

Belief in Free Will*

A Catalyst for Long-Term Job Satisfaction in the Workplace

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Abstract

This paper investigates the long-term relationship between belief in personal freedom and job satisfaction through two longitudinal studies. Study 1 tracked 252 Taiwanese real-estate agents over 3 months, while Study 2 followed 137 American workers in an online labour market over 6 months. We found a consistent positive correlation between belief in free will and job satisfaction, even after accounting for other agency constructs. This research highlights the enduring impact of embracing personal freedom on workplace contentment, offering valuable insights for enhancing individual well-being and organizational productivity in diverse cultural and occupational settings.

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Introduction

In today's dynamic and demanding work environments, the pursuit of job satisfaction is a fundamental aspect of individual well-being and organizational productivity. Central to this pursuit is the belief in personal freedom, an age-old philosophical concept that has garnered renewed attention for its potential practical implications. Extensive research has already established a significant correlation between the belief in free will and work performance, suggesting that this philosophical stance might offer tangible psychological benefits. However, while existing studies provide valuable insights, they often lack long-term investigation into the enduring relationship between belief in free will and job satisfaction. Addressing this gap, our research endeavours to explore the longitudinal association between these factors, shedding light on their lasting impact on individuals' satisfaction with their work.

In our quest to delve deeper into this intriguing connection, we conducted two distinct yet complementary studies. Study 1 involved a cohort of 252 Taiwanese real-estate agents, meticulously tracked over a period of three months. Through comprehensive assessments, we examined the correlation between the participants' belief in free will and their reported levels of job satisfaction. Study 2 broadened the scope by focusing on

*Code and data are available at: https://github.com/Hailey-Jang/STA302_Reproduction.git

137 American workers engaged in an online labour market, monitored diligently over six months. Leveraging similar methodologies, we sought to corroborate and extend the findings from Study 1, thereby providing a robust understanding of the relationship between belief in free will and job satisfaction across diverse cultural and occupational contexts.

Our findings unveil a compelling narrative: a consistent and positive relationship exists between the belief in free will and job satisfaction over extended periods. Both studies revealed that individuals who embrace the notion of personal freedom tend to experience higher levels of satisfaction in their professional endeavours. Remarkably, this association persisted even when accounting for other agency constructs, underscoring the unique and enduring impact of belief in free will on workplace contentment.

Understanding the profound influence of belief in free will on job satisfaction holds profound implications for both individuals and organizations alike. By elucidating this enduring relationship, our research not only enriches scholarly discourse but also offers actionable insights for enhancing workplace well-being and productivity. This paper unfolds in three sections: first, we provide a comprehensive review of the literature on belief in free will and its implications for job satisfaction. Next, we detail the methodologies employed in our two longitudinal studies, followed by a presentation and analysis of our findings. Finally, we offer a nuanced discussion of the theoretical implications, practical applications, and avenues for future research in this burgeoning field.

Data

This paper will replicate the data originally collected for the paper (2016) (Feldman, Wong, and Farh 2023). R (R Core Team 2023), a statistical programming language, is exclusively used in this paper. To clean and prepare the data, the libraries dplyr (Wickham et al. 2019),(Wickham et al. 2021), knitr (Xie 2021) are used. For the graphs, ggplot2 (Wickham 2016) is used.

Results

Job Satisfaction in Taiwan

The dataset comprises responses gathered from surveys conducted within 54 branch offices of a publicly listed real-estate agency company in Taiwan. Two waves of surveys, separated by a 3-month time lag, were administered to agents, resulting in a total of 293 returned questionnaires at Time 1 and 252 at Time 2, with a 74% response rate. The dataset encompasses several variables shedding light on agents' demographics, free will perception, and job satisfaction levels. Key variables include age (E_AGE), sex (E_SEX), free will perception, job satisfaction at Time 1 (JS), and job satisfaction at Time 2 (W2JS). Notably, age exhibits a mean of approximately 30.5 years at both time points, with a slight increase in the mean age at Time 2. Regarding sex distribution, the majority of respondents identify as male, comprising approximately 79-82% of the sample across both time points.

```
library(ggplot2)
library(dplyr)
library(tidyr)

data <- read.csv("FW satisfaction-Study 1-data.csv")

## `geom_smooth()` using formula = 'y ~ x'
## `geom_smooth()` using formula = 'y ~ x'
```

