ANON Dissertation Title

Chair: ANON

ANON
ANON
ANON

Proposal Word Length: 993 words
Budget Word Length: 298 words

May 30, 2024

Research Question and Proposed Research Activity

Advances in automation and communication technology threaten occupations. Walking robots are replacing warehouse workers (Delfanti 2021); artificial intelligence developments threaten high-skilled labor such as legal aids (Chouhan 2019; Grennan and Michaely 2020), and advances in communication technology ease firms' outsourcing of offshorable occupations to states with lower labor costs (Mageto 2022; Grossman and Helpman 2005).

Whereas previous trends in job insecurity were largely driven by exposure to trade across industries (Farber, Hall, and Pencavel 1993; Kletzer et al. 2005), sectors (Wood 1986; Broersma and Gautier 1997), or skill levels (Farber 2004; DeFrank and Ivancevich 1986), many modern economic threats apply to the specific tasks of a worker's occupation (David 2013; Acemoglu and Autor 2011; Acemoglu, Ticchi, and Vindigni 2011). As these threats move from larger groups of workers, such as high-skilled workers, to smaller groups, such as medical transcriptionists, it may be more difficult for workers to collect accurate information about their job insecurity[1]. In fact, several recent studies find evidence that ill-informed workers **misattribute** occupational-level job insecurity from automation or offshoring to migrant labor (Wu 2022, 2023; Kaihovaara and Im 2020).

This research asks how do workers react to job insecurity to form policy preferences and how accurate are workers' perceptions of job insecurity? The existing scholarship is split. While some scholars find evidence of misattribution, many political economists assume that workers correctly attribute the source of their job insecurity and these scholars find evidence that workers oppose the options that threaten them (Owen

1. Throughout this proposal, job insecurities will refer to an occupation's susceptibility to being lost to automation, offshoring, immigrant labor, or import penetration.

and Johnston 2017; Im 2021; Im et al. 2019; Casabianca, Lo Turco, and Pigini 2019). Notably, neither group of scholars directly observe workers' perceptions of job insecurity but rather assume correct or incorrect perceptions based on their occupations.

My dissertation can theoretically consolidate these disparate findings and will observe workers' perceptions of job insecurity directly. My dissertation's theory examines how job insecurities influence workers' policy preferences, contingent on workers' perceptions. Following prospect theory, this project expects workers' policy opinions to be driven by loss aversion and should oppose the options they believe may threaten them (Barberis 2013; Camerer et al. 2004).

There are two types of workers within this theory: knowledgeable and unknowledgeable. A **knowledgeable** worker has accurate perceptions of their job insecurities and is expected to oppose the options that threaten them and oppose the options that do not less. In contrast, I assume that **unknowledgeable** workers receive a noisy signal of threat. For example, they may witness layoffs in similar occupations. Under this noisy signal, workers may believe their job is insecure but cannot attribute it to a particular source. In that instance, workers are expected to oppose any option that could threaten their employment and should have greater opposition to all options. An unknowledgeable worker in this theory facing an offshoring risk would oppose offshoring (aligning with the expectations of political economists) and oppose migration, automation, and import penetration (aligning with the expectations of misattribution scholars).

A survey experiment will be utilized to test these expectations. This experiment will collect information on respondents' demographics and subject them to a treatment designed to increase or decrease perceived job insecurity temporarily. Table 1 shows the experimental conditions below.

Condition	Heightened Risk Condition	Lowered Risk Condition	Opposition to Migration	Opposition to Offshoring	Opposition to Offshoring	Opposition to Imports
1	Control	Control	–	–	–	–
2	Control	Offshoring	–	↓	–	–
3	Control	Import Penetration	–	–	–	↓
4	General Job Loss	Control	↑	↑	↑	↑
5	General Job Loss	Offshoring	↑	↓	↑	↑
6	General Job Loss	Import Penetration	↑	↑	↑	↓
7	Immigrant Labor	Control	↑	–	–	–
8	Immigrant Labor	Offshoring	↑	↓	-	-
9	Immigrant Labor	Import Penetration	↑	–	–	↓
10	Automation	Control	–	–	↑	–
11	Automation	Offshoring	–	↓	↑	–
12	Automation	Import Penetration	–	–	↑	↓

TABLE 1. *Experimental Conditions and Expectations*

The treatments are designed to instill a general sense of job insecurity, a specific sense of job insecurity, or a specific sense of job security using hypothetical treatments. The expectation is that respondents exposed to a noisy signal of job insecurity will be more likely to oppose all options. In contrast, respondents informed of specific heightened or lowered risks should oppose the threats more or less respectively.

