversity was a significant predictor of more productive meetings (**MEETING GENERATIONAL DIVERSITY,  $b = .23, p = .049$** ).

$$y_i = \beta_0 + \sum_{i=1}^p \beta_i X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \epsilon_i$$

The highest levels of generational diversity in meetings is based on the top 5% (32 meetings) of generationally diverse meetings reported. The top 5% of meetings reported had a Blau Index score of .66 or higher.

<sup>19</sup> Based on 5 Generations. For 4 Generations (combined Baby Boomer and Silent), just 26% ( $n = 30$ ) of meetings were unproductive when they had a Blau Index score equal to or greater than 0.70.

**3. More generational diversity in meetings is linked to higher intellectual capital in the firm and better firm performance**

A mediation analysis was conducted using PROCESS Model 4<sup>20</sup> in SPSS to examine if **INTELLECTUAL CAPITAL** mediated the relationship between **MEETING GENERATIONAL DIVERSITY** and **MEETING PRODUCTIVITY**. The total effect of **MEETING GENERATIONAL DIVERSITY** on **MEETING PRODUCTIVITY** was significant,  $b = 0.23, t(452) = 1.97, p = .049$ .

**MEETING GENERATIONAL DIVERSITY** was a significant predictor of **INTELLECTUAL CAPITAL**,  $b = 0.44, t(452) = 2.37, p = .018$ , and **INTELLECTUAL CAPITAL** was a significant predictor of **MEETING PRODUCTIVITY**,  $b = 0.76, t(452) = 5.29, p < .001$ , when controlling for **MEETING GENERATIONAL DIVERSITY**.

The indirect effect of **MEETING GENERATIONAL DIVERSITY** on **MEETING PRODUCTIVITY** through **INTELLECTUAL CAPITAL** was significant,  $ab = 0.34, 95\% \text{ CI } [0.04, 0.71]$ , indicating that **INTELLECTUAL CAPITAL** mediates the relationship between **MEETING GENERATIONAL DIVERSITY** and **MEETING PRODUCTIVITY**. The direct effect of **MEETING GENERATIONAL**

**DIVERSITY** and **MEETING PRODUCTIVITY**, controlling for **INTELLECTUAL CAPITAL**, was non-significant,  $b = 0.70, t(452) = 1.27, p = .201$ , suggesting that the relationship between **MEETING GENERATIONAL DIVERSITY** and **MEETING PRODUCTIVITY** is fully mediated by **INTELLECTUAL CAPITAL**.

This model is outlined below,

**Path a:** Effect of **MEETING GENERATIONAL DIVERSITY** on **INTELLECTUAL CAPITAL**

$$M = \beta_0 + \beta_1 IV + C\gamma + \varepsilon_1$$

**Path b:** Effect of **INTELLECTUAL CAPITAL** on **MEETING PRODUCTIVITY**

$$DV = \gamma_0 + \gamma_1 M + \delta_1 IV + C\delta + \varepsilon_2$$

**Path c:** Total effect of **MEETING GENERATIONAL DIVERSITY** on **MEETING PRODUCTIVITY**

$$DV = \delta_0 + \delta_1 IV + C\delta + \varepsilon_3$$

**Path d:** Direct effect of **MEETING GENERATIONAL DIVERSITY** on **MEETING PRODUCTIVITY** after controlling for **INTELLECTUAL CAPITAL**

$$DV = \alpha_0 + \alpha_1 IV + \alpha_2 M + C\delta + \varepsilon_4$$

*IV* is the independent variable (**MEETING GENERATIONAL DIVERSITY**)

*M* is the mediator variable (**INTELLECTUAL CAPITAL**)

*DV* is the dependent variable (**MEETING PRODUCTIVITY**, binary)

*C* represents covariates (vector of coefficients) of **MEETING GENDER DIVERSITY, MEETING FORMAT, MEETING DURATION, MEETING TOTAL ATTENDEES**), company size, and individual-level control variables (age, gender, seniority).

$\beta, \gamma, \delta, \alpha$  represent the coefficients for each path

$\varepsilon$  is the error term associated with each equation

<sup>20</sup> Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.