Interpreting figure 1 and figure 2, which are scatter plots depicting the relationship between belief in free will and job satisfaction, we observe a clear positive correlation between the two variables. The upward trend in both graphs suggests that individuals who hold stronger convictions in free will tend to report higher levels of job satisfaction. This relationship is particularly evident in figure 2, where job satisfaction over time is

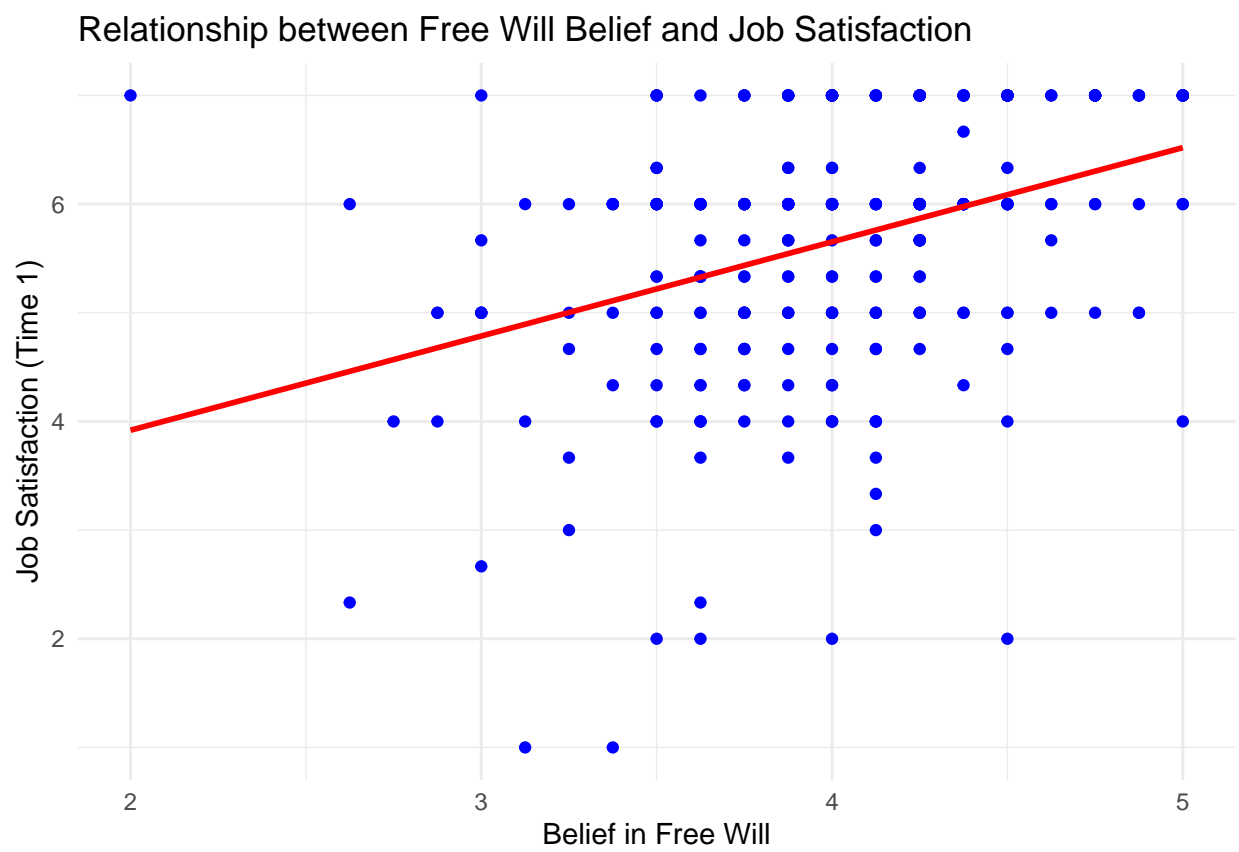


Figure 1: Relationship between Free Will Belief and Job Satisfaction (Time 1)

