

## RESPONSE TO THE COVID-19 CRISIS: DIFFERENCES BETWEEN FEMALE AND MALE- LED COMPANIES IN THREE INCOME GROUPS

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### INTRODUCTION

Many organizations have asked their employees to work remotely to maintain social distancing during the COVID-19 pandemic. The scale and impacts of mandatory teleworking are unprecedented. According to Talentlyft<sup>1</sup>, only 7% of US workers (primarily managers) worked from home regularly before COVID-19, but this increased to 62% of US employees working from home during the pandemic. This increase was driven by lockdown rules which required many companies to close their physical businesses to confine the pandemic. The restrictions placed on face-to-face interaction also pushed many companies to move their business to online sales. For example, a survey<sup>2</sup> by TD Bank's Restaurant Franchise Finance Group shows that 72% of franchisees have enhanced their digital ordering capabilities in response to the needs in the COVID-19 era. Both remote working and transformation to online sales supported business continuity during the COVID-19 crisis.

Like the COVID-19 pandemic, worldwide crises can lead to significant financial disruptions as many companies may not have well-prepared plans that allow them to adapt to the sudden changes in their industries. Many, but not all, companies respond to these disruptions with employee furloughs and layoffs<sup>3</sup>. How can some companies achieve business continuity while also acting socially responsible during a crisis while others cannot? Researchers indicated that women leaders are more likely to do better than male leaders in a crisis<sup>4</sup>. Studies show that during the COVID-19 pandemic, international female leaders are more resilient and are doing better in uncertain times<sup>5</sup>. With data from 8,755

firms located in 15 countries, we aim to examine the differences across female and male-led firms regarding their response to the COVID-19 crisis from three perspectives: online sales, remote workforce, and employee furlough. Furthermore, we explore these differences in three economic groups: low-income, middle-income, and high-income economic groups.

### RESPONSE TO THE COVID-19 CRISIS

Existing literature cannot explain many of the changes that have been necessary during the COVID-19 pandemic. For example, extant studies on telework discussed voluntary telework in normal situations, entirely unlike the necessity of remote work experienced during the COVID-19 pandemic. The traditional motivation for remote working was cost-saving, organizational flexibility, and learning<sup>6</sup>, while the new motivation of remote working has been the requirement for social-distancing, adaptability, and business resilience<sup>7</sup>. However, not all organizations worldwide are equally prepared to start teleworking. A study on which countries were ready for remote work found that developing countries were not prepared for teleworking<sup>8</sup>. According to a Delphi survey, there are significant differences between high-income countries and low-income countries on the potential for working from home<sup>9</sup>. Beyond the technological factors, there are many other factors, such as organizational characteristics, that may also influence teleworking adoption<sup>10</sup>.

Business resilience can also be used to explain how an organization responds to a crisis. Business resilience is one part of a broader concept of organizational resilience. It refers to "a fundamental quality in people, groups, organizations or systems to respond to a significant change that disrupts the expected pattern of events without engaging in an extended period of regressive behavior."<sup>11</sup> Resilience is also defined as "the ability to survive a crisis as well as thrive through effective planning and adaptive capability by

<sup>1</sup> <https://www.talentlyft.com/en/blog/article/385/covid-19-work-from-home-stats-is-remote-work-here-to-stay>

<sup>2</sup> <https://www.nrn.com/franchising/online-ordering-and-delivery-jumped-20-39-total-franchisee-sales-during-covid-19>

<sup>3</sup> Brussevich, Mariya, Era Dabla-Norris, and Salma Khalid. 2020. "Who will bear the brunt of lockdown policies? Evidence from tele-workability measures across countries." *IMT Working Paper*, WP/20/88: 1-24.

<sup>4</sup> Bruckmüller, Susanne, and Nyla R Branscombe. 2010. "The glass cliff: When and why women are selected as leaders in crisis contexts." *British Journal of Social Psychology* 49 (3):433-451.

<sup>5</sup> Cherneski, Jennifer. 2020. "Evidence-loving rock star chief medical officers: Female leadership amidst COVID-19 in Canada." *Gender, Work & Organization* 27 (5):900-913.

<sup>6</sup> Ruppel, Cynthia P, and Susan J Harrington. 1995. "Telework: An innovation where nobody is getting on the bandwagon?" *ACM SIGMIS Database: the DATABASE for Advances in Information Systems* 26 (2-3):87-104.

