ECON 4089

RESEARCH REPORT INSTRUCTIONS

Due date: April 15th; please submit an electronic copy to Turnitin via eClass.
Length: 12 to 15 pages long, 1.5 space, Times New Roman font, size 12, excluding graphs, tables, appendixes, and references.
First draft (midterm progress report) due date: Feb. 21st. Please submit two soft copies to eClass – one to Turnitin and one for peer review. Submission links can be found in the Assignment Submission block on eClass.
Goal: Your goal is to produce a polished technical/research report on your chosen topic.

I will call a research project which does not have econometric analysis a "research" or "technical" report. However, there is no generally agreed upon definition for this type of written output produced by economists. This is the type of research produced by economic institutions outside academia, such as the World Bank, the Bank of Canada, the Federal Reserve Bank in the U.S., and think-tanks such as the Brookings Institution, Peterson Institute for International Development, Fraser Institute, and C.D. Howe Institute.

Below is an outline of the sections that one can find in a research report.

I. General outline of the possible sections that your report will contain.

1. **Title page.** This page provides:
   - the title of the report;
   - the author's name and ID number;
   - the course name and number, the department, and university;
   - the date of submission.

   Catch your reader's attention with a title, which is descriptive, punchy and relevant.

2. **Executive Summary** (half-a-page to a page long). Succinct presentation of the problem addressed and the substance of your report. It is not an introduction to the topic. The summary should outline all the key features of your report, including the topic, what you did and how you did it, and the main outcomes of your work. A busy manager who might not have time to read the full report should be able to get the gist of the whole report by reading the summary.

   The summary:
   - states the topic of the report
   - outlines your approach to the task, if applicable
   - gives the most important findings of your research or investigation
   - states the main outcomes or conclusions.

   The summary does NOT:
   - provide general background information
   - explain why you are doing the research
   - refer to later diagrams or references.

3. **Contents**
   The table of contents page sets out the sections and subsections of the report and their corresponding page numbers. Label and number consecutively the sections and subsections of your report. The table of contents should clearly show the structural relationship between the sections and subsections. A reader looking for specific information should be able to locate the appropriate section easily from the table of contents. If you

have appendixes, provide a title in your table of contents to describe the contents of each appendix. Don't just call them Appendix 1 or Appendix 2.

4. **Introduction**

   The introduction provides the background information needed for the rest of your report to be understood. It is usually half to three-quarters of a page in length. The purpose of the introduction is to set the context for your report, provide sufficient background information for the reader to be able to follow the information presented, and inform the reader about how that information will be presented.

   The introduction includes:

   - the background to the topic of your report to set your work in its broad context
   - a clear statement of the purpose of the report, usually to present the results of your research
   - a clear statement of the research question of the project
   - technical background necessary to understand the report; e.g. theory or assumptions
   - a brief outline of the structure of the report, if appropriate

5. **Body of the report**

   This is the main part of the report, where you present your work. The introduction and conclusion act as a frame for the body. All the details of your work (including a summarized version of material in the appendices) must be included here in the appropriate section. You will need to put some thought into the ordering of the sections; the presentation of information should flow logically so that the reader can follow the development of your project. It is also essential that you choose concise but informative headings and subheadings so that the reader knows exactly what type of information to expect in each section.

   i. The body of the report:
      - presents the information from your research, both real world and theoretical
      - organizes information logically under appropriate headings
      - conveys information in the most effective way for communication:
        - uses figures and tables
        - can use bulleted or numbered lists
        - can use formatting to break up large slabs of text

   ii. Provide informative headings. As for the title, section headings should tell the reader exactly what type of information is contained in the section. They should be specific and content-focused rather than just labels. Devising informative headings as opposed to label headings right from the planning stage will help you to clarify exactly what you want to achieve in each section and subsection.

   iii. Make all headings consistent and parallel in structure. This means that headings should follow a similar grammatical form.

   iv. Incorporating figures, tables, and equations. There are conventions for using figures and tables in a report. Usually only these two categories are used; anything other than tables (maps, charts, diagrams, drawings, graphs) is called a figure. Figures and tables should be placed as close as possible to the point at which they are referred to in the text. Give all figures and tables a number and title. Refer to each figure and table in the text of the report.

6. **Conclusion.** The conclusions section provides an effective ending to your report. The content should relate directly to the aims of the project as stated in the introduction, and sum up the essential features of your work. This section:

   - states whether you have achieved your aims
   - gives a brief summary of the key findings or information in your report
   - highlights the major outcomes of your investigation and their significance.

7. **References.** Choose a particular style (e.g., Modern Language Association (MLA), American Psychological Association (APA)) and stick to it. In economics, however, we use the Chicago style.

II. Appendixes. These contain material that is too detailed to include in the main report, such as raw data. The conventions for appendices are as follows:

- each appendix must be given a number (or letter) and title;
- each appendix must be referred to by number (or letter) at the relevant point in the text.

III. Your audience. Your peers, i.e., people with sufficient economic background who are not familiar with the topic you have chosen.

IV. Use academic writing style. Academic writing style tends to be formal and objective. Avoid using words such as "I" or "me" as well as words that express feelings, such as "surprised," "hope," "worrisome" as well as words such as "believe," which implies that your statement is not based on facts.

There are many resources on writing that you can use. "The Elements of Style" by William Strunk Jr. and E. B. White is a classic style manual. You can find the original manual compiled by W. Strunk free of charge online. The most recent version (updated by White, a student of Strunk) can be purchased for less than $10.

