

How Morality and Efficiency Shape Public Support for Minimum Wages

Conor Lennon, University of Louisville*[†]
Keith F. Teltser, Georgia State University[‡]
Jose Fernandez, University of Louisville
Stephan Gohmann, University of Louisville

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Abstract

We use a survey-based experiment to examine public support for minimum wages. We first elicit respondents' moral assessment of two labor market systems: one with a minimum wage and one without. We find that gender and political affiliation are the strongest predictors of moral assessments, where men and republicans find the lack of a minimum wage less problematic. Next, we present four pairs of hypothetical employment outcomes and ask respondents to "vote" for their preferred system. The average respondent is willing to tolerate a large increase in unemployment, 4.7 percentage points, before voting against the minimum wage system. Moreover, this masks considerable polarization: 42% always choose the minimum wage system and 27% always choose the no minimum wage system. Overall, republicans are 14.5 percentage points less likely to choose the minimum wage system, though they exhibit little difference in willingness to tolerate additional unemployment. Notably, equity considerations matter. The average respondent is almost 20 percentage points less likely to choose the minimum wage system when told minorities and females are disproportionately affected. Finally, the average respondent is 7 percentage points less likely to support a system featuring a minimum wage of \$15 relative to \$10.10 or \$7.25, all else equal, suggesting that support for minimum wages may not be driven by a desire to maximize aggregate income for low-wage workers.

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[†]Corresponding author #1, conor.lennon@louisville.edu

[‡]Corresponding author #2, kteltser@gsu.edu

1 Introduction

Public and political discussion of minimum wages is often normative, and is concerned with issues of fairness, equity, right versus wrong, exploitation, dignity, and “living” wages. For example, former President Obama remarked in a press conference in April 2014, “In fact, about three in four Americans support raising the minimum wage [because] we believe that in the wealthiest nation on Earth, nobody who works full-time should ever have to raise a family in poverty. That’s a basic principle.”¹ This is corroborated by surveys such as those conducted by the Pew Research Institute, who found in 2015 that support for a \$10.10 federal minimum wage was as high as 73%.²

In contrast, economic research on the topic focuses heavily on how minimum wages affect employment outcomes. For example, Card and Krueger (1994) find that minimum wages were not associated with negative employment effects when comparing fast-food restaurants on either side of the Pennsylvania and New Jersey border shortly after New Jersey raised its minimum wage. Card and Krueger’s findings have been supported by the work of Card (1992), Addison et al. (2009), Dube et al. (2010), Allegretto et al. (2011), Cengiz et al. (2019), Ashenfelter and Juraйда (2021), and more. A competing strand of research finds that minimum wages harm certain groups, including younger workers (see David Neumark’s work for example: Neumark and Wascher, 2000, Neumark and Wascher, 2004, Neumark and Wascher, 2007, Neumark et al., 2014, and Neumark and Shirley, 2021). Sabia and Burkhauser (2010), Meer and West (2016), and Jardim et al. (forthcoming) also find some negative effects of increased minimum wages on employment.

Regardless of the findings or true effects, economic research on minimum wages focuses heavily on labor market consequences, while such consequences seem to be only a minor component of the public and political discourse surrounding minimum wages. To address the apparent gap in discourse between economists and the general public, we conduct the first (to our knowledge) experimental investigation into the nature of Americans’ preferences on minimum wages. In particular, we design and implement a survey-based randomized experiment with 2,219 Americans via Amazon’s mTurk

¹See <https://obamawhitehouse.archives.gov/the-press-office/2014/04/30/remarks-president-raising-minimum-wage>.

²At the time of the survey, the federal minimum wage was \$7.25. For more on the findings of the survey, see <http://www.people-press.org/2014/01/23/most-see-inequality-growing-but-partisans-differ-over-solutions/>.

service to study how morality, employment consequences, wage levels, and equity considerations shape respondents' attitudes toward minimum wages.³

Our work is inspired by, and contributes to, the literature in which surveys and experiments are used to elicit preferences on social outcomes such as redistribution and kidney shortages (e.g., Kuziemko et al., 2015, Elias et al., 2019). Methodologically, we draw particularly strong inspiration from Elias et al. (2019) who use a similar experimental approach to estimate the willingness of the public to allow payments to kidney donors. In their experiment, participants are randomly assigned to hypothetical alternative systems varying by compensation levels (\$30,000 or \$100,000), sources of compensation (public or private), cash versus non-cash payment, and hypothetical transplant gains. Participants are then asked to choose whether they prefer the hypothetical proposal over the current system (price ceiling of \$0). To examine whether attitudes toward paying donors have moral roots, the authors also ask participants to express their moral judgments about both the current system and the hypothetical payment system.

In our experiment, respondents encounter two hypothetical labor market systems: one with a minimum wage (of \$7.25, \$10.10, or \$15, assigned randomly) and one without.⁴ Respondents assess these two systems, using a 0 to 100 scale, on several moral dimensions including the degree to which they view the system as unfair, exploitative, or undignified. After respondents assess the two systems, we then present them with four pairs of hypothetical employment consequences where the disemployment effect of the minimum wage, relative to the system without a minimum wage, ranges from zero to eight percentage points. Half of respondents are given a range of zero to six percentage points, and the other half are given a range of two to eight. Some respondents are told the disemployment effect disproportionately impacts racial minorities and women, others are told the effects are proportionate across groups, and the remainder are given no information about the distribution of disemployment effects. Respondents are then asked to indicate their preferred system within each pair.

In designing and implementing the survey, we first completed two rounds of pretests to (a) ensure the survey instrument was working as intended, and (b) to determine whether the chosen parameters would generate sufficient variation and statistical power. To help ensure that the responses we

³Note: we have previously published a non-peer-reviewed abbreviated version of our experiment and findings in Lennon et al. (2019).

⁴University of Louisville IRB Protocol 18.0002, approved September 5, 2018.

collected are reliable and internally consistent, we built in several attention checks. To lend support to the external validity of our findings, we introduce consequentiality by emphasizing our intention to publicize our findings, and asking respondents to commit to carefully reading and providing honest answers to the survey questions. Moreover, during the survey, we remind respondents of our intention to publicize our findings and ask them whether they think policy-makers *should* be interested in our findings. Over 83% indicated yes, suggesting that the vast majority of respondents felt they provided thoughtful and truthful responses. We discuss our pretests, attention checks, and survey instrument in greater detail in the sections to follow.⁵

Relative to a labor market system featuring a minimum wage, we find that respondents assess a labor market system without a minimum wage as being significantly less fair to workers, more exploitative, and more undignified. We start by providing insight on the determinants of these moral assessments by estimating associations between respondents' ratings and their demographic characteristics including race, age, gender, income, education, and political affiliation. Political affiliation and gender stand out as two characteristics that are strongly associated with respondents' moral attitudes toward each system, where females and those who identify as democrats view the system without a minimum wage as more problematic (relative to males, republicans, and independents). We also explore the relationship between respondents' relative assessments of each system and their home state's minimum wage and Economic Freedom Index value (provided by the Fraser Institute),⁶ but find little to no convincing evidence of a significant association.

Turning to the trade-off between morality and employment consequences, our estimates imply that the average respondent is willing to tolerate up to 4.65 percentage points of additional unemployment before they would vote against the minimum wage system. However, focusing on the average respondent masks considerable polarization; 41.5% of respondents always vote for the minimum wage system, while 27.1% of respondents always vote for the system without a minimum wage. Notably, Elias et al. (2019) find very similar polarization as us in their setting: 46% support paying donors at all levels of transplant gains, while 21% always oppose paying donors.

Highlighting that minimum wages are a morally-charged issue, respondents' choices in our experimental setup are strongly related to their moral assessments of the two systems. Compared

⁵The survey experiment remains available to complete at http://louisville.az1.qualtrics.com/jfe/form/SV_39Keupyg3Vnqt49.

⁶See <https://www.fraserinstitute.org/economic-freedom/dataset>.

to all other respondents, those who always select the system without a minimum wage assess that system as 41% less morally problematic. Perhaps unsurprisingly, then, we also find that political identity plays a significant role in respondents' choices. All else equal, republicans are 14.5 percentage points less likely than democrats to choose the minimum wage, though they exhibit little to no difference in willingness to tolerate additional unemployment. Those who identify as neither republican nor democrat are 8.5 percentage points less likely than democrats to choose the minimum wage, and also exhibit little to no difference in willingness to tolerate additional unemployment.

Interestingly, our findings suggest that support for minimum wages may not be driven by a desire to maximize aggregate income for workers. That is, we find that respondents randomly assigned to consider a system featuring a minimum wage of \$15 are 7 percentage points less likely to support the minimum wage system, relative to those assigned \$10.10 or \$7.25, all else equal. This, combined with the fact that 68.6% of respondents choose the same system regardless of large employment effects, suggests that appeals to the public based on (the lack of) employment effects may do little to sway public opinion.

On the other hand, we find that respondents are sensitive to disparate effects of minimum wages, at least in terms of racial and gender equity. For example, respondents are almost 20 percentage points less likely to support the minimum wage system when treated with information stating that females and racial minorities are disproportionately affected, relative to respondents who receive no information on the identity of those affected by unemployment. In contrast, when respondents are told the effects are distributed evenly, there is no observable difference in support for minimum wages. These findings suggest that, to the extent that empirical research finds that minimum wages disproportionately harm already-disadvantaged groups, sharing information about such consequences with the public *would* likely influence public support.

Overall, the lack of focus on employment consequences in the public discourse may reflect gaps in economic education. However, it is also possible that public support for minimum wage legislation is deontological in nature: there might be something morally impermissible about low wages. If so, consequentialist arguments focused on the employment effects of minimum wages will be ineffective. Social scientists have acknowledged these kinds of deontological preferences when discussing the economics of repugnance. Examples include sexual encounters (Fiske and Tetlock, 1997), horse meat and price-gouging (Roth, 2008), and human organs (Elias et al., 2019). In addition to contributing to

this literature on morally-charged transactions, our work contributes to the literature in economics that examines how fairness, religious beliefs, political ideology, repugnance, identity, and dignity influence decisions.⁷

In Section 2 we describe the choice experiment, attention checks, and other features relevant to experimental validity. In the corresponding Appendix B, we include a sample experiment experienced by an actual respondent. In Section 3, we describe the data we collect in greater detail, including an analysis of how demographic characteristics relate to individuals’ moral views. Section 4 describes our main findings. In Section 5, we report the results of sensitivity and heterogeneity analyses. In Section 6, we conclude.

2 The Choice Experiment

We implement our choice experiment in Qualtrics while recruiting experiment participants using Amazon’s mTurk platform. On this platform, “requesters” can pay people to perform relatively short human intelligence tasks (HITs). These tasks include data entry, audio transcription, and so on. The platform is regularly used for economics and marketing surveys and experiments. We restrict participation to U.S. residents aged 18 or older.

As mentioned earlier, our experimental design is inspired by Elias et al. (2019), who examine the extent to which individuals would be willing to trade off their moral objections in order to tolerate payments to kidney donors. They present private or public (and cash versus non-cash) payments as alternative options for organizing the market for kidneys, and then elicit whether each system is viewed as fair, exploitative, or coercive to kidney donors and recipients. Then, they present participants with hypothetical outcomes describing how many kidneys would be procured and ask survey participants to “vote” for their preferred option (the current “no payment” system is also an option).

