

Comparing belief in free will and job satisfaction in the US and Taiwan

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Free will and job satisfaction are some terminologies that you do not hear often in the same sentence; however go hand in hand with one another. This paper replicates the data compiled from three studies, the first one being in regards to Taiwanese real estate agents, the second study being American online labor workers, and the third study looking into the subject of free will and job satisfaction on an international level. We will also be applying secondary research to aid our understanding of this topic, and how cultural norms affect the responses we receive. As this is an issue that every individual thinks about prior to entering an industry, or accepting a job, we found it to be a topic to be extremely beneficial to us as we are ending our time in university.

Introduction

Free will is a topic that has different meaning depending on the city or country we are in. For us in North America, the idea of free will is more apparent according to a survey concluding that 60% of Americans believe that they have free will (Scientific American 2015). With recent innovations in fields such as psychology, philosophy, and science, the idea of free will has shifted from what the exact term is, to free will's affects on human beings. This goes to show the neurological connections with free will, specifically that the way we view free will, will later affect our a variety of our daily decision making (Frontiers 2016). There are a variety of factors that shift the outcomes of free will, and in this paper we will take three different studies to help our understanding of free will. The first study we are looking at takes 252 Taiwanese real-estate agents over a three month period, while examining their job satisfaction with free will. The second study takes 137 American workers that are on an online labor market and conduct the same study over a six month period. And the final and largest study takes a sample of 14,062 employees from 16 different countries and examined their country level moderators. This subject has different meanings in every country, when taking a look at countries outside of North America such as Asia and other western countries, they have different beliefs of free

will on average, specifically that it is not as important as North Americans view it (Frontiers 2017). At its core, free will is to what extent or ability we can our own decisions and have autonomy, as well as the outcomes and consequences of our actions. Studies have shown that when free will is present, the population is happier, more positive, and live better, and contrary for countries that do not have free will (Alquist, Ainsworth, & Baumeister, 2013). Now this idea directly relates to careers, as it is something that individuals spend a majority of their time doing, and would prefer to be happier doing it rather than not happy. When you have autonomy and free will in your career, you immediately have a higher job satisfaction, as your neurological decision making is seen in a much clearer manner.

Data

2.1 Source The paper we have used for replication is from the list of Gilad Feldman papers offered from the course, specifically titled Agency Beliefs Over Time and Across Cultures: Free Will Beliefs Predict Higher Job Satisfaction, written by Gilad Feldman, Jiing-Lih Farh, and Kin Fai Ellick Wong. This paper dives into the meanings of free will, and takes several studies examining its correlation with job satisfaction as the primary factor, but also includes ideas in regards to psychological well being and international perspectives. Our reproduction seeks to focus on two different findings made from the original paper and apply a holistic lens to it. The two claims we are focusing on are as follows: (1) Is there a positive or negative relationship among free will and job satisfaction? (2) Something about age

2.2 Methodology This paper is replicating the data that was originally studied for the (2018) paper Agency Beliefs Over Time and Across Cultures: Free Will Beliefs Predict Higher Job Satisfaction. The first study takes Taiwanese real estate agent's job satisfaction into account and conducted the study in 54 branch offices of a public real estate company based in Taiwan. They then proceeded by distributing the surveys to agents in each of the branch in two different times, once every 3 months for a total of 6 months of data. They ended up with 293 surveys to review for study #1. For study number #2, the paper looks into the Amazon Mechanical Turk (MTurk) American Worker's Job Satisfaction. The study was conducted by in two different sections, in which they were able to survey a total of 209 American participants. After this initial study was done, the same group was invited to conduct a follow up survey six months later, and took in responses over a 15 day period. Out of the 209 initial participants, only 137 of them conducted the follow up survey. And for the final study, contrary to the first two where they directly went to a group and surveyed them; they surveyors used previous data from the World Value Survey (WVS) which was data conducted between 1990 and 2008, looking into the participants views on free will, job satisfaction, and job autonomy. Over these 18 years the survey received data 257,597 people, and focused on 14,062 participants as they answered questions directly related to our research. Although the total survey took into account people from over 40 countries, for our focus we looked at individuals from 16 specific countries.

2.3 Features The studies conducted each had their specific variables conducted. For the first study, the survey takes into account age, gender, social desirability of the job, job satisfaction after the first wave of

surveys, job satisfaction after the second wave of surveys, and their beliefs on free will. The age range for this study was between 22 to 49 years old, and only took into account male and female genders. The second study primarily took free will and job satisfaction into account.