As an economist, you may find McCloskey's book "Economical Writing" particularly helpful. On eClass, I have placed a link to McCloskey's paper on which the book is based. You can download the paper for free. You may also like to have a look at Neugeboren's "The Student's Guide to Writing Economics," which is available online via our library.

V. Evaluation criteria:

1. The degree of complexity. (20 points)
2. The depth of the economic analysis. Are your points/arguments supported with evidence? (20 points)
3. Clarity and depth of thought. Does your paper exhibit clarity, perceptiveness, originality and depth and maturity of thought? (15 points)
4. Coherence and organization. Does your paper exhibit focus, coherent organization, and interesting development? (15 points)
5. Technical proficiency with language. Does your paper exhibit an excellent control of expression, sentence structure and variety? (15 points)
6. The degree to which your research addresses the community partner's needs. (15 points)

VI. Where to publish and present your polished paper. There are several peer-reviewed undergraduate research journals that you can submit your polished paper to:

- Undergraduate Economic Review
- Issues in Political Economy
- Michigan Journal of Economics
- The UCLA Undergraduate Journal of Economics
- Michigan Journal of Business

You may also consider presenting your work at a professional event. Make sure to check the deadlines and requirements for application. Here are a few suggestions:

- Undergraduate Research Fair at York University
- Carroll Round at Georgetown University if you paper is in the field of international economics
- National Conference on Undergraduate Research (NCUR)
- Opportunities listed on the AEA website

York University

Faculty of Liberal arts and Professional Studies

Department of Economics

Can Soft Skills Reduce the Gender Pay Gap?

Final Report

Jacob Shapiro

Student Number 218101238

AP/ECON 4089 M

Tsvetanka S. Karagyozova

April 15, 2023

Table of Contents

1) Executive Summary

Soft skills have been a proven factor in the wage gap shrinking over the past few decades. The problem addressed in this paper is whether training in soft skills can further decrease the gender-based wage gap. More particularly, the paper explores the hypothesis that females can train their soft skills to further diminish the wage gap. An influential empirical study suggests that men are more responsive to training their soft skills, which is counterintuitive to the hypothesis. However, these empirical results appear to be biased; training in the study was tailored towards a male style of learning, which left the female participants at a disadvantage. This is because the study made participants undergo active learning, which is the optimal learning style for males. In contrast, research suggests that females learn optimally under passive learning. Nonetheless, females significantly outperformed men in empathy, so the question of how empathy and other soft skills affect salary arises.

Of all the soft skills priced in the labour market, leadership traits have the greatest positive influence on salary. In contrast, soft skills involving subordination have the greatest negative influence on salary. While empathy is not on the list of soft skills with negative effects on salary, its closest relatives are found to have a negative influence on salary. Lastly, the question of whether training women in leadership skills would lead to a further decrease in the wage gap is examined. Evidence suggests that this is not the case. Empirical studies show that when females demonstrate power, they are perceived in a negative light. This acts as a huge hindrance to their careers and puts them at a disadvantage to men of comparable abilities and skills. In conclusion, it is necessary to change the perception regarding females with power as a prerequisite to using leadership-based soft skills to reduce the gender pay gap.

2) Introduction

The wage gap has been a major issue in gender equality during the last century. The gap refers to women and men earning different wages and salaries. Furthermore, it is men that have always earned a considerably greater income than women. Numerous factors contribute to this disparity in wages that together accumulate for the current gap of 14.1 percent between the average man and woman (Workplace Gender Equality Agency, 2022). Some of these factors include education, training, skills, experience, and working time (International Labour Organization, 2022). While these elements do contribute to the gap, a study performed by the International Labour Organization shows that they do not make up the full difference. The remaining is attributed to gender-based discrimination which is a large societal concern (International Labour Organization, 2022). Women are an essential component of the workforce, and they have no reason to be discriminated against for simply being a different gender.

This gap has been shrinking over the recent decades as it used to be significantly worse. In 1966, the gap was larger than 42 percent which serves as a testament to the decreasing wage gap. However, there is still a long way to go before women achieve pay parity with men. If the current trendlines continue, the global wage gap is projected to come to an end by the year 2059 (Workplace Gender Equality Agency, 2022).

There are numerous factors that went into the pay gap decrease, including women's movements which are making significant strides in achieving equality (Workplace Gender Equality Agency, 2022). Another significant reason for the decreasing wage gap is that there is less sexism in the world today (Gomes, 2021). This has resulted in the gap between men and women decreasing when holding all other factors constant. Another major contribution to the decreasing wage gap is the comparative advantage that women have in soft skills (Beaudry and Lewis, 2014). Women score higher than men on most metrics of soft skills, but come short on some specific competencies (Beaudry and Lewis, 2014). By targeting skills like these and helping women improve in them, could the pay gap be decreased at a faster rate? Furthermore, how could these traits be trained so that a tangible improvement is found? This paper will revolve around these questions with the application being a decreased wage gap and greater equality between genders.

3) The Importance of Soft Skills

According to the financial assistant website “The Balance”, soft skills are “non-technical skills that relate to how you work. They include how you interact with colleagues, how you solve problems, and how you manage your work” (The Balance, 2022). Furthermore, soft skills involve a high competency in emotional intelligence or better known as EQ. Some of the skills that make up emotional intelligence are one's ability to successfully engage and carry out acts of communication, collaboration, leadership, creativity, and many more traits that involve a high degree of emotional intelligence.