The approach developed by Elias et al. (2019) appears to be well-suited to analyze the public’s views on a wide range of controversial market exchanges. Thus, we apply a modified version of their design to examine the extent to which paying workers less than a specified minimum wage is viewed as morally problematic, as well as the extent to which individuals trade off moral concerns

⁷See, for example, Akerlof and Kranton (2000), Bénabou and Tirole (2009), Bénabou and Tirole (2011), Bénabou et al. (2018), Benjamin et al. (2012), Benjamin et al. (2016), and Bursztyn et al. (2016).

with employment consequences. While Elias et al. relax the existing price ceiling to allow the kidney market to move toward an efficient outcome (i.e., more kidney transplants), in our setting we relax the price floor (minimum wage) to potentially increase efficiency (reduce unemployment). The simplest way to explain this to participants is to say the federal minimum wage is eliminated. Therefore, our experiment compares two systems: one with a minimum wage (denoted System A) and one without (denoted System B). The next subsection provides the details of the experimental procedure.

2.1 Experimental Procedure

We fielded our experiment by posting a “Human Intelligence Task” (HIT) on the mTurk system.⁸ The HIT required mTurk workers to click on a link to a Qualtrics survey containing the choice experiment.⁹ The first screen they see explains their rights as a research subject and allows them to provide informed consent. Then, the experiment proceeds in four stages.

In stage one, we present the options for organizing the labor market to participants. As part of this, but prior to observing the alternative systems, we present participants with some background information on what a minimum wage is, what it does, and who it typically applies to. We also explain how it varies across the United States. In addition, to help encourage truthful responses, we advise participants that we intend to publish our findings. The descriptions of System A (minimum wage) and System B (no minimum wage) are summarized in Table 1. The complete text of the experiment is available in Appendix B.

Notice that the value for the minimum wage that respondents observed is denoted as $\$X$ in Table 1. This is because we assign each respondent to one of three minimum wage levels: $\$7.25$, $\$10.10$, or $\$15$ with probabilities of 20%, 40%, and 40%. In addition, we set System A (minimum wage of $\$X$) unemployment to be 8 percent or 10 percent. In Subsection 2.5 below, we explain our choice of parameters and how they were informed by pre-testing.

We then ask participants to assess each system on five dimensions: exploitation, unfairness to workers, unfairness to employers, human dignity, and subjective values.¹⁰ As an example, when asked about exploitation, the statement respondents observe is “[t]his system exploits workers.”

⁸We deployed the survey experiment on September 7, 2018.

⁹They return at the end of the survey to input a unique code to receive their payment of \$1.

¹⁰We randomly varied the order of presentation of each system.

They express their agreement or disagreement using a sliding scale that ranges from zero (strongly disagree) to 100 (strongly agree).

In stage two of the experiment, we ask respondents to choose their preferred system from each of four pairs of hypothetical employment consequences for each system. To ease interpretation, we ask respondents to focus on outcomes in a representative U.S. city with a labor force of 100,000 adults. We present unemployment for each system as “the number of people who are unable to find work.” For a given respondent, the number of people unable to find work under System A (minimum wage) is either 8 percent (8,000 people) or 10 percent (10,000 people) in all four scenarios. For System B (no minimum wage), the number “unable to find work” across the four scenarios, in order, is 8, 6, 4, and 2 percent.¹¹

Note that, to study whether the distribution of disemployment effects by race and gender matters, we further assign each respondent to one of three potential information treatments effects. In particular, we tell one-sixth of our respondents that females and minorities comprise 45% and 40% of the labor force in the experiment’s fictional city, and that females and minorities comprise 45% and 40% of those unable to find work under both System A and System B (“equal effects”). We tell one-third of respondents that females and minorities comprise 75% and 70% of those unable to find work under System A, but only 45% and 40% under System B (“unequal effects”). The remainder observe no information on the distribution of employment effects by race and gender. In sum, these parameterizations ensure that each participant experiences only one of 18 potential treatment conditions. Table 2 breaks down the frequency of assignment to each condition.

Finally, toward the end of the survey, respondents are asked to provide demographic information and to consider a moral dilemma in a medical setting. Specifically, we ask respondents if a fictional doctor should inject two substances, one of which is a vaccine and the other deadly poison, into two fictional patients. Both patients have contracted a deadly virus and will die regardless of the doctor’s actions. However, by injecting the substances, the doctor will learn which substance is the vaccine (the patient who gets the poison will die immediately). The doctor will then be able to replicate the vaccine and save many from contracting the deadly virus in the first place. Those

¹¹Our pretests, discussed in Subsection 2.5, indicated that we would need relatively large employment differences to generate sufficient variation.

who agree that the vaccine should be injected are supposedly utilitarian, which can help us identify those who have consequentialist views on ethical issues more broadly.

In the following subsections, we discuss additional features and details of our experiment, including those designed to elicit thoughtful and truthful responses and filter out the inconsistent or unreliable responses.

2.2 Attention Checks

We built several attention checks into the survey. We consider two of these to be relatively strong and the rest to be somewhat weaker. The stronger checks ask respondents (1) to recall if they ever chose each system and (2) if they would never choose either of the systems. They fail the first check if they cannot accurately recall if they chose System A or System B across the various choice scenarios. They fail the second check if they claim they would never choose one of the systems but actually did choose one of those systems in at least one choice scenario. In the estimates in the paper, we eliminate all those who fails both of these checks as well as duplicates based on respondents' IP address, leaving us with 2,219 responses (see Table2).

Appendix Table A.1 reports the “pass” and “fail” rate for each attention check for the remaining 2,219 responses. The stronger checks on attention are presented first. Among those who did not fail both of those reliability checks, there remains a small minority who failed one of them. However we keep these responses in our data because many of those who fail one of the strong checks do not fail any of the other weaker three tests. In any case, our findings are very similar if we exclude those who fail just one of those strong checks. Moreover, including those who fail both of our stronger checks does little to alter the estimates.

The third reliability check in the table examines if participants chose the system they assessed to be most “desirable.” Given the loaded and subjective meaning of that term, we do not consider “failing” this check to be a major concern. A person could consider System A as “most desirable” but choose System B due to its employment consequences.

Reliability check number four examines respondents' answers to our “switching” question. In the survey, towards the end, our “switching” question asks respondents to choose (on a sliding scale) the level of unemployment that would be required to get them to choose System B. A respondent

fails this check if their answer implies that they should have chose System B in at least one choice scenario but did not; 96.2% of respondents passed this “test.”

The fifth reliability check examines inconsistent preferences. There are four binary choices for each participant, leading to 16 combinations of choices. Eight of these 16 potential routes through the experiment reflect consistent preferences in the sense that the participant always answers the same choice in each scenario or switches from System A or B to the other, only once. A respondent therefore fails this check if their responses do not respect monotonicity. For instance, a respondent who chooses A, then B, then A again is potentially unreliable. The data shows that 96.4% of respondents’ choice patterns respect monotonicity.

2.3 Consequentiality

Toward the end of the survey, to examine the degree to which participants believe their responses matter, we remind participants of our intention to publicize our findings and ask respondents if policy makers *will* be interested in our findings and if they *should* be interested in these findings. Appendix Figure A.1 provides the breakdown of respondents answers to those questions. It is clear that most respondents do not believe their voice will be heard. However, over 83% of respondents feel that their voice *should* be heard. These findings inspire further confidence in the reliability and truthfulness of our survey responses.

2.4 Time to Complete Survey

The average respondent took just over 12 minutes to complete the survey. The median respondent took 10 and a half minutes. The average time is inflated significantly by outliers in the right tail of the “time taken” distribution. For example, one respondent took over 2 hours and 40 minutes to complete the survey. It is likely that this person did not spend that time focused on the survey. Indeed, given 25% of reliable survey respondents took less than 8 minutes to do the survey, we suspect that the time taken to do the survey is artificially inflated for reasons that are unrelated to the survey’s length (such as interruptions or working on other short mTurk tasks). Finally, excluding those above the 95th percentile of the time distribution (a survey completion time of about 26 minutes) brings the median time to completion to 10 minutes and 7 seconds and the mean to 10 minutes and 55 seconds.

2.5 Pre-Testing

Before finalizing and implementing our experiment, we completed a round of pretesting in August of 2018. To be precise, we did two pretests, one involved gathering and paying for 50 responses to check our survey instrument was working as intended. Then, we gathered 250 responses to estimate the effect size of interest and to understand if the parameters would generate enough variation in the data. None of the data gathered in the pretest phase is presented in the main body of the paper. The pretest version of the survey allowed the unemployment rate to vary randomly in System A between 4%, 6%, 8% and 10%. For System B, the rate varied between 4% and 6% (presented to participants as X out of 100,000 who want to work are unable to find a job). We presented participants with three choice scenarios where employment effects were drawn randomly. From this, we found that in order to overcome the mean repugnance between System A and System B, respondents needed about a difference in employment of roughly 5,000 workers (i.e., a 5 percentage point difference).

With this setup, about 15% of respondents in the pretest faced three choice scenarios where all three were basically redundant. That is, due to the randomization they never observed a scenario where System A was “worse” than System B.¹² In addition, many experimental participants observed three situations where System B was significantly more efficient than System A. To avoid these extremes, we altered the survey design to the parameters discussed earlier in this section. These changes ensured that every respondent observes a scenario where the employment difference between System A and System B is small and one where it is not.

3 Data

We collected 2,534 responses to our survey. However, we had concerns about reliability for about 8% of respondents due to attention check failure (226 responses) and duplicate IP addresses (102 responses).¹³ We exclude these respondents from our main estimates, leaving us with 2,219 acceptable

¹²There are eight possible pairings, unemployment in System B was the same or worse than System A in three of these eight pairings.

¹³We exclude those whose internet protocol address appears more than once in our data (102 responses) because it suggests that one person is using several mTurk accounts to complete our survey multiple times.

responses. Note that $2,534 - 226 - 102 \neq 2,219$; there is some overlap between those who provide unreliable responses and duplicate IP addresses.¹⁴

In addition, we separate 107 respondents from the estimation sample because we randomly assign them to experience one choice scenario with no information on employment. When this occurs it is always as the first scenario the respondent observes. We do this to give us a baseline distribution of support for the two systems, and also as an additional sanity check to see whether support for each system is different when respondents do not observe employment outcomes. Of these 107 responses, we deem 96 to be acceptable, leaving us with 2,123 respondents in the main estimation sample. Of the 96 who do not observe employment consequences at all, 88.5% choose the system with a minimum wage (System A). In contrast, respondents chose a system with a minimum wage in 55.5% of situations where hypothetical employment consequences are presented.

3.1 Sample Characteristics

Table 3 reports on the demographic characteristics we gathered for the 2,219 participants with valid responses. As we have a convenience participant group, they are not representative of the U.S. population. In particular, the table illustrates that the sample is predominantly democratic-leaning. In addition, while there are respondents from every state, there is a mild west coast bias in the sample. Part of this is due to population: California appears most frequently but we should expect this given California is the U.S.’s most populous state. However, it is over-represented in our data (by about a 1.1 to 1 ratio). States such as Oregon (1.77 to 1) and Nevada (1.47 to 1) are also over-represented relative to their population. We suspect that this pattern arises because we began gathering our data late in the evening on September 7th, 2018. We expected the data gathering process to take 24 to 48 hours and, therefore, the starting time to matter little to the composition of our sample. To our surprise, the data gathering process took just under 12 hours. For Californians, and others on the west coast, this time period was roughly 5pm to 5am. For east coast mTurkers, it was 8pm to 8am. Without knowing in advance how long it will take to gather a given amount of data, it is unclear when the “ideal” time to begin data collection would be to have a more geographically balanced representation. For a complete breakdown of the geographic representation of respondents relative to the U.S. as a whole, see Appendix Figure A.2. In our results discussion to

¹⁴See Subsection 2.2 and Appendix Table A.1 for more on the reliability of responses.

follow, we present sensitivity analyses that control for state fixed effects and political affiliation to address these kinds of sample imbalances.

