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A Case Study of Leadership at a Women's College:

Teamwork, Diversity, and Confidence Building

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ABSTRACT

This study reports on women college students' leadership, teamwork, diversity, and communication skills while planning and executing a leadership event in Japan over a period of seven months. Data were gathered from 11 students who completed two online questionnaires: Questionnaire A was administered while planning the event and Questionnaire B was administered after they executed the event. The questionnaires asked about the difficulties/joys of teamwork as both a leader and a follower as well as the lessons they learned through the process. An analysis of the questionnaire results indicated drastic changes in participants' views of leadership, teamwork, diversity, and communication skills. Students' learnings mostly occurred during teamwork planning efforts, but after the execution, the learnings become established as a sense of appreciation and self-confidence, thereby enhancing their potential as a leader and a follower.

KEYWORDS: Leadership Education, College Student, Teamwork, Diversity, Confidence Building

1 INTRODUCTION

This study reports on a case study of women college students' leadership education, including teamwork, diversity, and communication skills, in Japan. The University of Sacred Heart Tokyo in Japan is a women's college that offers its Program in Global Leadership and Development (PGLD) to students who wish to learn leadership and teamwork skills applicable to society and the globe. One of the curricula involves the students coordinating as a team to plan and execute a unique event as both a leader and a follower. Throughout the program, students have numerous opportunities to develop their leadership, teamwork, and communication skills as well as experience diversity through event planning and execution. This case study illustrates the types of hardships and joys the students found in the teamwork, and it attempts to reveal possible measures teachers can take to offer a better learning environment to future students to enable them to grow into great leaders.

According to the Global Gender Gap Report 2020 [1], Japan ranks 121 among 153 countries, indicating it has larger gender gaps due to women's limited economic and political participation in Japan. Okugiri (2019) [2] described Japan as still struggling to promote more women as leaders; thus, leader education is essential for female university students to encourage their careers and participation in society. Usui, Rose, and Kageyama (2003) [3] reported that even tertiary schools and universities focus on educating female students to become good wives and mothers. Many young women are expected to quit their jobs when they get married in order to stay home and raise their children while their husbands work outside the home. Once their children are old enough to go to school, many of these women attempt to get a job, but most end up not being able to go back to their previous professional jobs and instead work part time without any responsibilities or rewarding work. Unfortunately, this is still the truth among the majority of people in Japan.

Meanwhile, the Japanese government has failed to provide a welfare plan or childcare service to support women. As a result, many women still need to choose between marriage and a career. If they choose marriage, they are often expected to quit their jobs. In addition, it is practically impossible to keep a job once they have a baby because the Japanese government does not provide sufficient day-care services for those who need them, particularly in urban and residential areas due to the low capacity. Even the application requirements for child daycare services affect women. In order to apply for a placement, mothers are required to have a job, but mothers cannot get a job unless they have a daycare placement for their child. This no-win situation means that most give up on the application and, thus, their careers. At the same time, husbands are never expected to sacrifice their careers—not by society or by their wives.

Even when women do not wish to get married, they are constantly bombarded with questions about when they are getting married. Many Japanese people still hold on to the stereotype that a healthy woman gets married in her mid-20s and starts having children. This obsolete mindset remains prevalent in Japan because of a lack of understanding of diversity. Indeed, this stereotype harms human rights, including the rights of LGBTQs. Although every woman has her own philosophy on happiness, the distorted stereotype does not allow many women to pursue their unique philosophy.

Hence, considering women's careers in Japan, it is still tremendously difficult to simultaneously achieve both happy private lives and careers due to the lack of diversity, and we are still struggling with this fact. People in Japan, including women, need to acknowledge diversity and the numerous ways that people can choose to live. To give university students a chance to learn about diversity and develop a global mind, some universities in Japan are now eager to construct a leadership curriculum. Furthermore, women's universities need to offer a program like PGLD to give students various life choices and future careers while developing

their leadership, teamwork, and communication skills to promote women's futures and help them find a meaningful place in society.

2 THE STUDY

The University of Sacred Heart Tokyo started offering PGLD in 2018. The program is not compulsory, but is open to those students who want to develop their leadership skills and apply these insights to their future careers. Applicants can enroll in PGLD, a two-year program, starting in their second year and are required to complete it in their third year. The curriculum includes introducing a leadership mindset, engaging in teamwork, attending a seminar, and participating in two activities: completing a three-month internship at a company or non-governmental organization and planning and executing a leadership event. In 2020, 13 third-year students involved in PGLD at the University of the Sacred Heart Tokyo were required to plan, coordinate, and host an event with group members to develop interpersonal, communicative, and problem-solving skills. They were given approximately seven months (over two semesters) to complete the event. They also had monthly meetings with two mentors to receive feedback on their planning (one of the mentors was the researcher). The students were also asked to hold five team meetings to discuss and plan the event. Students were free to choose any topic that involves global issues for the event. In 2020, the students executed the event online due to COVID-19 pandemic prevention and control requirements. They were told to form a group, with two to four members in each group, and they chose food sustainability, COVID-19, gender, and education as the event's topic.

2.1 Method

The researcher asked the 13 students to complete two questionnaires. Questionnaire A was administered three months after the students started planning the event but before executing it. Questionnaire B was administered after they held the event and asked about the difficulty/joy of teamwork as a leader and a follower as well as the lessons they learned through the process. The researcher explained that the questionnaires were not requirements for class credit and would not affect their grade at all; they were free to decline to answer if they wanted to. In the end, 11 students volunteered to complete both questionnaires. An analysis of the questionnaire results indicated drastic changes in their views of leadership, teamwork, diversity, and communication skills.

2.2 Questionnaires

Questionnaires A and B used the same format and questions. Participants were asked to complete the questionnaires using Google Form. The questions were as follows:

Q1. Was planning (and executing) the event easier than you expected? Why do you think so?
Q2. What was the fun part or pleasure of teamwork? Describe your experience.
Q3. What did you learn from the experience?

The participants were asked to provide comments in response to each question. They were allowed to write as many words as they wanted to write.

3 RESULTS

The questionnaire results included keywords that indicated participants' thoughts and ideas about teamwork; thus, their responses revealed particular inclinations about their views of teamwork. The keywords are summarized in Table 1, followed by an explanation of the details of each comment. For Questions 2 and 3, the total number is more than the number of participants (n=11) as some participants wrote multiple keywords.

Table 1 Keywords in Participants' Responses (n=11)

	Keywords	Questionnaire A	Questionnaire B
Q1: Was planning (and executing) the event easier than you expected? Why do you think so?			
responses	Difficulty understanding diversity	5	4
	Difficulty fixing team meetings	5	3
	Communication among teammates	0	4
	No difficulty	1	0
Q2: What was the fun part or pleasure of teamwork? Describe your experience.			
responses	Diversity among teammates	9	0
	Similarity among teammates	1	0
	A sense of accomplishment	1	10
	Face-to-face meeting and chatting with teammates	0	1
	Appreciation of participants	0	1
Q3: What did you learn from the experience?			
responses	Diversity	5	1
	Importance of communication	4	2
	Importance of planning	2	0
	Importance of ideas/opinions	2	0
	Pros and cons of online event	1	0
	Appreciation of others	0	4
	Good sense of team spirit	0	2
	Sense of responsibility	0	1
	Ability and possibility	0	2

In terms of difficulty in teamwork while planning (i.e., Q1), as asked on Questionnaire A, half of the students (n=5) found difficulty planning with their teammates particularly in terms of understanding diversity, such as different opinions on the team; the other half (n=5) experienced problems scheduling team meetings and adjusting to teammates' schedules. Excerpts from their responses are as follows. Words in parentheses are the keywords of difficulty they experienced.

(1) It might be effortless to do a thing alone. Listening to teammates' opinions and reaching a conclusion/goal was very difficult. (diversity)
(2) Each member seemed to have so much to do other than the planning, like university classes, a part-time job, or chores at home. Thus, we were not able to have meetings so often. It seems this problem was also due to being online and not being able to meet face-to-face because of COVID-19. (schedule)

However, according to the responses on Questionnaire B, which was administered after executing their event, the same question (Q1) indicated that students found more concrete and critical problems regarding communication, including difficulties communicating effectively or reaching a conclusion with teammates (n=4), understanding diversity among teammates such as coming to a decision among various ideas in a team discussion, and understanding teammates' differences in their work paces, styles, and degrees of enthusiasm (n=4). Another

problem was adjusting to teammates' schedules to set team meetings (n=3). Excerpts from their responses are as follows:

(3) Online communication was demanding. (communication)
(4) We were not able to see each other's progress due to online communication. (communication)
(5) We took too much time to set the event's goal because each of us had different ideas. Our whole plan was delayed, and we were in chaos right before the event. (team discussion)
(6) We could see each of us worked differently in pace and had a difference in degrees of enthusiasm. (difference in work paces, styles, and degrees of enthusiasm)
(7) We could not have enough meeting time, which caused a difference in workload. But we tried to be connected on SNS, sharing each of our progress. (scheduling)

In summary, the responses while planning and after executing the event revealed that various learning took place. While planning the event, the students started to understand the psychological (i.e., diversity) and physical (meeting teammates' schedule) difficulties. After the event, they shifted their focus to communication/expression in requesting a task or sharing work. They realized the need to cope with the difference in work paces, styles, and degrees of enthusiasm among teammates and found them difficult and challenging. It is also notable that their comments referred to problems with online communication, which is probably due to the fact that this event planning was taking place at the beginning of the COVID-19 pandemic, while people were still acclimating to exclusively online communication as part of the prevention and control requirements.

For Q2, on Questionnaire A, nine of the 11 respondents answered that they enjoyed diversity, including discussions with teammates. This is an interesting result because, as previously explained, half of the students found understanding diversity to be a significant difficulty for teamwork. Still, all of them answered that understanding and accepting different opinions during team discussions were a pleasure and beneficial for teamwork. One of them answered she enjoyed conversations in meetings because she found similarities in her team. Another student responded that she was happy when she felt a sense of accomplishment. Excerpts from their responses are as follows. Words in parentheses are the keywords.

(8) I was happy when our mentor said our idea was better after we had a discussion where each of us shared various thoughts. (diversity)
(9) I was able to find similar values we had on the team through discussions. (similarity)
(10) I enjoyed creating presentation slides because I could see our ideas starting to take shape. (a sense of accomplishment)

Meanwhile, as indicated by Q2 on Questionnaire B, 10 students were content when they felt a sense of accomplishment; interestingly, no one mentioned diversity. Only one student answered that she was pleased when she was able to meet her teammates face-to-face. A face-to-face meeting was not required in the program, but they decided to have one anyway. Another response mentioned her appreciation for the participants at the event. Excerpts from their answers are as follows:

(11) Since we needed to create many things, including movies and questionnaires for the participants from scratch, I felt a strong sense of accomplishment when we made each. (a sense of accomplishment)
(12) I was so happy when I was able to have a face-to-face meeting on the day before the event day because we were only allowed to meet online by then, and I found it not

stressful to have a discussion differently from an online conversation. In addition to that, we were able to chat, which was fun. (face-to-face meeting and chatting with teammates)

(13) I was happy because our mentors and people visited our online event even though they were not required to do so. (appreciation of participants)

The final question (Q3) asked what they learned throughout the process to plan and execute the plan. On Questionnaire A, the students showed a tendency to focus more on the team—namely, diversity (n=5), the importance of communication with teammates (n=4), the importance of planning (n=2), and the acceptance of different ideas (n=2). One highlighted the pros and cons of the online event. Excerpts from their responses are as follows. Words in parentheses are the keywords.

(14) My working style is always quick and efficient in planning. But through teamwork, I understood that taking enough time to think carefully may lead to good results. (diversity)

(15) I learned it is crucial to have enough discussions to decide the theme for an event that all teammates agree on. (diversity)

(16) I learned that planning and the consideration of others are essential, in addition to teamwork. (planning and diversity)

(17) I learned the importance of *hōrensō*. We had trouble restarting the discussion as our team were not in contact for a while. (communication)

(18) I learned that, when we make a decision, it is still vital for a team to consider how the teammates who had different ideas would feel and think. (acceptance of different ideas)

In (17), *hōrensō* is Japanese slang for the ideal business attitude. "Hō" stands for "hōkoku (report)," "ren" for "renraku (communicate)," and "sō" for "sōdan (consult)," *Hōrensō* sounds identical to the Japanese word for "spinach," and the sound is familiar to people in Japan. The idea has been valued particularly in the business scene because it fits the Japanese leadership style, as Lewis (2018) pointed out [4]. Figure 1 illustrates a simplified version of the Japanese leadership style.

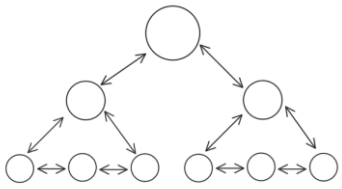

Figure 1: Japanese Leadership Style

As the Japanese leadership style values *hōrensō*, decision-making is generally slow, but each team member knows what is happening in the division. In Figure 1, teams on the bottom do not have the authority to make any decisions. They report their decisions in discussions to the head of the division. Only when the head agrees does the head report it and discuss it with their supervisor, and the head then informs the bottom team of the decision. If the decision is no, the team needs to start the discussion from zero again. Therefore, *hōrensō* is the basic idea of the Japanese leadership style. However, in this approach, no one needs to be assigned responsibility because the reports, communications, and consults are most valued in an organization. In the Japanese culture, sharing information among team members is appreciated most, regardless of the outcome.

For Q3 on Questionnaire B, after running the event, some still found frequent communication to be a decisive factor for a successful team (n=2). Still, the students were also more inclined to see an appreciation of others (n=4), the importance of good team spirit (n=2), a greater sense of responsibility (n=2), and more abilities and possibilities (n=3). One of the students noted that diversity is essential for being receptive to new ideas. Excerpts from their responses are as follows:

(19) Sharing information was crucial. We made several changes in the plan right before the event day, and I learned that sharing information among teammates would help fix the event much faster. (communication)
(20) I noticed I had many people who helped me. (appreciation of others)
(21) I know we had so many hardships, but I was happy to see that I had my teammates, and we felt a sense of achievement together. (appreciation of others)
(22) In teamwork, I learned good team spirit leads to event success. We were lucky to have a leader who facilitated our team meetings. We enjoyed every meeting because she never mentioned any negative words or opinions. (team spirit)
(23) I thought I needed to do my job for the team. (responsibility)
(24) Before, I believed my capacity was limited, but I realized that I could make ideas into reality after the event. From now, I think I will not be afraid of anything challenging. (ability and possibility)

Therefore, while planning the event, the students focused more on diversity, communication methods, and planning. But after the event, their comments were more introspective; they noticed their appreciation of teammates, participants, and people around them and their abilities/potentials. They also realized the responsibility and nature of the team, which indicated that the experience brought them successful learning about teamwork.

4 CONCLUSION

The results of this study showed that students experienced drastic changes in their thoughts and values about teamwork. Students faced difficulties in diversity in the process and communication problems among the team after the event, but they enjoyed encountering diversities on the team and feeling a sense of accomplishment, which implies students can promote self-esteem by executing an event. Students' learnings occurred mostly during teamwork planning efforts, but after the execution of the event, the understandings become established as a sense of appreciation and self-confidence, enhancing their potentials as both leaders and followers.

This study showed that leadership education with event planning and execution had a positive psychological effect on students. Such education will positively impact students in universities in Japan, as it is highly beneficial for women to experience success, acknowledge diversity, and build self-confidence to promote women's leadership.

The limitation of this study is the limited number of participants. Future research should gather responses from more participants to draw definite conclusions.

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Coronavirus Market-Crash – How Far Did FIRE Retiree's Capital Drawdown?

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ABSTRACT

This paper investigates the destruction of capital held by FIRE-retirees in the US stock-market as represented by the S&P500 index during the coronavirus market-crash. The performance of a lumpsum of $1,000,000 invested by retirees at the end of each year from 2009 to 2019 were calculated using 4% inflation adjusted withdrawal rates. Findings suggest that at the low point of March 23, 2020 the retirees of the first 4 years (2009 till 2012) using 4% inflation adjusted withdrawals all had their initial $1,000,000 capital plus growth. (Highest positive balance: 2009, $1,485,574, increase of 48.6%. Lowest positive balance: 2012, $1,282,147, increase 28.2%). All retirees from the end of 2013 had their initial $1,000,000 investment decreased to below initial capital (Lowest negative balance: 2019, $692,500, decrease 30.75%). Despite 4% inflation adjusted withdrawals, the longer the retirement period the more likely to experience net capital growth.

The investigation also revealed the effect of 0% or negative returns during the beginning years of an investment. Some $1,000,000 investments made in earlier years (2010, 2014 and 2017) ending in lower balances than investments made in the next year (2011, 2015 and 2018).

KEYWORDS: FIRE movement, Retirement, S&P500 index, CPI adjusted, Coronavirus market-crash

1 INTRODUCTION

The USA, like many other countries, is facing a financial retirement crisis. The hope of retirement security is out of reach for many Americans as secure pensions that last through retirement have been replaced with individual retirement accounts. The average American family has little retirement savings. Among working-age families with at least one earner, nearly 4 out of 5 do not have retirement savings that at least equal their annual income. Two out of three working families have household net worth that falls short of recommended savings targets **Error! Reference source not found.**.