While soft skills deal with emotional intelligence, hard skills deal with intelligence quotient or better known as IQ. This measures one's ability to problem-solve, learn, and perform cognitive tasks. In the past, hard skills were looked at as more important and more desirable to employers. This trend has recently shifted in the last few decades as companies are finding increased value in soft skills (Beaudry and Lewis, 2014). The most prominent reason for this is the increased usage and applications of technology in the world (Sultan, 2022). Advancements in technology have replaced numerous jobs involving figuratively hard skills such as manual labor. Automating tasks through technology allows for improved efficiency and effectiveness in many endeavors and so technology is taking jobs based on hard skills (Ra, 2019). An example of this is with data entry clerks as they were replaced by automation software since it is cheaper and more efficient to use. While technology can complete certain hard skills better than people, the current state of technology still lacks the soft skills to replace jobs in numerous sectors. For instance, a lawyer must be able to convince the judge and jury of a certain stance. While technology is capable of finding strict facts about the case, it cannot convey sufficient human emotion which is a crucial component of winning the favor of others. This makes soft skills significantly more important to employers in some industries, as those soft skills are not replaceable by technology (Sultan, 2022).

Through acknowledging the importance of soft skills, it becomes clear that they should be a point of focus for individuals who aspire to lead successful careers in certain industries. High levels of soft skills make individuals substantially more marketable to companies and hence allowing them to command higher-paying jobs. Noting the preceding, it is evident that

individuals need to engage themselves in activities that help to develop their soft skills. This could include immersing in social activities or even embarking on specialized soft skills training. Most importantly, the use of soft skills can continue to be employed by women to decrease the wage gap. To sustain the progression in decreasing the wage gap, women should be encouraged to participate in specialized soft skills training.

4) Measuring Soft Skills

A precursor to soft skill training is developing and understanding a system that is able to capture a qualitative metric. To achieve this, quantitative analysis must be implemented into qualitative data which allows for a scoring system to exist. There are numerous different methods of accomplishing this difficult task, one of which is the use of electronic tools that implement artificial intelligence to score participants through certain tests. The first of these tools is called "Skills Base" which uses custom rating criteria to analyze the soft skills of users. This software even includes a self-assessment feature which allows for one's strengths and weaknesses to be highlighted for further inspection (Chatterjee, 2022). Another very useful tool is called "Brilliant Assessment," which consists of an intelligent scoring algorithm, personalized reports, and even user feedback. This technology is so advanced that it can even test an employee's risk to cybersecurity and assess their possibility of causing harm to the company. (Chatterjee, 2022).

Measuring soft skills can also be performed by people if solid criteria are developed. This way responses can be analyzed against certain criteria and a score can be given based on how responses measure against the rubric. The issue is that cognitive bias can skew answers based on perceptions of the subject that the tester has. These cognitive biases differ from person to person which is what makes testing qualitative data very difficult. This is because responses are not black and white and hence, cannot be graded as simply correct or incorrect. Developing criteria to grade answers beforehand helps to eliminate cognitive bias as it allows answers to fit into categories that are associated with different scores (Emeritus, 2022).

5) Soft Skill Scores Before Training

To begin, the differences between soft skills across genders before training must be established. According to Andrews (2019), men and women are equally as emotionally intelligent. Andrews further elaborates that men and women are better at different skills, but cumulatively, they are equivalent. Furthermore, the study shows that women score higher in empathy, interpersonal relationships, and social responsibility. Meanwhile, men score higher in assertiveness, stress tolerance, and confidence (Andrews, 2019). To add, the differences in soft skills yield advantages in different work-related fields. For men, it is noted that they perform better in leadership-based roles as being assertive and confident are more important when practicing authority. Andrews claims that this is a significant disadvantage to women in the workforce as leadership roles typically pay more. This could be a contributing factor to the wage gap as men are taking jobs that pay higher salaries (Andrews, 2019).

Another study published in 2021 by the faculty of education at the National University of Malaysia yielded different results from the preceding (Awang and Careemdeen, 2021). In this study of 90 men and 174 women, it was found that men score higher in soft skills which contradicts the results from the research in the previous paragraph. Awang and Careemdeen (2021) also investigated factors like participation in community-based activities, and involvement in university clubs and the correlation between these and soft skills was noted as part of the study This was performed by evaluating and scoring all the 2 above factors on soft skills independently between the two genders. To begin, women and men were shown to score approximately the same on “participation in community-based activities”. More specifically, females scored incrementally higher than the males in the group which made the difference negligible when looking for a correlation with soft skills (Awang and Careemdeen, 2021). On the other hand, men were shown to score higher in “involvement in university clubs” by a considerable magnitude. Since men score higher in both soft skills and participation in university events by considerable amounts, there is a clear connection between the two variables. This is because with higher participation in university events, comes increased levels of soft skills. Hence, this uncovered a correlation between soft skills and participation in university clubs (Awang and Careemdeen, 2021). While looking at the original data would simply suggest that men are better than women at soft skills, looking at the research in further depth uncovers that

this is likely not the case. In reality, the men in the study participated in more university clubs and activities which luckily influenced their soft skills. This is because the majority of university extracurriculars involve social elements. This allows participants to gain valuable practice in socializing and working with other people. Since soft skills can be learned and practiced through activities that involve them, those who participate in university extracurriculars come out with greater abilities. Therefore, while the study showed men perform higher in soft skills, it was likely because they were more involved in social activities (Awang and Careemdeen, 2021).