<sup>7</sup> Dolce, Valentina, Emilie Vayre, Monica Molino, and Chiara Ghislieri. 2020. "Far Away, So Close? The Role of Destructive Leadership in the

Job Demands-Resources and Recovery Model in Emergency Telework." *Social Sciences* 9 (11):196.

<sup>8</sup> Carillo, Kevin, Gaëlle Cachat-Rosset, Josianne Marsan, Tania Saba, and Alain Klarsfeld. 2020. "Adjusting to epidemic-induced telework: empirical insights from teleworkers in France." *European Journal of Information Systems* 11 (4):1-20.

<sup>9</sup> Berg, Karianne, Jytte Isaksen, Sarah J Wallace, Madeline Cruice, Nina Simmons-Mackie, and Linda Worrall. 2020. "Establishing consensus on a definition of aphasia: an e-Delphi study of international aphasia researchers." *Aphasiology* 12 (11):1-16.

<sup>10</sup> Ansong, Eric, and Richard Boateng. 2018. "Organisational adoption of telecommuting: Evidence from a developing country." *The Electronic Journal of Information Systems in Developing Countries* 84 (1):e12008.

<sup>11</sup> Amann, Bruno, and Jacques Jaussaud. 2012. "Family and non-family business resilience in an economic downturn." *Asia Pacific business review* 18 (2):203-223.

developing innovative solutions.”<sup>12</sup> Business resilience has been of academic and practical interest due to the growing climate change and economic turbulence due to globalization<sup>13</sup>. This interest has increased during the COVID-19 pandemic, as companies’ operations were disrupted due to social distancing policies. These disruptions included the move to telework and increased online operations.

Perhaps the most significant disruption caused by the COVID-19 crisis is the change of a worker’s employment status, that is, the change from employment to furlough or even unemployment. Not all employees have appropriate remote working resources, and not all jobs are suitable for remote work<sup>14</sup>. For example, prior literature on teleworking primarily focused on skilled male workers<sup>15</sup>. Researchers<sup>16</sup> evaluated teleworkability across 35 countries estimated that about 15% of employees are at high risk of furlough.

### THE ROLE OF FEMALE LEADERSHIP

Women leaders are different from men leaders. For example, women leaders are more likely to adopt a relational approach in their leadership, thus bringing effective relational leadership behaviors to organizations<sup>17</sup>. Therefore, there is an argument that there is a ‘female leadership advantage.’<sup>18</sup> Indeed, the changing workplace in 21st-century has made the connective leadership style adopted by many women leaders a new model for the modern business environment<sup>19</sup>. The psychological roots of the female leadership advantage are gender differences. Unlike males, who tend to value separation as a mature male success, females tend to feel safer when they are connected within a social web. Typical female leadership skills include relational skills, empathy, and communication<sup>20</sup>. Prior literature has compared the female and male leadership

styles. For example, researchers discussed the differences and similarities of these two leadership styles and found male leaders tend to be more task-oriented, autocratic, and transactional, while female leaders are more interpersonally oriented, democratic, and transformational<sup>21</sup>. Prior research also examined female leadership’s effectiveness and found that female leadership has both advantages and disadvantages<sup>22</sup>. But recent advances in their employment and education have allowed them to achieve success as leaders, and it is anticipated that that success will continue.

Because of its unique attributes, female leadership can play a significant role during a crisis. Internally, female leaders with connective leadership characteristics care about their ego drives and tasks, and externally, they also care about the members of their group and community when they work together towards mutual goals<sup>23</sup>. By using a broad spectrum of behavioral strategies, connective leadership connects with others and their goals. This type of leadership recognizes the networks of relationships in our society. Many female leaders value the connection, caring, and responsibilities of their employees in their management. Female leaders will work together with their employees to accomplish organizational goals and retain a genuine concern for their employees’ benefits. Because of these characteristics, it is anticipated that female leaders are more likely to pursue strategies that benefit their employees’ even when faced with the potential for short-term economic loss. For example, a company with female leadership usually is a company that cares about corporate social responsibility (CSR)<sup>24</sup>. This suggests that companies with women in the management team will be less likely to resort to employee furloughs, as female leaders are more attuned to their followers/employees’ needs than male leaders<sup>25</sup>.