This design will test how knowledgeable and unknowledgeable workers form policy opinions. The heightened risk treatment is shown in Figure 1, and the lowered risk treatment is shown in Figure 2. I expect the treatments of job insecurity will be mediated by respondents' existing levels of job insecurity, so detailed information on respondents' occupations is necessary to conduct this analysis.

FIGURE 1. *Heightened Risk Treatment*

Control
The United States Congress has recently introduced bill H.R. 6273, which is designed to help protect Americans from **compromised watersheds**. This bipartisan bill has received historic support across the aisle, and will potentially protect millions of Americans' **drinking water**.

Import/Offshoring Treatments

The United States Congress has recently introduced bill H.R. 6273, which is designed to help protect Americans from **import/offshoring related job loss.** This bipartisan bill has received historic support across the aisle, and will potentially protect millions of Americans' **jobs and wages**.

FIGURE 2. *Heightened Risk Treatment*

Dissertation Enrichment

The proposed experiment is critical to my dissertation. My second chapter will include the discussed experiment and a survey, which will collect information on workers' perceptions of job insecurity, the source of these perceptions, and their policy opinions on potential job threats. I am pursuing several external dissertation grants to complete the survey[2]. However, using this survey alone, it would be difficult to make an internally valid argument. I cannot directly influence perceptions of job insecurity while collecting externally valid data on workers' perceptions of job insecurity and policy preferences.

My third chapter will build off the theory of my second chapter and explore how state-level distributions of occupations influence how policymakers vote for economic policies. Additionally, I have applied for a research fellowship with the Department of Labor to conduct a possible fourth chapter that will explore how the misattribution of the source of job insecurity may influence workers' pursuit of readjustment programs following job loss. Both of these projects rely on the premise that occupational-level job insecurities influence political opinions contingent on workers' knowledge of them. A premise that my second chapter will hopefully establish.

Necessary University Approvals

Several university approvals are necessary for this project. The first is IRB approval for the experiment. I will submit my IRB application in early February if I receive this pilot study grant.

The second necessary university approval is the paperwork necessary to provide

2. Namely, grants from the Russel Sage Foundation, the Washington Center, and the Institute for Humane Studies

the student assistants' salaries for their labor. I have been in contact with **ANON** from **ANON** about these salaries. While **ANON** did not find any issue with paying the undergraduates at the rates I have described, I will need to research how best to pay students through the university using grant money.

The final university approval I will need is approval for foreign travel to Italy for IPES in 2024. I have obtained this approval before and will pursue it for this trip in October 2024.

Dissertation and Project Timeline

Below is a timeline of the proposed research activities and my dissertation defense. I have highlighted the activities pertinent to the funded project in black and the other dissertation timeline materials in grey. See Table 2 below.

TABLE 2. *Dissertation Timeline*

January 2024	Submit in-department and external dissertation grants, Draft/submit first job market packet, Continue data/analysis work on Chapter 1, Collect Chapter 3 data
February 2024	Submit IRB and pre-registration materials for Chapter 2 experiment and survey, Recruit a team of undergraduate RAs to assist in occupation coding, Polish and circulate Chapter 1, Collect data for Chapter 3, Apply sparingly to jobs
March 2024	Conduct Chapter 2 experiment, Draft Chapter 3 and run baseline models, Redraft Chapter 1 following comments, Apply sparingly to jobs
April 2024	Conduct Chapter 2 survey if external funding is received[i], Clean Chapter 2 experiment data, Analyze Chapter 2 experiment results, **(If DOL, submit Chapter 4 survey IRB and pre-registration materials)**, Present at MPSA, Continue Chapter 3 analysis, Polish Chapter 1, Apply sparingly to jobs
May 2024	Clean Chapter 2 Survey Data, Analyze Chapter 2 Survey Results, Draft Chapter 2, Submit Chapter 1, **(If DOL, conduct Chapter 4 survey)**, Draft Chapter 3, Apply sparingly to jobs
June 2024	Draft Chapter 2, Wait for Chapter 1 review, Finish Chapter 3 analysis, **(DOL Fellowship)**, Draft Chapter 3 for comments, Apply sparingly to jobs
July 2024	Polish Chapter 2, Circulate Chapter 2 internally for comments, **(DOL Fellowship)**, Circulate Chapter 3, Apply sparingly to jobs
August 2024	Redraft Chapter 2, [If unlikely 2024 hire, refuse the DOL fellowship and defend an expedited Dissertation], **(DOL Fellowship)**, Redraft Chapter 3, R&R/Resubmit Chapter 1, Apply sparingly to jobs
September 2024	Submit Chapter 2, Prepare Dissertation, APSA, Redraft Chapter 3, Apply to jobs
October 2024	Prepare Dissertation, Submit Chapter 3, Apply to jobs
November 2024	Prepare Dissertation, Present at IPES, APSA, Apply to jobs
Winter 2024-2025	Defend Dissertation, Apply to jobs
Spring 2025	Polish projects for submission, Apply to jobs