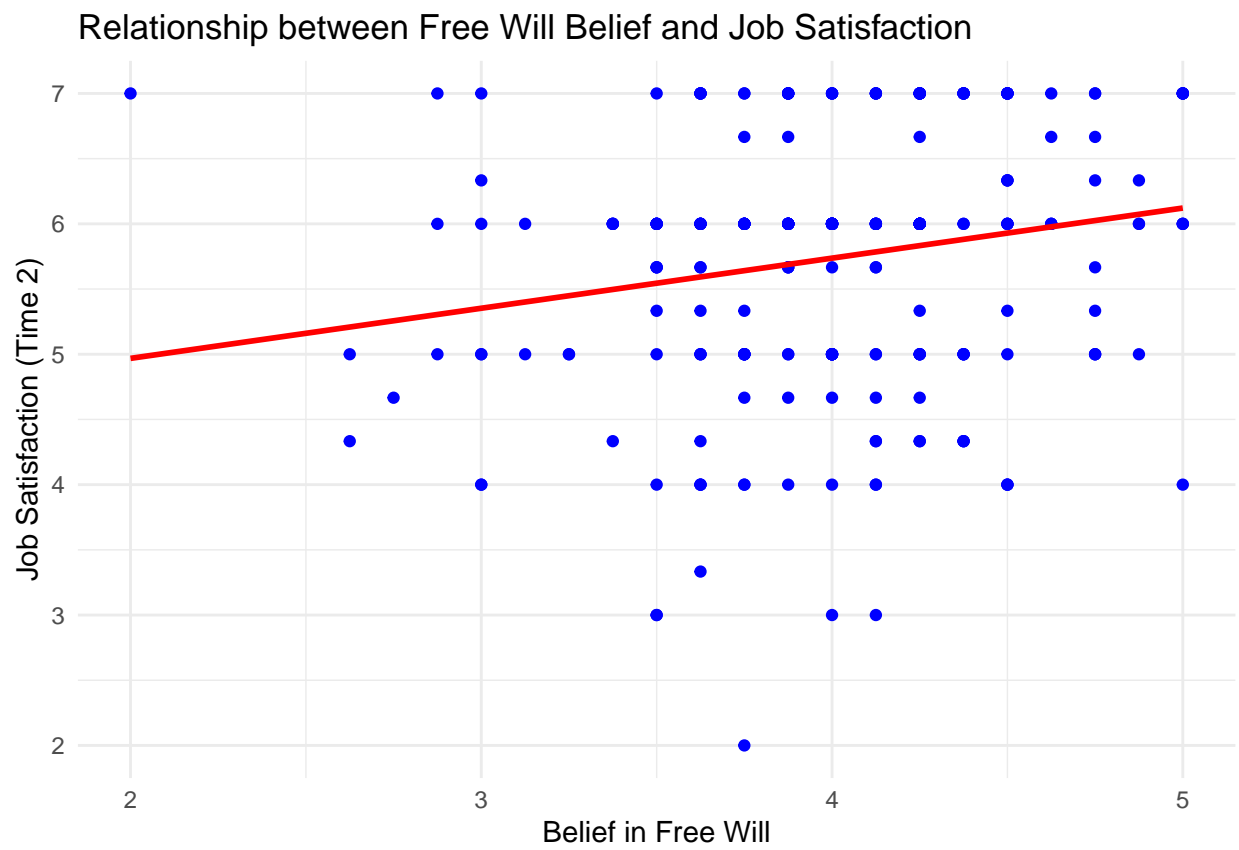


Figure 2: Relationship between Free Will Belief and Job Satisfaction (Time 2)

plotted against belief in free will. The trend line in this graph shows a distinct positive slope, indicating that as belief in free will increases, so does job satisfaction.