In contrast to the above problem, there is the followers of the FIRE (Financial Independent Retire Early) movement. Whilst consumerism is ingrained in the American culture, the FIRE followers embrace the concept of saving and investing the majority of their income in their 20's or 30's so you can retire early, sometimes in their 30's or 40's. They purposefully plan a life with a short career and a long retirement. This group choose to live extremely frugal (even saving up to 70%) of their annual income in order to accumulate enough funds (in the low millions) so that they are no longer dependent on a paycheck and can live of the combination of investment income and small withdrawals. When retired they typically withdraw no more than 4% of their portfolios to enable them to enjoy a retirement up to 6 decades. The preferred investment vehicles are Index funds and ETF's (Exchange Traded funds). Another favorite investment tool is rental properties **Error! Reference source not found.**. Some of them choose to work from time to time in areas of their hobbies, with money not being a factor in their decision to work.

There are no statistics on the number of FIRE adherents. The U.S. government does not keep records, nor do the retirement-investment companies. From blogs, social media and forums on the internet, it can be determined that the FIRE movement has strong following mostly amongst millennials. It is not possible to determine the ratio of casual readers, followers still aspiring towards financial independence and those who already achieved financial independence. We cannot determine the size of the retirement accounts of those already retired. The Reddit Financial Independence / Early Retirement online community has more than 850,000 members **Error! Reference source not found.**. Sam Dogen, who retired from his Wall Street job at age 34 with $3 million, claims to have had more than 70 million visitors during his 13 years of blogging at The Financial Samurai **Error! Reference source not found.**. Mr. Money Mustache is probably the best-known FIRE blog and introduced thousands to the movement. Peter Adeney started the blog in 2011 after he retired at age 30, through frugal living and smart investing **Error! Reference source not found.**.

The coronavirus market-crash experienced the fastest fall in global stock markets in the financial history. Just like other investors, the FIRE retirees had their portfolios decimated. In the popular financial press headings appeared like *They all retired before 40. Then this happened* **Error! Reference source not found.** or *The FIRE movement meets the Crash* **Error! Reference source not found.**. Some speculated that portfolios were damaged so badly that early retirees are forced back into the workforce and the pandemic might end the FIRE movement. A refreshing voice came from FIRE author Tania Hester with *A recession won't end the FIRE movement, but it will change it for the better* **Error! Reference source not found.**.

This paper seeks to determine how far did the capital of FIRE retiree's drawdown due to the Coronavirus market- crash.

2 LITERATURE REVIEW

There is an oversized body of literature on the pending financial retirement crises in the USA. The bottom line is that half of the households will not have enough retirement income to maintain their pre-retirement standard of living, even if they work to age 65 and annuitize all their financial assets, including the receipts from a reverse mortgage on their homes. This indicates that many of today's workers need to save more and/or work longer to achieve a secure retirement **Error! Reference source not found.**.

FIRE traces its roots to publication of the book *Your Money or Your Life* in 1992. With over a million copies sold, Vicki Robin and Joe Dominguez was instrumental in changing how people view money. They showed readers how people trade their life energy for money and that material success enslaved people more and more. With a step by step program they encouraged people to live more meaningful lives and that it was possible to live on a fraction of the money spent by a typical household. With a reasonable modest investment providing the required income, paid work could be avoided **Error! Reference source not found.**.

In the fallout of the 2008-2009 Great Recession, unemployment peaked at 10%, while the market dropped 56% from its 2007 highs. Some millennials saw how their parents, who worked hard their entire lives, lost their jobs, their houses and their savings. That contributed to a group of people seeking a different way of life. People wanting to live life on their terms, are willing to sacrifice in the short term in order to ensure financial security. By living very frugal and saving as much as possible, FIRE followers typically aspire to acquire enough funds so that they can use a safe withdrawal rate of 4% inflation adjusted to pay for their living expenditure **Error! Reference source not found.**. Tanya Hester is of the opinion that fundamentally those pursuing FIRE seek one thing: to end their reliance on a job. The goal is to not need money from work. It is not to never do a single thing again that happens to earn a person money. It's about making work something you can choose to do, not something you must do **Error! Reference source not found.**.

The question for FIRE followers is how much money should be accumulated in order to ensure a retirement spanning 4, 5 or even 6 decades. In 1994, the financial planner William Bengen determined how much money is required to retire by using historical data since 1926. The period he studied included the 1929 Great Depression and the 1939 Second World War. He looked at the longevity of 30 years for a portfolio consisting of 50% stock and 50% intermediate term Treasury notes. He used an end of first year withdrawal of 4%, followed by inflation-adjusted withdrawals in subsequent years. He did not find any group of years where the portfolio was exhausted before 33 years, and most scenarios would lead to a portfolio lasting 50 years or longer. The circumstance that led to the destruction of a portfolio was an "event", consisting of a severe stock-market downturn and high inflation (**Error! Reference source not found.**. This is how the 4% rule of thumb came into existence – by withdrawing 4% of your capital you need as a safe amount 25 times your projected living expenses.

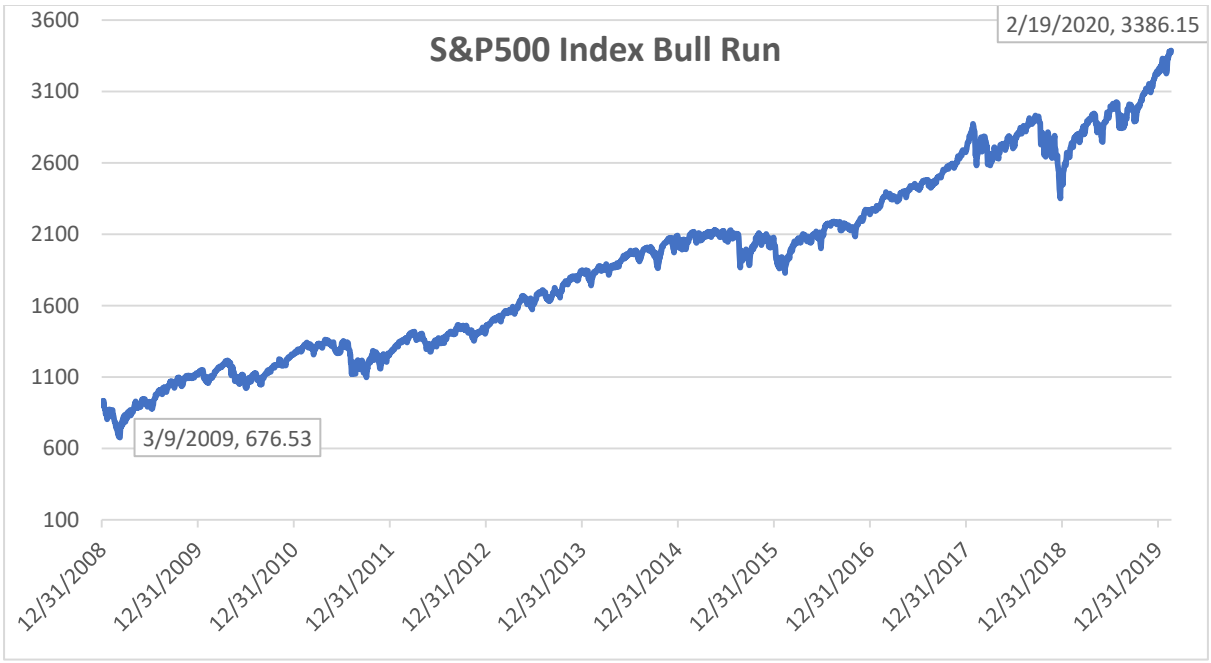
In 1996, Ferguson did a similar work but assumed that the investors plan to leave the principal value of the retirement portfolio to their heirs. He suggested a withdrawal plan of consuming dividend income only from an equity-heavy portfolio. According to him, a withdrawal rate of approximately 3% of the portfolio value would allow a portfolio to retain its real value in the long run **Error! Reference source not found.**. In 1998, Trinity's study used a similar methodology as Bengen's but focused on the idea of portfolio success rates. If an investor's portfolio outlives the investor's planned pay-out period, then it is counted a success. Their numbers imply that young retirees who anticipate long pay-out periods should plan on lower withdrawal rates than their older counterparts. They found for stock-dominated portfolios, withdrawal rates of 3% and 4% over a 30-year period represent exceedingly

conservative behavior. At these rates, retirees who wish to bequeath large estates to their heirs will likely be successful **Error! Reference source not found.**.

Meyer showed the risk of sequence of return as retirees' assets are more sensitive to losses from poor market returns in the years just prior to, or after, entering retirement. If poor returns are experienced during these critical years, their portfolios are threatened more significantly than if their assets were to experience poor market returns much later on in their retirement **Error! Reference source not found.**. In order to mitigate some of the risk of sequence of return, the traditional approach to FIRE is to have at least 1 year of living expenditure in cash so that they don't have to tap their portfolios during a downturn. Some of the more prudent FIRE retirees carry at least 2 to 3 years of expenses in cash **Error! Reference source not found.**.

In the lead up to the Corona market-crash the market enjoyed 11 years of growth, the longest running bull market in history. Up to the crash, some of the younger FIRE contingent has never seen a down market and advocated holding almost all of a portfolio in stocks. This is the group which would be the most vulnerable during a market crash **Error! Reference source not found.**.

The Standard & Poor's 500 index (S&P500) is the benchmark U.S. stock index measuring the stock performance of 500 large companies listed on the exchanges. A bull market is a rally greater than 20%, but only becomes official when the S&P 500 hits a record closing high. A bear market is a 20% decline in the S&P 500 from close to close. It is only officially over when the market recovers back to a new closing high. The bull market leading up to the Corona market-crash started at the end of the Great Recession on 9 March 2009 with the S&P at 676.53. It lasted for almost 11 years reaching a peak on 19 February 2020 with the S&P at 3,386.15. The growth during this longest running bull market was 400.5% from 676.53 to 3,386.15.

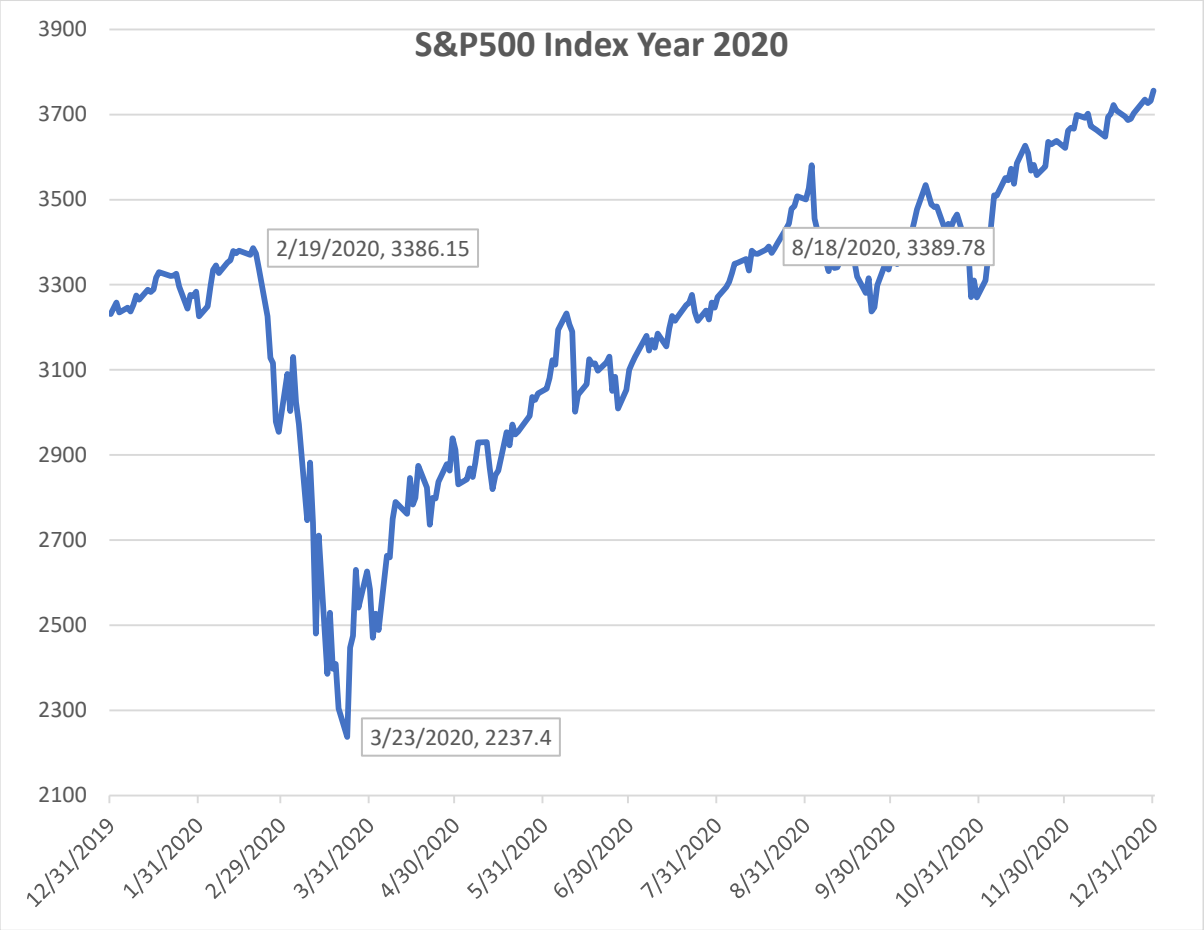


Source: Macrotrends.net **Error! Reference source not found.**.

Figure 1: S&P500 Index Year 2009 to February 2020

Figure 2 indicates the performance of the S&P500 Index for the year 2020. It started at 3,230.78, continued with the bull run and on19 February 2020 closed on an all-time high of

3,386.15. In a historical short time of 33 days it plunged to a bottom of 2,237.4 on 23 March 2020, wiping 33.9% from the highest point and 30.75% since the start of the year. The bear market was short lived as from there the market started to recover and on 18 August closed above the February 19 high, making it a bull market since March 23. That means that bottom of March 23 was the official end of the bear market and the start of the bull market.



Source: Macrotrends.net **Error! Reference source not found.**.

Figure 2: S&P500 Index Year 2020

During the historic bull run which started in 2009, only 2 years (2015 and 2018) posted negative returns on the S&P500 Index. The 2011 year ended neutral.

Table 1 Annual Performance of S&P500 Index

Year	Performance
2009	23.45%
2010	12.78%
2011	0%
2012	13.41%
2013	29.60%

2014	11.39%
2015	-0.73%
2016	9.54%
2017	19.42%
2018	-6.24%
2019	28.88%

Source: Macrotrends.net **Error! Reference source not found.**.

The Consumer Price Index (CPI) measures the average change in prices over time that consumers pay for a basket of goods and services, commonly known as inflation. The Bureau of Labor Statistic (BLS) is the American government agency tasked with collecting and disseminating the data. CPI data is released on a monthly basis and the BLS provides annual averages.

Table 2 Consumer Price Index

Year	CPI
2010	1.6%
2011	3.2%
2012	2.1%
2013	1.5%
2014	1.6%
2015	0.1%
2016	1.3%
2017	2.1%
2018	2.4%
2019	1.8%

Source: BLS **Error! Reference source not found.**.

3 METHODOLOGY

In order to determine how far did FIRE retirees' capital drawdown during the Corona market-crash the approach followed was to determine the different balances of an initial $1,000,000 entering the market at year end from 31 December 2009 to 31 December 2019. The portfolios were 100% invested in the stock market. The benchmark S&P 500 Index were used to represent performance. Initial investments were made on 31 December of the retirement year. For every $1,000,000 invested an additional amount of $40,000 (4% of $1,000,000) were kept in cash. Historical annual return data were used to calculate portfolio values after 4% inflation adjusted withdrawal at the end of every year. After the first year the 4% withdrawal rate is no longer used for compounding the amount withdrawn. The withdrawal amount is just adjusted with inflation. The annual average CPI data was used to determine the inflation.

To illustrate by way of an example. A 2009 retiree entered the market on 31 December 2009. For every $1,000,000 invested in his portfolio he kept $40,000 aside to pay for his living expenses during 2010. The S&P 500 increased with 12.78% in 2010. An initial $1,000,000 grew to $1,127,800. The inflation per CPI index were 1.6% in 2010. The

initial $40,000 is adjusted with 1.6% to ensure $40,640 withdrawal at year end for living expenses for the 2011 year. At the end of year 2010 the initial $1,000,000 had a balance of $1,087,160. ($1,000,000 + $127,800 - $40,640). In 2011 the closing balance of 2010, $1,087,160 was used as opening balance and adjusted with the S&P 500. Interesting is that 2011 was an exceptional year as the S&P 500 started and closed the year on the same point – resulting in no growth or loss. The 2010 withdrawal of $40,640 was then adjusted with CPI 3.2% to 41,940.48. This method is repeated for every year till the end of 2019. The same method is followed for the retirees of 2010 through to 2019.