[i] If I do not receive any of the external dissertation grants in this round, I have a list of alternatives to pursue in Summer and Fall 2024

Detailed Budget

TABLE 3. *Detailed Budget for ANON Dissertation Grant*

Category	Item	Expense Estimated Unit Cost (USD)	Number	Total Estimated Cost (USD)	Estimated Date	Notes
A: Direct Data Costs	Payment to Survey Subjects	$2	550	$1100.00	03/2024	10 minutes of work at a rate of $12 USD per hour.
	Prolific Fees	$366.67	1	$366.67	03/2024	
	VAT fees	$73.33	1	$73.33	03/2024	
Subtotal for Direct Data Costs				**$1,540.00**		
B: Research Assistance	Open-Ended Occupation Coding Total Hourly Wages	$12	94 (hours)	$1,128.00	03/2024	Coding assistance for open-ended occupation questions at a rate of $ 12 USD for 550 responses at a rate of 5 minutes per response coding. Including recoding of 25% of responses to establish intercoder reliability. Plus four hours of training for each of the four employees, and 10 weekly 30-minute meetings for four workers $\left[\left(\frac{550*5}{60} * 1.25\right) + (4 \times 4) + (10 * .5 * 4)\right] * \$12 = \$1,128.00$
	Fringe Benefits	$12	20	$121.00	03/2024	Fringe benefits at a rate of .107 for non-exempt FICA undergraduate workers
Subtotal for Research Assistance Costs				**$1,249.00**		
C: Travel Costs	Round trip to Florence Italy from **ANON**	$1,507.00	1	$1,507.00	09/2024	Round trip flight from **ANON** to FLR from November 11/7 to 11/11 for IPES 2024.
Subtotal for Travel Costs				**$1,507.00**		
Total Expenses				**$4,295.00**		

Table 3 details the estimated expenses for this project. The first cost is the direct data costs. Prolific was selected as it has been found to have greater data quality than M-Turk or Qualtrics[3]. It also provides transparent pricing and allows the necessary sampling screening.

A power analysis was conducted to determine the necessary sample size. No extant experiments with similar designs exist to take expected coefficient sizes, so Cohen's D effect sizes were used. Small effect sizes (d=0.2) are assumed to err on the side of caution[4]. Each simulated respondent is randomly assigned to a treatment condition, and outcome variables are generated using the following equation.

$$\text{Opinions Towards Policy}_a = \quad \beta_1 \phi_a + \beta_2 \rho_a - \beta_3 \sigma_a \qquad \text{s.t.}$$

$$a \in \{\text{ Immigration, Offshoring, Automation, Import Penetration}\}$$

3. Douglas, Ewell, and Brauer 2023.
4. Gignac and Szodorai 2016.

Where ϕ_a represents direct job insecurity, ρ_a represents a general job insecurity, and σ_3 represents direct job security. Five hundred samples were created at sizes 50 to 650 (increasing by 10). Figure 3 plots the percentage of the samples with significant p-values at each sample size, and the variables of interest are consistently powered at 550 respondents.

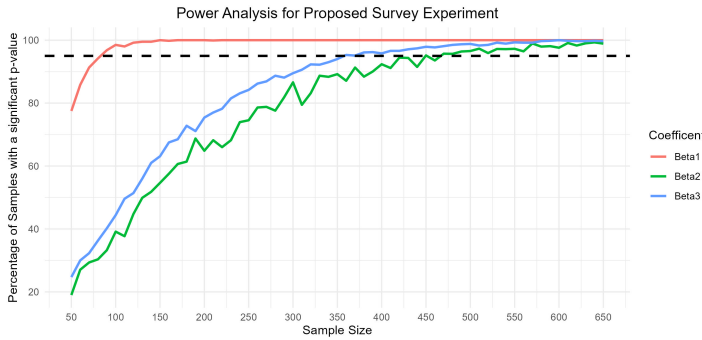

FIGURE 3. *Power Analysis for Proposed Experiment*

Additionally, research assistants will be required to code the open-ended occupation questions. The standard occupation coding for ISCO-08 asks respondents three open-ended questions on their occupation and codes their responses into 436 categories[5]. Unfortunately, existing automated programs for coding these occupations tend to result in different coding and are often inaccurate[6].

Given the small number of respondents and the necessity of accurate occupation coding, I will train a team of four undergraduates to code the responses into the occupational categories. Their training, meeting times, work, and benefits expenses are estimated above.