<sup>12</sup> Kamalahmadi, Masoud, and Mahour Mellat Parast. 2016. "A review of the literature on the principles of enterprise and supply chain resilience: Major findings and directions for future research." *International Journal of Production Economics* 171:116-133.

<sup>13</sup> Espiner, Stephen, Caroline Orchiston, and James Higham. 2017. "Resilience and sustainability: A complementary relationship? Towards a practical conceptual model for the sustainability–resilience nexus in tourism." *Journal of Sustainable Tourism* 25 (10):1385-1400.

<sup>14</sup> Kniffin, Kevin M, Jayanth Narayanan, Frederik Anseel, John Antonakis, Susan J Ashford, Arnold B Bakker, Peter Bamberger, Hari Bapuji, Devasheesh P Bhawe, and Virginia K Choi. 2020. "COVID-19 and the Workplace: Implications, Issues, and Insights for Future Research and Action." DOI: 10.1037/amp0000716.

<sup>15</sup> Belzunequi-Eraso, Angel, and Amaya Erro-Garcés. 2020. "Teleworking in the Context of the Covid-19 Crisis." *Sustainability* 12 (9):3662.

<sup>16</sup> Brussevich, Mariya, Era Dabla-Norris, and Salma Khalid. 2020. "Who will bear the brunt of lockdown policies? Evidence from tele-workability measures across countries." IMT Working Paper, WP/20/88: 1-24.

<sup>17</sup> Carli, Linda L, and Alice H Eagly. 2016. "Women face a labyrinth: An examination of metaphors for women leaders." *Gender in Management: An International Journal* 31(8): 514-527.

<sup>18</sup> Post, Corinne, Ioana M Latu, and Liuba Y Belkin. 2019. "A Female Leadership Trust Advantage in Times of Crisis: Under What Conditions?" *Psychology of Women Quarterly* 43 (2):215-231.

<sup>19</sup> Lipman-Blumen, Jean. 1992. "Connective leadership: Female leadership styles in the 21st-century workplace." *Sociological Perspectives* 35 (1):183-203.

<sup>20</sup> Lammers, Joris, and Anne Gast. 2017. "Stressing the advantages of female leadership can place women at a disadvantage." *Social Psychology* 48 (1): 28-39.

<sup>21</sup> Eagly, Alice H, and Linda L Carli. 2003. "The female leadership advantage: An evaluation of the evidence." *The Leadership Quarterly* 14 (6):807-834.

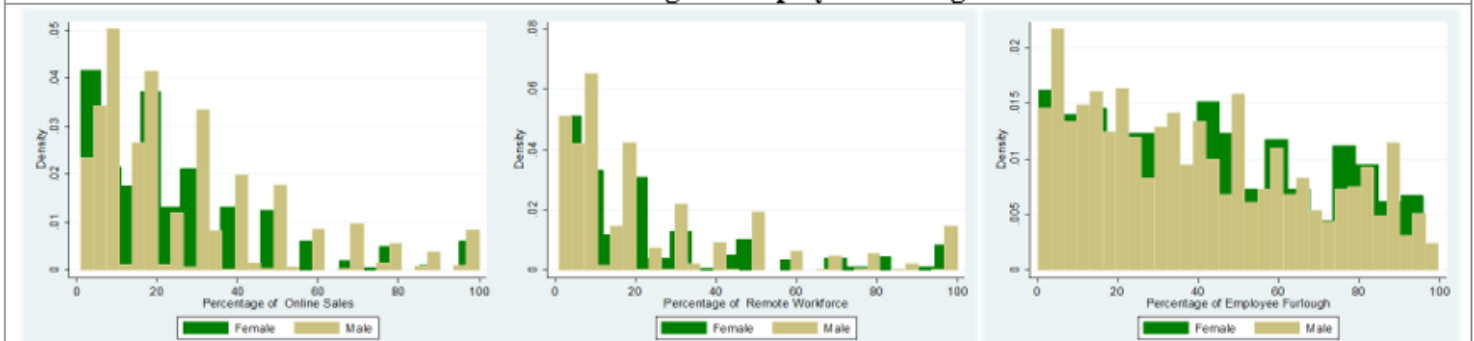
<sup>22</sup> Eagly, H. 2007. "Female leadership advantage and disadvantage: Resolving the contradictions." *Psychology of Women Quarterly* 31(1):1-12.