The market bottomed on 23 March 2020 with the S&P 500 shedding 30.75% from 31 December 2019. For the crash data the 31 December balance were adjusted with the 30.75% drop. The inflation adjusted withdrawal was not taken into account as the retirees would still have cash available till the end of December.

4 RESULTS

Tables 3 and 4 presents the annual balances and the balance at the crash bottom of $1,000,000's invested. Table 3 indicates that at the crash, the retirees from 2009 to 2012 would all have more than their initial $1,000,000 capital. Table 4 shows that the retirees from 2013 to 2019 would all have balances smaller than $1,000,000. The first entry in the table indicates that a retiree of 2009 would have increased the initial $1,000,000 to $1,485,575 at the bottom of the crash. The balances generally decline steadily from top to bottom, or seen as investment time from 2009 to 2019. However, the balance of 2010 retiree is smaller than that of a 2011 retiree and so is 2014 /2015 as well as 2017 / 2018 reversed. The numbers imply the returns of 2011 (0%), 2015 (-0.73%) and 2018 (-6.24%) combined with the inflation adjusted withdrawal is responsible for this. During their first year of retirement the 2010, 2014 and 2017 retirees had their balances dropped below initial investment of $1,000,000.

Table 3 Year End and Crash Balances 2009 to 2012 Retirees

	2009	**2010**	**2011**	**2012**
2009	1,000,000			
2010	1,087,160	1,000,000		
2011	1,045,220	958,720	1,000,000	
2012	1,142,562	1,045,137	1,093,260	1,000,000
2013	1,437,297	1,311,719	1,375,412	1,255,400
2014	1,556,846	1,417,660	1,489,956	1,357,140
2015	1,501,278	1,363,804	1,436,921	1,305,942
2016	1,599,722	1,449,839	1,531,298	1,388,702
2017	1,864,670	1,686,399	1,785,073	1,615,682
2018	1,701,500	1,535,090	1,629,035	1,471,132
2019	2,145,235	1,931,516	2,054,047	1,851,477
Crash	1,485,575	1,357,575	1,422,428	1,282,148

Table 4 Year End and Crash Balances 2013 to 2019 Retirees

	2013	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
2010							
2011							
2012							

2013	1,000,000						
2014	1,073,260	1,000,000					
2015	1,024,745	952,660	1,000,000				
2016	1,081,296	1,002,983	1,054,880	1,000,000			
2017	1,249,208	1,156,350	1,218,367	1,153,360	1,000,000		
2018	1,128,173	1,041,788	1,099,977	1,039,570	896,640	1,000,000	
2019	1,410,129	1,299,487	1,374,524	1,297,225	1,113,892	1,248,080	1,000,000
Crash	976,515	899,895	951,858	898,328	771,370	864,295	692,500

Figure 3 indicates the total gain or loss on an original $1,000,000. The investment made end of 2009, gained $485,575 whilst the investment made at end of 2019 lost $307,500. A difference of $793,075 on the same amount of $1,000,000 invested.

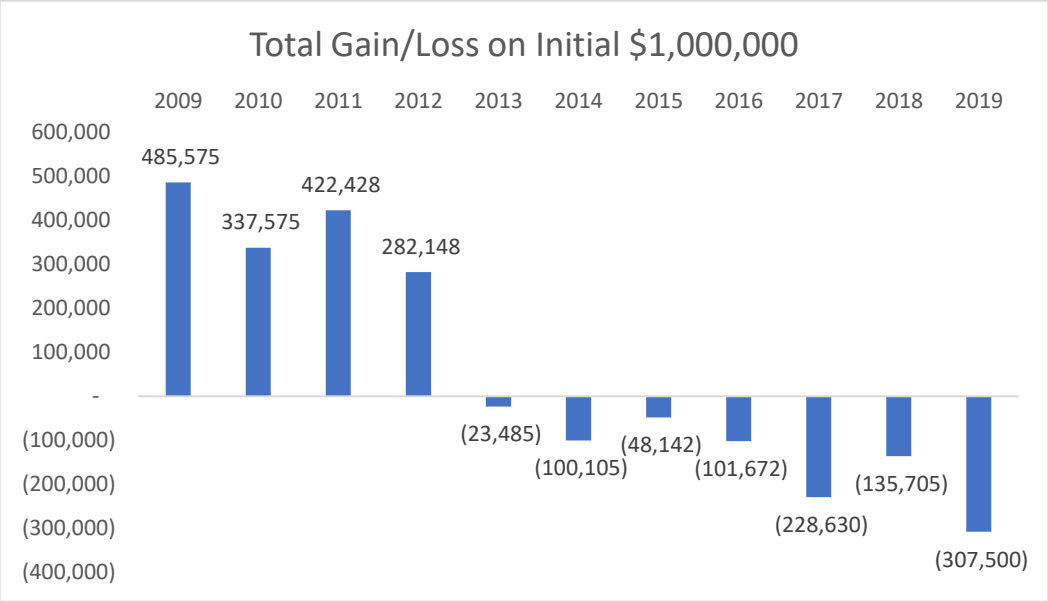


Figure 3: Total Gain / Loss on Initial $1,000,000

Figure 4 shows the loss per original $1,000,000 from the growth/withdrawal adjusted balances of 31 December 2019 to the lowest point of the crash. All balances dropped with 30.75% over 83 days. The 2009 retirees lost the most with $659,660 whilst the 2019 retirees lost the least with $307,500.

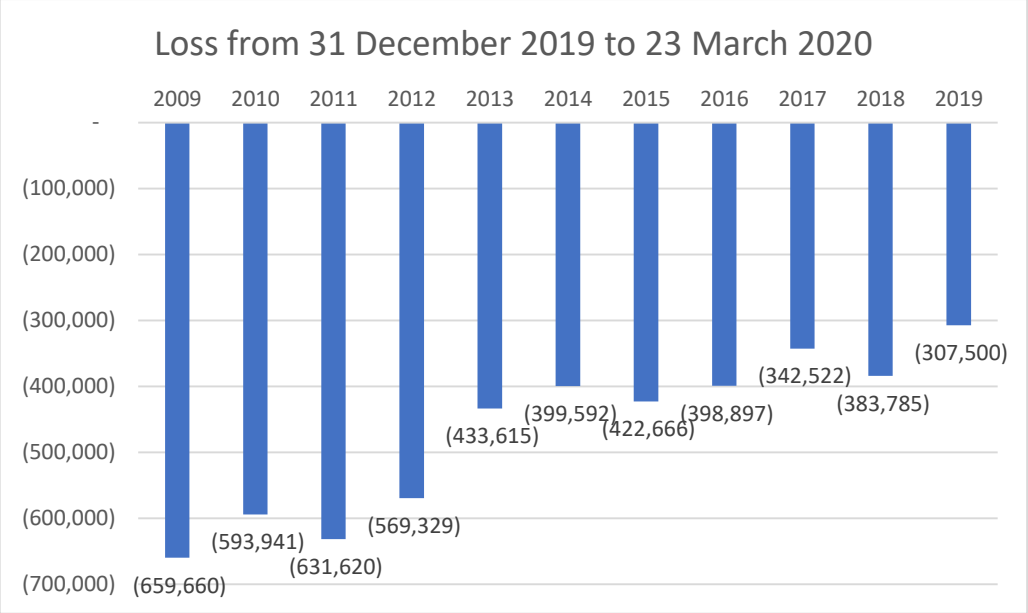


Figure 4: Loss from 31 December 2019 to 23 March 2020

In Figure 5 the relationship between the years retired and the percentage gain or loss over entire investment period till date of crash is displayed. Despite being retired for 10.25 years and making annual inflation adjusted withdrawals the 2009 retirees experienced capital growth of 48.6%. The retirees of 7 years and longer all experienced net capital gain whilst shorter retirees had to endure net capital loss. The 2019 retirees lost 30.75% in a mere 83 days after their initial retirement.

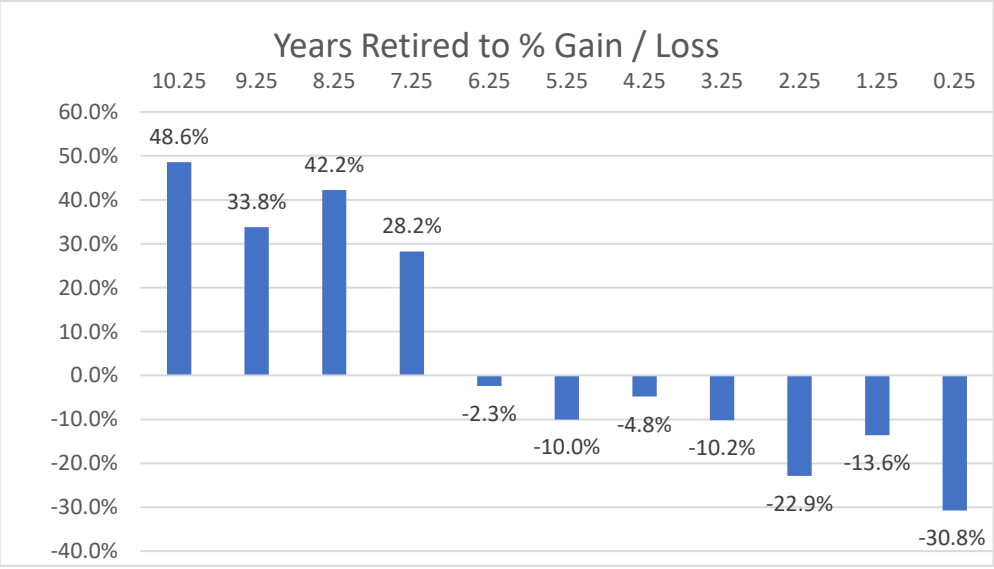


Figure 5: Years Retired to % Gain/Loss

5 CONCLUSION

The general trend is that those who were longer retired ended with higher amounts than those who enjoyed shorter retirements. At the market-crash the FIRE retirees of the first 4 years (2009 till 2012) using 4% inflation adjusted withdrawals all had their initial $1,000,000 capital plus growth. (Highest positive balance: 2009, $1,485,574, increase of 48.6%. Lowest positive balance: 2012, $1,282,147, increase 28.2%). The record bull run of 11 years

contributed largely to this. The more recent retirees from end 2013 onwards all had their initial $1,000,000 investment decreased to below initial capital invested. Particularly hard hit was the 2019 retirees who experienced a drop of 30.75% of their capital in the first 83 days of their retirement. Further studies can be done on how the market recovery indicated by Figure 2 changed the capital balances by year end 2020. It is also worth investigating if the market scare did actually send early retirees back to work.

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COVID-19: Unmasking the Digital Gender Divide in a Pandemic

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Abstract

The digital revolution has paved the way to a digital world that stimulates economic growth, develops health outcomes, and raises millions out of poverty by means of new technologies and services. The COVID-19 outbreak hastened the implementation of digital solutions at an exceptional speed, producing unforeseen opportunities for alternative methods to social and economic life. On the other hand, the COVID-19 crisis threatens to repel hard-won achievements in gender equality, further revealing women's vulnerabilities based on their already existing economic, social and political situations. Tackling the digital gender divide is essential to guaranteeing sustainability of women's livelihood. Therefore, the aim of this study is to find out if the COVID-19 crisis is enforcing existing digital inequality keeping in mind that failure to address the gender digital divide will increase gender inequality.

Keywords: Digital revolution, COVID-19, gender equality, digital gender divide, digital inequality

Introduction

The World Health Organization (WHO) deems the coronavirus disease (COVID-19) a public emergency endangering global health [1]. Governments all around the world have taken rigid actions, including but not limited to, maintaining social distancing, shutting public services, schools and universities, and calling off cultural events [2,3]. People are being instructed or directed to stay at home and socially quarantine themselves to prevent being infected [4]. The unceasing pandemic exemplifies an outbreak of an unprecedented scale, which has led to a widely spread fear and ambiguity. This current situation caused by Covid-19 and the worldwide health emergency has resulted in most people resorting to the internet and its services to communicate, interact, and carry on with their job responsibilities from home. Internet services have seen upsurges in utilization from 40 % to 100 %, compared to pre-lockdown levels. Video-conferencing services similar to Zoom have increased ten times in usage, and content delivery services such as Akamai have experienced a 30 % rise in content usage [5]. Therefore, people who are considered to be on the wrong side of the digital divide are totally left out.

Despite the evolution that the world has witnessed over the years in terms of the considerable growth in access and the development of new applications and more affordable computing devices, there are still substantial obstacles to overcome in making sure that women are involved in the transformation to a digitally enabled society. Ensuring that women can effectively take on new digital technologies would promote global productivity and social development [6]. Nevertheless, a closer investigation shows important gaps not only in terms of digital access but also in the aptitude of particular social groups to leverage new technological applications for socio-economic growth [7]. Numerous research show that cultural disparities between genders have propelled, to a certain extent, females towards signing up for technical careers [8,9,10,11], having rejected their presence in the previous two decades [12,13,14,15,16]. Several of these studies have indicated that technology and computers are often deemed men tools [17,18,19,20,21]. One of the potential reasons of such decline may be that females use video games less than males for their leisure, being one of the gateways to technology [18,22,23,24,25,26,27,28,29]. Realistically, the digital gender gap may be associated with the low participation of women in technical careers. In addition, females opt for careers related to health, education, and the services sector, while males choose technical careers such as engineering and computer science, where females contribute to just 10% [30].

The concept of a “digital gender divide” which signifies that there is an inconsistency between women and men’s access to IT technology [31, 32, 33]. According to a 2018 Organization for Economic Co-operation and Development (OECD) report, there are many fundamental reasons as to why there is gender-based digital exclusion [34]. The most eminent causes include restricted access to digital tools in terms of affordability, lack of skill and/or education and lack of technological literacy as well as ingrained gender biases and socio-cultural norms. While connectivity in general is a challenge for developing countries, the aforementioned factors influence women worldwide. Approximately, 327 million more males than females own a smartphone and have access to mobile internet. On average, females are nearly 26% less likely than males to own a smartphone. For instance, in South Asia and

Africa these percentages are exceptionally noticeable as they stand at 70% and 34% respectively [34].

ICTs have the ability to transform industries by offering opportunities to provide services in new and efficient ways, which can reach the most underprivileged sectors of societies. Therefore, the aim of this research paper is to find out if COVID19 crisis is strengthening the worst impacts of the digital gender divide in the Lebanese society and deduce whether Lebanese females who don't have access to digital tools and services will be left behind, aggravating existing gender inequalities.

Literature Review

Gender divide and the role of ICTs

The digital divide is a new form of inequality, which has been added to the already existing types of discrimination. According to Hilbert, the term digital divide refers to "an inequality in the power to communicate and to process information digitally" [35]. In most countries, men have a higher Internet access rate than women have and especially in developing countries and this brings digital gender divide term to the concept [36]. The study of the digital divide has its roots in early forecasts of social inequality in the information society. Originally, information poverty, evaluated through unequal access to Information and Communications Technology (ICT) and the network infrastructure, attracted scholars' attention worldwide [37]. In fact, the unequal access to digital networks and infrastructure, which has led to an unequal access to information and online services that they provide, formed the first phase of the digital divide research [38]. Apparently, the first phase of the digital divide study was characterized by a clear political economic approach. For instance, Pippa Norris referred to ICTs as "a Pandora's box unleashing new inequalities of power and wealth, reinforcing deeper divisions between information rich and poor, the tuned-in and the tuned-out, the activists and disengaged" [39].

Gradually, it became clear that the digital divide is not simply an access problem but a complex multidisciplinary phenomenon closely associated with the political, economic and cultural development of a society. Scholars emphasized that, taking into consideration the numerous aspects of a society's life, "there is more than one digital divide". They also pointed out that the interpretation of the digital divide as a binary division between haves and have-nots is not applicable [37]. Researchers apprehended the complexity of the issue and debated that "digital inequality should not be only the preserve of specialists but should make its way into the work of social scientists concerned with a broad range of outcomes connected to life chances and life trajectories" [40]. The digital divide has drawn the attention of researchers from numerous research areas, including sociology, political and economic studies, anthropology and more [37].

It is worth mentioning that uneven access to digital technologies and media, in addition to an early perception of digital inequality, endorsed the concept of "digital inclusion" as a substitute for considering the digital divide as "digital exclusion". To begin with, it became apparent that policies looking to bridge the existing digital gaps should be directed at building digital inclusion – in technological, economic and usage forms. Concurrently, it was evident that the technological inequalities were mostly determined by "the societal and cultural norms

of the existing society, and there has been a long historical trajectory of how the human race has embraced and advanced technologies over the time" [41].

Technology regeneration is another aspect of digital divide which acknowledges that technologies evolve at extremely high speeds, further exacerbating efforts to relieve inequality [42], as end-users do not use technology equally or at the same speed[43]. For instance, an individual who routinely uses computing devices and the internet might still encounter a gap of not having integrated social media, wearable devices, networked or smart tools, or health information technology into their typical ICT behavior [44]. E-inclusion is, thus, best apprehended along a spectrum; it no longer considers that there are basically "civilized tool-users and uncivilized non-users," which, "can be marginalizing and patronizing in its own terms" [45]. When hypothesizing the digital divide, it is therefore essential to: (1) show it along a continuum; (2) indicate its diametric association with the notion of e-inclusion; and (3) specify its relationship to behavioral measurements (e.g. ICT use) and determinants (e.g. access).