## 6. Whose voice gets heard most in meetings? And is it productive?

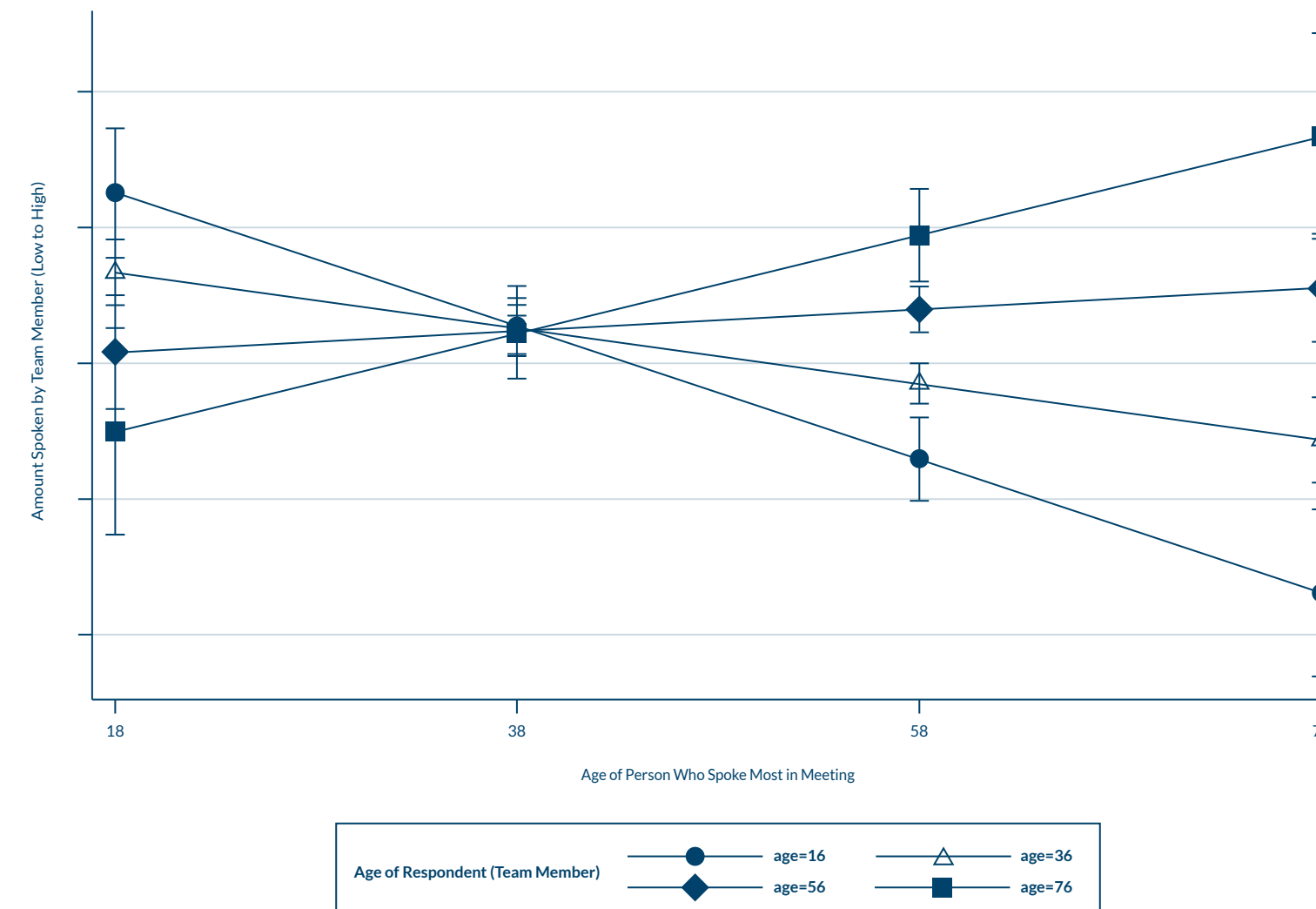
### 1. Generational tensions can undermine meeting inclusion

When the person who speaks most in a meeting comes from an older generation, younger generations contribute less. We performed a linear regression predicting the binary outcome variable **MEETING VOICE** from **MEETING SPOKE MOST AGE** and meeting-level control variables (**FORMAT**, **MEETING DURATION**, **MEETING TOTAL ATTENDEES**), company size, and individual-level control variables (age, gender, seniority). The interaction term between team member age and age of the person who spoke most was also added to the model.<sup>21</sup> The overall model explained significant variance in **MEETING VOICE** ( $R^2 = .08$ ), with age of the team member ( $p = .001$ ), age of the person who spoke most ( $p < .001$ ), and their interaction ( $p < .001$ ) all significant predictors.

$$y_i = \beta_0 + \sum_{i=1}^p \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i4} (X_{i1} \times X_{i3}) + \varepsilon_i$$

This interaction is visualised in the plot below (Figure C1).

**Figure C1:** Interaction between age of meeting team member who spoke most and age of respondent (team member) in predicting the amount they spoke during the meeting.