<sup>23</sup> Same as footnote 19.

<sup>24</sup> Mayo, Margarita, Luis Gomez-Mejia, Shainaz Firfiray, Pascual Berrone, and Veronica H Villena. 2016. "Leader beliefs and CSR for employees: the case of telework provision." *Leadership & Organization Development Journal* 37 (5): 609-634.

<sup>25</sup> Tomova, Livia, Bernadette von Dawans, Markus Heinrichs, Giorgia Silani, and Clauss Lamm. 2014. "Is stress affecting our ability to tune

**Figure 1. Leadership Gender Difference in Percentage of Online Sales, Percentage of Remote Workforce, and Percentage of Employee Furlough**



	Female	Male	t-value
Percentage of Online Sales	9.34 ± 18.47	8.95 ± 18.82	0.63
Percentage of Remote Workforce	6.73 ± 17.45	6.96 ± 17.64	-0.40
Percentage of Employee Furlough	15.8 ± 25.65	17.5 ± 27.06	-1.66**

Results: There are significant differences between firms with female leaders and male leaders regarding percentage of employee furlough. The firms led by female leaders have a fewer employee furlough.

**SAMPLE DESCRIPTION AND METHOD**

We used secondary data of 8,755 firms across 15 countries to examine the firm response differences to the COVID 19 crisis for firms with female and male leadership. The analysis consists of t-test comparisons among companies that female and male leaders lead in three facets: percentage of online sales, remote workforce, and employee furlough. We explore differences in three income groups by dividing the home countries of these companies. According to a reputable international financial institution, the 15 countries are categories into three groups: low income (n=2,580: Albania-372, Belarus-246, Bulgaria-659, Georgia-572, Jordan-601, and Zambia-130), middle income

(n=3,124: Moldova-360, Mongolia-349, Morocco-1094, Russian Federation-1322), and high income (n=3,050: Cyprus-189, Greece-358, Italy-741, Poland-1369, Slovenia-393). We conduct the t-test comparisons across these three groups.

**FINDINGS**

Figure 1 shows the differences in online sales, remote workforce, and employee furlough across firms with female and male leaders. The percentage of online sales measures the percentage of a company’s online sales out of total sales. The percentage of a remote workforce is measured as the share of a company’s workforce operating remotely. The employee furlough is measured by the percentage of employees who have been furloughed since the outbreak of

**Figure 2: Leadership Gender Difference in Percentage of Online Sales in Different Income Groups**

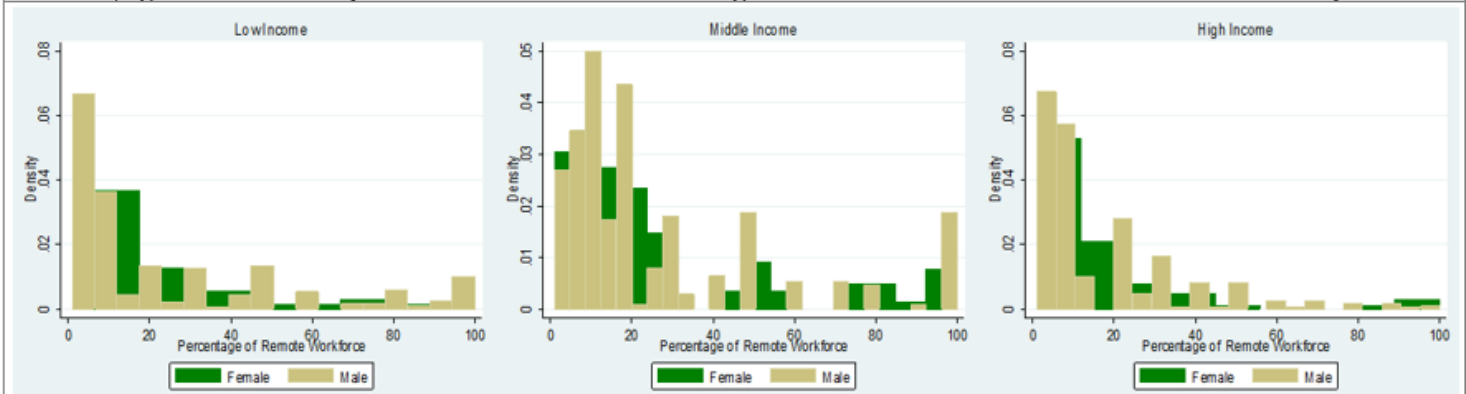


	Female	Male	t-value
Online Sales: Low Income	3.08 ± 12.95	4.82 ± 16.60	-1.99**
Online Sales: Middle Income	14.90 ± 22.20	13.43 ± 21.49	1.28
Online Sales: High Income	7.71 ± 14.80	6.56 ± 15.26	1.27