Results

Data from Study 1 were used to show the relative amount of belief in free will of the average Taiwanese real estate agents and how much are they satisfied with their job across two times within 6 months with the same sample. We extracted the responses from the survey and extracted the responses to the questions : “From the scale of 0 to 10, How much do you agree with this statement: I have free will”and “From the scale of 0 to 10, How much do you agree with this statement: I am satisfied with my job” at Time one and two. In Table 1, there are three values on a scale of 0 to 10 compared : (1) Job Satisfaction T1, (2) Job Satisfaction T2, and (3) Belief in Free Will which is only measured once since beliefs rarely vary on a relatively short time span. The rows would be the mean and standard deviation calculated using R. Looking at Table 1, we immediately notice that the mean score of Job satisfaction barely vary from the first and second time (5.64 and 5.74 respectively) and that the average level of belief of free will would be 3.99. In addition,the standard deviation of the three values seem reasonable. In analyzing Table 1, we can recognize that the slight increase in job satisfaction still within the standard deviation.

```
knitr::opts_chunk$set(echo = FALSE)
Table_I <- data.frame(
  Job_satisfaction_T1 = c(5.64, 1.18),
  Job_satisfaction_T2 = c(5.74, 0.99),
  Belief_free_will = c(3.99, 0.49)
)

# Name the rows
rownames(Table_I) <- c("Mean", "Standard Deviation")

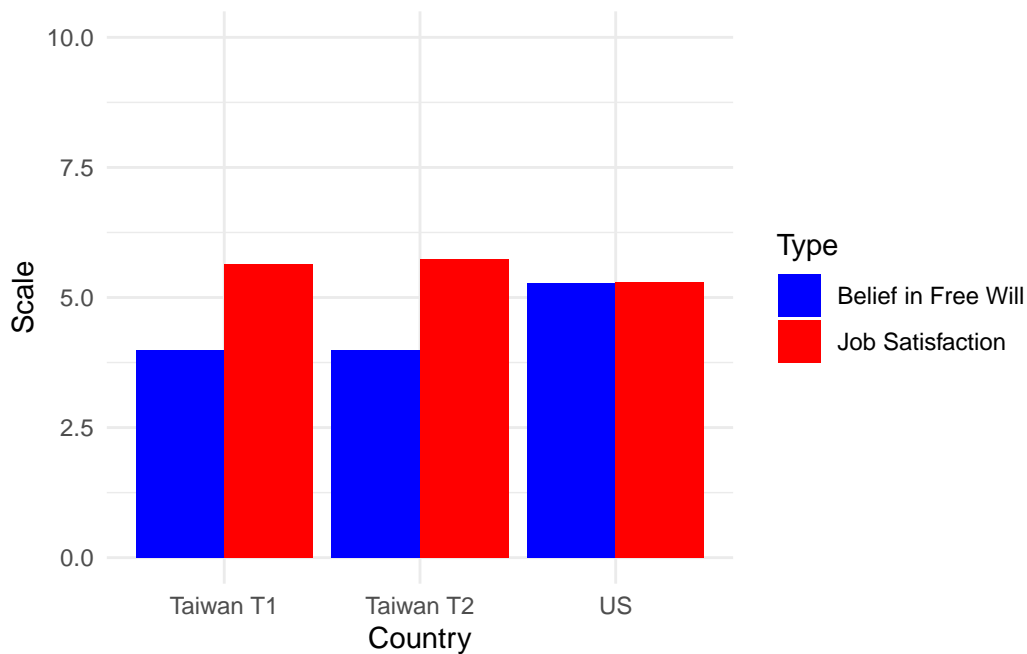
# Print the dataframe
print(Table_I)
```

| | Job_satisfaction_T1 | Job_satisfaction_T2 | Belief_free_will |
|--------------------|---------------------|---------------------|------------------|
| Mean | 5.64 | 5.74 | 3.99 |
| Standard Deviation | 1.18 | 0.99 | 0.49 |

Talk more about it.

And also planes (**?@fig-planes**). (You can change the height and width, but don't worry about doing that until you have finished every other aspect of the paper - Quarto will try to make it look nice and the defaults usually work well once you have enough text.)

| | Job_satisfaction | Belief_free_will |
|--------------------|------------------|------------------|
| Mean | 5.29 | 5.28 |
| Standard Deviation | 1.22 | 0.84 |



Talk way more about it.