The gender digital divide

Gil et al. presented four obstacles that stop women from accessing and using ICTs and the Internet: Lack of technology education, limited free time, social norms which support men, and financial and institutional restraints [46].

Melhem, Morrell and Tandon clarify how women gain from knowledge less than men because of having particularly less access to technology field and to education in general [47]. Having access to the education is still a bigger obstacle for women when compared to men, knowing that almost two-thirds of the illiterate world population consists of females [48]. Many women require the knowledge of applying technology or in becoming accustomed to it as a reason for not using the Internet. The high rates of women's illiteracy and the absence of ICTs training can be considered as two major issues in joining the information economy. Furthermore, based on UN e-Government Survey in 2012, 90% of the online content is in English, while only one-third of the world Internet users speak English [36].

Women in developing countries worry about domestic responsibilities as well as family and children related issues. Moreover, due to their high burden responsibilities and their roles as primary caregivers, there is not much time remaining to try new technologies. In some cases, along with their other responsibilities, women need to work in order to take care of the family in case they are single moms or to help their spouses in handling the family income [48]. The absence of free time along with their household duties and sociocultural customs that give a low priority to education are the main reasons why many women do not attend school. Another point is the autonomy of using the Internet in case women are provided access it, and to which extent the other family members control their autonomy. The greater the autonomy of use is, the greater they benefit [49].

According to the World Economic Forum report, outdated beliefs and social norms are forcing women into traditional roles and restraining them [50]. Often, technologies are considered to be within the domain of men and the notion of men having control of technology, information and knowledge has reduced women's chances to learn, have access to, use or profit from technology [48]. Many obligations forced through social norms confer

control of technology to men. Gender gap in access, usage and the possession of ICTs is powered by a collection of social norms and cultural barriers, which have a negative effect on women. While more than two-third of women around the world have a lack of access to the Internet, their chances of having education and career opportunities are globally less than men and in some developing countries, they are faced with restraining gender inequalities and discriminations [48].

According to Chadwick et al., since ICTs play an important role in collecting and sharing information, using those technologies can increase power and control in society. They explain how access to ICTs among disempowered groups who have limited economic resources has been minimized. More than 1 billion people live in developing countries and in rural areas and are surviving with an average of $1 to $2 per day [48]. The collection of laws, policies and social norms in these countries build barriers for women and refrain them from developing their skills and earning higher incomes. Therefore, they are considered minorities when it comes to having access to or using new technologies, or being able to afford technologies that might support them economically [47, 48]. The prevailing gender discrimination may negatively influence women in all aspects of political, social and economic empowerment as well as in labor markets. Furthermore, this discrimination hinder women's education and training opportunities and consequently the allocation of financial resources for doing business [51].

Determinants of COVID-19 related Internet uses and outcomes

Digital inequality research proposes that the massive amount of web-based information and communication options around the COVID-19 pandemic are probably difficult to obtain and theorize for sections of the general population. Some regularly examined personal categorical inequalities are gender, age, personality, and health [52]. Earlier research discovered that males and females vary in their internet activities; females are more likely to use the internet for email and social media; while males are more likely to use the internet to attain information [53, 54]. Age in general has a negative impact on all types of internet uses and outcomes [52]. In the COVID-19 crisis, older people are particularly susceptible; therefore, it is very imperative for them to know how to act and stay safe.

An individual's personality may hamper or motivate their engagement in specific COVID-19–related activities. The cognitive appraisal theory proposes that individuals reveal two types of cognitive appraisal processes in a crisis [55]. The process begins with an assessment of the crisis as a possible source of danger or life disruption. If the crisis is not viewed as being dangerous, it is not considered a stressor and does not need intervention. Conversely, if the crisis is considered relevant, it is viewed as a stressor and must be further assessed by comparing the demands of the crisis and the person's resources [56]. At this point, personality is added to the equation [56]. There is a consensus related to the Big Five model when personality traits are analyzed. This model suggests five personality traits of agreeableness, neuroticism, conscientiousness, introversion, and openness [57]. However, there is no clear understanding as to whether these traits contribute to or diminish resisting disturbance [56]. In addition, there is no consensus on how the Big Five personality traits are associated with internet use [52, 58]. For example, conscientiousness is connected to people who abide by rules. On one hand, one might debate that this would lead to a greater need for information on how to act. On the other hand, the internet is unrestricted, and rules and

procedures are largely absent. When associating personality traits with internet use for psychological acclimatization to the COVID-19 crisis, it is not apparent whether these traits will assist or hamper COVID-19–related internet uses and outcomes.

Education is the most examined positional categorical inequality in digital divide research, and is expected to play a role in the present context. People with higher levels of education are more prepared to understand web-based information and profit from internet use [52]. Glied and Lleras-Muney theorized, "Improvements in health technologies tend to cause disparities in health across education groups because education enhances the ability to exploit technological advances. The most educated make the best use of this new information and adopt newer technologies first." Education is one of several reasons contributing to digital exclusion. However, regardless of the reason, knowledge and behavior gaps created in this way have frequently presented a depressing propensity to remain unbridged for years, and even for decades [59].

Methodology

In order to achieve the aim of this research paper, the authors used a web-based survey and drew upon a sample collected in Lebanon. The survey comprised two sections: section one was designated to collect demographic information about the participants (including gender and educational level), while the second part identified their input regarding Lebanese females' access to technology and whether COVID19 has increased the digital gender divide.

In the first section of the survey, the educational level ranged from primary school to postgraduate degree. This was followed by ten closed questions that were used to collect data in order to draw generalized conclusions based on statistical analysis. By answering those questions, respondents provided the authors with a clear understanding of how different people use the internet to meet their information and communication needs and the results they obtain from their internet use in relation to the COVID-19 pandemic (see Appendix 1).

Results and Discussion

This research paper collected quantitative data through a survey which was circulated through Google Forms. Survey answers were collected from Lebanese females and males who live in different areas of Lebanon, between the periods that extended from January 20 till February 3, 2021. The study was able to collect around seventy three responses. The aim of the survey was to provide a broader understanding of the digital gender divide in the case of a major health pandemic by using the ongoing COVID-19 crisis as a context for empirical work.

The gender of the respondents was almost equally divided between males and females as females constituted 51% and males 49%. 73% of the respondents held postgraduate degrees, 25% undergraduate degrees, 1% high school degrees, and 1% had a primary school education level.

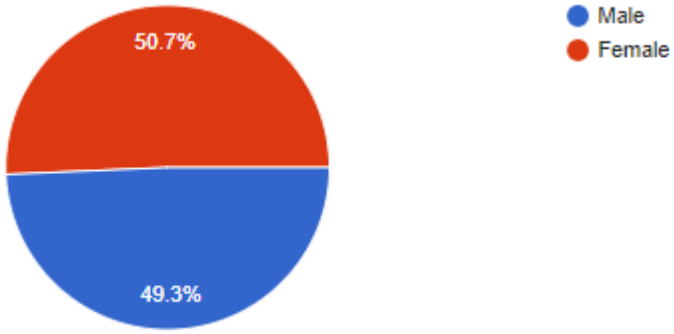


Fig. 1. Respondents' gender

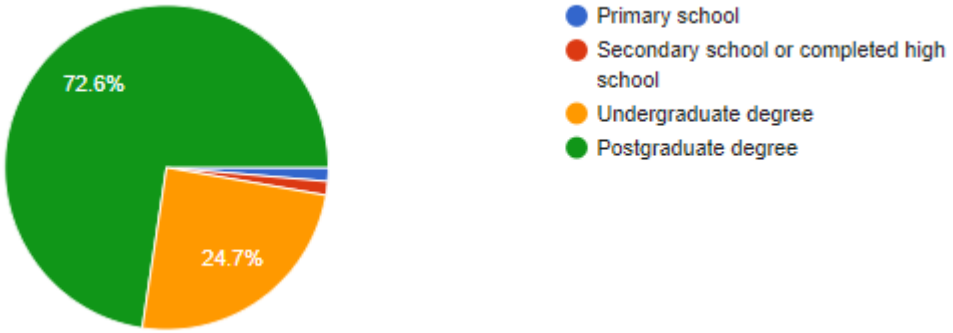


Fig. 2. Respondents' educational level

The opportunities computing devices offer are known to be associated with disparities in internet uses and outcomes. Since each device has its own explicit characteristics and advantages, a greater diversity of devices offers a wider range of use activities and outcomes [60]. To measure material internet access, we considered four devices used to connect to the internet, which included smartphones, desktop computers, laptop computers and tablets. All of the respondents own a personal mobile device. However, 33% of male respondents use of all these devices to access to internet while 16% use only smartphones. As for female respondents, 38% use all of the above-mentioned devices to access the internet and 3% use only smartphones.

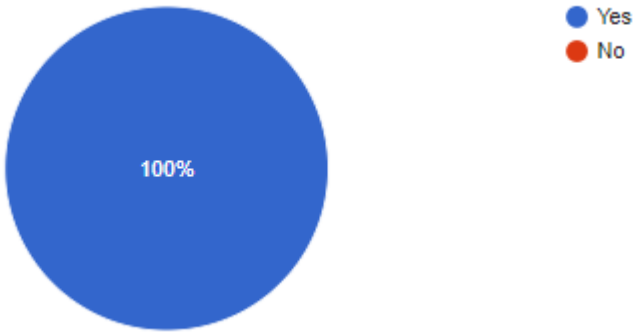


Fig. 3. Respondents' possession of a personal mobile device

“Access to the Internet is defined as a process of appropriation that starts with general attitudes toward the Internet and advances to having physical and material access” [60]. When asked how often the respondents have access to afore-mentioned computing devices, 92% of male respondents said that they have access at least once a day while the percentage of females was higher at 97%. While no female respondents had access to the internet once every few months, 3% of the male respondents did.

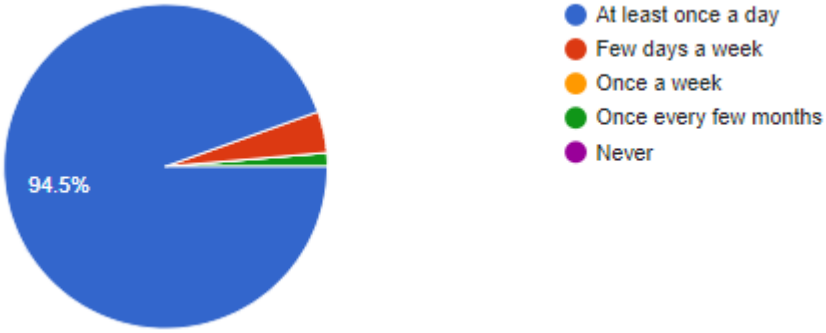


Fig. 4. Respondents’ frequency of access to the internet

Regarding gender, contrary to common internet use, men were found to be more likely to participate in communication-type COVID-19–related internet usages during the crisis than women were. A probable explanation is that men and women may react to crisis news in different ways [61]. When asked about how they have access to COVID news, 67% of male respondents said through digital devices while the percentage of female respondents who used digital devices to access COVID news was 86%. Similarly, when asked if the internet has been essential during the coronavirus outbreak, 64% of male respondents believes that it has been while 73% of female respondents thought that the internet has been essential during the pandemic.

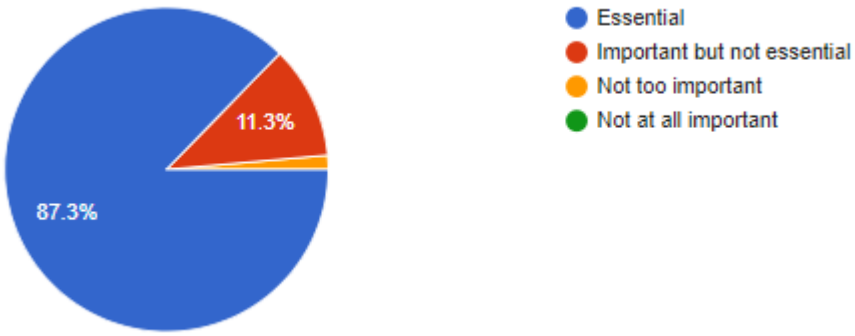


Fig. 5. Respondents’ thought about the internet being essential during COVID outbreak

The internet has become a fundamental source of information for the public, as it offers access to general information, the most recent national and international developments, and procedures on behavioral norms during the crisis. In this context, the internet plays an important role in the great obstacles facing governments regarding the transmission of

knowledge and guidelines to the population at large [62, 63]. When respondents were asked about the method they use to have access to COVID news, 73% of female respondents opted for using digital devices (e.g. tablet, smartphone, computer) to have access to COVID news, while only 8% preferred watching or listening to COVID news (e.g. radio, television). As for the male respondents, 64% stated that they use digital devices (e.g. tablet, smartphone, computer) to have access to COVID news and 19% affirmed watching or listening to COVID news (e.g. radio, television).

In conclusion, more Lebanese females than males have access to the internet at least once a day. In addition, more females than males believe that the internet is essential during the COVID outbreak. Lastly, more females than males use digital services such as smartphones and tablets to receive news about COVID.

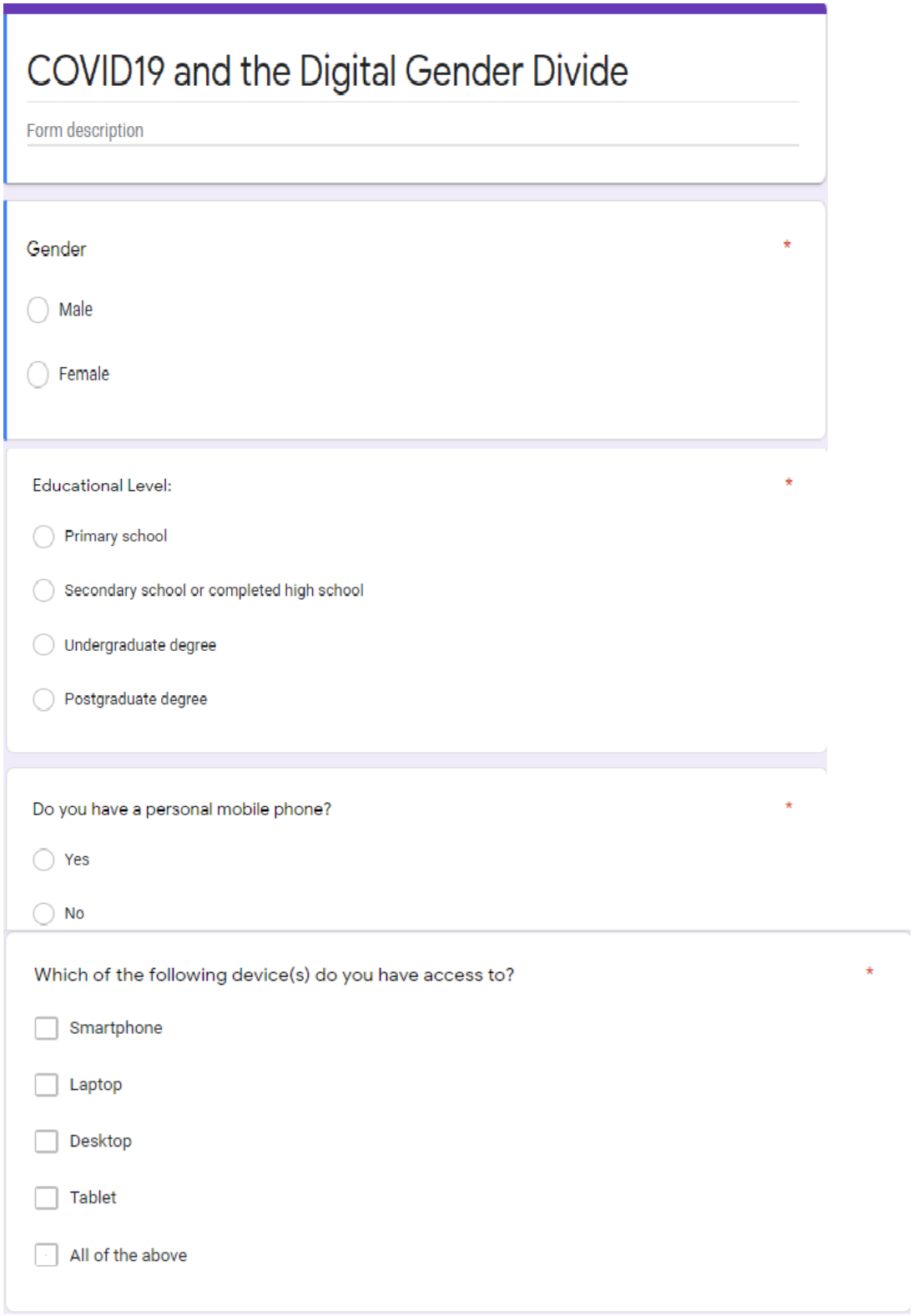
Conclusion and recommendations

Digital inequality research has proven that internet access is not evenly disseminated among the general population [52, 64]. The simple idea of digital inequality is derived from a comparative perspective of social and information inequality, as there are benefits linked to internet access and negative outcomes of lack of access. Internet use and differences in outcome among groups of people are likely to have reflective outcomes on how people handle a crisis. As COVID-19 increases people's dependence on digital services, men will profit in a disproportionate way to women since they will have more access to lifesaving information. Women and girls who do not have access to strength-building information will be left behind, worsening existing gender inequalities. Women are, on average, 14 percent less likely to possess mobile phones than their males, and 43 percent less likely to participate online [64]. Therefore, the aim of this research paper was to provide a comprehensive examination of digital inequality in the case of an unprecedented health pandemic and to find out if the coronavirus crisis is reinforcing the worst impacts of the digital gender in Lebanon.