### 2. How the strong voice of Gen X influences productivity

We performed a linear regression predicting the binary outcome variable **MEETING PRODUCTIVITY** (team member reported productive vs unproductive) from **MEETING SPOKE MOST/LEAST GENERATION** and meeting-level control variables (**MEETING GENDER DIVERSITY**, **MEETING GENERATIONAL DIVERSITY**, **MEETING FORMAT**, **MEETING DURATION**, **MEETING TOTAL ATTENDEES**, **MEETING SPOKE MOST/LEAST GENDER**, **MEETING SPOKE MOST/LEAST POSITION**), company size, and individual-level control variables (age, gender, seniority). Post hoc comparisons showed that meetings were more productive when the person who spoke most was a Millennial vs Gen X ( $b = -.04$ ,  $p = .051$ ). Post hoc comparisons showed that meetings were less productive when the person who spoke least was from Gen X vs Millennials ( $b = -.07$ ,  $p = .002$ ) or Gen Z ( $b = -.11$ ,  $p < .001$ ).<sup>22</sup>

$$y_i = \beta_0 + \sum_{i=1}^p \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \varepsilon_i$$

<sup>21</sup> An alternative regression was run ( $n = 3,060$ ) for only cases where the age of the person who spoke most was not equal to that of the participant. This allowed us to ensure that the person who spoke the most was not the reporting team member (participant meeting voice\*meeting spoke most generation,  $p = .033$ ).

<sup>22</sup> Again, an alternative regression was run ( $n = 3,060$ ) for only cases where the age of the person who spoke most was not equal to that of the participant. Post hoc comparisons showed that meetings were more productive when the person who spoke most was a Millennial vs Gen X ( $b = -.04$ ,  $p = .040$ ). Post hoc comparisons showed that meetings were less productive when the person who spoke least was from Gen X vs Millennials ( $b = -.06$ ,  $p = .002$ ) or Gen Z ( $b = -.10$ ,  $p < .001$ ).

## 7. The behaviours that characterise productive (and unproductive) meetings

### 1. The inclusive characteristics of productive meetings

a. We explored the impact of specific, inclusive meeting behaviours on the perceived productivity of meetings.

We performed a linear regression predicting the binary outcome variable **MEETING PRODUCTIVITY** (team member reported productive vs unproductive) from meeting-level control variables (**MEETING GENDER DIVERSITY, MEETING GENERATIONAL**

**DIVERSITY, MEETING FORMAT, MEETING DURATION, MEETING TOTAL ATTENDEES**), company size, individual-level control variables (age, gender, seniority), and the 16 items listed under **INCLUSIVE MEETINGS** (see **Appendix B** above). The results of the regression for the 16 items can be seen in Table C4. The overall model explained significant variance in **MEETING PRODUCTIVITY** ( $R^2 = .28$ ), with

**MEETING GENERATIONAL DIVERSITY** remaining a significant predictor ( $b = -.08, p = .037$ ).

$$y_i = \beta_0 + \sum_{i=1}^p \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i4} + \varepsilon_i$$

**Table C4:** Meeting behaviours ranked by strength of association with perceived meeting productivity (regression results)

Category	Item	Coefficient	t	p
<i>Significant Predictors</i>				
Psychological Safety	My contribution was valued	0.19	8.72	<.001
Belonging	In this meeting, everyone's insights were used to rethink or redefine the task	0.14	7.02	<.001
Inclusion	Those in the meeting were open to hearing new ideas	0.11	4.78	<.001
Belonging	In this meeting, everyone's ideas for how to do things better were given serious consideration	0.09	4.14	<.001
Inclusion	Those in the meeting were ready to listen to everyone's suggestions and requests	0.06	2.45	.014
Belonging	The meeting had a culture in which employees appreciated the differences that people brought	0.06	2.78	.005
Belonging	In this meeting, input was actively sought from team members	0.05	2.34	.02
<i>Non-Significant Predictors</i>				
Psychological Safety	I did not feel excluded	0.03	1.37	.171
Belonging	Those who attended the meeting were valued for who they were as people	0.03	1.24	.215
Belonging	The meeting was a non-threatening environment in which people could reveal their "true" selves	0.02	0.86	.389
Dissent	The views expressed by team members were consistently challenged by other team members	0.02	1.03	.302
Dissent	At least one team member expressed ideas completely different to those of other team members	-0.01	-0.7	.482
Psychological Safety	I felt comfortable disagreeing with others	-0.02	-0.99	.324
Dissent	There were some team members who disagreed with others in the meeting	-0.02	-1.3	.194
Inclusion	Everyone in the meeting had the opportunity to contribute to decisions	-0.04	-1.57	.115

b. *No difference in the length of meetings when everyone's ideas are considered versus those where a small few dominate*

We tested the simple correlation between **MEETING DURATION** and participant responses to the item *"In this meeting, everyone's ideas for how to do things better were given serious consideration"* and found no association between these;  $r = 0.02, p = .289$ .

c. *While constructive, consistent challenging within meetings can help productivity, open disagreement between team members is likely to undermine outcomes*

We performed the same linear regression (see **7.1a**) predicting **MEETING PRODUCTIVITY** using only the 4 dissent items (rather than all 16 items) listed under **INCLUSIVE MEETINGS**. Although positive behaviours were far more important to productivity outcomes overall (see **Table C4**), testing only dissent revealed that the item *"There were some team members who disagreed with others in the meeting"* was negatively associated with **MEETING PRODUCTIVITY**;  $b = -0.05, p = .015$ .