Replication:

Link of the reproduction of the paper on the social science reproduction platform :<https://doi.org/10.48152/ssrp-1yg9-0z41>

Discussion

4.1 Findings In this paper we have replicated the studies and results founded by Feldman, Farh, and Wong. These authors seeked to find the relationships between freewill and job satisfaction across different countries, cultures, and ages. Of these findings, our paper focused on three

specific aspects. (1) Free will is fairly constant throughout the first study, and that there is an increase in job satisfaction throughout time. (2) Individuals with a stronger belief in free will, will also report a higher job satisfaction in a single region. (3) Depending on the region you are in, individuals will report different beliefs in free will correlated to job satisfaction.

4.2 Canada's belief in free will and job satisfaction The Canadian population is currently at just over 38 million people, and has increased by nearly 4 million people in the past decade. And throughout all of the provinces in Canada, Quebec is the province with the highest overall satisfaction among men and women in Canada (Statistics Canada 2023). Among this group, Quebec men surveyed that they were 80.7% very satisfied or satisfied with their job, and Quebec women only surveyed 78.4% being either very satisfied with their job, or satisfied with it. Among the women, the province of New Brunswick holds the highest job satisfaction topping in at 80.5%, with Prince Edward Island being the runner up at 80%. Concerning the original paper from Feldman, Farh, and Wong, it is important to note the international presence and multicultural aspect of this study, as well as the vast number of immigrants that move to Canada on a yearly basis. In the year of 2023, Canada was able to welcome over 437,000 new permanent residences, and 604,000 temporary workers, with a variety of these individuals coming from Asia and Europe (Government of Canada 2023). Due to this vast number of immigrants coming to Canada, we can assume that there were a variety of individuals that experienced an increase in belief in free will with their correlation to job satisfaction especially those that came from countries where belief in free will was weaker than that of Canada. Contrarily, those that came from countries with a stronger belief in free will and came to a specific province in Canada with a lower job satisfaction such as Manitoba with a 65.2% job satisfaction (Statistics Canada 2023), they might experience a reverse effect and decrease in their belief in free will which would directly correlate to their job satisfaction.

4.3 Practical Implications for Organizations The research and work done by Feldman and his peers will allow companies and organizations worldwide to drastically benefit their organizations by taking into account their employees views on their current job statuses. By taking employees considerations into account, employee retention will be higher because job satisfaction will increase, companies will increase their overall reputation and image, the overall wellbeing of companies will rise with an increase in company loyalty. Once these institutions realize that a stronger job satisfaction stems from a stronger belief in free will, employees will be able to foster a state of autonomy, ultimately empowering employees and enhancing the overall productivity of respective companies.

4.4 Limitations As the work we have conducted was based off the reproduction from the work of Feldman, we were limited to the parameters he looked into. Despite the data being long and expansive, we could only look at the data from the United States and Taiwan specifically. There were also some concerns in regards to accuracy of data, specifically that some of the individuals who partook in the surveys were either influenced to say positive things about the company, or were led to believe that they have free will, where in reality they do not. This is a topic that is much more apparent in an international setting, lower developed communities, and areas with less free speech. Additionally there was the issue of the variety in occupations,

where we would compare a white collar executive working in a major American city such as New York or San Francisco, to an employee at a much smaller company living in Taiwan. There was no main base here to compare the two career paths as they are drastically different in every way. Finally we found that the reproducible article focused on many positive outcomes of free will in the context of job satisfaction, and lacked to mention enough information in regards to the down side of the the lack of autonomy and free will, and how that correlates with job satisfaction. The role of employees in these instances do indeed vary as for many they account their work ethic with happiness, disregarding autonomy and free will. This ultimately leads to ethical and moral issues that were not mentioned in the paper. 4.5 Future Research In regards to future understandings of the topic of free will and job satisfaction, it would be interesting to explore how ethics and morality play a role in decision making when it comes to individual autonomy. Especially how specific work environments alter answers to research studies and surveys. Additionally looking into different cultures and countries outside of the United States and Taiwan, looking into major global cities such as London, and remote areas such as Nunavut. Finally to take the study to a next step would be to track an individuals opinions on this topic from the beginning of their career to the end, ideally staying within the same company for that time, looking at decades of research and studies. This would be able to tap into the psychological implications of individuals and how personality growth and maturity play a role in their decision making process.

First discussion point

If my paper were 10 pages, then should be be at least 2.5 pages. The discussion is a chance to show off what you know and what you learnt from all this.

Second discussion point

Third discussion point

Weaknesses and next steps

Weaknesses and next steps should also be included.

Appendix

Additional data details

Model details

Posterior predictive check

In [?@fig-ppcheckandposteriorvsprior-1](#) we implement a posterior predictive check. This shows...

In [?@fig-ppcheckandposteriorvsprior-2](#) we compare the posterior with the prior. This shows...

References