As the need for mobile devices grows, it is becoming a very effective tool for providing life-enhancing information, services, and opportunities. Mobile phone ownership and mobile internet use have increased significantly among Lebanese women. The study shows that more Lebanese females use the internet at least once a day than their male counterparts. Consequently, more Lebanese females have access to COVID news using digital services (e.g. tablet, smartphone, and computer) than Lebanese males do. Moreover, more females than males think that the internet has been essential to them during the coronavirus outbreak as it helps them have better access to health information.

Although research shows that women and girls are relatively disadvantaged and are less likely to use the information and communication opportunities offered by the internet to their advantage in a health pandemic. However, access to the internet by both Lebanese men and women is almost identical as they are utilizing the same digital technology. And while low levels of education and skills constrain women's ability to access and use digital technologies, Lebanese females seem to be equipped with the right skills which they used to their benefit in the pandemic. Thus, the COVID-19 crisis is not an enforcer of existing digital inequalities in Lebanon.

Appendix 1



COVID19 and the Digital Gender Divide

Form description

Gender *

- Male
- Female

Educational Level: *

- Primary school
- Secondary school or completed high school
- Undergraduate degree
- Postgraduate degree

Do you have a personal mobile phone? *

- Yes
- No

Which of the following device(s) do you have access to? *

- Smartphone
- Laptop
- Desktop
- Tablet
- All of the above

How often do you have access to those ICT (information and communications technology) devices mentioned in the previous question? *

- ( ) At least once a day
- ( ) Few days a week
- ( ) Once a week
- ( ) Once every few months
- ( ) Never

Which of the following statements best describes how you have access to COVID news? *

- ( ) I only watch or listen to COVID news (e.g. radio, television)
- ( ) I read the COVID news more often on digital devices (e.g. tablet ,smartphone, computer)
- ( ) I read the COVID news more often on paper (e.g. newspapers, magazines)
- ( ) I read the COVID news equally often in paper format and on digital devices

Does the handset you use most often have the following? *

- [ ] Touch screen
- [ ] Ability to access the internet
- [ ] Ability to download apps
- [ ] Ability to send and receive SMS

How has 'using a mobile phone' affected your life? *

- [ ] I feel safer
- [ ] I have better access to health information and services
- [ ] I have better access to education services and learning opportunities
- [ ] I am able to do small/routine jobs more conveniently during COVID

How often do you use the Internet on your mobile device? *

- ( ) At least once a day
- ( ) A few days a week
- ( ) Once a week
- ( ) Once every two weeks
- ( ) Once a month
- ( ) Once every few months
- ( ) Never

If you don't have internet access on your mobile device, what has been preventing you from doing so? (please skip question if it does not apply to you)

- [ ] I don't have access to an Internet-enabled device
- [ ] There is no network connection, or there is poor network connection where I live
- [ ] Credit/monthly bill is expensive
- [ ] All of the above

What is the main purpose for using the Internet? *

- [ ] Entertainmnet
- [ ] Education
- [ ] Work
- [ ] E-services such as online banking
- [ ] Social networking

Do you think the internet has been essential to you during the coronavirus outbreak?

- ( ) Essential
- ( ) Important but not essential
- ( ) Not too important
- ( ) Not at all important

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India's Missing Working Women: How COVID-19 pushed women out of formal labour markets

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Abstract

India's women were disproportionately impacted by COVID-19 induced lockdowns and economic disruptions. Recent high frequency data demonstrates that that women suffered massive job and income losses. In December 2020, nine months into the lockdown, there were still 11.5 million fewer persons in the labour force vs. December 2019, 4 million men and 7.5 million women. The overall size of the labour force shrunk by 2.6% between December 2019 to December 2020, yet the size of the female labour force shrunk by 14%, vs. 1% for men. Women faced stricter mobility restrictions, limiting their access to workplaces. Across income strata, women's unpaid domestic responsibilities increased, with some estimates showing a 30% increase in carework, leaving them little time for seeking renumerated employment. Gender digital divides worsened, leaving women without access to digital business and online education, increasingly important in a post-COVID-19 economy. Most importantly, women faced the scourge of the shadow pandemic of domestic violence, rendering them insecure and unable to work. Despite being one of the world's fastest growing emerging economies, only a quarter of Indian women were in the labour force even pre-COVID-19. Analysis of time series data over the last five decades (1970-2018), shows that women's labour force and workforce participation rates have secularly declined to their lowest levels since Independence. Given this disparate impact of COVID-19, in the absence of targeted policy interventions designed to support retention and promote women's workforce participation, women are likely to continue being excluded from India's spectacular growth story.

Keywords: Women, labour force, wage gaps, India, post-COVID-19 recovery

Introduction

The workforce is not a 'gender neutral' sphere where only one's qualifications, skills, and performance determine entry into or progress in a profession. Starting from the very decision to gain an education, to entering the labour force, to the kind of work they can take on, to the hours they can spend at work, and even the location of their workplace, Indian women face restrictions owing to deeply entrenched patriarchal norms. The burden of domestic work and unpaid care further inhibits women's ability to acquire skills for better jobs, leading to a vicious cycle, such that women continue being kept out of the labour force. Consequently, women's work has remained largely informal, invisible, and labour-intensive. (Sudharshan and Bhattacharya, 2008). In this context, the imposition of the COVID-19-induced national lockdown in March 2020, followed by intermittent localised lockdowns, and the looming threat of the COVID-19 pandemic even up to the writing of this paper in December 2020, put women's already poor levels of job security at even greater risk.

This paper aims to shed light on the impact of COVID-19 on women's work by studying five trends that affected them disproportionately: massive job and income losses, mobility restrictions, unpaid domestic work, gender-based digital divides, and the shadow pandemic of domestic violence. We hope to contribute to the research on women's economic empowerment, documenting the conditions that have affected women's labour force and workforce participation through data analysis, secondary research and literature reviews.

Methodology

This paper follows a mixed methods approach. Secondary data analysis helped in capturing historical trends in labour market outcomes. An analysis of time series data (at the all-India level) over the last five decades (1970-2018) was conducted to examine the trends in labour market outcomes. This data was sourced from Periodic Labour Force Surveys conducted by the National Sample Survey Organisation, published by the Ministry of Statistics, Programming and Implementation, Government of India. Monthly data on key labour market indicators, published by the Centre for Monitoring Indian Economy's (CMIE) Economic Outlook Database, was used to study the impact of COVID-19 on women's economic participation. This was followed by a thorough review of literature, complemented by consultations with academics and field practitioners to help in contextualising the findings, appreciating the underlying causes of observed trends and developing forward-looking recommendations.

1. Historical trends in women's labour market outcomes

1.1.Female Labour Force and Workforce Participation

The female labour force participation rate (FLFPR) is the proportion of women in the population who are working or are looking for work. Rising from about 24% in 1955-56, the FLFPR (for all ages) peaked at 33% in 1972-73. It then showed a decline till 1999-00, when it touched 26%. It increased mildly to 29% in 2004-05 only to reduce to a dismal 17.5% in 2017-18—**its lowest ever in the history of Independent India**, improving slightly to 18.6% in 2018-19**.** The FLFPR for 15 years and above declined steadily from 47% in 1987-88 to 24% in 2018-19. The **difference between the proportion of men and women in the labour force has remained at about 40 percentage points over the last five decades**.

The rural FLFPR (15 years and above) nearly halved, falling from 53.7% in 1987-88 to 26.4% in 2018-19, with a marginal uptick to 26.4% in 2018-19. On the hand, the urban FLFPR fell

from 26.1% in 1987-88 to 19.4% in 2009-10 and has remained flat at about 20.5% since 2011-12. **Thus, the exodus of rural women from the labour force was as a key driver of falling FLFPR, especially since 2004.**

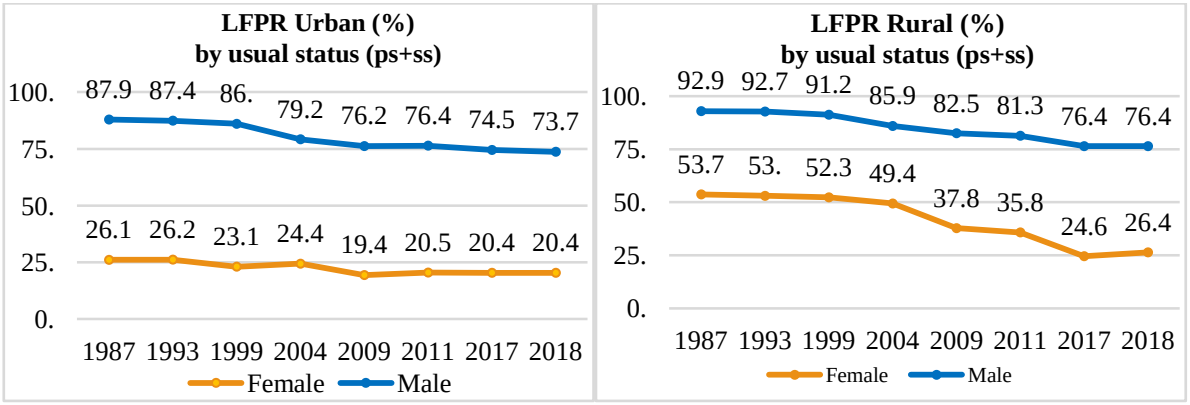


Fig. 1: Labour participation rate for men and women (15 years and above) in rural and urban areas (1987-2018). (Source: Data from National Sample Survey Organisation)

Throughout the four decades starting from the 1980s, the proportion of working women (15 years and above) witnessed a secular decline. Between 1987-88 to 2018-19, the rural female workforce participation rate (FWPR) fell from 52.8% to 25.5% and the urban FWPR fell from 25.1% to 18.4%. On the other hand, rural male WPR declined from 91.1% to 72.2%, and urban male WPR declined from 84.5% to 68.6%. Unemployment rates for women remained consistently higher than men between 1972-73 to 2018-19. URs for both men and women showed sudden spikes over the 2011-12 to 2018-19 period. Notably, the UR for urban women increased from 5.2% to 10.8% (the highest since 1977-78) and saw a mild decrease to 9.9% in 2018-19, while for rural women it increased from 1.7% to 3.5%.

Notably, **there was an increase in the proportion of employed women working as salaried or regular workers, in urban areas**. In rural areas, 2.8% of working women were regular workers in 1983-84, vs. 10.3% of working men. These proportions changed to 11% and 14.2% in 2018-19. This trend was even more pronounced in urban areas, where the proportion of women in salaried work almost doubled from 25.8% to 54.7% between 1983-84 and 2018-19, vs. a just a 4-percentage point increase for men, from 43.7% in 1983-84 to 47.2% in 2018-19.

About 35% of rural female workers were engaged as casual labour in 1983-84; this reduced only slightly to about 29.3% in 2018-19 (Any person who was casually engaged in others' farm/non-farm enterprises—both household and non-household—and, in return, received wages as per the terms of the daily/periodic work contract, is considered as casual labour). Rural males engaged in casual labour fell marginally from 29% in 1983-84 to 28% in 2018-19. On the other hand, with increasing participation in salaried employment, women's engagement in casual labour in urban areas more than halved from 28% in 1983-84 to 10% in 2018-19. For urban males however, there was no such decline, as their participation in casual labour remained stagnant, 15.4% in 1983-84 to 14.2% in 2018-19. **Thus, casual labour has continued to be the norm for rural women over the last five decades.**

1.2.Wage Differentials

Wages for women have remained fundamentally low and the **gender wage gap has remained sticky over the last three decades, i.e. between 1993-2018**. Average female wages for

casual work in rural areas have stood at ~66% of the male wage. For casual work in urban settings, this increased in 2018 to only 63% of the male wage. Regular rural workers saw the gender wage ratio improve (59% to 64%). Gender wage gaps were lowest for urban salaried workers; the gender wage ratio remained at ~79%.

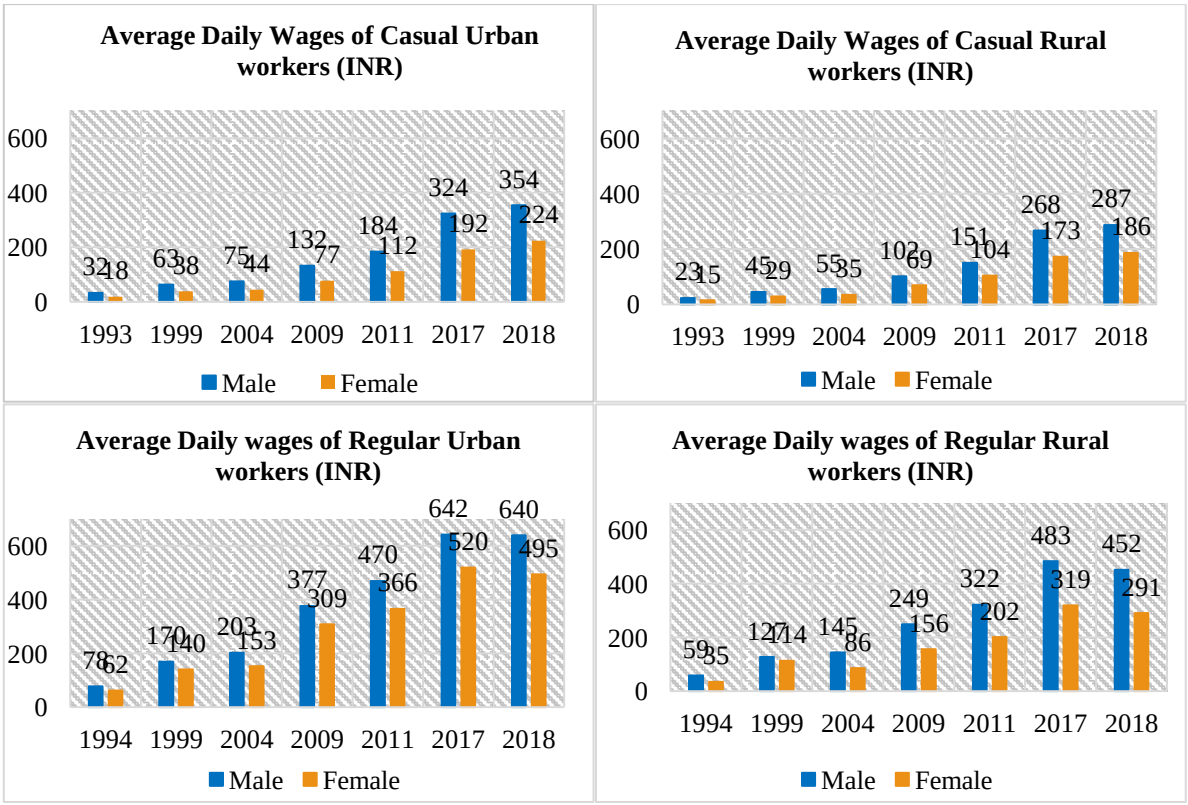


Fig. 3. Comparison of average daily wages of casual/regular workers by gender in rural/urban areas (1993-2018) (Source: Data from National Sample Survey Organisation)

A survey of the literature provides several explanations for these trends. Men tend to migrate to urban areas as rural wages are about 1/3rd the urban wage, leaving women in low-paying rural jobs (ILO, 2018). Sticky stereotypes of "women's work" being labour intensive, coupled with low levels of skilling, leads to women performing unskilled/helper roles in the organised manufacturing sector, resulting in lower wages (Galbraith et al., 2004; Dutta, 2005; Das, 2007). Career breaks and the ensuing loss of experience due to childbirth lead to "motherhood penalties" to the extent of 3% - 10% per child globally (Bhalla and Kaur, 2011; Agüero et al., 2020). In India, almost 69% of women in the formal workforce expect a pay cut when restarting their careers post motherhood (Rajesh et.al., 2019), and mothers are likely to receive fewer call-backs to their applications (Bedi et al.). Ultimately, the perception and positioning of women as supplementary wage earners can explain the existence of a gender pay gap even when a man and women are at similar education and experience levels, working in the same industry. (Duflo, 2012; Das, 2012; Varkkey et al., 2017).

2. Impact of COVID-19 on women's work

Over the last seven decades, women's labour force and workforce participation has reduced and consistently remained below that of men. There has been an exodus of women from the labour force, particularly in rural areas. A high proportion of working women are in casual employment, especially in rural areas, vis-à-vis men. With the imposition of a nation-wide lockdown in March 2020, gender gaps in labour market outcomes widened. CMIE data reveals the deepest impact on

labour market outcomes was felt in the months of April/May 2020, with some improvement in June/July, and a second dip in August/September owing to rising COVID-19 caseloads. While there was a slight improvement in October, this was followed by deeper losses in November and December. We explore the five trends driving these gender gaps, their likely role in post-COVID-19 recovery, and present finding from stakeholder consultations for the same.