Results: although in the overall sample, there are no differences across firms regarding online sales. But there are differences in firms in low-income countries. The results indicate that firms led by male leaders in low-income countries have higher online sales.

into others? Evidence for gender differences in the effects of stress on self-other distinction." *Psychoneuroendocrinology* 43:95-104.

**Figure 3: Leadership Gender Difference in Percentage of Remote Workforce in Different Income Groups**



	Female	Male	t-value
Remote Workforce: Low Income	2.33 ± 10.31	4.97 ± 16.40	-3.86***
Remote Workforce: Middle Income	11.56 ± 22.76	9.94 ± 21.09	1.40
Remote Workforce: High Income	4.63 ± 12.72	5.44 ± 13.12	-1.07

*Results:* although in the overall sample, there are no differences across firms regarding remote workforce. But there are differences in firms in low-income countries. The results indicate that firms led by male leaders in low-income countries have more remote workforce.

COVID-19. The three bar-charts provide an overview of the differences between female and male groups. In all three charts, the y axis indicates the density of companies, the data series in gold are for firms with male leaders, and the data series in green are for firms with female leaders. Generally speaking, the majority of companies are led by male leaders (7,104 vs. 1,621). For each group, the table shows the mean value and standard deviation for the three variables.

The t-test results compare female and male-led companies regarding online sales, remote workforce, and employee furlough. There are no significant differences between the two groups regarding online sales and remote workforce for the overall sample. However, for the percentage of employee furlough, the result (t-value=-1.66\*) indicates that compared to companies with male leaders, companies with female leaders have fewer employees furloughed. This result is consistent with the argument and findings in prior literature that female leaders care more about their community members and social responsibility. When facing a crisis, they may find some other ways to mitigate the adverse effects instead of furloughing employees. For example, some employees' furlough or unwillingness to participate in teleworking is because of the lack of support from colleagues and supervisors<sup>26</sup>. By applying relational skills, female leaders can support and motivate employees and facilitate their work conditions. Next, figures 2 to 4 display the differences across female-led and male-led companies in different income groups in the percentage of online sales, percentage of the remote workforce, and the percentage of employee furlough,

respectively. For all three figures, the comparison was made by dividing the sample into three income groups: low income, middle income, and high income.

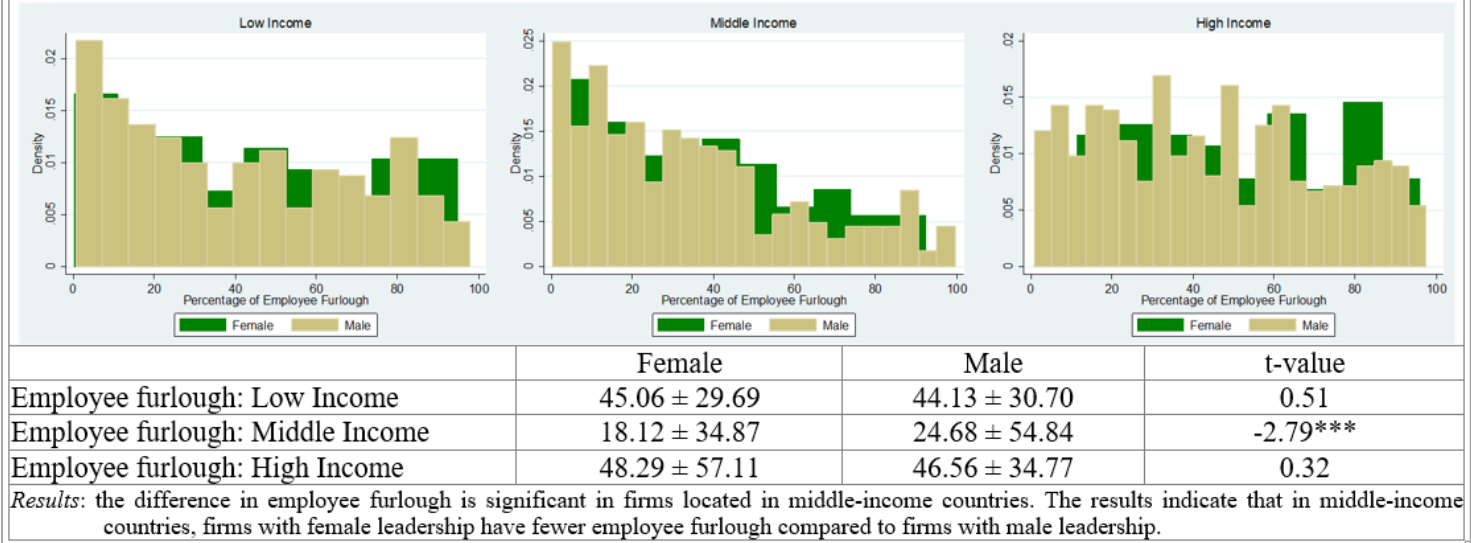
Figure 2 shows the difference in online sales in the three income groups. The results indicate that although there is no significant difference across the female and male groups in the overall sample regarding the percentage of online sales, such difference exists in the low-income group. The t-value (-1.99\*\*) supports this significant difference and indicates that firms led by male leaders in low-income countries have a higher percentage of online sales. One possible reason for this difference is that it is not easy for female leaders to gain enough resources to initiate the digital transformation and move to online sales in low-income countries.

