The Effect of Pay Level on Employee Selection and Performance in Mission-Driven Organizations

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Abstract

Many for-profit organizations incorporate important social missions into their business models and strategies (hereafter, mission-driven organizations). We conduct an experiment in a real online labor market to investigate the effect of pay level on the performance of employees attracted to mission-driven organizations. We hypothesize and find that compared to employees who select a mission-driven job that offers above-market pay, those who select a mission-driven job that offers below-market pay work harder and perform better on a task that advances the social mission of the organization. This result is consistent with our theory suggesting that below-market pay is a more effective screening mechanism for selecting value-congruent employees who are naturally inclined to work hard toward the social mission of the organization. Collectively, we demonstrate that in mission-driven organizations, offering below-market pay yields a productivity-enhancing selection benefit. In addition to important practical implications, our results contribute to the contract selection literature and suggest a boundary condition for the applicability of efficiency-wage theory.

Keywords: pay level; self-selection; value congruence; social mission
I. INTRODUCTION

For-profit organizations increasingly incorporate important social missions into their business models and strategies (Feintzeig 2015). For example, TOMS was founded on the social mission of “improving lives one for one”. The company matches every pair of shoes sold with a new pair of shoes for a child in need and every piece of eyewear sold with a full eye exam and treatment for a person in need. Furthermore, a growing number of for-profit organizations are incorporating as benefit corporations or attaining B Corp certifications (Isaac and Gelles 2015).1 The mission of a benefit corporation or a Certified B Corp goes beyond making profits for its owners and includes creating a positive impact on society and the environment. These mission-driven organizations seek employees whose personal values are congruent with that of the organization because they believe that these employees will be naturally inclined to work hard for a social mission they value personally. For example, TOMS’s official website indicates the company seeks employees who “are driven by the idea of giving shoes to children, and sight to those in need.”

Value congruence is hard to verify or reliably measure. As a result, information asymmetry between the organization and potential employees regarding potential employees’ level of value congruence cannot be easily resolved. While widely used screening mechanisms, such as in-person interviews and aptitude tests, can effectively mitigate information asymmetry regarding a potential employee’s ability, such screening mechanisms are often ineffective in reducing information asymmetry regarding a potential employee’s value congruence (e.g.,

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1 A benefit corporation refers to a company that is incorporated under corporate law that legally protects the company’s social missions by mandating considerations other than profit, while a B Corp refers to a company that is certified by B Lab to meet specific standards for social and environmental performance.
Graves and Karren 1996; Huo et al. 2002; Swaney 2014). In this study, we examine the effectiveness of pay level as an alternative or additional mechanism for selecting value-congruent and therefore productive employees. More specifically, we investigate how pay level impacts the performance of the hired workforce on a task that contributes directly to the organization’s social mission and whether this performance effect is mediated by the extent to which hired employees hold personal values congruent with the social mission of the organization.

We argue that, for an organization with a salient social mission (hereafter “mission-driven organization”), offering below-market pay provides an effective mechanism for sorting employees based on the extent to which they personally value the social mission of the organization. This is because individuals with a relatively high level of value congruence derive much personal utility from advancing the social mission of the hiring organization. As a result, they will accept below-market pay in exchange for the opportunity to advance a social mission that they personally value. In contrast, those with a lower degree of value congruence do not derive the same personal utility from advancing the social mission of the organization and therefore, are less willing to accept below-market pay. Alternatively, when an organization offers above-market pay, potential employees will likely select the job offered regardless of their level of value congruence. As a result, relative to above-market pay, below-market pay is more effective at screening for value-congruent employees.2

Furthermore, theory and empirical evidence suggest that value congruence is positively associated with employee performance. From an agency theory perspective, agency problems

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2 We conceptualize value congruence as a continuous variable. It is defined as the extent to which an employee personally values the social mission of an organization. For brevity, we refer to those with a relatively high degree of value congruence as value-congruent employees.
arise when the incentives of the organization and those of the employees are misaligned. However, when employees are value congruent, their goals and incentives naturally align with those of the organization, and agency problems are minimized. Empirical evidence suggests that value-congruent employees possess a natural inclination to work hard and do what is best for the organization (e.g., Blau 1987; Meglino, Ravlin, and Adkins 1989). As a result, we hypothesize that relative to employees who select a mission-driven job that offers above-market pay, those selecting a mission-driven job that offers below-market pay will work harder and perform better on a task that advances the social mission of the organization because they hold personal values more congruent with the social mission of the organization.