2.1. Massive Job and Income Losses

A review of high frequency CMIE data reveals that not only were initial labour market impacts stronger for women, but the recovery of women's employment was also slower as well. We explore the trends in labour force participation, workforce participation and unemployment below.

2.1.1. Trends in labour force participation

The size of the labour force contracted from 433.8 million (383.4 million men, 50.4 million women) in March 2020 to 369.0 million (332.0 million men, 37.0 million women) in April 2020. *Between March-April 2020, 13.4 million women, (26.6%), moved out of the labour force vs. 51.4 million men (13.4%).*

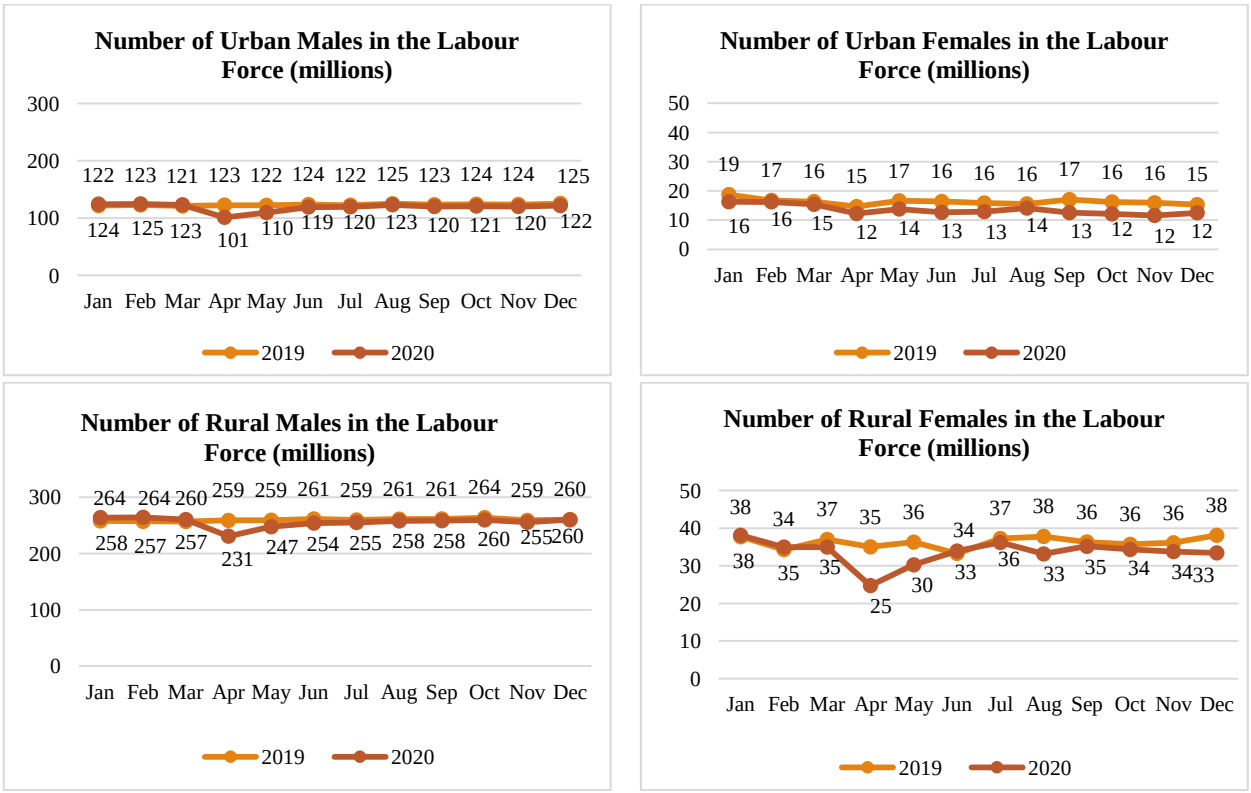
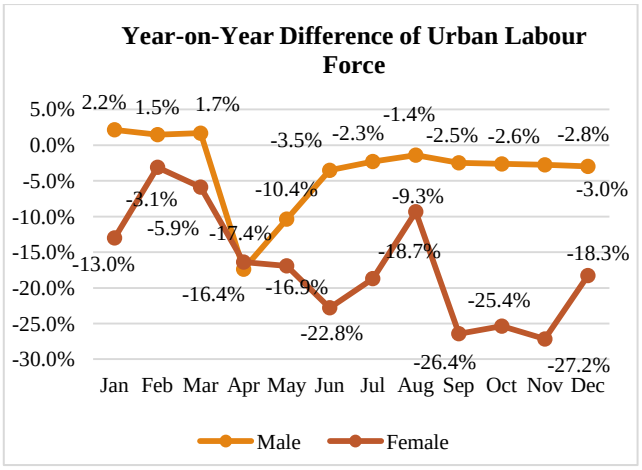
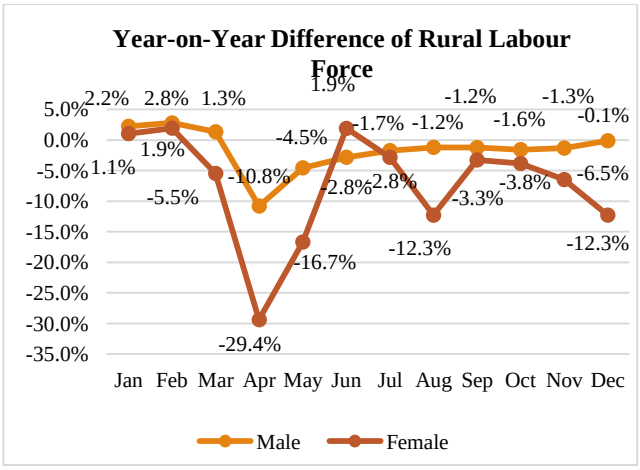


Fig. 6: Urban/rural men and women in the labour force (January-December 2019, 2020) (CMIE).

In December 2020, nine months into the lockdown, there were still 11.5 million fewer persons in the labour force vs. December 2019, 4 million men and 7.5 million women. The overall size of the labour force shrunk by 2.6% between December 2019 to December 2020, the size of the female labour force shrunk by 14%, vs. 1% for men. Of these 7.5 million women displaced from the labour force, 4.7 million were rural women, vs. 2.8 million urban women. Urban women suffered the deepest losses, with labour force contracting by 18.3%, vs. 3% for urban men. The rural labour force contracted by 12.3% for women, vs. 0.1% for men.





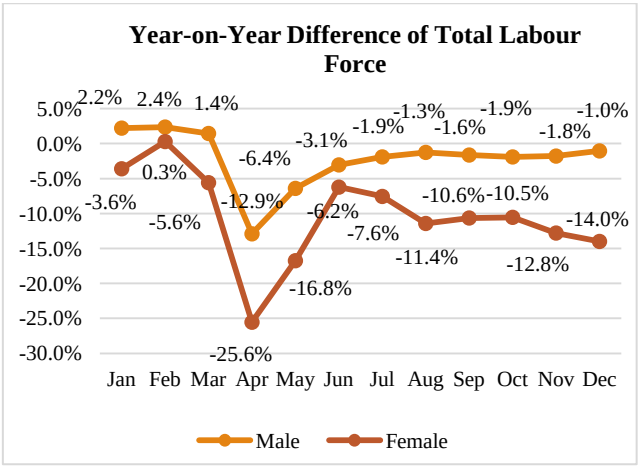
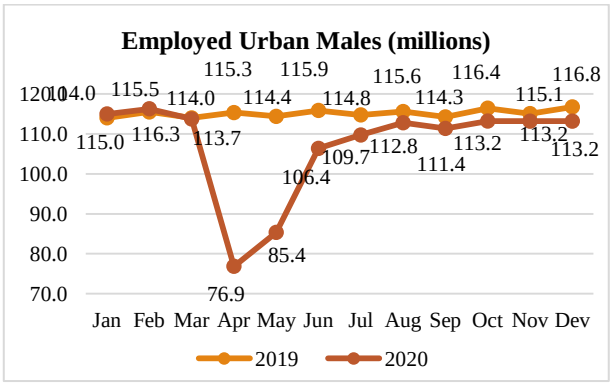
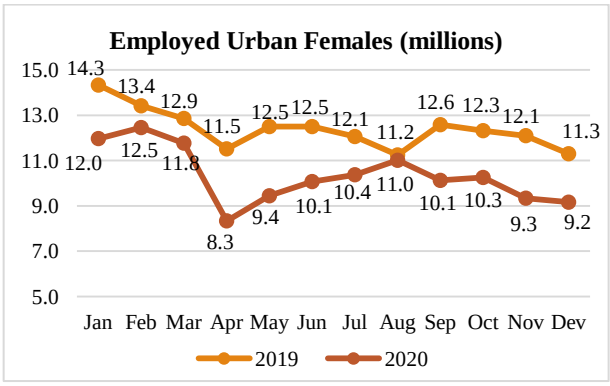


Fig. 7: Year-on-Year Difference of Labour Force (January-December 2020 vs. 2019) (CMIE).

2.1.2. Trends in workforce participation

113.6 million workers lost jobs between March-April 2020, of which 15.4 million were women. While the absolute fall in male employment was far greater, the proportionate fall for women was higher, as *37.1% of women lost their jobs, versus 27.7% men.* As trade and mobility restrictions eased employment almost recovered to March 2020 levels in November, 393.5 million (November) vs. 395.8 million (March), before reducing back to 388.8 million in December.





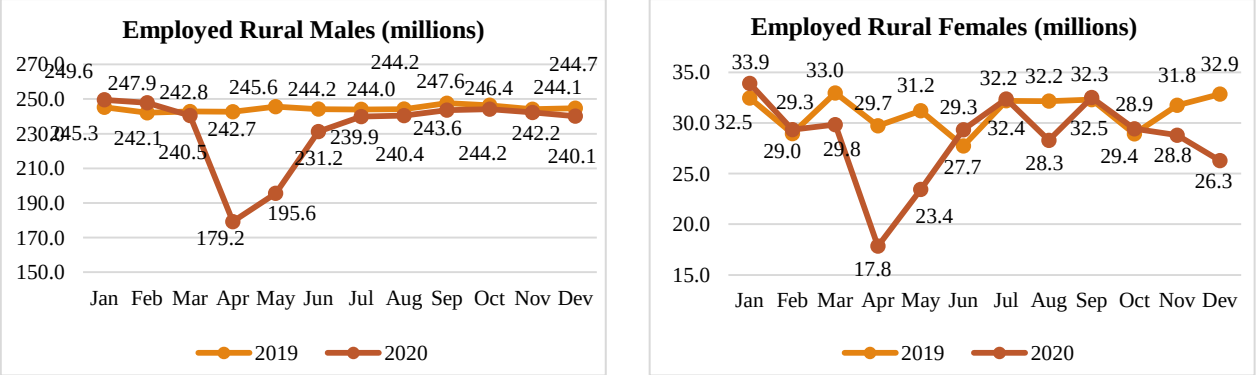


Fig. 8: Employed rural/urban men and women during the pandemic (January-December 2020) (CMIE).

Urban female employment fell from 11.8 million in March 2020 to 8.3 million in April 2020, i.e. by 29.2%, vs. 32.4% for men, recovering to 9.2 million in December 2020, at an average recovery rate of (-)2.75% between March-December 2020. Male employment, despite the higher initial shock, showed a higher average recovery rate of (-)0.05%, almost bouncing back to pre-lockdown levels by August. Mr. Narayan Sen, the Founder of Adarsh Siksha Samiti which is a non-profit organization based in Rajasthan noted that sources of income and earnings decreased for women who belong to urban areas or are dependent on travelling to urban areas to earn their living owing to stricter lockdown conditions.

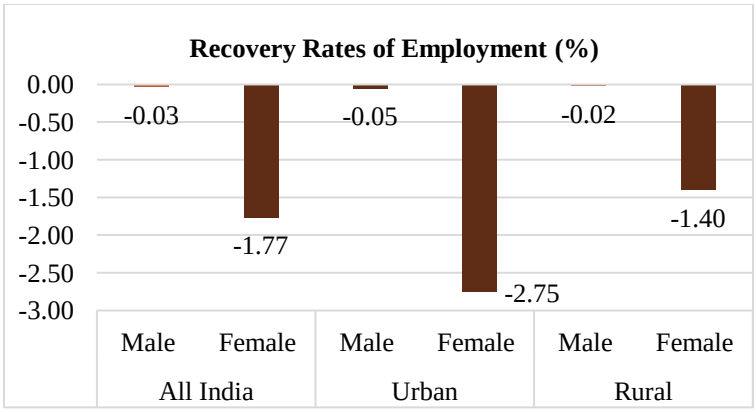


Fig. 9: Recovery rates of employment (March-December 2020) (CMIE).
Note: Recovery rate is calculated as the compounded average change in number of persons employed between March 2020 to December 2020.

Employed rural women experienced a steeper dip, from 29.8 million in March 2020 to 17.8 million in April 2020, i.e. by 40.2% vs. 25.5% for men. While recovery was rapid initially, with employment nearing pre-lockdown levels in June, a dip occurred in August followed by a temporary uptick in September. There was a consequent fall in November and December resulting in an average recovery rate of (-)1.40% between March to December. Rural men were the fastest to recover, at (-)0.02%, with their absolute employment bouncing from back to March 2020 levels, 240.5 million (March) vs. 240.1 million (December). This was corroborated by consultations with women's groups, who pointed towards men being preferred for re-employment as the economy opens, especially in informal and unorganised sector, and in micro, small and medium enterprises (MSMEs).

2.1.3. Prevalence of unemployment

Female URs were higher than male URs throughout the period of study, and the lockdown has only amplified female unemployment. Both male and female URs remained higher than 2019 levels only in the first two months of lockdown. In the following months, male URs were comparable to 2019 levels, and female URs were lower. In December 2020, female UR was 22.9%, higher than 17.3% in December 2019, and male UR was 7.4% vs. 6.3% in December 2019. Yet, these low URs do not fully reveal the depth of unemployment. In December 2020, of the 37.8 million unemployed men, 28.2 million (74.6%) were actively looking for employment. In comparison, only 10.4 million of the 22.8 million unemployed women (45.6%) did the same, suggesting that falling URs are a sign of being discouraged by economic conditions, especially for women.

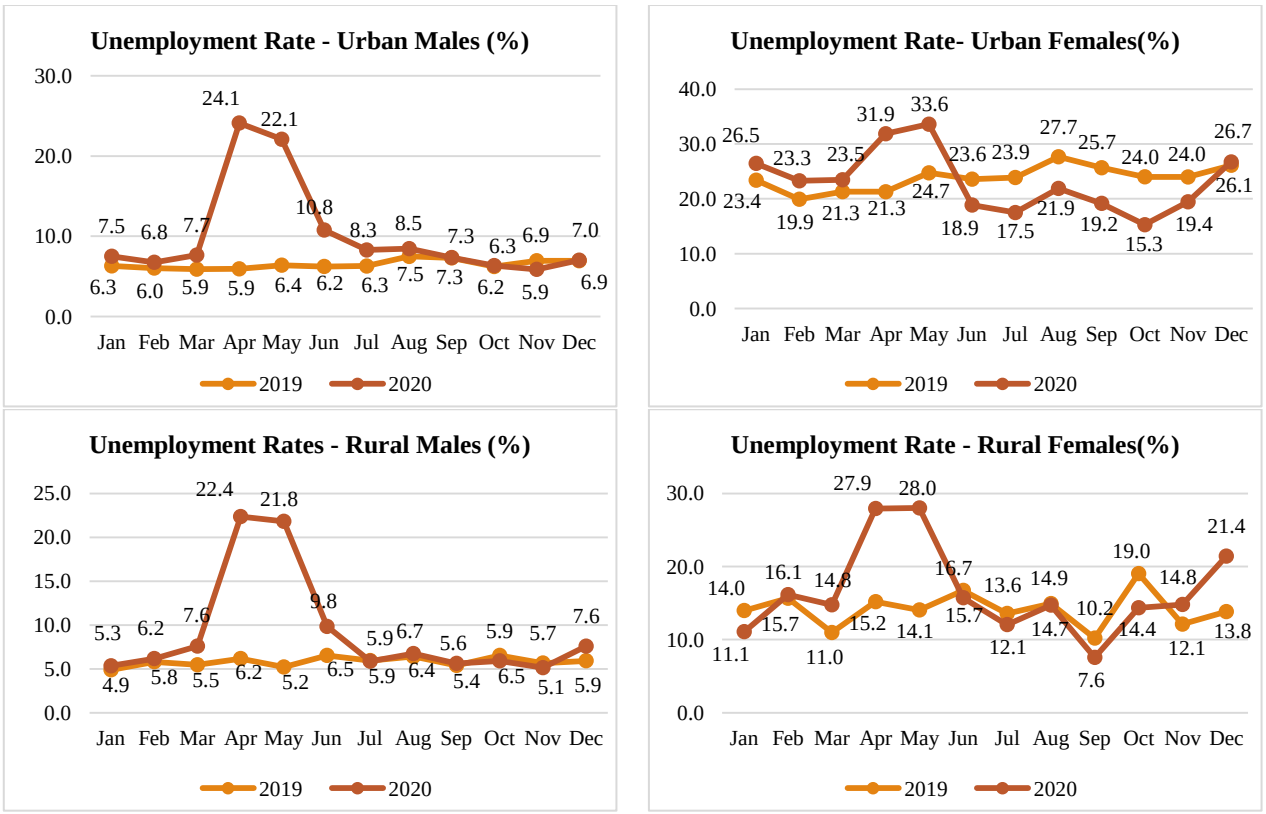


Fig. 10: Rural/urban URs by gender during the pandemic (January-December 2020) (CMIE).