## 8. Inclusive meetings, for the firm and employees of every generation

### 1. How to bolster inclusion in meetings

d. *Re-think hybrid meetings.*

We ran a one-way ANOVA to examine **INCLUSIVE MEETINGS** (continuous) based on **MEETING FORMAT** (face to face, remote, hybrid). We found a significant effect of **MEETING FORMAT** on **INCLUSIVE MEETINGS**,  $F(2, 3427) = 6.56, p < .001$ . Post-hoc comparisons using Bonferroni correction revealed that the mean score for Face to Face meetings ( $M = 3.93, SD = 0.86$ ) was significantly different from Hybrid Meetings ( $M = 3.75, SD = 0.91$ ; 95% CI [-0.27, -0.07]). However, there was no significant difference between Remote Meetings ( $M = 3.84, SD = 0.91$ ) and either Face to Face or Hybrid Meetings.

e. *Consider team members before duration.*

We tested the simple correlation between **MEETING DURATION** and **INCLUSIVE MEETINGS** and found no association between these;  $r=0.02, p=.328$ .

### 2. The productivity potential of more inclusive meetings

As just 15% of meetings were unproductive when they were inclusive (see **INCLUSIVE MEETINGS** and **Table B2**), inclusive behaviours have the potential to reduce unproductive meetings from 35% to 15%.

In the context of the average firm of 2,500 employees,

- 35% of meetings are unproductive, representing a cost of \$9.58M per year in wasted meetings (US).
- The total cost of meetings (productive and unproductive) is \$29.51M per year.
- Reducing the proportion of unproductive meetings by 10% represents a saving of \$5.77M.

This would represent \$115.31 million per year for a listed company of 50,000 employees.

### 3. Generational diversity and inclusive meetings

We performed a multivariate analysis of variance predicting the 7 significant items identified in **INCLUSIVE MEETINGS** (binary as present or not present) from **MEETING GENERATIONAL DIVERSITY** and meeting-level control variables (**MEETING GENDER DIVERSITY, MEETING FORMAT, MEETING DURATION, MEETING TOTAL ATTENDEES**), company size, individual-level control variables (age, gender, seniority). Higher **MEETING GENERATIONAL DIVERSITY** increased the likelihood that *"Those in the meeting were open to hearing new ideas"* ( $b = .09, p = .025$ ) and that *"Those in the meeting were ready to listen to everyone's suggestions and requests"* ( $b = .09, p = .019$ ).

$$y_i = \beta_0 + \sum_{i=1}^p \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i4} + \epsilon_i$$

Table C5: Proportion of inclusive meetings by meeting format

Format	Non-Inclusive		Inclusive		Total N
	N	%	N	%	
Face to Face	524	44%	670	56%	1194
Remote	711	46%	844	54%	1555
Hybrid	351	52%	330	48%	681
Total	1586		1844		

## 2. How focusing on inclusive meetings can help firms outperform

We performed regressions to predict individual outcomes (**INDIVIDUAL PRODUCTIVITY, TURNOVER INTENTIONS**) from **INCLUSIVE MEETINGS**, controlling for relevant control variables, company size and individual-level control variables (age, gender, seniority, years in occupation, years at firm, education). **INCLUSIVE MEETINGS** were a significant predictor of **INDIVIDUAL PRODUCTIVITY** ( $b = .30, p < .001$ ) and **TURNOVER INTENTIONS** (*I am happy with my job*,  $b = .30, p < .001$ ; *I will look for a new job in the next 12 months*,  $b = .24, p < .001$ ).

$$y = \beta_0 + \sum_{i=1}^p \beta_i X_i + \beta_2 X_{i2} + \beta_3 X_{i3} + \varepsilon_i$$

We next performed regressions to predict firm outcomes (**FIRM PERFORMANCE, INTELLECTUAL CAPITAL**) from **INCLUSIVE MEETINGS**, controlling for relevant control variables at company level (size, org type, sector). **INCLUSIVE MEETINGS** were a significant predictor of **FIRM PERFORMANCE** ( $b = .32, p < .001$ ) and **INTELLECTUAL CAPITAL** ( $b = .33, p < .001$ ).

$$y = \beta_0 + \sum_{i=1}^p \beta_i X_i + \beta_2 X_{i2} + \varepsilon_i$$





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