Similarly, figure 3 shows the differences in the percentage of the remote workforce in the three income groups. Although in the overall sample, we found no significant differences across female and male-led companies regarding the remote workforce percentage, we see differences exist for companies operating in lower-income countries. The result (t-value = -3.86\*\*\*) shows male-led companies in these countries have a greater percentage of employees participating in remote work than companies with female leaders. We again suggest that

<sup>26</sup> Bae, Kwang Bin, David Lee, and Hosung Sohn. 2019. "How to increase participation in telework programs in US Federal Agencies:

Examining the effects of being a female supervisor, supportive leadership, and diversity management." *Public Personnel Management* 48 (4):565-583.

**Figure 4: Leadership Gender Difference in Percentage of Employee Furlough in Different Income Groups**

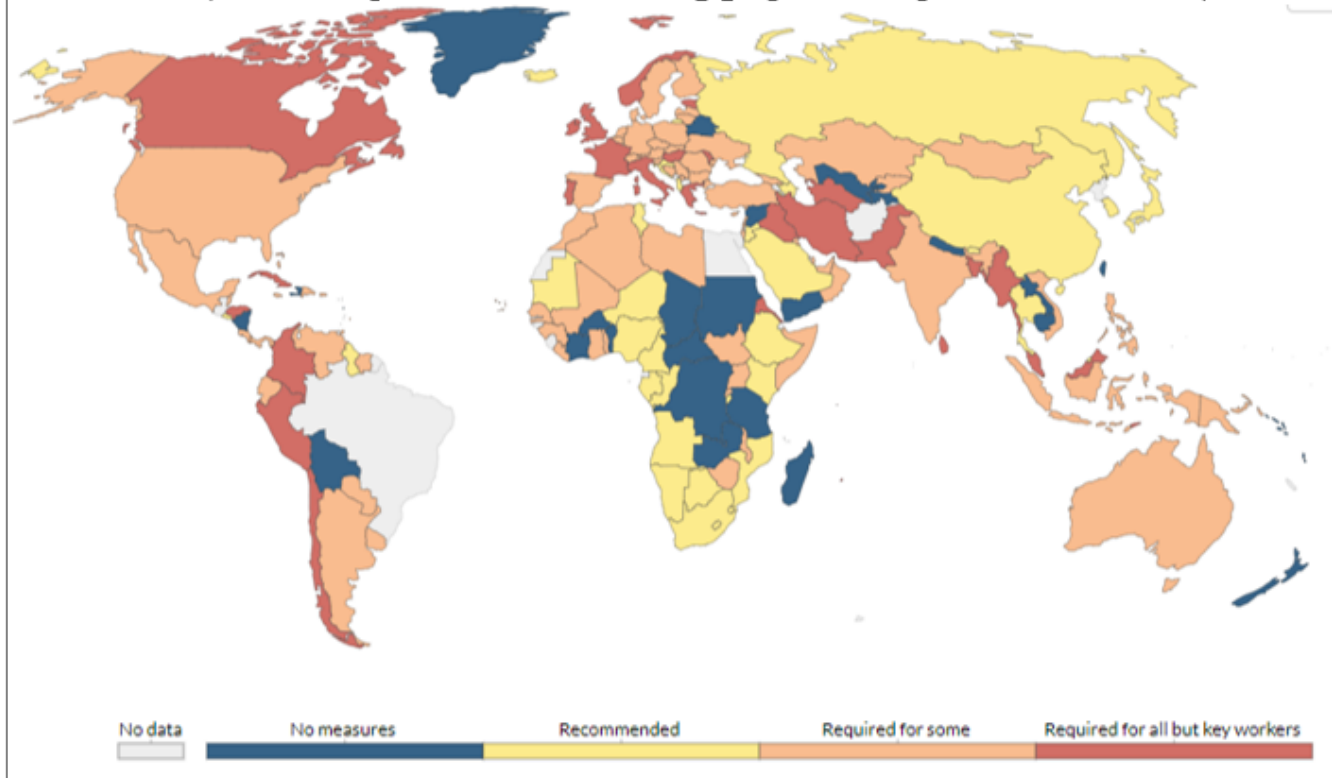


companies with female leaders have greater resource constraints in low-income countries<sup>27</sup>.

Finally, figure 4 shows the comparisons of two groups regarding the employee furlough in different income groups. As shown in figure 1 for the overall sample, there are significant differences between companies with female and

male leaders in the percentage of employee furlough. Overall, there are more employee furloughs in the companies led by male leaders. This variation is driven by significant differences in the furlough rate between male and female-led companies in middle-income countries (t-value = -2.79\*\*\*). This is an interesting finding, and one plausible reason is that

**Figure 5: Workplace Closures During the COVID-19 Pandemic, March 16, 2021**  
(Source: <https://ourworldindata.org/grapher/workplace-closures-covid>)



<sup>27</sup> Chandrasekhar, C. P., and Ghosh, J. 2001. "Information and communication technologies and health in low-income countries: the

potential and the constraints." *Bulletin of the world Health Organization* 79: 850-855.

in middle-income countries, the nature of female leadership influences the outcome significantly. In high-income countries, both groups of leaders may follow well-established regulations, and in low-income countries, both groups of leaders may follow the deeply rooted social norms<sup>28</sup>.