2.1.4. Income losses of women-owned businesses

Of the 61 million MSMEs in India, only 20% are women-owned. Almost 90% are sole proprietorships, and nearly 48% are rural (vs. 88%, 34% for men). Women-owned enterprises remain concentrated in certain sectors, 35% in personal services, 31% in wearing apparel and textiles and 15% in food and other services (IFC, 2018). These small businesses, which largely operate in consumer facing sectors (e.g. textiles, food-processing, handicrafts, etc.) witnessed a sharp demand shock with the onset of the nation-wide lockdown, and their revival has been slow. In a July 2020 survey, women-led enterprises reported a 72.5% drop in revenue, with 88% utilising personal savings to meet working capital needs (IWWAGE, 2020). Weavers, artisans and home-based solopreneurs were left with unclaimed inventories owing to order cancellations (SEWA Bharat, 2020).

Stakeholder consultations illustrated several disruptions in supply chains. A waste recycling entrepreneur from Madhya Pradesh experienced increased raw material costs as newspaper

circulation reduced during the pandemic. With lockdowns, access to physical marketplaces was restricted. Jute entrepreneurs in West Bengal stated they experienced a sharp decline in bulk supply orders for their products and being heavily dependent on sales from exhibitions and fairs, lost a considerable proportion of their annual income owing to their cancellation. Access to finance and shortage of working capital emerged as the most common constraint, cited by nearly every respondent. Women entrepreneurs from Telangana in the textile sector stated that while the government had provided some relief through moratorium on interest payments, it was only for a short period. They soon faced the prospect of restarting interest payments, had the burden of loan repayment, even though they had not been able to restart production, and demand was nowhere near pre-COVID-19 levels. Several other women from self-help-groups (SHGs) acknowledged that while loans were easier to avail as an SHG member, the savings amounts deposited with SHGs reduced over lockdown periods. With household incomes reducing, replenishing their deposits in the SHG was also challenging.

In an attempt to mitigate their losses, women entrepreneurs pivoted to alternative products like masks, sanitisers, personal protective equipment and cotton nightgowns. Some entrepreneurs also experimented with food delivery. Women-led SHGs manufactured 170 million masks, 530,000 PPE kits, 513,000 litres of sanitiser. They operated 123,000 community kitchens from March-November 2020 (Ministry of Rural Development, 2020). However, they perceived the income generated from these channels were merely short-term solutions.

2.2. Mobility Restrictions

Even before COVID-19, only 54% of women were allowed to go a nearby market alone, and only 48% could visit places outside their village or community by themselves (National Family and Health Survey 2015-16). Women are less likely to own or control family/personal transport, and are heavily reliant on public transport services. In urban areas, even though they comprise 19% of "other workers", 84% of their trips are made using public transport (Cropper, 2019; ITDP and Safetipin, 2018). Heightened mobility restrictions and disruption of public transport services lowered women's access to workplaces, hampering their ability to participate in the labour force and earn livelihoods, even as physical workplaces restarted operations.

Several stakeholders shared that they required strong reasons to leave the home, inhibiting their ability to work, run businesses, study or avail healthcare services and Government aid both during and after the lifting of official lockdowns. Consequently, women's financial independence and personal agency was eroded. Representatives from Azad Foundation (a community based organisation), shared that patriarchal notions of women remaining within the home, performing unpaid care or domestic work, were more difficult to challenge owing to COVID-19 restrictions. Nearly 85% of the women training with Azad Foundation to become cab drivers reported that they faced restrictions on their mobility from their family, particularly the men in their households. Several stakeholders pointed that bank branches are at a long distance from habitations, and ATMs are not commonplace in rural areas. Mobility restrictions placed on women due to social norms were compounded by heavy policing during the lockdown, thus making it difficult to access government's cash transfers. Women entrepreneurs from Andhra Pradesh also stated that the lack of public transportation during lockdown and risk of COVID-19 exposure deterred them going to work, thus leading to job losses.

2.3. Increased burden of domestic work

On average, women spent 5 hours per day on unpaid household and caregiving work, vs. 30 minutes for men in 2019, i.e. nearly ten times as much as men. (NSSO Time Use Survey, 2019). Across income classes, women bore a greater burden of unpaid care work, be it childcare due to school closures or elderly care owing to pressure on healthcare services during lockdowns, with some surveys reporting nearly 30% increase in urban women's care work (Dalberg, 2020). In a recent survey of informal workers, 66% of women indicated increases in unpaid domestic work and 36% stated child/elderly care work increased during the lockdown's first two months (Chakraborty, 2020). Homemakers looking for employment declined between March and September 2020, from 6.4 million to 2.5 million, recovering to 5.3 million in November (CMIE). Nearly 43% of urban female solopreneurs reported a loss of productivity due to increased domestic work during COVID-19 (Bain, 2020).

Stakeholder consultations highlighted how unpaid work and lack of childcare facilities remained an obstacle to rejoining work for women. Apanalaya, a community organisation running Community Childcare Centers (CCC) for women in Mumbai's informal settlements shared they had 44 functional CCCs pre-COVID-19. As of September 2020, only 6 had reopened. The fear of COVID-19, coupled with fall in household incomes meant that families were either unwilling or unable to send their children to CCCs. This meant several women from the community could not re-join work, as they had no access to affordable childcare services. Even the women running CCCs lost their livelihood. Thus, women from this community were plunged into a vicious cycle and poverty trap owing to the sudden loss of incomes.

An SHG community mobiliser in Telangana noted that women earlier working in SHGs, nearby factories or local shops withdrew from work owing to household responsibilities. During the lockdown, as male family members were spending more time at home, there was a reduction in women's independence as they actively disallowed women from voicing opinions, or providing inputs into household decisions.

Moreover, with school closures, it was not only married women, but adolescent girls whose time on domestic work increased. Stakeholders shared that a gender divide emerged with girls having to take care of younger siblings, as parents had to leave homes to resume work post the lockdowns. Further, while boys were taking up manual labor or agricultural fieldwork, girls were made to stay home for household duties. This loss of precious years of education reduces girls' chances of completing higher education, skill training and eventually joining the workforce.

2.4. Increasing gender-based digital divides

In India, 63% of adult women own a mobile phone, but only 21% use mobile internet, vs. 79% and 42% adult men, respectively (GSMA, 2020). Women are systematically denied access to technology, with their use of mobile phones governed by male relatives (Harvard Kennedy School, 2018). With online learning and skilling, telemedicine, and work from home becoming the norm, and blended modes expected to continue even after COVID19, women are at risk of getting left behind, unable to acquire the skills required to participate in a digital economy.

SHG members from West Bengal reported a hesitancy and lack of confidence in shifting to online marketplaces. Lack of access to personal mobile phones, cost of data and limited knowledge of social media and digital marketing channels meant they were unwilling to invest in a transition to online selling. Women entrepreneurs from Maharashtra shared that even though women in their community were using smartphones for personal use, they were unable to make financial transactions online, and lacked digital financial literacy. An educator from Madhya Pradesh shared that girls were missing out on online classes due to lack of access to smartphones and mobile data.

He shared his observations that in several households with both a male and female child, the male child is given the mobile phone for pursuing his online classes and not the girl.

On a more optimistic note, Mann Deshi Foundation, a community based financial services enterprise in Maharashtra offered low-interest loans to women for buying smartphones. Eventually, around 80% of the women in their community availed the scheme and purchased smartphones. Mann Deshi then shifted their training programmes to virtual platforms. Around 15 trainers taught women how to make face masks and sell them via WhatsApp. Between March - August 200, over 400 women produced more than 450,000 masks. Women entrepreneurs were provided with the necessary tools to shift and expand their businesses online, helping them sustain their incomes. Additionally, a virtual market place ("e-bazaar") was launched during Diwali (November 2020) with more than 3,000 listed products, and met with immense success. Several assigned "Digital Didis" were actively engaged in community education and helped the women navigate online platforms. Mann Deshi also partnered with companies like Google, IBM and WhatsApp to increase the women's digital literacy.

2.5. The "shadow pandemic" of domestic violence

India is a country where every third woman faces some form of domestic violence, and 52% of women and 42% of men believe it is justified for a husband to hit his wife (NFHS-4, 2015-16). the shadow pandemic of domestic violence only exacerbated women's challenges during COVID-19. Social isolation and mandatory confinement with potential abusers increases risk of domestic violence. Ravindran & Shah (2020) showed evidence of a 131% increase in domestic violence complaints in May 2020 in red zone districts that saw the strictest lockdown measures relative to green zone districts with the least strict measures. Red zone districts also experienced a 184% increase in cybercrime complaints relative to green zone districts in May 2020. The National Commission of Women (NCW) received 13,410 complaints of crimes against women between March – September 2020, of which 4,350 were domestic violence. Complaints peaked in the March – May period, with 1/3rd of complaints being filed in these 3 months alone.

Efforts were made to ensure that existing Central government schemes such as One Stop Centres, Ujjawala Homes, and Emergency Response Support System remain operational throughout the lockdown. Notably, 33% of violence complaints were made via the NCW's WhatApp based helpline launched in April 2020, suggesting that a discreet method of reporting was much needed during the pandemic. State government initiatives, such as Uttar Pradesh Police's "Suppress corona, not your voice" campaign, Odisha Police's Phone-Up programme, Kerala State Commission for Women's tele-counseling facility, Maharashtra Government's Akshara Centres, Special Cell for Women and Children, and the #LockdownOnDomesticViolence campaigns were important steps, signalling intolerance for domestic violence across governments.

The threat of domestic violence breaks a women's confidence, thereby making it difficult for her to hold a job. On the other hand, the lack of financial independence makes women even more susceptible to remaining in a violent relationship. Moreover, as historical evidence shows, only 14% of women who have ever experienced violence seek help making it clear that figures of reported violence are only the tip of the iceberg.

4. Charting a gender sensitive socio-economic recovery

An analysis of data over the last seven decades shows that women's work is largely informal, invisible and labour-intensive. Women's labour force and workforce participation has declined, and consistently remained below that of men. There has been exodus of women from the

labour force, particularly in rural areas. There is a preponderance of women in traditional sectors with low labour productivity, such as agriculture, handicrafts, handlooms and textiles. Despite improvements in education, rising household incomes, liberalisation and increased linkages with global value systems, the exodus of India's women from the labour force continues. In this context, the COVID-19 pandemic has come as a shock, resulting in massive job losses for women, especially informal workers, and the slower recovery of women-led microbusinesses. It has also increased domestic work, deepened gender digital divides, exacerbated gender-based skill and educational gaps and placed millions of female health workers at risk.

India introduced a strong emergency response to COVID-19 lockdowns, offering free food grains, free gas cylinders, and direct cash support to low-income women. In the post-COVID-19 years, Central / State governments, the private sector and community based organisations need to come together to chart a gender-sensitive socio-economic recovery strategy for India. This includes a combination of short and long-term measures.

Drawing on the experience of measures introduced by developing countries post COVID-19, India should expand the immediate support offered to women in the short term, as follows:

1. **Expanding cash transfers for vulnerable women, below poverty line**. Post COVID19, Indonesia expanded its conditional cash transfer (CCT) program from 9.2 to 10 million households with mothers and children and increased the frequency of transfers from quarterly to monthly. The Government increased assistance for households with pregnant women by 25% for 3 months. Philippines, where a CCT program with 85% women beneficiaries has been operational since 2010, signed the Pantawid Pamilyang Pilipino Program (4P) Act into law in April 2019 to ensure its sustainability through adequate government support. Post COVID-19, women from 4.2 million 4P families were targeted for unconditional emergency cash transfers.

2. **Incentivize retaining women informal workers in the labour force**. In Thailand, women were overrepresented in highly affected sectors, such as manufacturing (48%), accommodation and food services (63%), health and social work (76%), education (65%), and home-based domestic work (86%). The Government is providing (i) $160 per person per month for 3 months to 16 million people, at least 45% women, not covered by the social security system (SSS); (ii) $32 monthly for 3 months to 14.6 million low income earners, of whom 8.3 million are women; (iii) SMEs employing 48%-50% women can avail tax deduction upon employee retention, as well as withholding tax deductions; and (iv) Women who lost their jobs can enroll for free online skills training and their children are provided with free milk.

3. **Support for women owned businesses**. Cambodia is targeting that at least 20% of SME borrowers under its low-interest Enterprise loan program should be women. Colombia announced a $4.8 billion credit line for women entrepreneurs. Turkey is providing grants worth almost $19,000 each for women-led co-operatives. Morocco has created a digital platform for marketing local products from women's co-operatives. Egypt has allocated $0.3 billion to finance more than 200,000 women-led micro-projects over the next 5 years.

4. **Increase compensation of ASHA & Anganwadi workers.** ASHA and Anganwadi workers are providing last mile contract tracing and COVID-19 survey activities. Globally, countries are enacting measures to ensure gender parity in compensation of male and female health workers, and providing financial support for childcare of female essential personnel.

Increasing salaries of ASHA & Anganwadi workers, in line with benefits announced for healthcare sector workers should be a priority.

In the long, three important steps need to be considered. First, the Central Government should work on boosting gender budgets (currently averaging ~5% of total expenditure between 2008-09 to 2019-20), to support national, State and district-level authorities in implementing programmes to improve women's lives and livelihoods. Second, all public and private stakeholders should collect gender-disaggregated data by default to aid targeted policymaking. Third, women's representation in disaster-response decision-making must increase at all levels to increase the likelihood of gender-sensitive policy design. India must keep women at the heart of economic recovery, and create opportunities to bring its "missing" women under the spotlight.

Acknowledgements

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The Salespeople's Reactions to Customer Sexual Harassment: A Case Study of Taiwan's Life Insurance Industry

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ABSTRACT

This study explores the impacts of customer reward power, customer coercive power, perceived behavioral control and personal factors on the full-time life insurance salespeople's intentions to report quid pro quo and hostile work environment types of customer sexual harassment. This study collects quantitative data through questionnaire surveys. 743 valid questionnaires are gathered for the analyses. The findings of this research show that quid pro quo customer sexual harassment is intolerable to the respondents, and it will not become more tolerable because of the benefits these respondents could get in the wrongful behaviors. The regression analyses then support the effects of customer reward power on the whistleblowing intentions in quid pro quo customer sexual harassment. Perceived behavioral control is found to be the most influential factor that affects the whistleblowing intentions. This is the first empirical study to test the relationships among these variables. The findings could provide some implications for the researchers, official authorities and life insurance companies.

KEYWORDS: customer sexual harassment, customer reward power, customer coercive power, perceived behavioral control, life insurance salespeople

1 INTRODUCTION

Despite previous studies have discussed the negative influences of customer sexual harassment on the well-beings of service workers (Hughes and Tadic, 1998; Madera, Guchait and Dawson, 2018), few studies have compared the service workers' reactions to different types of customer sexual harassment behaviors. According to literature, customer sexual harassment contains quid pro quo and hostile work environment types of harassment (Tseng, 2013; Tseng and Kang, 2015; Otsri, 2020). Quid pro quo customer sexual harassment takes place when a harasser (a customer) makes an unwanted sex-based behavior toward the victim (a service worker) in exchange for benefits. Hostile environment customer sexual harassment, on the other hand, is an unwanted sex-based behavior by a customer that creates an offensive, threaten or hostile work environment for the service workers. Since quid pro quo harassment occurs when opportunities or benefits (such as promotion) are made depending on the provision of sexual favors, and hostile environment sexual harassment usually creates a hostile, or intimidating working environment that affects the victim's well-being, the two types of customer sexual harassment are viewed as separate conditions (Icenogle et al., 2002; Otsri, 2020). By using Taiwan's life insurance salespeople as a research sample, the purpose of this research is to provide an understanding of service workers' intentions to report the two types of customer sexual harassment behaviors.

To better understand the whistleblowing intentions, the role of customer power should not be ignored. Researchers have provided interpretive frameworks to understand the relationship between power and people's reactions to sexual harassment behaviors (Sindhu, 2017). Some studies acknowledge that power is at the core of sexual harassment problems (Sapiro, 2018). Nonetheless, there are no empirical studies have examined the relationship between customer power and service workers' whistleblowing intentions toward customer sexual harassment behaviors. This study proposes that customer reward power and customer coercive power can offer better explanations of the life insurance salespeople's intentions to report customer sexual harassment behaviors.