3.2 Moral Assessments

Figure 1 illustrates the assessment of each system on the five dimensions of morality described earlier. As a reminder, each respondent assessed each aspect of each system on a scale from zero to 100. The order in which respondents viewed the two alternative systems is randomized.¹⁵ We can see that respondents consider both systems to be relatively fair to employers. On the other four measures, they assess System A to be fairer to workers, less exploitative, more dignified, and more concordant with their personal values. For example, almost 800 of the 2,219 respondents viewed System A as completely fair to workers and not exploitative (they stated “strongly disagree” with the statements “[t]his system is unfair to workers” and “[t]his system exploits workers”). In contrast, about the same number of respondents viewed System B as maximally unfair and exploitative. Because respondents’ assessments are similar for the fairness to workers, exploitation, dignity, and personal values questions, we use their average (29.2 out of 100 for System A, and 72.1 out of 100 for System B) as an overall “repugnance” rating (borrowing the term from Roth, 2008 and Elias et al., 2019) for each system and present that average as a the upper leftmost subfigure in Figure 1.¹⁶ Given the similarity of the ratings on each dimension, it should be clear that our findings are little different if we use any one of these four measures in place of a four-component average.

In Appendix Table A.2, we present a complete breakdown of how each system is viewed, particularly as a function of the minimum wage observed (\$7.25, \$10.10, or \$15) and self-reported political party affiliation. There, we see the assessment of each system is responsive to the minimum wage observed with the system with a \$15 minimum being markedly less problematic in four of the five moral dimensions. The exception to the pattern is in how higher minimum wages are unfair to employers. The primary comparison of interest here is that of System A (minimum wage) to System B (no minimum wage); even a system with a \$7.25 minimum wage is viewed very differently to one with no minimum wage. Turning to the second panel of the table, it appears that respondents who see themselves as closer to the Democratic Party drive much of the difference in assessments

¹⁵Unfortunately, we did not set the Qualtrics system to record the order of presentation for this randomization.

¹⁶Because “unfair to employer” seems to be an outlier when considering respondents’ ratings, we do not include it in the average repugnance rating.

between the two systems. That said, republicans also tend to assess System B (relative to System A) as more exploitative, unfair to workers, disrespectful to human dignity, and in conflict with their personal values. The responses for those who claim to be affiliated with neither party tend to lie in the middle of democrats and republicans. These patterns provide additional confidence in the reliability of respondents' answers to the survey's demographic and choice questions.

3.3 Explaining Differences in Repugnance Ratings

In Table 4, to explore why respondents assess the two systems differently, we examine how the difference in respondents' assessment of each system relates to demographic characteristics including race, gender, age, income, education, and political preferences. As part of this exercise we also relate respondents' assessments to their state's actual minimum wage at the time of the choice experiment and their state's Economic Freedom Index score (provided by the Fraser Institute), both overall and then specifically to the labor market.¹⁷

The dependent variable in each specification in Table 4 is the difference in the average rating between the two labor market systems (we describe how we construct that average earlier in this section). Specifically, $\Delta Repugnance$ is the difference between the average repugnance rating of the system without a minimum wage relative to the system with a minimum wage. Within such a set up, a positive coefficient implies that the system with no minimum wage is more morally offensive (i.e., the difference between the ratings of the two systems is "larger").

In the first column of the table, we see that differences in political affiliation and gender are associated with differences in respondents' assessments of each system. For example, men assess the systems more similarly than females, with the difference between their ratings being 7.1 points smaller than the difference for females, all else equal. We interpret this as meaning that men assess the system with no minimum wage as less morally problematic. When looking at political affiliation, we see that those who report no political affiliation and republicans rate the two systems more similarly relative to those who identify as democrats. In contrast, there is no statistically significant association between age, race, income, or education and respondents' assessments.

¹⁷The Fraser Institute assesses state's level of economic freedom using scores out of 10 in three categories: government spending, taxation, and labor market freedom. See <https://www.fraserinstitute.org/economic-freedom/dataset> for the scores for each state and more information about their methodology. We obtain information on state-level minimum wages for 2018 (the year of our experiment) from <https://www.laborlawcenter.com/state-minimum-wage-rates/>.

In the second column, we add the 2018 minimum wage for each respondents' state as a covariate, but we find that it is not strongly associated with respondents' assessments of the two systems. In the third and fourth columns, we add the 2018 Economic Freedom Index (EFI) scores for each respondent's state and then just a labor market specific freedom index value. In each case, there is no strong association. For completeness, in the fifth and sixth columns, we include both the 2018 minimum wage and the overall EFI score and then the labor market specific freedom index scores. When we do so, we find that higher state-level minimum wages are now associated with respondents assessment of the two systems, with the effect statistically significant at the 5% level. To interpret the coefficient in column (5), the -1.415 coefficient means that the repugnance gap between the two systems closes by about 1.4 points for each \$1 increase in a respondent's state minimum wage. Given that the state minimum wage is only statistically significantly associated with respondents' assessments of the two systems when we also include EFI scores, and given that the effect on respondents ratings is small even for relatively large minimum wage increases, we can conclude that one's actual state minimum wage does little to affect our experimental findings. Similarly, the association between labor market specific scores is only statistically significantly different from zero in a specification where we also include the state's 2018 minimum wage. Given these two variables are negatively correlated (largely because higher minimum wages contribute to lower EFI scores), we again conclude that the economic conditions in the state (as captured by EFI scores or the state's minimum wage) provide limited explanatory power for our respondents' assessments of the two systems.

3.4 Choice Frequencies

Figure 2 reports the pattern of choices across the different minimum wage treatments. In the figure, we see a clear pattern, System A (minimum wage) is chosen frequently (55.5% of the time, on average), but is generally less likely to be chosen when System A's unemployment is 10% (10,000 out of 100,000) and decreases as the difference in unemployment between the two systems increases. As a reminder, System B unemployment is 8,000 in the first scenario and then 6,000, 4,000, and 2,000 for the next three scenarios. The corresponding choice frequencies for System A in each scenario

are 70.0%, 58.1%, 49.9% and 43.9%. These patterns suggest that at least some participants are responsive to the information presented to them.¹⁸

Interestingly, the level of the minimum wage appears to affect the frequency of choosing System A in a non-monotonic way. Specifically, the frequency of choosing System A is 64.0%, 53.8%, 46.2%, and 41.5% across the four scenarios for a minimum wage of \$7.25 and 68.6%, 56.8%, 47.5%, and 42.3% for a minimum wage of \$15. However, for any given combination of unemployment under Systems A and B, System A is more likely to be chosen when the minimum wage is \$10.10 relative to when it is \$7.25 or \$15. Specifically, System A is chosen 74.4%, 61.5%, 54.3%, and 46.6% across the four scenarios. These patterns suggest that support for minimum wages cannot be explained only by a desire to maximize aggregate income for workers. If that were the case, we would simply expect a higher wage to be more attractive, all else equal.

3.5 Characteristics of Switchers and Non-Switchers

Interestingly, we find substantial polarization among respondents. 41.5% of respondents always choose the minimum wage system (System A) and 27.1% always choose the system without the minimum wage (System B). In a similar fashion to Table 3, we present the demographic characteristics of switchers and non-switchers in Appendix Table A.3. One thing that stands out is that dividing respondents by switcher and non-switcher status yields smaller differences in demographic and identity characteristics, relative to dividing respondents by political identity as we do in Table 3. For example, the average respondent who always chooses System A is more moderate on the self-rated liberal-conservative scale — 2.4, relative to 1.9 among those identifying as democrats. For reference, this scale runs from 1 to 5, where 1 is strongly liberal and 5 is strongly conservative. Those who always choose System B are also more moderate on this scale — 3.2, relative to 4.0 among those identifying as republicans. A similar pattern is observed with age, percentage of males, and race. A notable exception is in labor market experience, where the differences between those who always choose Systems A or B are larger (relative to democrats versus republicans) with respect to income levels and experience with minimum wage jobs.

¹⁸Note that Appendix Table A.1 shows 96.4% of respondents made choices that respect monotonicity (that is, they did not switch back and forth between System A and B on multiple occasions).

4 Main Findings

In this section, we examine the choices of our experimental participants in four scenarios where they observe varying employment effects and must choose between a system with a minimum wage and one without. In our regression estimates, we include the difference in repugnance scores between the two systems, which are gathered before they observe employment effects and make their choices, as an explanatory variable.

We present our findings as the coefficient estimates from a linear probability model (LPM).¹⁹ The basic estimating equation takes the following form:

$$P(\text{Chose } A)_{ic} = \beta_0 + \beta_1 \Delta \text{Repugnance}_i + \beta_2 \Delta \text{Unemployment Rate}_{ic} + \Pi X_{it} + \epsilon_{ic}$$

In the estimating equation, $P(\text{Chose } A)_{ic}$ refers to respondent i 's probability of choosing System A (minimum wage) in choice situation c and takes on the value of 100 when person i chooses System A in choice scenario c and a value of zero otherwise. The $\Delta \text{Repugnance}_i$ term reflects the difference between respondent i 's moral assessment of System A and System B ($\Delta \text{Repugnance}_i = \text{Assessment of System } A_i - \text{Assessment of System } B_i$).²⁰ The $\Delta \text{Unemployment}_{ic}$ term reflects the percentage point difference in the unemployment rate between the systems in each choice scenario ($\Delta \text{Unemployment}_{ic} = \text{Unemp. System } A_{ic} - \text{Unemp. System } B_{ic}$). We also include controls, X_{it} , and an idiosyncratic error term ϵ_{ic} . With this setup, β_1 and β_2 represent percentage point changes in the probability of supporting System A (minimum wage) for each one unit difference in $\Delta \text{Repugnance}$ and $\Delta \text{Unemployment}$.

In the first column of Table 5, we present estimates from a specification without controls. We find that respondents' choices are strongly associated with their moral assessment of the two systems; the coefficient on the repugnance term suggests that a one unit increase in $\Delta \text{Repugnance}_i$ is associated with a 0.44 percentage point reduction in the probability of choosing System A. The mean of $\Delta \text{Repugnance}_i$ is -42.92, suggesting that, all else equal, the average respondent is 18.88 percentage points (-42.92×-0.44) more likely to support a minimum wage. The coefficient associated with the unemployment term suggests that a one percentage point larger unemployment gap is associated

¹⁹The estimating equation is better-described as a modified linear probability model because our outcome variable takes on values of zero or one hundred, ensuring that our coefficients are percentage point changes.

²⁰Note that this difference calculation is reversed from Subsection 3.3.

with a 4.06 percentage point reduction in the probability of choosing System A. Thus, in thinking about the trade off between repugnance and efficiency (i.e., employment), our estimates imply that the average respondent requires a 4.65 percentage point ($18.88/4.06$) reduction in unemployment to support a system without a minimum wage.

Subsequent columns in Table 5 interact the main effect of repugnance and unemployment with the experimental parameters to examine if and how these affect support for each system. Specifically, in the second column, we include an indicator for System A unemployment of 10,000. We also interact the indicator with $\Delta Repugnance_i$ (coefficient estimates not reported in the table) and $\Delta Unemployment_{ic}$. Notice that the main effect of $\Delta Repugnance_i$ is little different to the first column of estimates. While the coefficient on the indicator term is positive, the overall effect is a reduction in the probability of choosing System A of about 7.4 percentage points. The total effect consists of the sum of the coefficient on the indicator term plus the effect of the two additional percentage points of unemployment relative to System A unemployment of 8,000 (that is, $0.617 - [2 \times 4.646] + [2 \times 0.637] = 7.4$). The estimated coefficient on the $System A = 10,000 \times \Delta Repugnance$ interaction term is small and statistically no different from zero. We therefore omit it from the table to economize on space (the same is true in subsequent specifications).