We test our predictions by conducting an experiment on Amazon’s Mechanical Turk platform. Mechanical Turk is a real online labor market where “Requesters” can hire individuals to perform “Human Intelligence Tasks” (HIT). We ask participants to choose between two jobs: a job in which participants’ effort contributes directly to the social mission (hereafter, the mission-driven job) and a similar job without a social mission (hereafter, the competing job). We keep the pay level for the competing job constant and manipulate whether the pay level for the mission-driven job is above market (20% more than the competing job) or below market (20% less than the competing job). That is, participants in the above-market condition select between the mission-driven job that pays above market and the competing job, whereas participants in the below-market condition select between the mission-driven job that pays below market and the competing job.

All participants work on the same 40 letter-search questions. Participants who select the mission-driven job, regardless of their experimental condition, receive the promised fixed compensation (either below-market or above-market) if they answer at least 5 of the 40 letter-
search questions correctly. In addition, their performance on the task furthers a social mission. More specifically, participants earn a small donation for the American Cancer Society for each correctly answered letter-search question. Donating to the American Cancer Society represents our operationalization of the mission-driven organization’s social mission; so, for those selecting the mission-driven job, performance on the experimental task directly contributes to the organization’s social mission. In contrast, since the competing job does not have a salient social mission, performance on the competing job did not earn donations for the American Cancer Society. As our research examines the effect of pay level on the performance of employees hired by a mission-driven organization, we focus our analysis on participants selecting either the above-market or below-market mission-driven job.

Our results are consistent with our predictions. First, we find that, relative to participants who selected the above-market mission-driven job, participants who selected the below-market mission-driven job (over the competing job) worked harder and performed better on the experimental task. Second, we find this performance effect is mediated by the extent to which participant’s personal values are congruent with the social mission of the organization. These results provide important practical implications, particularly given the notable trend in our economy for for-profit organizations to incorporate important social missions into their business models and strategies (Feintzeig 2015). For example, 30 U.S. states and D.C. allow companies to incorporate as a benefit corporation, and as of April 2015, over 2,500 benefit corporations (e.g. Patagonia, Kickstarter, and Method) exist in the U.S. (Berrey 2015). In addition to these benefit corporations, over 1,500 companies in 130 industries and 42 countries are currently certified as B Corps (e.g. Etsy) according to the B Corporation’s official website (B Lab, 2016). Our theories
and results suggest that benefit corporations, certified B Corps and other mission-driven companies can benefit from the productivity-enhancing selection effect of below-market pay.

More broadly, as the U.S. and the rest of the world transition from a manufacturing economy to a service economy, companies increasingly find themselves in complex environments where explicit contracting on measures of output is costly or impractical (Hales, Wang and Williamson 2015). Economic theories have long suggested that employee selection may provide a useful mechanism to mitigate agency problems in these environments (e.g., Akerlof and Kranton 2005; Campbell 2012; Prendergast 2008). We provide theory and empirical evidence suggesting that offering potential employees below-market wages may enhance an organization’s ability to screen for value-congruent employees. This finding is consistent with the hiring practice of Google as explained by Google’s former CEO Eric Schmidt and former Senior Vice President of Products Jonathan Rosenberg: “In fact, the compensation curve should start low. You can attract the best smart creatives with factors beyond money: the great things they can do, the people they’ll work with, the responsibility and opportunities they’ll be given, the inspiring company culture and values...” (Schmidt and Rosenberg 2014: 126).

Our study contributes to the literature that examines the role of compensation system design in employee selection. This literature has primarily examined how compensation contracts can be designed to screen for employee skill (e.g., Chow 1983; Waller and Chow 1985; Kachelmeier and Williamson 2010). Our theories and results highlight that it is also important for researchers to consider the role of compensation system design in attracting employees with the right personal values. In doing so, we also contribute to the growing literature suggesting that organizations can rely on employee selection as a potential solution to contracting problems (e.g., Akerlof and Kranton 2005; Campbell 2012; Prendergast 2008; Swaney 2014).
Our theories and results also contribute to the efficiency-wage literature. Theoretical models of efficiency wage suggest that paying above-market wages can attract employees with high ability if workers are heterogeneous in ability, and worker’s ability and reservation wages are positively correlated (e.g., Yellen 1984). While we do not disagree with the general tenets of these models, our theories highlight the importance of incorporating into these models the widely accepted notion that workers are also heterogeneous in value congruence (Akerlof and Kranton 2005; Murphy 2012; Oyer and Schaefer 2011; Sekiguchi and Huber 2011). Our theories and results suggest that in environments where it is important for companies to attract value-congruent employees, paying above-market wages initially may impede instead of enhance employee productivity.

We organize the remainder of the paper as follows. Section II provides background and develops our hypotheses. Section III describes the method used to test our hypotheses. Section IV presents the results and Section V concludes.