In this study, we further argue that perceived behavioral control (PBC) is another factor that can affect the life insurance salespeople's intentions to report the two types of customer sexual harassment behaviors. Perceived behavioral control is defined as an individual's perception of how easy or difficult it is to perform a certain behavior (Johe and Bhullar, 2016). According to Ajzen's (2005) theory of planned behavior, behavioral intentions are directly influenced by perceived behavioral control. Empirical studies have also confirmed a significant relationship between perceived behavioral control and behavioral intentions (Armitage and Christian, 2017). Thus, this study proposes that perceived behavioral control will predict the life insurance salespeople's intention to report customer sexual harassment behaviors.

Finally, it is pointed out that people with relatively a lower social status could be easier to be the target of sexual harassment (Sheets and Braver, 1999). The existing literature has also found the significant relationships between personal factors (such as gender) and sexual harassment problems (Rothgerber et al., 2020). This study explores the relationships between personal factors and the life insurance salespeople's intentions to report customer sexual harassment behaviors. Figure 1 presents the conceptual model of this study.

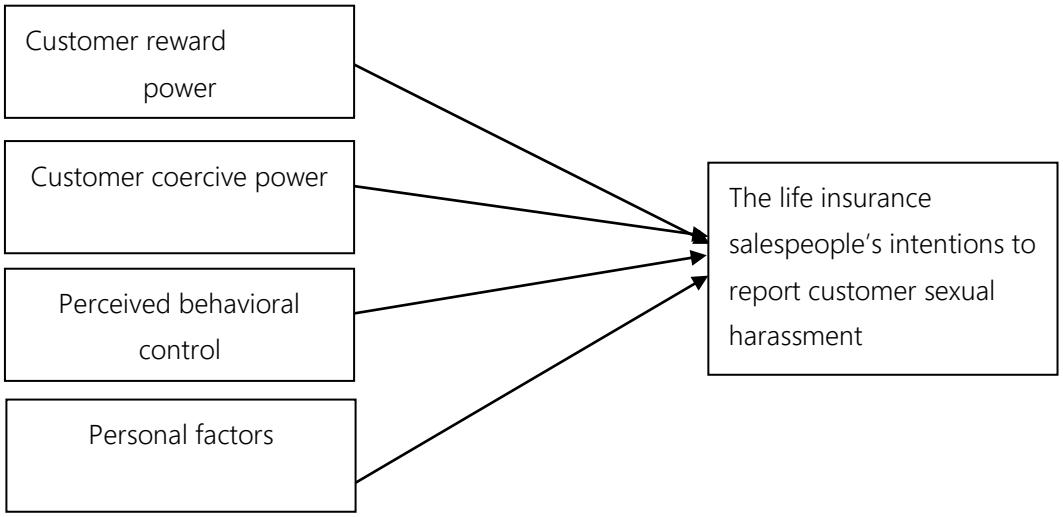

Figure 1. The conceptual model of this research

2 LITERATURE REVIEW

2.1 Customer reward power and the life insurance salespeople's intentions to report customer sexual harassment behaviors.

Customer reward power is based on the customer's ability to reward or remunerate the service workers for obedience (Zhao et al., 2008). In this research, we argue that customer reward power is associated with the life insurance salespeople's intentions to report customer sexual harassment behaviors. The argument is plausible because customer reward power represents a customer's ability to control over the desired benefits (e.g. customer purchases) that the salespeople need. Thus, we believe that the perception of customer reward power should be significantly associated with the salespeople's whistleblowing intentions.

The following research hypothesis is proposed:

> *Hypothesis 1: Perception of customer reward power is negatively associated with the life insurance salespeople's intentions to report customer sexual harassment behaviors*

2.2 Customer coercive power and its impacts on the life insurance salespeople's intentions to report customer sexual harassment behaviors

Customer coercive power refers to a customer's ability to influence the service workers through the use of violence or punishment (Huo et al., 2016). Coercive power can be used by customers to make the service workers feel fears (Grégoire et al., 2018). Since fears have significant effects on behavioral intentions (Benk, Çakmak and Budak, 2011; Pan and Houser, 2019), it can be argued that customer coercive power may lead to the changes of the life insurance salespeople's whistleblowing intentions.

To test whether or not customer coercive power negatively relates to the life insurance salespeople's whistleblowing intentions, the following hypothesis is formulated.

Hypothesis 2: Perception of customer coercive power is negatively associated with the life insurance salespeople's intentions to report customer sexual harassment behaviors

2.3 The influences of perceived behavioral control on the life insurance salespeople's intentions to report customer sexual harassment behaviors

According to the theory of planned behavior, perceived behavioral control is strongly predictive of behavioral intentions (Kashif, Zarkada and Ramayah, 2018). Empirical research has also found a significant relationship between perceived behavioral control and intentions (Alleyne, Haniffa and Hudaib, 2019). Based on those studies, it is expected that perceived behavioral control is positively related to the life insurance salespeople's intentions to report customer sexual harassment behaviors to the management. A hypothesis is provided.

Hypothesis 3: Perceived behavioral control is positively associated with the life insurance salespeople's intentions to report customer sexual harassment behaviors

2.4 Personal factors and the life insurance salespeople's intentions to report customer sexual harassment behaviors

2.4.1 Gender difference

In this study, it is expected that the female life insurance salespeople would possess a lower intention to report customer sexual harassment than the male life insurance salespeople. The argument is plausible, because Asian women are taught to be more dependent and obedient than Asian men (Haj-Yahya, Schnell and Khattab, 2018). Hence, it is argued that the female life insurance salespeople are less likely to report the customer sexual harassment behaviors. The following hypothesis is provided.

H4a: The female life insurance salespeople will possess a lower intention to report customer sexual harassment behaviors than the male life insurance salespeople

2.4.2 Age

Since ethical judgments are positively associated with ethical intentions (Barnett and Vaicys, 2000), this study proposes that, compared to the newcomers or young life insurance salespeople, senior life insurance salespeople will have higher intentions to report the customer sexual harassment behaviors. On the other hand, young life insurance salespeople are usually in a lower job position, and therefore the young life insurance salespeople may be less powerful than the senior life insurance salespeople. Based on this, we argue that the young life insurance salespeople may possess a lower intention to report customer sexual harassment behaviors. To test the relationship between age and the life insurance salespeople's whistleblowing intentions, a hypothesis is proposed.

H4b: The young life insurance salespeople will possess a lower intention to report customer sexual harassment behaviors than the senior life insurance salespeople

2.4.3 Marriage

Some scholars also point out that marital status can represent a kind of social status, and those who have already married could be considered more powerful (Strohschein and Ram, 2017; Chen and Williams, 2018). Yet, there has been no research about the relationship between marital status and service workers' intentions to report customer sexual harassment behaviors. This study proposes that unmarried life insurance salespeople are less likely to report the customer sexual harassment behaviors. A hypothesis is developed.

> *H4c: The unmarried life insurance salespeople will possess a lower intention to report customer sexual harassment behaviors than the married life insurance salespeople*

2.4.4 Education

Education may play an important role in influencing the intentions to report customer sexual harassment behaviors. No study has examined this issue. To examine the potential impact of education on the salespeople's whistleblowing intentions, the following hypothesis is developed.

> *H4d: The life insurance salespeople who have not received higher education will possess a lower intention to report customer sexual harassment behaviors than the life insurance salespeople who have received higher education*

3 METHODOLOGY

3.1 Sample

In order to study the life insurance salespeople's intentions to report customer sexual harassment behaviors, the life insurance salespeople from the well-known life insurance companies located in different cities were recruited by approaching the management of life insurance companies. The formal investigation was conducted in the respondents' offices. Conversations were not allowed among the respondents during the investigation. Before the formal investigation, the respondents were informed the purpose of this study. The guarantee of anonymity and confidentiality were also mentioned. To make sure the responses were returned anonymously and confidentially to the author(s), the respondents were asked to put the paper-based questionnaires into the envelopes after they had completed the questionnaires.

3.2 Date Information

The empirical investigations were conducted during November 17, 2020 to December 17, 2020. Follow-up calls were done about one week later after questionnaire submission. 840 questionnaires were randomly distributed to the participants, and 791 questionnaires were returned. Of the 791 returned questionnaires, 743 valid and complete questionnaires were used for analyses. This represented a usable response rate of 88.45%. Table 1 showed the profile of respondents.

Table 1: The profile of respondents

Variables	Frequency	Percentage

Version		
A	374	50.3%
B	369	49.7%
Gender		
Female	480	64.6%
Male	263	35.4%
Age		
20~29	163	21.9%
30~39	215	28.9%
40~49	210	28.3%
50 or above	155	20.9%
Education		
Senior high school	166	22.3%
Bachelor's degree	531	71.5%
Post-graduate degree	46	6.2%
Marriage		
Single	337	45.4%
Married	406	54.6%

3.3 Data collection method

The data were collected through anonymous questionnaires. A questionnaire with scenario-based approach was used in the studies on gender based harassment (Tseng, 2014; Clarke, Ford and Sulsky, 2016). Given the difficulty to observe the life insurance salespeople's whistleblowing intentions in reality, the hypotheses of this study were also tested with data collected through a scenario-based approach. The present study designed two versions of scenario-based questionnaires (version A and version B). Two versions of questionnaires were developed because quid pro quo and hostile environment sexual harassment were conceptually different.

Each version of the questionnaire contained only one scenario, and each scenario described one type of customer sexual harassment. As showed in Table 2, the scenario in questionnaire version A described quid pro quo sexual harassment by a customer, and the scenario in questionnaire version B was about hostile environment sexual harassment by a customer.

Table 2: Scenarios in questionnaire versions A and B

Versions	Scenarios
Scenario A Quid pro quo sexual harassment	X was a salesperson of your company. One day, a customer (the opposite sex customer) wanted to buy new products from X. In order to let the customer had better understanding of the details of products, X met the customer at a restaurant not far from the company. In the process of discussing the products, the customer asked X for some sexual requirements, and the customer promised to buy a large number of the products recommended by X as long as X was willing to cooperate. X was very angry and uncomfortable about the customer's behavior and considering whether to report the customer's sexual harassment behavior to the management of company, so as to deal with the problem.
Scenario B Hostile environment sexual harassment	X was a salesperson of your company. One day, a customer (the opposite sex customer) wanted to buy

	new products from X. In order to let the customer had better understanding of the details of products, X met the customer at a restaurant not far from the company. In the process of discussing the products, the customer made some sexual demands to X in a violent and threatening tone. If X was not willing to cooperate, the customer would use some means to further intimidate and threaten X. X was very angry and uncomfortable about the customer's behavior and considering whether to report the customer's sexual harassment behavior to the management of company, so as to deal with the problem.

3.4 Measurement

All measures except for the personal factors were assessed by using a seven-point Likert-type scale anchored on “totally agree” (value = 7) to “totally disagree” (value = 1). The measurement was provided in Table 3. Customer reward power and customer coercive power were measured by adapting the research of Rahim (1988). The measurement for perceived behavioral control and whistleblowing intentions were developed based on previous studies as well (Ajzen, 2005; Ajzen and Fishbein, 2005; Armitage and Christian, 2017).

Table 3: Example question items

Constructs	Items
(Flow control valves) Air operated valves	1. In general, I rely on customers' purchases heavily.
Customer reward power	1. In general, my customers have the ability to punish me if I do not comply with their wishes.
Customer coercive power	1. If I were X, I would find it easy to report the customer sexual harassment behavior to the management of my company.
Perceived behavioral control	1. If I were X, I would definitely report the customer sexual harassment behavior to the management of my company.

Finally, we tested the personal factors that were likely to influence the salespeople’s intentions to report the customer sexual harassment behaviors. The variables included gender, age, marriage and education.

3.5 Construct checks

To check the reliability, convergent validity and discriminant validity of the constructs, the indicators of Cronbach's α, composite reliabilities, factor loadings, average variance extracted (AVE) values, and the square root of AVE were analyzed by using partial least squares regression (PLS regression). All indicators satisfied the statistical requirements, showing the reliability, convergence and discriminant validity of this research were acceptable. The problems of common method variance were examined through using the Harman's one factor test and a confirmatory factor analysis. Since a single factor did not emerge and the first factor did not account for most of the variance, common method bias

was unlikely to be a serious issue in this research. Variance inflation factors (VIFs) were further checked to examine the effect of multicollinearity. The values of VIFs associated with each independent variable were less than 4, suggesting no serious concerns for multicollinearity.

4 RESULTS

Table 4: Results for version

	Model 1	Model 2	Model 3
Variables	Quid pro quo customer sexual harassment	Hostile work environment	Quid pro quo + Hostile work environment
Gender	-0.016	-0.040	-0.028
Age	0.080	0.130*	0.103**
Marriage	0.033	-0.042	-0.005
Education	0.149**	0.069	0.108**
CRP	-0.107*	-0.006	-0.052
CCP	0.015	-0.031	-0.012
PBC	0.499**	0.489**	0.491**
Adjusted R^2	0.271	0.255	0.265
F-value	20.763	19.015	39.185
Sample size	374	369	743

Note 1: *Significant at $p < 0.05$; ** Significant at $p < 0.01$. T-values are given in parentheses.
Note 2: CRP = customer reward power; CCP = customer coercive power; PBC = perceived behavioral control.

4.1 Model 1

Model 1 presents the regression analysis for the impacts of personal factors (i.e. gender, age, marriage and education), customer reward power, customer coercive power and perceived behavioral control on the respondents' intentions to report quid pro quo customer sexual harassment behaviors (sample size = 374). Table 4 presents the results. Hypothesis 1 posits that the respondents' perception of customer reward power is negatively related to their intentions to report quid pro quo customer sexual harassment behaviors. The results show that the coefficient of customer reward power is negatively and significantly related to the whistleblowing intentions ($\beta = -0.107$; $p < 0.05$). The finding indicates that the respondents will possess a lower level of intention to report the quid pro quo customer sexual harassment behavior when strong customer reward power is perceived by them. Thus, Hypothesis 1 is supported in questionnaire version A. Hypothesis 2 predicts a negative effect of customer coercive power on the life insurance salespeople's intentions to report the quid pro quo customer sexual harassment behaviors. The negative coefficient of customer coercive power is insignificant ($\beta = 0.015$, $p > 0.05$), showing that customer coercive power is not related to the whistleblowing intentions (Hypothesis 2 is not supported). This research then checks how perceived behavioral control is related to the respondents' whistleblowing intentions. The positive coefficient between perceived behavioral control and whistleblowing intentions ($\beta = 0.499$, $p < 0.01$) shows that the respondents with a stronger level of perceived behavioral control will be more likely to report the quid pro quo customer sexual harassment behavior to

their management. The positive sign for the coefficient between education and whistleblowing intentions is consistent with the prediction of Hypothesis 4d ($\beta = 0.149$, $p < 0.01$), showing that the more educated salespeople will have higher whistleblowing intentions toward quid pro quo customer sexual harassment behaviors.

4.2 Model 2

The scenario in questionnaire version B contains a case of hostile environment sexual harassment. Model 2 presents the results of regression analyses (sample size = 369). According to Table 4, the coefficient for the relationship between perceived behavioral control and whistleblowing intentions is significant and positive ($\beta = 0.489$, $p < 0.01$), suggesting that Hypothesis 3 is supported for questionnaire version B. The positive coefficient for the relationship between age and whistleblowing intentions suggests that age is influential to the life insurance salespeople's whistleblowing intentions ($\beta = 0.130$, $p < 0.05$). This results are consistent with the prediction of Hypothesis 4b. The effects of customer reward power and customer coercive power on the whistleblowing intentions do not show significant results. Thus, Hypotheses 1 and 2 are not supported.

4.3 Model 3

Model 3 focuses on the life insurance salespeople's whistleblowing intentions toward the two types of customer sexual harassment behaviors (sample size = 743). We find that age, education and perceived behavioral control influence the respondents' intentions to report the customer sexual harassment behaviors. Accordingly, Hypotheses 3, 4b and 4d are supported. The results of Model 3 show that the influences of age and education are stronger than the influences of gender and marriage. In addition, it is found that perceived behavioral control is very important to explain the whistleblowing intentions, and its effects remain strong and stable for all the models.

5 CONCLUSION

By using Taiwan's life insurance salespeople as a sample, this study examines the salespeople's whistleblowing intentions toward two types of customer sexual harassment behaviors. This study further proposes that the variables such as customer reward power, customer coercive power, perceived behavioral control and personal factors can determine the whistleblowing intentions.

Theoretical implications

Some theoretical implications related to the literature on customer sexual harassment could be drawn. To begin with, this study can show us how the types of customer sexual harassment may relate to the life insurance salespeople's whistleblowing intentions. Although several studies have pointed out that positive outcomes have substantial effects in enhancing people's positive attitudes and intentions, the findings of this research shows that quid pro quo customer sexual harassment is intolerable to the respondents, and it will not become more tolerable because of the benefits these respondents could get in the wrongful behaviors.

On the other hand, it should be noted that the relevant studies are less clear about the relationships among customer reward power, customer coercive power and the service

workers' intentions to report customer sexual harassment. The theoretical contribution of this study includes the support for the link between customer reward power and behavioral intentions to report the quid pro quo customer sexual harassment behaviors. Thus, this study provides further insight into to the relationship between customer power and the life insurance salespeople's whistleblowing intentions toward customer sexual harassment behaviors.

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