In the third column, we interact $\Delta Repugnance_i$ (again, coefficient estimates not reported in the table) and $\Delta Unemployment_{ic}$ with the level of minimum wage observed (\$10.10 or \$15). The associated estimates should be interpreted as relative to the omitted category, \$7.25. Notice that System A appears to be 7.8 percentage points less likely to be chosen when the minimum wage is \$15. This seems to conflict with the aggregate data presented in Figure 2, where System A seems to be chosen slightly more often when the minimum wage is \$15 versus when it is \$7.25. The discrepancy can be explained by the fact that repugnance ratings are higher for the \$7.25 minimum wage than the \$15 minimum wage, but are held equal in the regression framework. When jointly accounting for the effect associated with the difference in repugnance between the two minimum wage levels (i.e., the lower repugnance rating of \$15 increases the probability that System A is chosen), we obtain a similar pattern as seen in Figure 2. See Subsection 3.2 and Appendix Table A.2 for more details on respondents' moral assessments of each system.

In the fourth column of Table 5, we examine the effect of providing information on the distribution of unemployment effects by race and gender relative to the composition of the labor force in the

experiment’s fictional “city.” The estimates should be viewed as relative to “no information.” The data suggests that choices are similar to the baseline (no information) if females and minorities are affected equally. On the other hand, informing our participants that minorities and females are disproportionately affected is associated with a 19.74 percentage point reduction in the probability of choosing System A. This is equivalent to the effect of a 4.2 percentage point difference in unemployment.²¹ Note that the coefficient on the interaction of the unemployment variable and unequal race and gender indicator is positive but the effect is somewhat mechanical. That is, given many fewer people choose System A when they observe that there is a disproportionate impact on females and minorities, there are fewer people left to “react” to further reductions in unemployment in later choice scenarios. For completeness, the fifth column presents the coefficient estimates from a specification that includes all of the indicators and interactions. The coefficient estimates remain similar to the estimates from the specifications in columns two, three, and four.

In Table 6, we examine how our estimates vary when we include controls for self-reported demographic information. In addition, to illustrate how the response to employment differences varies across the range of possible values, we include each possible difference in the unemployment rate as an indicator variable. The coefficients associated with the $\Delta Unemployment$ terms should be interpreted as relative to $\Delta Unemployment = 0\%$. The estimates reveal that the effect of additional unemployment has a diminishing effect on the probability of supporting a system with a minimum wage. Importantly, the point estimates on the $\Delta Unemployment$ and $\Delta Repugnance$ terms in each specification are statistically no different to one another, regardless of included controls. The stability of the estimates across the specifications is remarkable given the final specification in the table includes controls for age, race, gender, political affiliation, labor force status, state of residence, income level, and education level.

5 Robustness and Sensitivity

5.1 Sensitivity Analysis

In Table 7, we examine the robustness of our estimates to the omission of certain groups of respondents. These estimates also follow the more flexible specification used in Table 6. In the first

²¹ $4.2 = 19.74 \div 4.72$, where 4.72 is the corresponding coefficient on $\Delta Unemployment$ in column 4 of Table 5.

column, we remove the 68.6% of respondents (i.e., the 1,556 out of 2,219) who never switch choices. Given we are focusing on those who we have identified as sensitive to employment effects it is unsurprising that the estimates without the “never switchers” are more sensitive to disemployment.

In columns two, three, and four of Table 7 we eliminate those who report themselves to be extremely conservative or liberal, those who express a religious affiliation, and those who are non-college educated. The point estimates differ little relative to the comparable estimates in Table 6. The final column of Table 7 presents estimates when controlling for individual fixed effects. These estimates are quite similar to our other specifications, thereby helping to mitigate concerns about the representativeness of our sample.

While the linear probability model is the most straightforward for presenting our estimates, for completeness we also examine the robustness of our findings to estimating a binomial logit model. We report the post-estimation marginal effects of our logit estimates in Appendix Table A.4. In each column, we re-estimate the corresponding specification from Table 5. The estimates are similar to Table 5, but note that they must be multiplied by 100 to be interpreted as percentage point changes. For example, in the first column of Table A.4, a one percentage point difference in unemployment between the two systems is associated with a 4.02 percentage point reduction in the probability of choosing System A.

5.2 Heterogeneity of Preferences

In Table 8, we examine how choices are related to various characteristics of respondents. In each specification we include an indicator for the characteristic of interest and interact that indicator with the unemployment difference between Systems A and B in a given choice scenario (to reduce the number of coefficients reported, we return to the less flexible specification similar to the first column of Table 5). The first column of Table 8 focuses on differences in the choices of males and females. The estimates suggest males are 5.66 percentage points more likely than females to choose System A, holding all else equal.²² However, males are not more responsive to the size of the unemployment difference between the systems.

²²Note, however, that all else is generally not equal. Males also give System B lower repugnance ratings compared to females, as seen in Table 4.

The second column suggests that older respondents are slightly less likely to choose System A (2.37 percentage points), but the effect is not statistically different from zero. Older respondents are also slightly less responsive to the size of the unemployment difference between the systems — the coefficient of 0.75 implies that older respondents are 3.55 ($= 4.3 - 0.75$) percentage points less likely to choose System A for each additional 1 percentage point reduction in unemployment. Column four compares White respondents to all others. They are slightly more likely to choose System A, but the effect is not statistically different from zero. Column five examines differences in choices as a function of responses to our question about the moral dilemma about the deadly virus and vaccine.²³ Here, we find that respondents who give the “utilitarian” (i.e., consequentialist) response are slightly more likely to switch away from System A for a given reduction in unemployment.

The final column of Table 8 reports how the choices of Republicans and those who report no political affiliation differ from democrats. Relative to democrats, those who report no political affiliation are 8.47 percentage points less likely to choose System A. Those who identify as republicans are 14.56 percentage points less less likely to choose System A. Again, the effect is a level difference rather than a slope difference with the coefficients on the interaction term being statistically no different to zero in each case.

6 Conclusion

Economic research on minimum wages focuses heavily on employment consequences, while such consequences seem to play a minor role in the public and political discourse surrounding minimum wages. As Elias et al. (2019) write, there is a long history of calls for economists to consider the decision-making power of ethical forces (Smith, 1822, Marshall, 1890, Sen, 1999). However, with the exception of Elias et al. (2019), there is little empirical evidence on the extent to which individuals’ preferences toward controversial transactions are driven by moral attitudes versus the consequences of such transactions. To help fill this gap, we use a choice experiment to assess how moral concerns, disemployment consequences, wage levels, and equity considerations shape preferences for minimum wages.

²³Recall from Subsection 2.1, this is the thought experiment concerning two patients who have contracted a deadly virus. A doctor has two syringes, and knows that one is a deadly poison and the other is the vaccine, but does not know which one is which until the doctor injects one into each patient. Once the doctor learns this information, the doctor can replicate the vaccine and save many lives.

Our findings suggest that people view minimum wages as a moral issue, with significant differences in our respondents' assessment of a labor market system with and without minimum wages in terms of fairness, exploitation, human dignity, and conflict with one's beliefs. Notably, we find that males and republicans find the lack of a minimum wage less problematic than do females, democrats, and politically-unaffiliated respondents.

Focusing on people's choices when faced with varying employment effects, regression estimates support the idea that support for minimum wages rests upon moral foundations. In particular, we find that (1) support for minimum wages is only mildly affected by large disemployment effects and (2) respondents' choices are strongly associated with their moral assessments. In addition, given the same disemployment effect, respondents are more likely to support a \$7.25 or \$10.10 minimum wage than a \$15 minimum wage. If preferences for minimum wages were driven by a desire to maximize aggregate income for workers, we would expect a higher wage to be more attractive, all else equal. Notably, the majority of respondents appear to be entirely unmoved by disemployment effects. In our sample, 41.5% of respondents always vote for and 27.1% always vote against a minimum wage, which also highlights substantial polarization. However, we also find that respondents are sensitive to unequal distributional effects of minimum wages. When told that racial minorities and women are disproportionately impacted by disemployment effects, respondents are almost 20 percentage points less likely to support the minimum wage system.

While evidence demonstrating disproportionate consequences for already-disadvantaged groups may sway public opinion, overall, our findings suggest that consequentialist arguments resting on the employment effects of minimum wages will not. As Roth (2008) explains, "laws against buying or selling kidneys reflect a reasonably widespread repugnance, and this repugnance may make it difficult for arguments that focus only on the gains from trade to make headway in changing these laws." Our experiment demonstrates that laws against paying workers wages that are "too low" may similarly reflect deeply-held moral values. That is, proponents *and* opponents of minimum wage legislation will find it difficult to advance their preferred policies if they focus primarily on the consequences of such policies.

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Tables and Figures

Table 1: Description of Alternative Systems

System	Description to Participants
System A	This system features a minimum wage of \$X per hour worked. This minimum applies in all 50 U.S. states and employers must pay their employees at least \$X per hour. Any employer who pays any worker a wage below \$X would be guilty of a federal crime under the Fair Labor Standards Act.
System B	The federal government abolishes all minimum wages. For the purposes of this survey, please assume that this law would apply equally in all 50 U.S. states and would override existing laws in all states. That is, there would be no minimum wage law anywhere in the United States. Workers and employers would negotiate hourly wages on a case-by-case and person-by-person basis. All wage agreements that workers and employers agree to are completely legal.

In this table, we report the labor market systems described to participants. We set \$X to be \$7.25, \$10.10, or \$15 with probabilities of 20%, 40%, and 40% respectively. See Table 2 for more info on assignment to treatment conditions.

Table 2: Summary of Assignment to Treatment Conditions

Minimum Wage Observed	\$7.25	\$10.10	\$15.00	All
Unreliable Responses	40	86	100	226
Duplicate IP Addresses	24	40	38	102
Valid Responses	446	880	893	2,219
Unemployment Treatments				
System A Unemployment = 8,000	225	418	401	1,044
System A Unemployment = 10,000	197	428	454	1,079
No Efficiency/Employment Info Group	24	34	38	96
Race and Gender Information Treatments				
Did not Observe Race/Gender Info	240	442	419	1,101
Observed Race/Gender Info	206	438	474	1,118
Observed Unequal Race/Gender Outcomes	135	296	322	753

Note: Each respondent is assigned one of three minimum wage levels, one of two levels for unemployment in System A (minimum wage), and to one of three potential information treatments regarding the distribution of unemployment by race and gender (no information, equal effects, unequal effects). The table reports on the distribution of respondents to the eighteen potential treatment conditions within the experiment. The table also highlights how many responses are deemed reliable (these respondents passed our built-in attention checks) and how many had to be removed from the sample.