**II. THEORY AND HYPOTHESES**

**Background**

Mission-driven organizations seek employees whose personal values are congruent with the organizations’ social missions because they believe that such employees are naturally inclined to work hard for a social mission they value personally. For example, TOMS was founded on the social mission of “improving lives one for one.” Hence, TOMS seeks employees who “are driven by the idea of giving shoes to children, and sight to those in need.” However, information asymmetry exists between the organization and potential employees regarding the potential employees’ level of value congruence because: (1) there are substantial variations in potential employees’ value congruence prior to hire (Akerlof and Kranton 2005; Gatewood and
Feild 1998; Murphy 2012; Oyer and Schaefer 2011; Sekiguchi and Huber 2011); and (2) personal value is an attribute that is hard to verify *ex ante.*

In an effort to recruit value-congruent employees, mission-driven organizations may use screening procedures such as in-person interviews and behavioral tests to screen out applicants whose values are incongruent with those of the organization. Nonetheless, there is evidence suggesting in-person interviews and behavioral tests are costly and may not be effective methods for assessing value congruence (e.g., Graves and Karren 1996; Rosse, Stecher, Miller, and Levin 1998; Huo et al. 2002). In this study, we investigate the effectiveness of pay level as a complementary screening mechanism.

**Hypotheses**

Prior accounting literature suggests that compensation contracts can be structured to reduce information asymmetry by allowing a potential employee to use contract selection to reveal his or her type. For example, studies show that performance-based pay can be used to attract individuals with high skill (i.e., employees whose skills are aligned with compensated performance measures) (e.g., Demski and Feltham 1978; Chow 1983; Waller and Chow 1985; Shields and Waller 1988).

Despite a large literature on the role of compensation contract design in sorting potential employees based on *skill*, there is a lack of research on the role of compensation and incentive contract design in sorting potential employees based on value congruence. We argue that, for a mission-driven organization, offering below-market pay provides an effective screening mechanism to screen out employees who do not personally value the social mission of the organization. More specifically, those with a relatively high degree of value congruence derive much personal utility from advancing the social mission of the hiring organization. As a result,
they are willing to accept below-market pay for the opportunity to advance a social mission that they personally value. In contrast, those who have a lower degree of value congruence do not derive the same personal utility from advancing the social mission of the organization and therefore, are less willing to accept below-market pay. Thus, below-market pay can effectively sort employees based on their value congruence.

In contrast, when a mission-driven organization offers above-market pay, potential employees will likely select the job offered by the organization regardless of their level of value congruence. Therefore, the set of potential employees who select above-market pay likely resembles a random sample of the population, with some exhibiting high value congruence while others exhibiting low value congruence. As a result, relative to above-market pay, below-market pay is more likely to attract a workforce with a relatively high level of value congruence.

Agency theory suggests that employees whose values and goals are congruent with those of the organization should exhibit less severe agency problem and have a natural inclination to do what is best for the organization. Hence, these employees should work harder toward the organizational mission even when they have few extrinsic incentives to do so. Prior management research provides some empirical evidence supporting the theory that value congruence is positively associated with employee performance. For example, congruency between an individual’s values and an organization’s value is positively associated with job involvement (Blau 1987), organizational commitment (Meglino, Ravlin, and Adkins 1989), and job performance (Caldwell and O’Reilly 1990).

Relatedly, value-congruent employees likely exhibit identified motivation (motivation based on congruence with one’s own values or goals) (Ryan and Connell 1989; Adler and Chen
Theory suggests that identified motivation leads to higher effort and performance (Ryan and Connell 1989; Gagne and Deci 2005; Adler and Chen 2011). Prior empirical research provides some support for the relation between identified motivation and individual effort and productivity. For example, studies find that identified motivation leads to significantly higher levels of quality and productivity than extrinsic controls at auto assembly plants (Adler 1993; O’Reilly and Chatman 1996). Similarly, Chen, Lill, and Vance (2015) document a positive association between identified motivation and effort in their survey-based research conducted with Amazon’s Mechanical Turk participants.

The above discussion suggests that, compared to individuals who select above-market pay, individuals who select below-market pay jobs at mission-driven organizations are more likely to work harder toward the organization’s social mission because they hold more congruent values. Our prediction departs from the predictions and results found in the efficiency wages literature. The efficiency wages literature suggests that higher wages likely lead to greater effort and performance due to the selection of high-skilled employees, positive reciprocity, and greater intention to keep the job (e.g. Akerlof 1984; Levine 1993). Our theory suggests that, for mission-driven organizations, when we take into consideration the organization’s social mission and the fact that employees differ in value congruence, below-market wages may be more effective than above-market wages in attracting a diligent workforce – one that actually

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3 Prior accounting research on work motivation has largely focused on the dichotomy between intrinsic and extrinsic motivation. However, more recent accounting research recognizes a richer range of motivational orientations comprised of intrinsic, identified, introjected, and external motivation (e.g. Adler and Chen 2011; Guo et al. 2013). Intrinsic motivation arises from inherent enjoyment of an activity; identified motivation arises from an activity’s congruence with one’s own values or goals; introjected motivation arises from concerns about social approval; and external motivation arises from external reward or punishment (Ryan and Connell 1989).
works harder toward the organization’s social mission. We posit the following hypotheses:

**H1a:** Relative to individuals who select above-market pay, individuals who select below-market pay perform better on a task that contributes directly to the organization’s social mission.