A study in 2016 performed by a global consulting firm named “Korn Ferry”, demonstrated different results from the two studies mentioned above. Over the years of 2011-2015, data from 55,000 professionals from 90 countries were collected using the emotional and social competency inventory which is a survey to access emotional intelligence. This study concluded that women are higher performers than men in terms of soft skills. More specifically, they found that women score higher on almost all competencies that relate to emotional intelligence (Korn Ferry, 2016). The exception to this was self-control as no significant difference was observed. The study even found that women perform better in leadership-based soft skills than men do which is contradictory to what the preceding studies found. To be specific, the biggest gender gaps the research uncovered is that women are 86% more likely to use practices involving self-awareness and 45% more likely to use empathy than men (Korn Ferry, 2016). Furthermore, women still outperform men in the following skills: positive outlook, coaching/mentoring, influence, inspirational leadership, conflict management, organizational awareness, adaptability, teamwork, and achievement orientation (Korn Ferry, 2016).

In conclusion, there is a clear difference in the findings of the reviewed studies. For the most part, the consensus seems to be that men and women cumulatively share the same level of soft skills. The difference is in the individual competencies as men and women score differently in each specific skill.

6) Training Soft Skills

As previously denoted, the base levels of soft skills between men and women before training would appear to be very similar. Since soft skills are a factor in decreasing the wage gap, it would be critical to determine if these skills can be trained (Beaudry and Lewis, 2014). If women were to have an advantage in responsiveness to soft skill training, then it can be used to create a gap in soft skills across genders. This would help to further decrease the wage gap, as soft skills are an important factor that influences the difference in wages between genders (Beaudry and Lewis, 2014).

Sutil-Martín and Otamendi (2021) go into great depth in evaluating soft skills scores after a training program is carried out. In this study from Spain, a group of 200 adult males and females from both university, and outside the university were first evaluated before any training. The soft skill evaluation was broken down into many different subsections which were each scored on an individual basis. To be specific, soft skills were broken down into 4 macro skills, 8 meso skills, and 21 micro skills as denoted in Figure 1. Each of the 21 micro skills were individually evaluated which gave scores for meso and macro skills by totaling the micro skills from their respective category. After the initial testing, specific and methodical training was commenced for each of the 21 micro skills. While the training exercises differed between each micro soft skill, the overall type and style of training was kept uniform across each session. To expand, the training was designed as numerous “serious games”, which are essentially strategy games including gamestorming and board games (Sutil-Martín and Otamendi, 2021). Overall, the training for soft skills had a very specific approach that utilized active learning as opposed to passive learning. After training each micro soft skill, each attribute was tested again to track the soft skill scores of individuals that had participated in the training so the effectiveness of the education could be evaluated.

MACRO SOFT SKILL	MESO SOFT SKILL	MICRO SOFT SKILL
SS1. Intrapersonal	1.1. Self-knowledge	1.1.1. Academic self-concept
		1.1.2. Emotional self-concept
		1.1.3. Social self-concept
		1.1.4. Family self-concept
		1.1.5. Physical self-concept
	1.2. Self-management	1.2.1. Volatility
		1.2.2. Withdrawal
SS2. Interpersonal	2.1. Empathy	2.1.1. Adopting perspectives
		2.1.2. Understanding emotions
	2.2. Influence	2.2.1. Assertiveness
SS3. Personal Social Responsibility	3.1. Strategic mindset	3.1.1. Openness
	3.2. Conscientiousness	3.2.1. Industriousness
		3.2.2. Orderliness
SS4. Organizational Sustainability	4.1. Compassion	4.1.1. Kindness
		4.1.2. Common humanity
		4.1.3. Engagement
		4.1.4. Indifference
		4.1.5. Separation
		4.1.6. Disengagement
	4.2. Morality	4.2.1. Idealism
		4.2.2. Relativism

Figure 1 (Sutil-Martin and Otamendi, 2021, pg 4)

The results of the study were highly surprising as they were counterintuitive to the expected outcome. To begin, a very unanticipated result was that certain soft skill scores had decreased after training (Martín and Otamendi, 2021). This means that not only was the training not effective, but it had the opposite result as intended for 6 of the 21 micro soft skills as denoted in Figure 2. Thus, training is not effective on certain soft skills such as assertiveness and industriousness (Sutil-Martín and Otamendi, 2021). Firstly, this shows that if the goal is to improve soft skills, certain categories should be left alone as training does more harm than good. Another potential reaction to this result is the need to modify the training to make it more effective. Therefore, the first observation of this study is that only training traits that see an increase in score should be targeted or alternatively, a change in training must be implemented for certain traits.