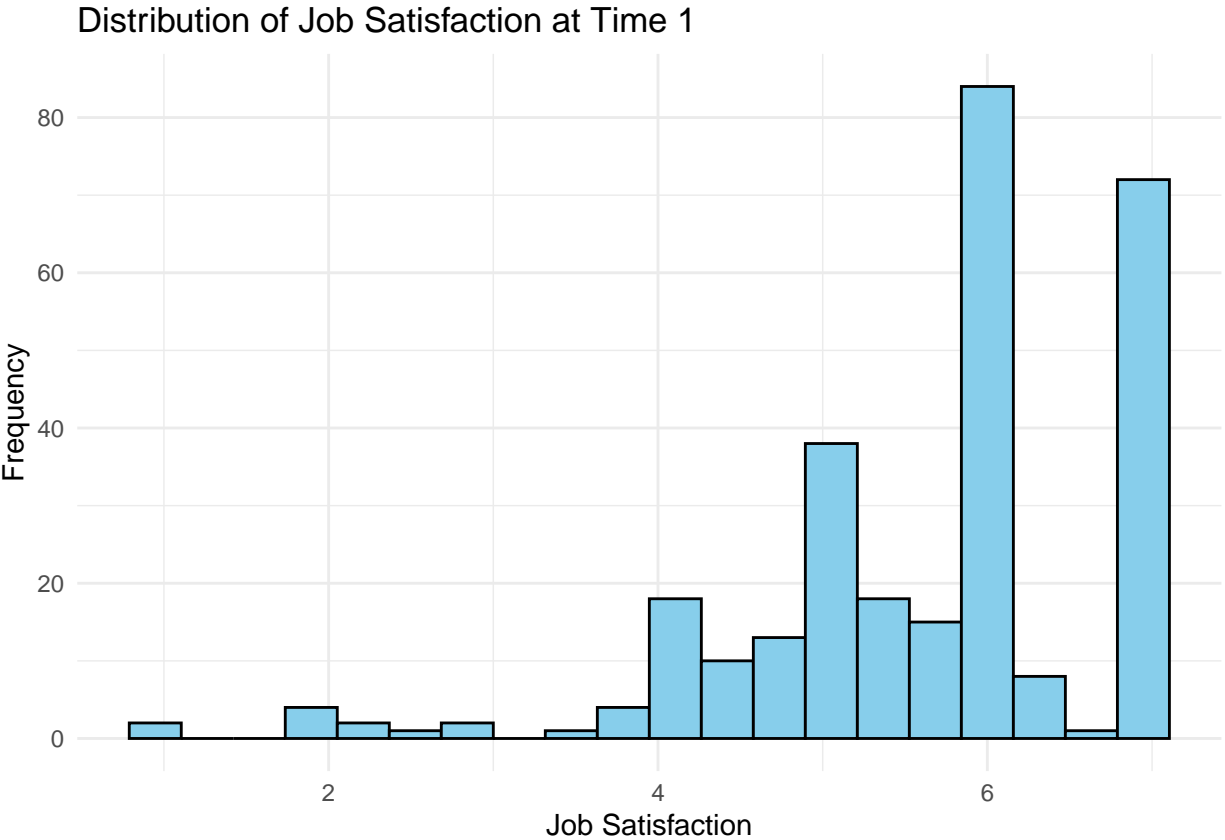


Figure 3: Distribution of Job Satisfaction at Time 1

Furthermore, a notable observation arises when comparing job satisfaction levels between Time 1 and Time 2, highlighted in figure 3 and figure 4. Despite a relatively modest increase in satisfaction levels during Time 2, the change is not statistically significant. However, the distribution plots for both time points reveal a positive trend, with the majority of data points shifting upwards from Time 1 to Time 2. This shift is corroborated by the histograms, where the distribution of job satisfaction scores at Time 2 appears slightly skewed towards higher values compared to Time 1. While the difference may seem subtle, it suggests an overall trend of improving job satisfaction among surveyed branch offices over the three months. Further statistical analysis could offer deeper insights into the significance and underlying factors driving this observed change.

Discussion

Free Will and Job Satisfaction

Through complementary studies involving Taiwanese real-estate agents in an online labour market, the research uncovers a consistent and positive relationship between belief in free will and job satisfaction over extended periods. This finding not only enriches our understanding of the psychological dynamics within the workplace but also highlights the enduring impact of philosophical perspectives on individual well-being.

One significant takeaway from this study is to confirmation of the enduring influence of belief in free will on job satisfaction. Despite fluctuations in external circumstances, individuals who embrace personal freedom consistently report higher levels of workplace contentment. This insight underscores the profound impli-

