Individual Exercise 4

ORGB 671 - 075

Discrimination as a Self-Fulfilling Prophecy: Evidence from French Grocery Stores
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1. **Main finding:**

The paper investigates managerial bias effects on the job performance of minority cashiers in a French grocery store chain. The study reveals that when minority cashiers work under managers who harbor biases against them, their job performance significantly declines.

This effect is not observed among majority cashiers under the same managers, highlighting the specific impact of bias on minority employees. The scheduling of cashiers with different managers is done quasi-randomly, allowing the authors to isolate the effect of managerial bias from other factors. To me, the paper also mirrors the emphasis on understanding the causal effects of interventions (in this case, the effect of managerial bias on employee performance) and the importance of isolating these effects from confounding variables.

This study provides concrete evidence that discrimination can create a self-fulfilling prophecy, where biased expectations lead to worse performance outcomes for the discriminated group.

2. **Research design of paper and mastering econometrics course:**

The research design of this paper can be understood through the lens of the econometric principles discussed in the econometric course. This study essentially utilized a **quasi-experimental design**, a concept closely related to the econometric tools, particularly concerning **ceteris paribus** comparisons and the handling of selection bias. In the study, the researchers took advantage of a natural variation in the way cashiers were scheduled under different managers, which was determined **quasi-randomly**. This setup allowed them to observe the performance of minority and majority cashiers under conditions that could be considered as close to random assignment as possible without manipulating the work schedules themselves. This is akin to finding a natural experiment within the workplace, a method that echoes the econometric approach of using random assignment or instrumental variables to achieve ceteris paribus -- holding other factors constant to isolate the effect of a single variable. By comparing the performance of minority cashiers when they worked under biased and unbiased managers, the researchers were able to directly measure the impact of managerial bias on cashier performance. This approach mirrors the discussions in the econometric course about the importance of creating conditions where only the variable of interest changes, thus mimicking the effects of an actual experiment without needing to manipulate the environment artificially. This study's design navigates the challenges of selection bias, a key concern highlighted in the econometric course. In real-world settings, individuals are not randomly distributed across conditions; they come with pre-existing differences. The scheduling of cashiers, while not perfectly random, offers a workaround that approximates random assignment well enough to study the causal impact of bias on performance. This methodology aligns with the econometric strategies, such as using **natural experiments** or **instrumental variables** to infer causality in the absence of controlled, randomized trials.

3. **Possible remaining threats to inference that result from measurement or implementation problems likely encountered by the researchers:**

- Measurement error and biases: if the way cashiers' work quality or managers' biases are measured isn't accurate, the study's conclusions might not be spot-on. It's like trying to measure how much it rained with a bucket that has holes. This kind of error could lead to misestimation of the causal effect of managerial bias on cashier performance. As discussed in the course, econometrics emphasizes the importance of accurate measurement to ensure that the variables used in analysis truly reflect the concepts they are supposed to represent.
- Quasi-random assignment implementation: the study assumes cashiers are randomly assigned to managers. If this isn't strictly true (say, some cashiers always work mornings, other evenings), it could mess up the study's findings. It's like assuming all apples in a bag are the same when some are oranges.
- Omitted variable bias (OVB): If there are unobserved variables that influence both the likelihood of a cashier being scheduled with a biased manager and their performance, this could lead to OVB. The econometrics principles suggest that failing to account for all relevant variables that might affect the outcome can lead to incorrect inferences about the causal relationship. For example, if certain cashiers who are more resilient to bias are more likely to be scheduled with biased managers, this could overestimate the true negative impact of bias on performance.
- Generalizability, specific to French grocery stores: the study's insights might not apply everywhere. What happens in French grocery stores might not hold in, say, American tech companies.
- Other effects of scheduling: if being scheduled at certain times or under certain conditions affects cashier performance beyond manager bias (like busier shifts leading to stress), it complicates understanding the true effect of bias.

4. **If want to try to establish why they leave the organization, what could be one causal hypothesis to test?**

I believe one causal hypothesis that can be considered to test why patent examiners leave the organization could be this following one:

- The level of job satisfaction influenced by workload and work-life balance causes patent examiners to leave the organization.

This hypothesis suggests that if patent examiners experience high levels of stress due to an excessive workload and poor work-life balance, they are more likely to resign. Testing this hypothesis would involve comparing the resignation rates among examiners with high workload and poor work-life balance against those with manageable workloads and better work-life balance, controlling for other factors such as pay, career advancement opportunities, and organizational support.

5. **Outlining a research design that would use one of the tools described in the course to test the hypothesized causal link. Be as specific as possible about your implementation:**

The research design I would like to provide outline for is to match examiners with high workload and poor work-life balance to similar examiners with lower workload and better work-life balance on observable characteristics, then comparing their resignation rates.

Therefore, the hypothesis would be "job satisfaction, influenced by workload and work-life balance, causes patent examiners to leave the organization", using **a quasi-experimental design** with **regression analysis**.

First, starting by gathering data on a large number of patent examiners, including their job satisfaction levels, workload, work-life balance, and whether they left the organization. Also, we should include control variables like age, gender, years of experience, and any other factors that might influence their decision to leave.

Second, to measure job satisfaction, we can use survey data or HR records to quantify job satisfaction, workload, and work-life balance. Job satisfaction can be measured through standardized survey questions, while workload could be gauged by the number of patents reviewed per period, and work-life balance by reported satisfaction with time spent outside work.

Third, to identify a comparison group, if possible, we should find a natural experiment within the data where workload or work-life balance changed due to external factors not related to the examiners' personal choices (e.g., policy changes, departmental restructuring).

Forth, we should conduct regression analysis, using regression models to analyze the relationship between job satisfaction (including workload and work-life balance) and the probability of leaving. The key is to control for other variables that might affect this outcome, ensuring that any observed effect is as close as possible to the causal effect of job satisfaction on the decision to leave.

Lastly, we should interpret the results, to see if the analysis shows that lower job satisfaction, higher workload, or poorer work-life balance significantly increases the likelihood of leaving, this supports the hypothesis. However, it should be mentioned that it's important to discuss potential limitations, such as unobserved variables that might also influence both job satisfaction and the decision to leave.