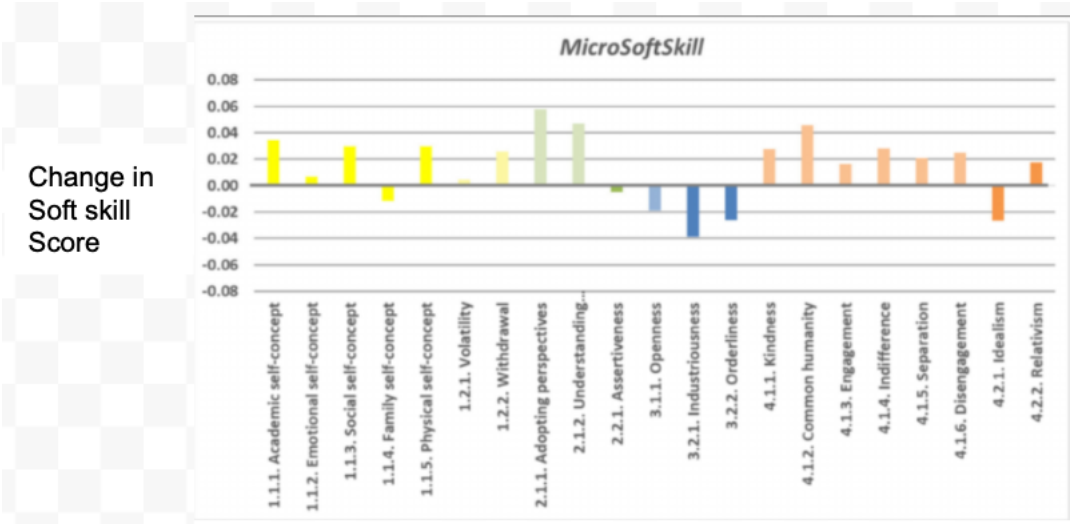
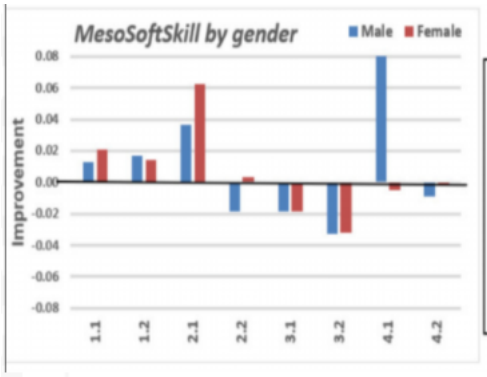


Figure 2 (Sutil-Martin and Otamendi, 2021, pg 14)

The second surprising result of the study was that men and women showed significantly different results in their responsiveness to the training (Sutil-Martín and Otamendi, 2021). Men were shown to have a greater total net improvement in their soft skills when compared to women which is denoted in Figure 3 However, men had not outperformed women on each of the 8 meso soft skills individually. The trend observed was that women outperformed men on 6 of the 8 meso skills as demonstrated in Figure 3. The reason that men had still managed a greater overall improvement was due to the magnitude of the difference in the meso skills that they did perform better in. To elaborate, men were able to show increased responsiveness in compassion-based training by such a significant amount that it offset the 6 meso skills women were superior in (Sutil-Martín and Otamendi, 2021).



	M	F	Diff	p-value	
1.1. Self-knowledge	0.0127	0.0210	-0.0084	0.4570	
1.2. Self-management	0.0171	0.0142	0.0029	0.8800	
2.1. Empathy	0.0363	0.0622	-0.0259	0.2280	
2.2. Influence	-0.0184	0.0033	-0.0217	0.2890	
3.1. Strategic mindset	-0.0188	-0.0187	-0.0001	0.9950	
3.2. Conscientiousness	-0.0327	-0.0322	-0.0006	0.9710	
4.1. Compassion	0.0799	-0.0048	0.0847	0.0170	**
4.2. Morality	-0.0094	-0.0014	-0.0080	0.6220	

Figure 3 (Sutil-Martin and Otamendi, 2021, pg 14)

Another interesting observation was the difference in the vocational group to the university group between genders. As shown in Table 1, female university students significantly outperformed the vocational females while vocational males had shown greater improvements in training than the university student males (Sutil-Martín and Otamendi, 2021). This is thought-provoking as it becomes clear that each gender has a different age group or demographic that is more responsive to training soft skills. Counterintuitively, males after university performed better than university males – about 67% of vocational males improved their soft skills post-training compared to 50% of university males. This is unexpected because university students are more involved in learning so one would expect a greater reactivity to training since they learn on a more consistent basis and are more accustomed to it. This could be an element for further investigation with one potential reason for this trend being the lesser maturity in males when young. Immaturity could decrease young male's willingness to learn which, in turn, could decrease their attentiveness and hence, the results observed here.

SS - SOFT SKILLS	PRE	POST	Improvement	% Positive
FEMALE - VOCATIONAL	0.5382	0.5360	-0.0022	42.31%
FEMALE - UNIVERSITY	0.5436	0.5537	0.0101	65.38%
MALE - VOCATIONAL	0.5242	0.5322	0.0081	66.67%
MALE - UNIVERSITY	0.5542	0.5629	0.0086	50.00%
Total	0.5399	0.5464	0.0065	56.76%

Table 1 (Sutil-Martin and Otamendi, 2021, pg 18)

The outstanding question is how to use soft skills training to give women a further advantage that could lead to decreasing the wage gap. Based on the results of Sutil-Martín and Otamendi (2021), it becomes very apparent that there should be a focus on the meso soft skills of self-knowledge and empathy as these were the two skills that women had improved on after training to a greater extent than men. In contrast, men would want to train on self-management and compassion as these two skills were both improved at a higher rate than women. Further, according to Sutil-Martín and Otamendi's (2021) study, it would be optimal to train women that are still in university as they were shown to be considerably more responsive to training compared to vocational women. Alternatively, if men were being trained, vocational individuals would want to be the primary focus as they demonstrated increased reactivity to training (Sutil-Sutil-Martín and Otamendi, 2021). The execution of additional studies is critical in determining

if Sutil-Martin and Otamendi's (2021) results are accurate to reality or an outlier in the grand scheme.

7) Optimal Learning Conditions Between Genders

An interesting question arising from the study of Sutil-Martín and Otamendi (2021) is whether men and women should be trained in different ways to optimize improvements in their soft skills. If this is the case, then the study would have potentially been tailored towards one gender as each learns optimally under different environments and the results could be biased. To look into this possibility, the differences in learning styles between genders were looked into.