Table 3: Selected Demographic Characteristics of Experiment Participants, by Political Identity

		Democrat	Republican	Neither	All
Count		1,095	614	510	2,219
Demographics	Age	36.2	39.3	35.8	36.9
	Std. Dev.	11.4	12.8	11.1	11.8
	% Male	45.2%	52.1%	51.1%	48.5%
	White	71.8%	87.0 %	68.6%	75.3%
	Black	12.9%	3.1%	10.8%	9.7%
	Other	15.3 %	9.9 %	20.6%	15.1%
Politics	Liberal-Conservative Scale	1.9	4.0	2.8	2.7
Note: 1= Strongly Liberal and 5 = Strong Conservative					
Self-Reported Income	<\$20,000	11.3%	10.4%	17.0%	12.3%
	\$20,000 to \$60,000	50.5%	45.5%	49.2%	48.8%
	\$60,000 to \$100,000	25.3%	27.0%	24.4%	25.6%
	\$100,000 or more	12.9%	17.0%	9.4%	13.3%
Education	Less than High School	0.5%	0.2%	0.8%	0.5%
	High School or Some College	41.6%	44.0%	52.55%	44.8%
	Bachelor's Degree	41.6%	38.6%	34.3%	39.1%
	Graduate Degree	16.4%	17.3%	12.4%	15.7%
Religion	Christian	39.3%	75.4%	36.3%	48.6%
	Other	8.9%	3.4%	9.2%	7.8%
	Atheist/Agnostic/No Affiliation	51.9%	21.2%	54.5%	43.7%
Morality Questions	Some Values are Sacred	4.4	4.3	4.4	4.4
	Suffering for an Ethical Principle is Wrong	3.9	3.5	3.7	3.7
	Freedom from Interference	3.5	3.4	3.6	3.5
	Vaccine Injection	3.5	3.5	3.4	3.5
Note: 1= Strongly Disagree and 5 = Strongly Agree					
Min Wage Experience	Currently Works for Min Wage	7.5%	5.9 %	14.0%	8.9%
	Ever Worked for Min Wage	70.8%	69.8%	65.6%	69.1%
	Never Worked for Min Wage	21.7%	24.3%	20.4%	22.0%
Location	Number of States (incl PR and DC)	51	48	49	52
	Most Common	CA (13.3%)	CA (11.6%)	CA (14.9%)	CA (13.2%)
Repugnance	Average for System A	26.8	32.2	31.3	29.3
	Average for System B	80.3	59.5	69.6	72.1

Note: Data refers to 2,219 valid responses. See Table 2, Subsection 2.2, and Appendix Table A.1 for more on what is considered a valid response.

Table 4: Repugnance Ratings and Respondent Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)
	Δ Repugnance					
Age	0.0627 (0.0817)	0.0655 (0.0819)	0.0678 (0.0817)	0.0673 (0.0817)	0.0653 (0.0819)	0.0592 (0.0818)
Male	-7.084*** (1.732)	-7.233*** (1.732)	-7.458*** (1.737)	-7.446*** (1.736)	-7.418*** (1.734)	-7.256*** (1.731)
Asian	9.022 (7.035)	9.464 (7.001)	8.931 (7.046)	8.922 (7.050)	9.518 (6.943)	9.939 (6.949)
Black	1.535 (7.273)	0.836 (7.261)	1.984 (7.308)	2.092 (7.301)	1.510 (7.210)	1.185 (7.214)
White	10.01 (6.541)	9.565 (6.512)	9.924 (6.562)	9.974 (6.554)	9.987 (6.448)	9.664 (6.449)
Some College	13.46 (11.22)	13.62 (11.37)	13.25 (11.24)	13.21 (11.28)	13.54 (11.30)	13.56 (11.75)
Bachelor's Degree	8.335 (11.25)	8.740 (11.40)	8.191 (11.28)	8.134 (11.31)	8.671 (11.33)	8.795 (11.79)
Graduate Degree	5.820 (11.35)	6.105 (11.49)	5.803 (11.37)	5.775 (11.40)	6.205 (11.42)	6.428 (11.87)
Income \$20,000 to \$60,000	0.893 (2.956)	0.607 (2.968)	0.709 (2.964)	0.730 (2.966)	0.760 (2.977)	0.780 (2.974)
Income \$60,000 to \$100,000	2.754 (3.188)	2.566 (3.198)	2.744 (3.198)	2.768 (3.199)	2.708 (3.211)	2.867 (3.208)
Income \$100,000+	-0.549 (3.729)	-0.746 (3.737)	-0.685 (3.737)	-0.656 (3.739)	-0.681 (3.746)	-0.477 (3.744)
No Political Affiliation	-16.11*** (2.238)	-16.43*** (2.247)	-16.57*** (2.245)	-16.56*** (2.245)	-16.64*** (2.248)	-16.69*** (2.248)
Republican	-27.21*** (2.027)	-27.52*** (2.038)	-27.26*** (2.039)	-27.20*** (2.036)	-27.54*** (2.039)	-27.53*** (2.037)
2018 State Minimum Wage		-0.811 (0.525)			-1.415** (0.715)	-2.318*** (0.840)
Overall Econ. Freedom Index Score			-0.0793 (0.810)		-1.507 (1.095)	
Labor Market Econ. Freedom Index Score				-0.357 (0.862)		-3.290** (1.372)
Observations	2,072	2,068	2,063	2,063	2,063	2,063

*** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level. The dependent variable in each specification in the table is the difference in the average rating between the two labor market systems (we describe how we construct that average in Section 3.3). A positive coefficient implies that the characteristic is associated with the system without a minimum wage being relatively morally more offensive. We obtain state minimum wages for 2018 based on information from <https://www.laborlawcenter.com/state-minimum-wage-rates/>. We obtain Economic Freedom scores from the Fraser Institute. Note, the omitted category for race is Hispanic; for income, it is the group of respondents who earn less than \$20,000; for education, it is those with a high school diploma or less; for political affiliation, it is those who identify as a democrat.

Table 5: Main Estimates using Linear Probability Model

	(1)	(2)	(3)	(4)	(5)
	P(Chose A)				
Δ Unemployment Rate	-4.059*** (0.195)	-4.646*** (0.252)	-3.379*** (0.438)	-4.724*** (0.266)	-4.556*** (0.493)
Δ Repugnance	-0.440*** (0.0191)	-0.439*** (0.0267)	-0.438*** (0.0441)	-0.464*** (0.0254)	-0.469*** (0.0194)
System A = 10,000		0.617 (1.937)			0.486 (1.887)
Δ Unemployment Rate \times System A = 10,000		0.637* (0.341)			0.795** (0.345)
Min Wage Observed = \$10.10			0.448 (2.940)		0.413 (2.807)
Min Wage Observed = \$15			-7.848*** (2.981)		-7.124** (2.849)
Δ Unemployment Rate \times \$10.10			-0.843 (0.538)		-0.968* (0.532)
Δ Unemployment Rate \times \$15			-0.795 (0.532)		-0.961* (0.526)
Equal Race and Gender Effects				1.115 (2.600)	1.588 (2.592)
Unequal Race and Gender Effects				-19.74*** (2.355)	-19.37*** (2.347)
Δ Unemployment Rate \times Equal RG				-0.0483 (0.551)	-0.0819 (0.547)
Δ Unemployment Rate \times Unequal RG				1.936*** (0.431)	1.941*** (0.431)
No. of Choices	8,492	8,492	8,492	8,492	8,492
No. of Respondents	2,123	2,123	2,123	2,123	2,123

*** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level. Standard errors are clustered at the respondent level.

Table 6: Introducing Demographic Controls: Linear Probability Model

	(1)	(2)	(3)	(4)
	P(Chose A)	P(Chose A)	P(Chose A)	P(Chose A)
Δ Unemployment = 2%	-10.65*** (1.185)	-10.60*** (1.187)	-10.53*** (1.193)	-10.59*** (1.210)
Δ Unemployment = 4%	-20.11*** (1.307)	-20.07*** (1.307)	-20.00*** (1.311)	-20.10*** (1.326)
Δ Unemployment = 6%	-27.27*** (1.367)	-27.23*** (1.368)	-27.16*** (1.370)	-27.24*** (1.389)
Δ Unemployment = 8%	-32.16*** (1.902)	-32.08*** (1.894)	-31.93*** (1.877)	-32.02*** (1.895)
Δ Repugnance	-0.440*** (0.0191)	-0.450*** (0.0191)	-0.411*** (0.0204)	-0.413*** (0.0208)
No. of Choices	8,492	8,492	8,492	8,288
No. of Respondents	2,123	2,123	2,123	2,072
Age, Race, Gender		Y	Y	Y
Politics, LF Status, Location			Y	Y
Income, Education				Y

*** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level. Standard errors are clustered at the respondent level.

Table 7: Sensitivity Analysis: Linear Probability Model

	(1)	(2)	(3)	(4)	(5)
	P(Chose A)	P(Chose A)	P(Chose A)	P(Chose A)	P(Chose A)
Δ Unemployment = 2%	-20.60*** (2.304)	-12.94*** (1.745)	-10.56*** (1.605)	-11.14*** (1.538)	-12.37*** (1.090)
Δ Unemployment = 4%	-50.91*** (2.576)	-22.64*** (1.909)	-19.79*** (1.803)	-20.41*** (1.699)	-21.84*** (1.090)
Δ Unemployment = 6%	-73.84*** (2.383)	-30.24*** (1.976)	-28.16*** (1.959)	-26.85*** (1.794)	-29.00*** (1.090)
Δ Unemployment = 8%	-83.89*** (2.277)	-35.92*** (2.668)	-34.18*** (2.745)	-30.82*** (2.555)	-35.56*** (1.369)
Δ Repugnance	-0.127*** (0.0263)	-0.448*** (0.0265)	-0.506*** (0.0280)	-0.464*** (0.0245)	
No. of Choices	2,652	4,368	3,728	4,660	8,492
No. of Respondents	663	1,092	932	1,165	2,123
Omitted Group	Never Switchers	Extreme Politics	Religious	Non-College Educated	-
Fixed Effects	-	-	-	-	Yes

*** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level. Estimates in the first four columns include standard errors clustered at the respondent level. The fifth column reports fixed effects estimates.

Table 8: Heterogeneity Across Groups: Linear Probability Model

	(1)	(2)	(3)	(4)	(5)
	P(Chose A)				
Δ Unemployment	-4.113*** (0.277)	-4.306*** (0.244)	-4.419*** (0.418)	-3.591*** (0.304)	-4.335*** (0.277)
Δ Repugnance	-0.449*** (0.0190)	-0.441*** (0.0191)	-0.440*** (0.0192)	-0.441*** (0.0191)	-0.403*** (0.0203)
Male	5.663*** (2.059)				
Δ Unemployment \times Male	0.0833 (0.391)				
Age >40		-2.366 (2.161)			
Δ Unemployment \times Age>40		0.751* (0.405)			
White			3.563 (2.488)		
Δ Unemployment \times White			0.483 (0.472)		
Inject Vaccine (Agree or Strongly Agree)				1.714 (2.090)	
Δ Unemployment \times Vaccine				-0.773* (0.396)	
Neither Democrat nor Republican					-8.467*** (2.608)
Republican					-14.56*** (2.586)
Δ Unemployment \times Neither					0.484 (0.498)
Δ Unemployment \times Republican					0.596 (0.455)
No. of Choices	8,492	8,492	8,492	8,492	8,492
No. of Respondents	2,123	2,123	2,123	2,123	2,123

*** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level. Standard errors are clustered at the respondent level.

Figure 1: Ratings of System A (minimum wage of \$X) and System B (no minimum wage) on Moral Dimensions.