### CONCLUDING REMARKS

To respond to the COVID-19 crisis, organizations are experiencing rapid and unprecedented changes, including the digital transformation of business processes and remote working. These adjustments can ensure business continuity and improve business resilience, critical for an organization's economic sustainability during a crisis such as the COVID-19 pandemic. Meanwhile, employees are also experiencing changes such as furlough or layoff. It is not easy for a company to maintain both economic and social sustainability in a crisis. Prior literature suggested that female leaders can do better due to the unique characteristics than male leaders during a crisis. We examine the differences between these two groups in this research brief.

Overall, we find that both female leaders and male leaders can do well regarding the move to online sales and supporting a remote workforce. But female leaders do furlough a smaller percentage of their employees than their male counterparts, which is one aspect of social responsibility. Minimizing employee furloughs is critical to maintaining equality and inclusion, especially during a crisis. Thus, the importance of female leadership or diversity in management teams should be highlighted.

Second, we need to acknowledge the impact resource constraints had on response to the COVID-19 crisis in the low-income countries. This research suggests that additional resources may be needed to support the female leaders in these countries as they may not have the same access to capital as male leaders do.

Third, the role female leadership plays in countries with different income levels can be very different. Thus, policymakers may need to develop different types of programs in different countries to amplify the role of female leadership.

Finally, as countries decide to relax regulations regarding workplace closures as the vaccine distributions progress (see Figure 5), we believe that some of the effects of female leadership will persist. It is possible that the having laid off fewer employees during the pandemic will improve the recovery of some female led firms. In addition, employees may value a more empathetic workplace even after the pandemic is over. This may make female led firms more attractive to employees, especially those in operating in the middle-income countries.

<sup>28</sup> Jayachandran, S. 2020. Social Norms as a Barrier to Women's Employment in Developing Countries. NBER Working Paper, (w27449).

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