Lastly, the final expense of this dissertation pilot would be a flight to IPES 2024. I

5. Züll 2016.
6. Schierholz and Schonlau 2021.

hope to present at IPES to gain feedback on this project before expanding this research agenda in my future works.

References

Acemoglu, Daron, and David Autor. 2011. Skills, tasks and technologies: Implications for employment and earnings. In *Handbook of labor economics,* 4:1043–1171. Elsevier.

Acemoglu, Daron, Davide Ticchi, and Andrea Vindigni. 2011. Emergence and persistence of inefficient states. *Journal of the European economic association* 9 (2): 177–208.

Barberis, Nicholas C. 2013. Thirty years of prospect theory in economics: A review and assessment. *Journal of economic perspectives* 27 (1): 173–196.

Broersma, Lourens, and Pieter Gautier. 1997. Job creation and job destruction by small firms: An empirical investigation for the Dutch manufacturing sector. *Small Business Economics* 9:211–224.

Camerer, Colin F, et al. 2004. Prospect theory in the wild: Evidence from the field. *Advances in behavioral economics,* 148–161.

Casabianca, Elizabeth J, Alessia Lo Turco, and Claudia Pigini. 2019. Import penetration and returns to tasks: Recent evidence from the Peruvian labour market. *Empirical Economics* 56:551–617.

Chouhan, Karan Singh. 2019. Role of an AI in legal aid and access to criminal justice. *International Journal of Legal Research* 6 (2): 1.

David, H. 2013. The "task approach" to labor markets: an overview. *Journal for Labour Market Research* 46 (3): 185–199.

DeFrank, Richard S, and John M Ivancevich. 1986. Job loss: An individual level review and model. *Journal of Vocational Behavior* 28 (1): 1–20.

Delfanti, Alessandro. 2021. *The warehouse. Workers and robots at Amazon.* Pluto Books.

Douglas, Benjamin D, Patrick J Ewell, and Markus Brauer. 2023. Data quality in online human-subjects research: Comparisons between MTurk, Prolific, CloudResearch, Qualtrics, and SONA. *Plos one* 18 (3): e0279720.

Farber, Henry S. 2004. Job loss in the United States, 1981–2001. In *Accounting for Worker Well-Being,* 23:69–117. Emerald Group Publishing Limited.

Farber, Henry S, Robert Hall, and John Pencavel. 1993. The incidence and costs of job loss: 1982-91. *Brookings papers on economic activity. Microeconomics* 1993 (1): 73–132.

Gignac, Gilles E, and Eva T Szodorai. 2016. Effect size guidelines for individual differences researchers. *Personality and individual differences* 102:74–78.

Grennan, Jillian, and Roni Michaely. 2020. Artificial intelligence and high-skilled work: Evidence from analysts. *Swiss Finance Institute Research Paper,* nos. 20-84.

Grossman, Gene M, and Elhanan Helpman. 2005. Outsourcing in a global economy. *The Review of Economic Studies* 72 (1): 135–159.

Im, Zhen Jie. 2021. Automation risk and support for welfare policies: how does the threat of unemployment affect demanding active labour market policy support? *Journal of International and Comparative Social Policy* 37 (1): 76–91.

Im, Zhen Jie, Nonna Mayer, Bruno Palier, and Jan Rovny. 2019. The "losers of automation": A reservoir of votes for the radical right? *Research & Politics* 6 (1): 2053168018822395.

Kaihovaara, Antti, and Zhen Jie Im. 2020. Jobs at risk? Task routineness, offshorability, and attitudes toward immigration. *European Political Science Review* 12 (3): 327–345.

Kletzer, Lori G, et al. 2005. Globalization and job loss, from manufacturing to services. *Economic perspectives* 29 (2): 38–46.

Mageto, Joash. 2022. Current and future trends of information technology and sustainability in logistics outsourcing. *Sustainability* 14 (13): 7641.

Owen, Erica, and Noel P Johnston. 2017. Occupation and the political economy of trade: Job routineness, offshorability, and protectionist sentiment. *International Organization* 71 (4): 665–699.

Schierholz, Malte, and Matthias Schonlau. 2021. Machine learning for occupation coding—A comparison study. *Journal of Survey Statistics and Methodology* 9 (5): 1013–1034.

Wood, Peter A. 1986. The anatomy of job loss and job creation: Some speculations on the role of the 'producer service'sector. *Regional studies* 20 (1): 37–46.

Wu, Nicole. 2022. Misattributed blame? Attitudes toward globalization in the age of automation. *Political Science Research and Methods* 10 (3): 470–487.

Wu, Nicole. 2023. "Restrict foreigners, not robots": Partisan responses to automation threat. *Economics & Politics* 35 (2): 505–528.

Züll, C. 2016. The coding of occupations. *GESIS Survey Guidelines,* 3.