Honingsfeld and Dunn (2003), demonstrates that there is a difference in how men and women optimally learn (As shown in Table 2, men were shown to take in information and learn at a faster rate if the information was taught through active learning rather than passive learning. Women demonstrated opposite results as they were shown to optimally learn through passive learning as opposed to active learning (Honingsfeld and Dunn, 2003). To explain, active learning is when an individual is involved in the learning process as opposed to just listening or watching a lecture. Some examples of active learning are hands-on projects, group discussions, simulations, case studies, and debates. This means that men show an improved ability to learn through being more engaged in lessons which allow for increased active learning. Passive learning is not done through actively participating in the lesson, but rather passively observing (Honingsfeld and Dunn, 2003). Some examples of passive learning include presentations, lectures, readings, and self-studying. This establishes that women will learn better through a lesson in which students play no role and the teacher provides all the needed information.

Four learning-style differences between males and females:

Boys	Girls
More Visual and Spatial	More Auditory
Kinesthetic & Tactual Learners	Fine with Lecture Style learning
Do well with Routine and Structure	Prefer Variety
More Peer Motivated	Self/Teacher/Parent Motivated

Table 2 (Honingsfeld and Dunn, 2003)

The knowledge of optimal learning environments for men and women has a significant implication on the study conducted by Sutil-Martín and Otamendi (2021) on training soft skills.

This is because the study was performed in such a way that forced participants to actively learn. In the study, participants were trained in soft skills based on serious games where participants must actively engage in a game in a similar fashion to a board game or strategy game (Sutil-Martín and Otamendi, 2021). As previously noted, however, men learn better than women when educated with an active approach (Honingsfeld and Dunn, 2003). This confirms that Sutil-Martín and Otamendi's study was tailored towards men as they were more receptive to the used mechanisms of the training. Furthermore, this sheds doubt on Sutil-Martin and Otamendi's result that men are more receptive to soft skills training. Since the training involved was in tune with the way men learn, it is intuitive that they had shown better results. It is important to note that while this likely was the reason that men had higher rates of improvements in their soft skills than women, one cannot be certain without more studies being done. The hypothesis that the results from training being in man's favor could be due to the training being more tailored towards men needs to be proven statistically.

Furthermore, the magnitude to which the training tailored towards men has influenced the results should be tested empirically. There are a few possible outcomes that may have occurred if the training was gender neutral, the first of which is that women outperform men in soft skill scores after the neutral training. The second is that women and men would develop equally after training and both present similar results. The last is that the gap in improvement between men and women would shrink, that is, men still could perform better than women, but to a lesser degree. Nonetheless, it is expected that performing gender neutral training would decrease the extent to which men outperform women in the Sutil-Martín and Otamendi's (2021) study. Lastly, to make the training not in favor of any gender, both males and females should be separately trained under their respective optimal learning environments. To elaborate, this would mean training men under an active learning style and females under a passive learning style as this would optimize their responsiveness to the learning. To do this, men can be trained the same as they were in the Sutil-Martín and Otamendi's study while the female group should be offered a more lecture-based style of teaching.

8) Impact of Soft Skills on Salary

Regardless of the unintentional bias the Sutil-Martín and Otamendi's (2021) study had in its training methods, females were still able to significantly outperform males on the meso soft skill empathy. In this skill, males had an improvement score of 0.0363 while females nearly doubled this improvement as they improved by a score of 0.0622 (Sutil-Martín and Otamendi, 2021). This shows that even with an education plan that was not suited for the learning style of females, they still showed great mastery of the skill. Had the training been female-oriented, this gap would have been even larger which solidifies empathy as a skill that women can be successfully educated in at an improved rate than men. This raises the immediate question of whether empathy training in women can be used to increase aggregate soft skill levels and make women stand out more to employers. This would allow women to command a higher wage as their value to a business would increase. In order to answer this question, statistics on the soft skills that pose an influence on salary were necessary to explore. This question was addressed in a study in the United Kingdom by Calanca (2019). The first step was identifying the soft skills that each participant frequently had to demonstrate in their job. Once this was performed, the salary of each of the 245000 jobs was noted and tied to the soft skills that were required of them. The next element was aggregating the data between participants and finding the average salary that each soft skill is tied to. Afterwards, the salary rewards from each soft skill were measured and each skill was ranked in their monetary bonuses that they yield as denoted in Figure 7 (Calanca, 2019).

When analyzing the ranking of the most important soft skills on salary, a general trend becomes very clear. The skills that have the most positive influence on salary are all traits that involve leadership. As an example, the top 3 most important skills are maturity, delegation skills, and team building skills (Calanca, 2019). In order to lead a team, maturity is very important as it is essentially a trait that overlaps many others as you must be mature to successfully perform numerous endeavors. To name a few, being mature promotes accountability, conflict resolution, and good decision-making. Delegation skills are also very critical when leading individuals as one must have the ability to assign responsibilities to followers/employees in an equitable way. Team-building skills are also crucial in leadership as one must successfully boost morale and motivation in their team while helping them achieve goals.

While the soft skills that pose the greatest positive influence on salary are associated with leadership, the skills that pose the most negative influence on salary are related to subordination (Calanca, 2019). In this study, the bottom 3 skills on salary rewards were time management, willingness to learn, and professionalism (Calanca, 2019). Time management is associated with subordination as there is a schedule given by a superior that must be followed. Willingness to learn is also affiliated with subordination as one must learn anything their superior requests and hence it is a desirable trait in the lower levels of the business hierarchy. Lastly, professionalism is linked to subordination as it is normally the individuals that interact with customers directly that must exhibit high levels of civility. The employees that directly interact with customers are typically lower level as individuals higher up the corporate ladder typically work in the background.