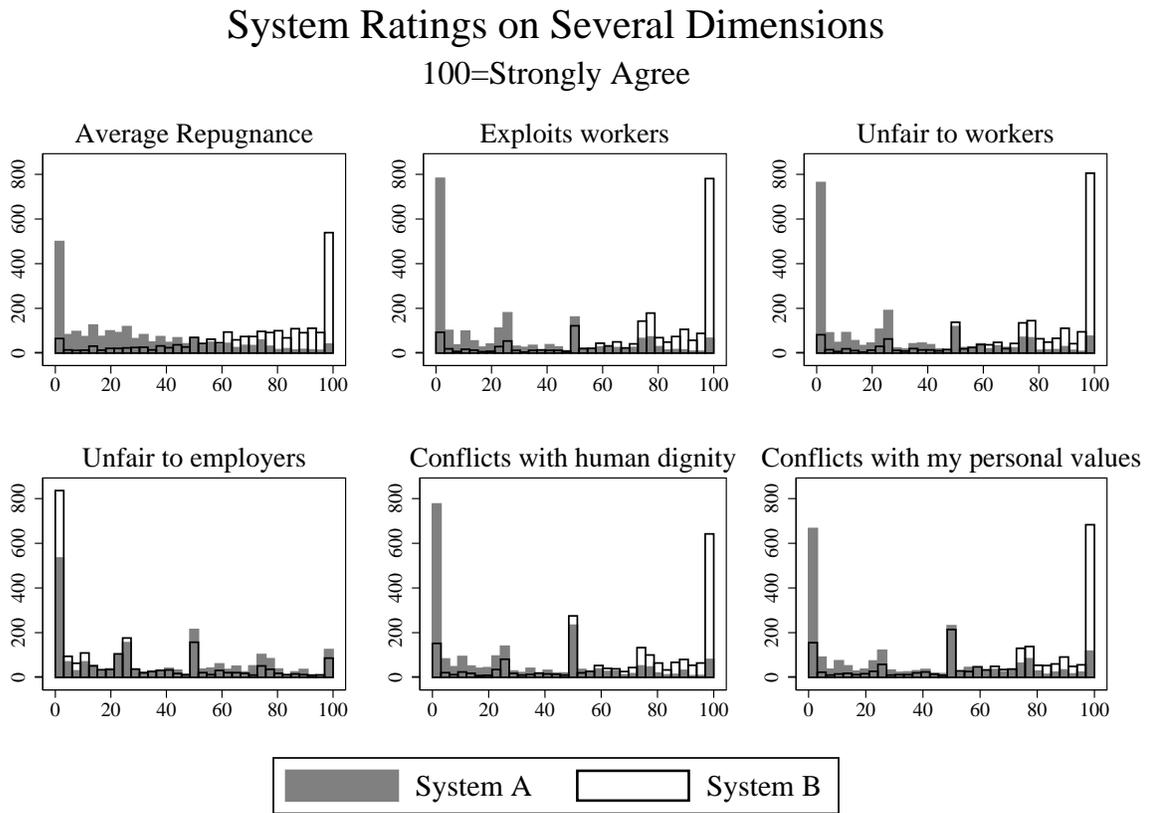
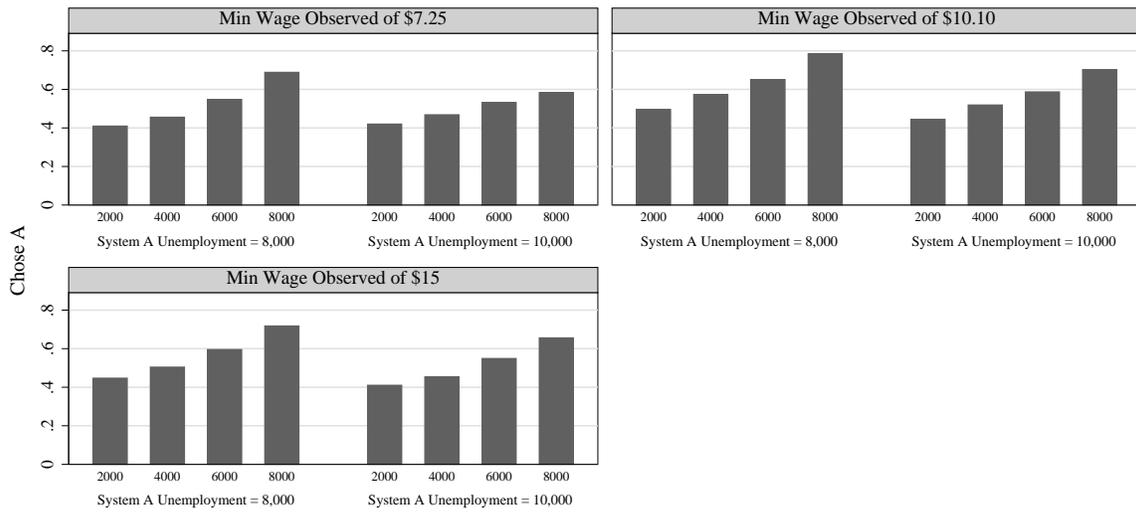


Figure 2: Choices in All Combinations of System A and B Unemployment Levels



Proportion Who Chose System A for Various System B Unemployment Levels

A Additional Tables and Figures

Table A.1: Checks on Attention and Reliability

Reliability Check	Description	Pass	Fail
1	Cannot recall own choices	2,035 91.7%	184 8.3%
2	Claims they would never choose a system which they did choose	2,033 91.6%	186 8.4%
3	Choices Correspond to Desirability Rating of each system	1,656 74.6%	563 25.4%
4	Suggested they would choose System B for some level of employment but did not do so in the experiment	2,135 96.2%	84 3.8%
5	Choices reflect monotonic preferences	2,139 96.4%	80 3.6%

The table reports how many respondents passed or failed five checks on attention, response reliability, and consistency. Statistics are reported for 2,219 respondents. This total excludes those who failed both the first and second reliability checks listed above plus those who appear to have taken the survey more than once based on their IP address.

Table A.2: Detailed Repugnance Ratings

	System A				System B			
Min Wage	\$7.25	\$10.10	\$15	All	No Min Wage			
Count	446	880	893	2,219	2,219			
Exploits Workers	49.4	26.8	16.6	27.2	75.6			
Unfair to Workers	50.0	26.6	18.1	27.9	74.4			
Unfair to Employers	24.9	33.2	48.5	37.6	25.1			
Fails to Respect Human Dignity	48.3	26.5	19.3	28.0	67.8			
Conflicts with Personal Values	48.8	30.4	30.7	34.2	69.5			

	System A				System B			
Political Affiliation	Democrat	Republican	Neither	All	Democrat	Republican	Neither	All
Count	1,095	614	510	2,219	1,095	614	510	2,219
Exploits Workers	26.1	27.4	29.4	27.2	82.6	64.8	73.4	75.6
Unfair to Workers	26.6	28.1	30.5	27.9	83.0	62.4	74.9	74.4
Unfair to Employers	29.5	52.0	37.8	37.6	23.0	28.8	25.0	25.1
Fails to Respect Human Dignity	25.9	29.9	30.1	28.0	76.7	54.6	64.6	67.8
Conflicts with Personal Values	28.4	43.5	35.4	34.2	78.8	56.3	65.4	69.5

Table reports breakdown of repugnance by minimum wage observed and reported political affiliation.

Table A.3: Selected Demographic Characteristics of Experiment Participants, by Observed Choices of Systems

		Always A	Switcher	Always B	All
Count		921	696	602	2,219
Demographics	Age	37.6	35.7	37.4	36.9
	Std. Dev.	12.1	11.3	11.7	11.8
	% Male	49.6%	45.5%	50.2%	48.5%
	White	78.6%	72.4%	73.4%	75.3%
	Black	8.6%	11.8%	9.0%	9.7%
	Other	12.8 %	15.8%	17.6%	15.0%
Politics	Liberal-Conservative Scale	2.4	2.8	3.2	2.7
Note: 1= Strongly Liberal and 5 = Strong Conservative					
Self-Reported Income	<\$20,000	13.5%	12.8%	10.0%	12.3%
	\$20,000 to \$60,000	49.8%	49.6%	46.4%	48.8%
	\$60,000 to \$100,000	25.9%	25.3%	25.3%	25.6%
	\$100,000 or more	10.8%	12.4%	18.2 %	13.3%
Education	Less than High School	0.3%	0.6%	0.5%	0.5%
	High School or Some College	43.2%	46.8%	44.7 %	44.8%
	Bachelor’s Degree	40.3%	37.6%	39.0%	39.1%
	Graduate Degree	16.2%	14.9%	15.7%	15.7%
Religion	Christian	43.5%	50.3%	54.3%	48.6%
	Other	6.3%	8.5%	8.1%	7.8%
	Atheist/Agnostic/No Affiliation	50.2%	41.2%	37.6%	43.7%
Morality Questions	Some Values are Sacred	4.5	4.4	4.3	4.4
	Suffering for an Ethical Principle is Wrong	3.8	3.8	3.5	3.7
	Freedom from Interference	3.6	3.4	3.5	3.5
	Vaccine Injection	3.4	3.5	3.5	3.5
Note: 1= Strongly Disagree and 5 = Strongly Agree					
Min Wage Experience	Currently Works for Min Wage	11.29%	8.05%	6.3%	8.9%
	Ever Worked for Min Wage	69.1%	69.5%	68.8%	69.1%
	Never Worked for Min Wage	19.7%	22.4%	24.9%	22.0%
Location	Number of States (incl PR and DC)	51	52	52	52
	Most Common	CA (13.1%)	CA (13.3%)	CA (13.3%)	CA (13.2%)
Repugnance	Average for System A	27.9	25.7	35.7	29.3
	Average for System B	85.7	72.9	50.3	72.1

Note: Data refers to 2,219 valid responses. See Table 2, Subsection 2.2, and Appendix Table A.1 for more on what is considered a valid response.

Table A.4: Logit Estimates

	(1)	(2)	(3)	(4)	(5)	(6)
	P(Chose A)					
Δ Unemployment Rate	-0.0402*** (0.00188)	-0.0426*** (0.00162)	-0.0400*** (0.00186)	-0.0403*** (0.00185)	-0.0425*** (0.00160)	
Δ Repugnance	-0.00431*** (0.000180)	-0.00431*** (0.000179)	-0.00456*** (0.000188)	-0.00434*** (0.000178)	-0.00461*** (0.000186)	-0.00431*** (0.000180)
Δ Unemployment Rate = 2%						-0.106*** (0.0118)
Δ Unemployment Rate = 4%						-0.200*** (0.0130)
Δ Unemployment Rate = 6%						-0.272*** (0.0136)
Δ Unemployment Rate = 8%						-0.322*** (0.0189)
System A = 10,000		0.0298* (0.0171)			0.0312* (0.0168)	
Min Wage Observed = \$10.10			-0.0301 (0.0240)		-0.0367 (0.0227)	
Min Wage Observed = \$15			-0.112*** (0.0241)		-0.112*** (0.0230)	
Equal Race and Gender Effects				0.0102 (0.0224)	0.0141 (0.0221)	
Unequal Race and Gender Effects				-0.118*** (0.0190)	-0.115*** (0.0189)	
No. of Choices	8,492	8,492	8,492	8,492	8,492	8,492
No. of Respondents	2,123	2,123	2,123	2,123	2,123	2,123

*** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level. Standard errors are clustered at the respondent level.

Figure A.1: Beliefs on the Effect of Study on Policymakers

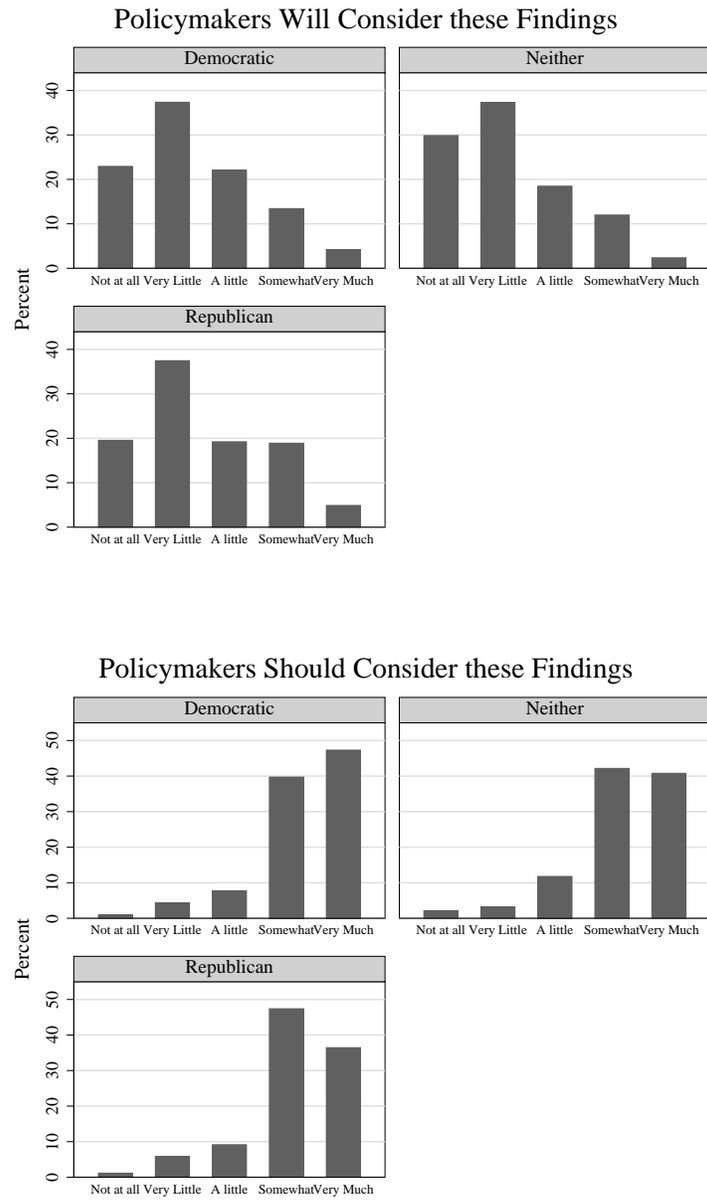
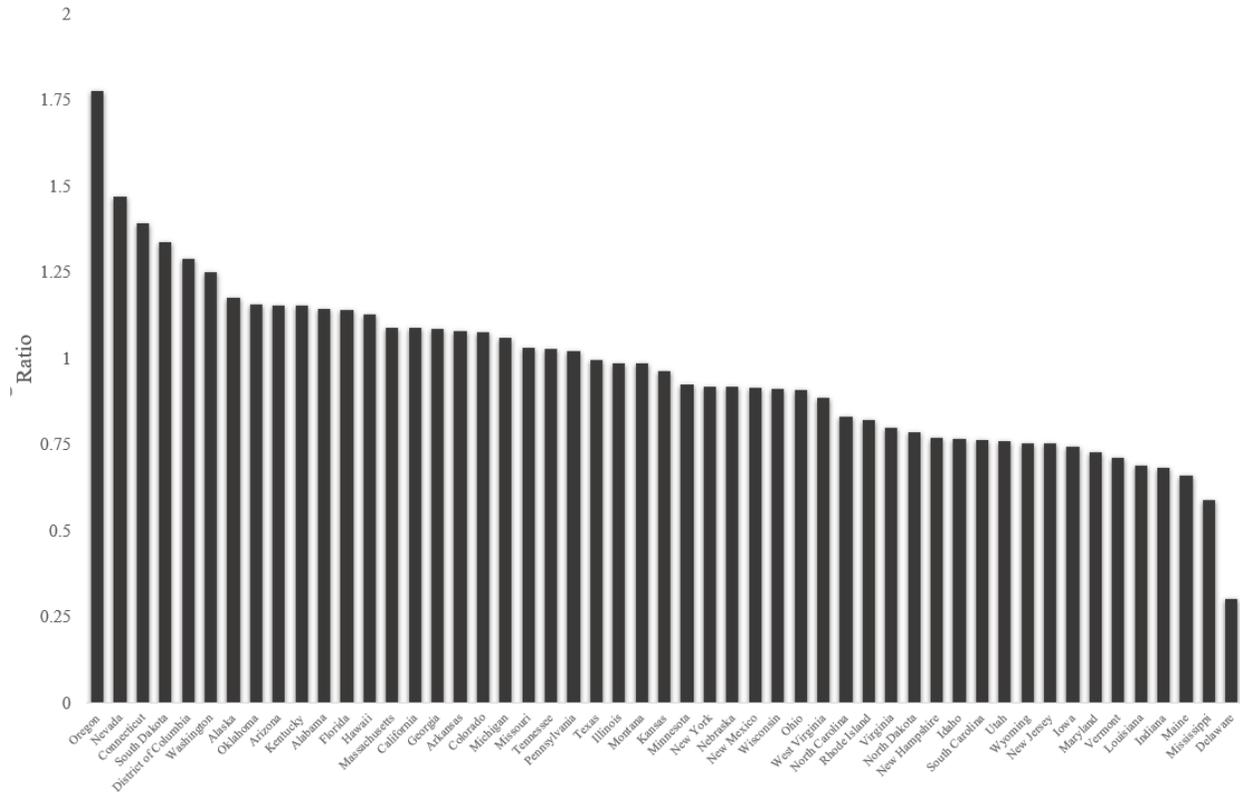


Figure A.2: Ratio of Representation: Experiment Participants vs. U.S. Population



Notes: this figure illustrates the ratio between the percent of all responses from a given state in our sample relative to that state's share of the U.S. population in 2017 as reported by the Census Bureau. Most states are reasonably represented but states such as Oregon and Delaware are over- and under-represented, respectively. Note that our main findings are robust to excluding any state which is more than 20% over- or under-represented (that is, omitting responses from any state with a 1.2 to 1 ratio of response share to population share and/or omitting those with a .8 to 1 ratio).

B Experiment/Survey Document

B.1 Sample Survey

This appendix section contains a complete survey, beginning on the following page. The survey remains available to complete at http://louisville.az1.qualtrics.com/jfe/form/SV_39Keupyg3Vnqt49.

English ▼

Minimum Wages, Morality, and Efficiency: A choice Experiment

September, 2018

Dear Survey Participant:

You are invited to participate in a research study about attitudes toward minimum wages. This study is conducted by Dr. Stephan Gohmann, Dr. Keith Teltser, Dr. Conor Lennon, and Dr. Jose Fernandez of the University of Louisville. There are no known risks for your participation in this research study. The information collected may not benefit you directly. The information learned in this study may be helpful to others. The information you provide will be used to help us understand the nature of public preferences towards minimum wages. Your completed survey will be stored at the University of Louisville. The survey will take approximately 10 to 12 minutes to complete. Payment will be \$1 for completing the survey. You will also be asked if you would be willing to be re-contacted for a similar follow-up survey. If you are re-contacted, you will also be compensated \$1 for that follow-up survey.

Individuals from the Department of Economics at the University of Louisville, the Institutional Review Board (IRB), the Human Subjects Protection Program Office (HSPPO), and other regulatory agencies may inspect these records. In all other respects, however, the data will be held in confidence to the extent permitted by law. Should the data be published, your identity will not be disclosed.

Taking part in this study is voluntary. By answering survey questions you agree to take part in this research study. You do not have to answer any questions that make you uncomfortable. You may choose not to take part at all. If you decide to be in this study you may stop taking part at any time. If you decide not to be in this study or if you stop taking part at any time, you will not lose any benefits for which you may qualify.

If you have any questions, concerns, or complaints about the research study, please contact: Dr. Conor Lennon (phone: (502) 852-7773; e-mail: conor.lennon@louisville.edu) or Dr. Jose Fernandez (phone: (502) 852-4861; e-mail: jose.fernandez@louisville.edu).

If you have any questions about your rights as a research subject, you may call the Human Subjects Protection Program Office at (502) 852-5188. You can discuss any questions about your rights as a research subject, in private, with a member of the Institutional Review Board (IRB). You may also call this number if you have other questions about the research, and you cannot reach the research staff, or want to talk to someone else. The IRB is an independent committee made up of people from the University community, staff of the institutions, as well as people from the community not connected with these institutions. The IRB has reviewed this research study.

If you have concerns or complaints about the research or research staff and you do not wish to give your name, you may call 1-877-852-1167. This is a 24 hour hot line answered by people who do not work at the University of Louisville.

Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible for use on a mobile device. If

you do not wish to participate in this study, please close this window now and your session will end.

Sincerely,

Dr. Conor J. Lennon

Dr. Jose M. Fernandez

- I consent, begin the study
- I do not consent, I do not wish to participate, please delete all record of my involvement.

>>

English ▼

You will be able to continue with the survey after reading the brief text below.

The Fair Labor Standards Act explains that, as of June 2018, the federal minimum wage in the United States is \$7.25 per hour of work. It is a federal crime to employ workers at any hourly wage below the federal minimum wage. Individual states are free to set a higher minimum wage, but the federal rate is the lowest possible hourly wage (there are some exceptions such as the hospitality industry, where tipping is customary).

In March of 2018, the Bureau of Labor Statistics reported that 1.8 million hourly workers, roughly 2.3 percent of all hourly workers, were paid no more than the federal minimum wage. Of those 1.8 million workers;

- 49 percent were between 16 and 24 years old.
- 65 percent work part-time.
- 53 percent have a high school diploma or less.
- 17 percent are Black, and 17 percent are Hispanic or Latino.
- 58 percent are female.

In recent years, there has been discussion about raising the federal minimum wage. Those in favor of an increase see the minimum wage as a potential way to reduce poverty and inequality. Opponents note that increasing the minimum wage could lead to unemployment because employers will not be able to afford to employ as many workers.

In this study, you may be asked to consider the minimum wage compared to some alternative policy options. We will refer to your options as System A and System B in each scenario. The order of presentation is randomly chosen. For that reason, you may be asked to consider System B prior to considering System A. You will be asked to express your opinion on the ethics of these systems, including if you feel they are fair (to both workers and their potential employers), dignified, or exploitative. You will then be given some potential associated employment outcomes to consider and asked to "vote" on a preferred option.

Based on the findings of this study, we will prepare and submit a summary of our findings (in the form of an op-ed) to major national newspapers including the New York Times, the Washington Post, the Chicago Tribune, and the Los Angeles Times. We may also be asked to speak about our findings on television, radio, or at public speaking events. In order to help us explain how American people view the minimum wage, we ask that you commit to answering our study's questions honestly.

Note that all of the answers that you provide will remain anonymous and treated with absolute confidentiality. The researchers do not know your identity, and they will never be able to match your name with the answers that you provide.

Do you commit to carefully reading and providing your thoughtful and honest answers to the questions in this survey?

- I commit to answering the questions in this study honestly and truthfully.**
- I do not commit to answering the questions in this study honestly and truthfully, please remove me from this study.**

English ▾

System A: This system features a minimum wage of \$10.10 per hour worked. This minimum applies in all 50 US states and employers must pay their employees at least \$10.10 per hour. Any employer who pays any worker a wage below \$10.10 would be guilty of a federal crime under the Fair Labor Standards Act.

Please consider the following statements and indicate your agreement or disagreement with them by moving the appropriate slider.

Note: the definition of underlined words can be viewed by hovering over them with the mouse cursor.

This system exploits workers

Strongly disagree 0 Somewhat disagree 25 Neither agree nor disagree 50 Somewhat agree 75 Strongly agree 100



This system is unfair to workers

This system is unfair to workers

Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
0	25	50	75	100



This system is unfair to employers

Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
0	25	50	75	100



This system does not respect human dignity.

Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
0	25	50	75	100



English ▼

In this part of the survey, you will consider some potential consequences of the systems you have rated. You will be presented with three choice scenarios. This is the first scenario.

For the purposes of the survey consider the potential effect of the alternative systems on a small U.S. city. The city contains 100,000 adults who are willing and able to work. Of these 100,000, 55,000 are male and 45,000 are female. In addition, 60,000 are White, 20,000 are Black, and 20,000 are Hispanic/Latino.

The table below summarizes what happens to employment in the city under each alternative system.

System A		System B
Minimum wage of \$10.10 Number of people <u>unable</u> to find work: 10,000		Minimum Wage Eliminated Number of people <u>unable</u> to find work: 8,000
For System A, among the workers who are unable to find work, 40 percent are members of a minority community (they are Black or Hispanic) and 45 percent are female.		

For System B, among the workers who are unable to find work, 40 percent are members of a minority community and 45 percent are female.

Please indicate the system you would like to see implemented by choosing one of the options below. Please think of your selection as the expression of a "vote."

System A

System B

On a scale of 0 to 100, how would you rate the overall desirability of each system?

Extremely
undesirable
0

Somewhat
undesirable
25

Neither desirable
nor undesirable
50

Somewhat
desirable
75

Extremely
desirable
100

System A



System B



This is the second scenario.

Again, consider the potential effect of the alternative systems on a small U.S. city. The city contains 100,000 adults who are willing and able to work. Of these 100,000, 55,000 are male and 45,000 are female. In addition, 60,000 are White, 20,000 are Black, and 20,000 are Hispanic/Latino.

The table below summarizes what happens to employment in the city under each system.

System A		System B
<p>Minimum wage of \$10.10</p> <p>Number of people <u>unable</u> to find work: 10,000</p>		<p>Minimum Wage Eliminated</p> <p>Number of people <u>unable</u> to find work: 6,000</p>
<p>For System A, among the workers who are unable to find work, 40 percent are members of a minority community (they are Black or Hispanic) and 45 percent are female.</p> <p>For System B, among the workers who are unable to find work, 40 percent are members of a minority community and 45 percent are</p>		

female.

Please indicate the system you would like to see implemented by choosing one of the options below. Please think of your selection as the expression of a "vote."

System A

System B

On a scale of 0 to 100, how would you rate the overall desirability of each system?

Extremely
undesirable
0

Somewhat
undesirable
25

Neither desirable
nor undesirable
50

Somewhat
desirable
75

Extremely
desirable
100

System A

0



System B

0



This is the third scenario.

For the purposes of the survey consider the potential effect of the alternative systems on a small U.S. city. The city contains 100,000 adults who are willing and able to work. Of these 100,000 people, 55,000 are male and 45,000 are female. In addition, 60,000 are White, 20,000 are Black, and 20,000 are Hispanic/Latino.

The table below summarizes what happens to employment in the city under each system.

System A		System B
<p>Minimum wage of \$10.10</p> <p>Number of people <u>unable</u> to find work: 10,000</p>		<p>Minimum Wage Eliminated</p> <p>Number of people <u>unable</u> to find work: 4,000</p>
<p>For System A, among the workers who are unable to find work, 40 percent are members of a minority community (they are Black or Hispanic) and 45 percent are female.</p> <p>For System B, among the workers who are unable to find work, 40 percent are members of a minority community and 45 percent are</p>		

female.

Please indicate the system you would like to see implemented by choosing one of the options below. Please think of your selection as the expression of a "vote."

System A

System B

On a scale of 0 to 100, how would you rate the overall desirability of each system?

Extremely
undesirable
0

Somewhat
undesirable
25

Neither desirable
nor undesirable
50

Somewhat
desirable
75

Extremely
desirable
100

System A



System B



This is the third scenario.

For the purposes of the survey consider the potential effect of the alternative systems on a small U.S. city. The city contains 100,000 adults who are willing and able to work. Of these 100,000 people, 55,000 are male and 45,000 are female. In addition, 60,000 are White, 20,000 are Black, and 20,000 are Hispanic/Latino.

The table below summarizes what happens to employment in the city under each system.

System A		System B
<p>Minimum wage of \$10.10</p> <p>Number of people <u>unable</u> to find work: 10,000</p>		<p>Minimum Wage Eliminated</p> <p>Number of people <u>unable</u> to find work: 2,000</p>
<p>For System A, among the workers who are unable to find work, 40 percent are members of a minority community (they are Black or Hispanic) and 45 percent are female.</p> <p>For System B, among the workers who are unable to find work, 40 percent are members of a minority community and 45 percent are</p>		

female.

Please indicate the system you would like to see implemented by choosing one of the options below. Please think of your selection as the expression of a "vote."

System A

System B

On a scale of 0 to 100, how would you rate the overall desirability of each system?

Extremely
undesirable
0

Somewhat
undesirable
25

Neither desirable
nor undesirable
50

Somewhat
desirable
75

Extremely
desirable
100

System A



System B



English ▼

The following question asks you to recall the choices you made.

Please check all of the below sentences that apply to your choices, as truthfully and honestly as possible.

- I chose System A (a minimum wage of \$10.10) in at least one choice opportunity
- I chose System B (no minimum wage) in at least one choice opportunity

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English ▼

Again, please consider the choices you made.

Please check all of the below sentences that apply to your choices, as truthfully and honestly as possible.

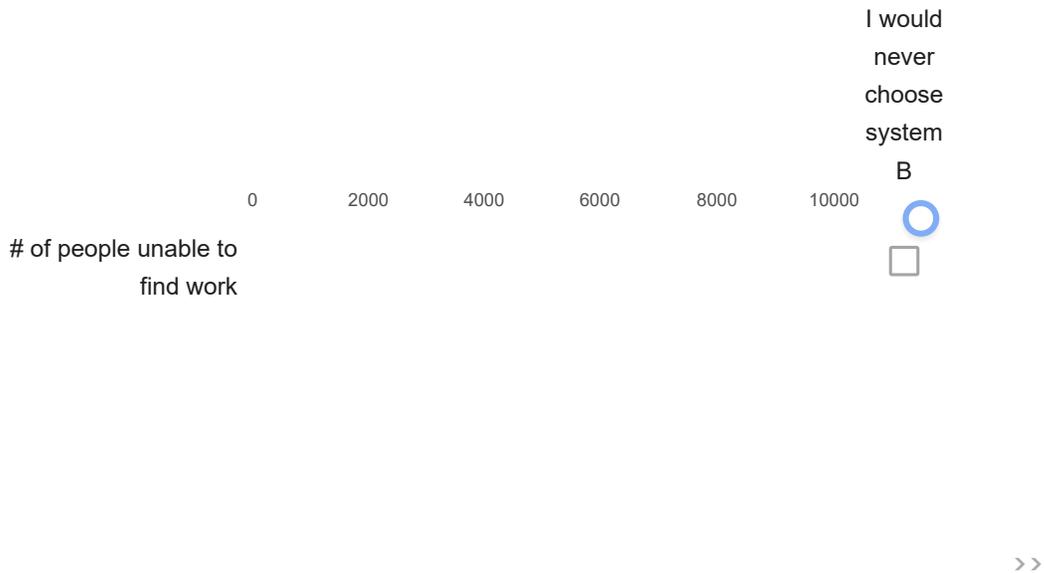
- I would have never chosen System A (a minimum wage of \$10.10) regardless of the number of workers who were able to find work
- I would have never chosen System B (no minimum wage) regardless of the number of workers who were able to find work
- None of the above

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English ▾

Suppose **10,000** people were unable to find work under System A (minimum wage of \$10.10). Please use the slider below to select a numerical answer to complete the missing part of the following statement: I would be willing to choose System B (no minimum wage) instead of System A if the number of people unable to find work was less than _____.



English ▼

As mentioned earlier, we will share the findings of this study with the general public and policy makers by sending them to major national newspapers for publication as an op-ed.

To what extent do you believe that policy makers **will** take your opinion about the minimum wage into consideration?

- Not at all
- Very little
- Little
- Somewhat
- Very much

To what extent do you believe that policy makers **should** take your opinion into consideration?

- Not at all
- Very little
- Little
- Somewhat
- Very much

English ▼

In this section of the survey we ask that you provide some socio-demographic information.

Thank you for helping us collect accurate information.

What is your age?

Are you...

- Male
- Female

In which state do you currently reside?

Which statement best describes your current employment status?

- Working (paid employee)
- Working (self-employed)
- Not working (disabled)
- Not working (temporary layoff from a job)
- Not working (retired)
- Not working (looking for work)
- Not working (other)

- Prefer not to answer

What is the highest level of school you have completed or the highest degree you have received?

- Less than high school degree
- High school graduate (high school diploma or equivalent including GED)
- Some college but no degree
- Associate degree in college (2-year)
- Bachelor's degree in college (4-year)
- Master's degree
- Doctoral degree

- Professional degree (JD, MD)

Information about income is very important to understand. Please indicate the answer that includes your entire household income in 2017 before taxes.

- Less than \$10,000
- \$10,000 to \$19,999
- \$20,000 to \$29,999
- \$30,000 to \$39,999
- \$40,000 to \$49,999
- \$50,000 to \$59,999
- \$60,000 to \$69,999
- \$70,000 to \$79,999
- \$80,000 to \$89,999
- \$90,000 to \$99,999
- \$100,000 or more
- Prefer not to answer

To which racial group do you most identify?

- White
- Asian

- My affiliation is not listed
- No religious affiliation

Have you donated money to or volunteered for a non-profit or charitable organization in the past 2 years?

- Yes
- No

Do you think of yourself as closer to the Republican or Democratic Party?

- Republican
- Democratic
- Neither

Have you ever worked in a position where your hourly wage was equal to the minimum wage?

- Yes, my current job pays minimum wage.
- Yes, a previous job paid minimum wage.
- No

Is any member of your immediate family currently working in a position that pays minimum wage?

- Yes
- No
- Unsure

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English ▼

Please indicate your level of agreement with the following sentence:

Some aspects of human life are sacred and should never be violated regardless of the possible material gains.

- Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree

Please indicate your level of agreement with the following sentence:

Allowing people to experience suffering in order to maintain an ethical principle is morally wrong.

- Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree

Please indicate your level of agreement with the following sentence:

People should have the freedom to do things that offend others' morals so long as no one is directly physically or financially harmed.

- Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree

Consider the following scenario:

Suppose a viral epidemic is killing millions of people around the world. The virus is fatal in every case: once someone contracts the virus they cannot be saved but the virus takes several days to kill a person. A doctor has developed two substances. One is a vaccine and the other is a deadly poison. Due to a clerical error, the doctor is not sure which is which. The doctor is taking care of two patients who have the fatal virus.

The only way to identify the vaccine is to inject each patient with one of the two substances. If the doctor injects the substances one of the patients will die immediately from the poison. However, because the doctor will know which substance is the vaccine, millions of other lives will be saved.

Please indicate your level of agreement with the following sentence:

The doctor should inject the substances into the patients.

- Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree

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English ▼

We are planning to contact some of the respondents to this survey sometime in the next 4 to 6 weeks to complete a similar type of survey. If you are interested in being contacted, please indicate below. If you are recontacted and choose to participate, your participation will be compensated.

- Yes, I am willing to be contacted again No, I am not willing to be contacted again.

If you have any feedback on our survey (typos, errors, general comments, and so on) please let us know. You can type your comments into the text box below.

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Thank you for completing our survey. Your response has been recorded.

Your MTurk completion code is: 1234567890

Please copy and paste the completion code into the space provided in the mTurk HIT to ensure your prompt payment.

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