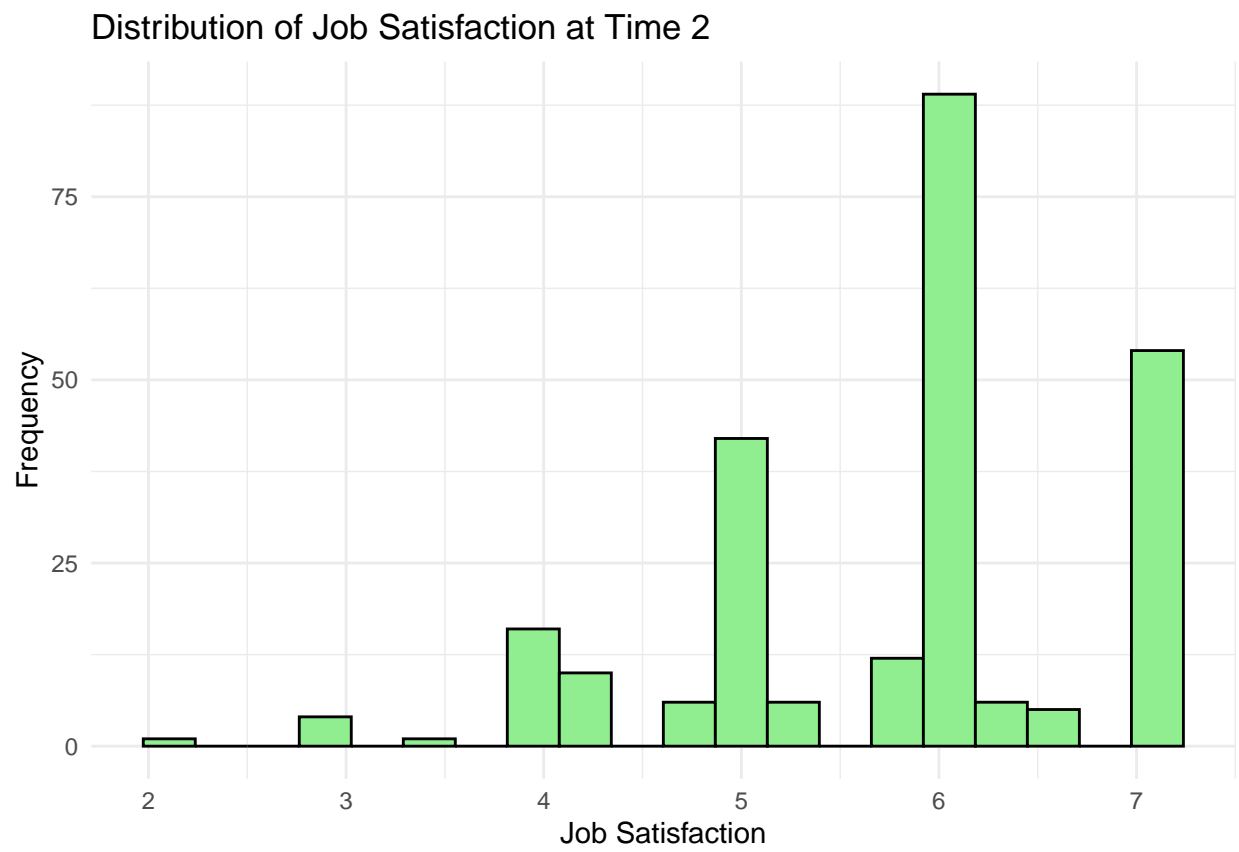


Figure 4: Distribution of Job Satisfaction at Time 2

cations of philosophical perspectives on psychological states and organizational outcomes, suggesting that fostering a sense of agency may be a valuable strategy for enhancing workplace well-being.

Long-Term Effect of Free Will

However, despite its strengths, the research also exhibits some weaknesses. For instance, the relatively short duration of the longitudinal studies, spanning three to six months, may limit the generalizability of the findings. Additionally, while the use of real-world samples enhances ecological validity, it may also introduce confounding variables that are difficult to control for.

Moving forward, future research should aim to address these limitations by conducting more extensive longitudinal studies across diverse populations and industries. Furthermore, exploring the underlying mechanism through which belief in free will influences job satisfaction could provide valuable insights for developing targeted interventions aimed at improving workplace well-being. Overall, this paper lays a solid foundation for further inquiry into the complex interplay between philosophical beliefs, psychological states, and organizational outcomes in the modern workplace.

bibliography

- Feldman, Gilad, Kin Fai Ellick Wong, and Larry Farh. 2023. "Agency Beliefs Across Time and Culture: Free Will Beliefs Predict Higher Work Satisfaction." OSF. <https://doi.org/10.17605/OSF.IO/D2E6S>.
- R Core Team. 2023. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.
- Wickham, Hadley. 2016. *Ggplot2: Create Elegant Data Visualisations Using the Grammar of Graphics*. <https://CRAN.R-project.org/package=ggplot2>.
- Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Golemund, et al. 2019. "Welcome to the tidyverse." *Journal of Open Source Software* 4 (43): 1686. <https://doi.org/10.21105/joss.01686>.
- Wickham, Hadley, Romain François, Lionel Henry, and Kirill Müller. 2021. *Dplyr: A Grammar of Data Manipulation*. <https://CRAN.R-project.org/package=dplyr>.
- Xie, Yihui. 2021. *Knitr: A General-Purpose Package for Dynamic Report Generation in r*. <https://CRAN.R-project.org/package=knitr>.