Calanca's (2019) findings of the impact of soft skills on salary are very counterintuitive as one would expect skills such as time management to be very beneficial and hence demanding of a higher wage. The reality of this is opposite as time management entails a role of subordination. It is important to note that the study is not arguing that these skills are not beneficial to have, but rather that when compared to other soft skills, they do not pose the same benefit on salary.

This is a very important observation when considering the role of empathy on salary. While empathy was not one of the soft skills that was evaluated in the study, certain skills were mentioned that are comparable to empathy such as listening skills, and friendly personality (Calanca, 2019). Empathy is the ability of one to put themselves in someone else's shoes and understand their emotions. An empathetic individual must be a great listener as they would need to listen to understand the problems and struggles that someone else feels. Furthermore, empathetic people are friendly as they subscribe to the idea of treating people how they would like to be treated and everyone appreciates friendliness. According to Calanca (2019), both listening skills and friendliness have a considerable negative influence on salary rewards. This shows that empathy and its related skills are not beneficial on salary. This serves as proof that the comparative advantage that women hold in empathy training is not helpful in decreasing the wage gap.

Skill cluster	*r*	Count
maturity	11.9**	112
delegation skills	10.2**	53
team building skills	9.8*	50
strategic planning	9.1**	608
ability to work in a fastpaced environment	8.0*	51
leadership	7.4**	4743
constructive feedback	6.9*	74
proposal writing	6.2*	84
ability to improve skills	6.0**	108
discretion	5.7	309
results driven	4.9**	541
presentation skills	4.5**	1464
telephone skills	−7.3**	227
polite	−5.9**	339
dynamic person	−5.2	70
dedication	−4.6**	467
friendly personality	−4.6	97
listening skills	−4.3**	355
punctual	−4.1*	248
ability to identify problems	−3.1	132
calm	−2.8*	787
professional manner	−2.6**	2303
willingness to learn	−2.2**	1652
time management	−1.8	2149

Table 3 (Calanca, 2019)

9) The Perception of Power

This discovery that soft skills, in which women have a comparative advantage such as empathy, have a negative effect on salary raises a new question that centers around whether women should train the soft skills that have the greatest positive influence on the wage gap to decrease its size. While Sutil-Martín and Otamendi (2021) showed men to be more responsive to training their soft skills, if the training was tailored more to women, the opposite could be the case. That is, if through training women could gain comparative advantage in leadership-based traits, this could allow for them to demand higher wages.

When looking into this possibility, an interesting study was encountered on the perception of male and female leaders. In this study, a university professor at Columbia Business School conducted an experiment with his students (Katsarou, 2004. The class was randomly split into two groups and given the identical description of a CEO of a major company. The only difference between the two groups was that one was told the CEO was a female while the other was told the CEO was a male. Interestingly, each group in the class had a completely different perception of the CEO (Katsarou, 2004). The group that had been told the CEO was a male, had

perceived him as very successful and a strong choice for the CEO role. On the other hand, the group that believed the CEO was a female had perceived her as selfish and undeserving of her role as CEO. The general trend is that the more assertive a female is, the less she is respected. To take this idea further, the trend suggests that the relationship between power and success is different between genders. In men, more success results in more power as successful men are perceived as powerful and are revered. In women, perceptions of achievement cause women that are successful to be less admired. This was well documented by Katsarou (2004) as the traits that are indicative of success were not admired when demonstrated by a woman. All that was different in the information provided to the two groups in the study was the gender of the CEO, but this completely changed the perception that people had of the CEO.

Perception is exceedingly relevant in the process of an individual's personal and career growth. Katsarou (2004) findings suggest that if a powerful female were to try to climb the ranks of the corporate ladder in a company, she would be met with greater hurdles than a male with identical characteristics. This is because the perceptions of her by fellow employees would be lesser than her male counterpart and hence, the male is more likely to receive a promotion and achieve success. It is also very telling that these students are the future of the workforce and so it is indicative that the cycle of wrongful perceptions will not break over time. Therefore, Katsarou's (2004) study suggests that it would not benefit women if they were to train the soft skills that have the greatest influence on wages due to the negative perception of powerful women.

The preceding study has significant implications on whether soft skills training should be used to diminish the wage gap. It has been shown that even if women demonstrate the soft skills that are commanding of a higher wage, perceptions of powerful women cause the improved skills to be rendered a negative. This would mean that even if women gained a comparative advantage in soft skills through training, this would not have the expected positive influence on salary. It isn't that the women would be less competent or worse at their jobs than men, but it would simply be an unfortunate case of the power of perception. This leads to the conclusion that the attitude towards powerful women must change in order to achieve gender equality. If successful women were revered in the same way that successful men are, it allows for women to be given the same opportunities that men are given including higher-paying jobs. This would act

as a huge factor in decreasing the wage gap as women would be better represented in the upper ranks of companies, which earn higher wages.

In conclusion, a change in perception is a prerequisite to offer training in soft skills to women as such training is rendered useless unless the opinions of powerful women are changed. Once the attitude towards powerful women and men becomes the same, then we can talk about how to train soft skills.

10) Conclusion

To conclude, there are two key findings from this paper that are relevant to decreasing the gender-based wage gap. First, when training soft skills, a training regiment that is suited for the needs of each gender is necessary. Each gender learns under different optimal environments and hence, it is important to make the training account for this difference. Individual differences in learning styles between people can also be accounted for when designing programs to improve soft skills. To expand, different training regiments can be developed that are each tailored to the individual learning styles. Prior to beginning the soft skills training itself, a test can be used to determine the learning style of each individual. This way, each individual undergoing the training can have lessons that are optimized to their particular style of learning.

The second major finding is that perception stands in the way of soft skills and eliminates the impact soft skills should have on the gender-based wage gap. This is because perceptions of powerful women have been shown to be negative while the opposite is true for men. This barrier stands in the way of many qualified women achieving a higher-paying job as colleagues and recruiters see these women in a negative light. This results in men getting more of the higher paying jobs as they are looked at in a more positive light. This means that the negative perception of powerful women must be confronted and looked into as its own issue. This way, one of the barriers to wage equality can be removed. Overall, it is clear that the issues surrounding the gender-based wage gap are far from over and should continue to be studied and understood so that equality can be reached.

11) Works Cited

Andrews, Shawn. “Council Post: Are Men and Women Equally Emotionally Intelligent?” Forbes, October 12, 2022. https://www.forbes.com/sites/forbescoachescouncil/2019/10/09/are-men-and-women-equally-emotionally-intelligent/?sh=406e3de07939.

Awang, Mohd Mahzan, and Jalal Deen Careemdeen. "The Relationship between Social Capital and Soft Skills among University Students." ResearchGate, 2021,https://www.researchgate.net/publication/355142177_The_Relationship_between_Social_Capital_and_Soft_Skills_among_University_Students#pf5.

Beaudry, Paul, and Ethan Lewis. “Do Male-Female Wage Differentials Reflect Differences in the Return to Skill? Cross-City Evidence from 1980–2000.” *American Economic Journal: Applied Economics* 6, no. 2 (2014): 178–94. https://doi.org/10.1257/app.6.2.178.

Calanca, Federica. “Responsible Team Players Wanted: An Analysis of Soft Skill Requirements in Job Advertisements - EPJ Data Science.” SpringerOpen, April 27, 2019. https://epjdatascience.springeropen.com/articles/10.1140/epjds/s13688-019-0190-z.

Chatterjee, Deyasini. “How to Measure Soft Skills Effectively?” Emeritus, January 24, 2023. https://emeritus.org/blog/measure-soft-skills-effectively/.

Dolores Lucia Sutil Martin, Javier Otamendi. "Soft Skills Training Program Based on Serious Games." ResearchGate, 2021, https://www.researchgate.net/publication/353728093_Soft_Skills_Training_Program_Based_on_Serious_Games.

Doyle, Alison. “What Are Soft Skills?” The Balance, October 9, 2022. https://www.thebalancemoney.com/what-are-soft-skills-2060852.

Dunn, Rita, and Andrea Honingsfed. “Teaching Strategies & Gender Differences.” *Intermediate Teaching Strategies*, https://teachingstrategiesforintermediate.weebly.com/gender-differences.html.

Gomes, Alexandra. “Are We Getting Less Sexist? A Ten-Year Gap Comparison Analysis of Sexism in a Portuguese Sample.” *Sage Journals*, Sage Journals, 20 Apr. 2021, https://journals.sagepub.com/doi/abs/10.1177/00332941211011073.

Hoff, Madison. “These 8 Charts Show the Glaring Gap between Men's and Women's Salaries in the US.” *Insider*, Insider, 15 Mar. 2022, https://www.businessinsider.com/gender-wage-pay-gap-charts-2017-3.

International Labour Organization. 2022. “International Equal Pay Day 2022: Can Pay Transparency Measures Help Reduce the Gender Pay Gap?” https://www.ilo.org/global/topics/equality-and-discrimination/WCMS_856125/lang--pt/index.htm#:~:text=Globally%2C%20women%20on%20average%2C%20are,per%20cent%20less%20than%20men

Katsarou, Maria. “Women & the Leadership Labyrinth Howard vs Heidi.” *Leadership Psychology Institute*, 2004, https://www.leadershippsychologyinstitute.com/women-the-leadership-labyrinth-howard-vs-heidi/.

Korn Ferry. "New Research Shows Women Are Better at Using Soft Skills Crucial for Effective Leadership." Korn Ferry, 10 Mar. 2020, https://www.kornferry.com/about-us/press/new-research-shows-women-are-better-at-using-soft-skills-crucial-for-effective-leadership.

Mazur, Kevin. "The Rising Importance of Soft Skills Driving Productivity." INSEAD Knowledge, 15 Oct. 2020,https://knowledge.insead.edu/economics-finance/rising-importance-soft-skills-driving-productivity.

MIT Sloan School of Management. "Soft Skills Training Brings Substantial Returns on Investment." MIT Sloan School of Management, 17 Oct. 2019, https://mitsloan.mit.edu/ideas-made-to-matter/soft-skills-training-brings-substantial-returns-investment.

National Committee on Pay Equity. "Info & Time Line: The Wage Gap Over Time." National Committee on Pay Equity,https://www.pay-equity.org/info-time.html.

Ra, Sungsup. “The Rise of Technology and Impact on Skills.” *Taylor & Francis Online*, 7 Sept. 2019, www.tandfonline.com/doi/full/10.1080/14480220.2019.1629727.

Robins, Linda. "Soft Skills Development." TrainingZone, 7 Jul. 2020,https://www.trainingzone.co.uk/develop/talent/three-soft-skills-that-will-increase-your-companys-profit.

Sultan, Owais. “Importance of Soft Skills in Technology.” *HackRead*, 28 Feb. 2022, https://www.hackread.com/importance-of-soft-skills-in-technology/.

Workplace Gender Equality Agency, "Equal Pay Day 2022." 2022, https://www.wgea.gov.au/gender-pay-gap-data/equal-pay-day-2022.