**H1b:** The positive performance effect of below-market pay is mediated by the hired employees’ level of value congruence with the mission-driven organization.

III. METHOD

**Design and Participants**

We employ a $1 \times 2$ between-subjects design and manipulate whether a mission-driven job (i.e., a job with a salient social mission) pays 20% more (Above-Market) or 20% less (Below-Market) than a competing job. Participants were recruited online via Amazon’s Mechanical Turk. The Mechanical Turk (MTurk) platform is a real online labor market, where “Requesters” can hire individuals to perform “Human Intelligence Tasks” (HITs). Recruiting participants from a real online labor market is important for testing our theory because it is essential that pay level is a salient factor affecting participants’ job choice. To validate this assumption, we conducted a pilot survey of more than 400 Mturk workers. Out of the 400 survey respondents, 96% indicate that they work on Mechanical Turk for money, and 89% indicate that the most important reason why they work on Mechanical Turk is money.

**Experimental Procedures**

We recruited 200 MTurk workers to participate in the experiment that was hosted in Qualtrics. Qualtrics randomly assigned participants to either the above-market or below-market condition. Participants in the above-market condition were told the following:
In this study, you can choose one (and only one) of two jobs to perform. Both jobs include a search task and a short questionnaire.

- Job A pays $1.00 to you.
- Job B pays $1.20 to you plus your work on this job can earn up to $2.00 for the American Cancer Society.

These two jobs should take about the same amount of time. Job A is not easier or quicker than Job B and Job B is not easier or quicker than Job A. Whether you choose to work on Job A or Job B, you will be helping us with our research.

Participants in the below-market condition were also given the choice of one of two jobs.

However, Job B in the below-market condition pays 20% less instead of more than Job A. More specifically, participants in the below-market condition were told the following:

In this study, you can choose one (and only one) of two jobs to perform. Both jobs include a search task and a short questionnaire.

- Job A pays $1.00 to you.
- Job B pays $0.80 to you plus your work on this job can earn up to $2.00 for the American Cancer Society.

These two jobs should take about the same amount of time. Job A is not easier or quicker than Job B and Job B is not easier or quicker than Job A. Whether you choose to work on Job A or Job B, you will be helping us with our research.

Job B represents a mission-driven job that is associated with a social mission – donating to the American Cancer Society. Participants who choose this job can contribute directly to this mission by earning donations for the American Cancer Society. We choose donating to the American Cancer Society as the social mission in our experiment for several reasons. First, contributions to this social mission can be quantified by the amount of donations participants earn for the American Cancer Society. As a result, we are able to create an environment where we clearly establish how participants’ performance on the job (i.e., experimental task) directly contributes to this social mission. Second, the American Cancer Society is one of the largest and best-known charitable organizations in the United States according to the Forbes list of “The 50 largest U.S. Charities”. As a result, participants are likely to have some general knowledge about
the main cause of the charity and whether they personally value this cause, which facilitates their job selection decision. Last but not least, our theory suggests that below-market pay helps to screen out individuals who do not personally value the organization’s social mission. As a result, we need a social mission that is valued only by a subgroup of our participant pool. Thus, variation in participants’ level of value-congruence is essential to the testing of our theory. Based on a pilot survey conducted, significant variation exists among MTurk workers on the extent to which they value donating to the American Cancer Society as a social mission. This makes donating to the American Cancer Society an appropriate social mission for the test of our theory.4

Job A represents a competing Job that is not associated with the social mission. We set the compensation for Job A at $1.00 based on our best estimate of market pay on Mechanical Turk for jobs similar to our experimental task. We set the compensation for Job B at $1.20 (20% more than the competing job) for participants in the above-market condition and 0.80 (20% less than the competing job) for participants in the below-market condition. After participants made their job choice, we provided them with information about the experimental task and its minimum performance requirement. All participants regardless of their job selection and condition were asked to solve 40 letter-search questions. For each letter-search question, participants were given a box of random letters and were asked to determine the number of times a specific letter (i.e., the search letter) appeared in the box. To receive compensation, participants had to answer at least 5 of the 40 letter-search questions correctly, representing a minimum performance threshold. With this minimum performance threshold, all participants were

4 More specifically, in a pilot vignette survey, we asked participants to allocate $100 in donation among five charities including American Cancer Society. Allocation to the American Cancer Society ranges between $0 and $100, has a mean of $22 and a standard deviation of $22.
incentivized to answer at least the first five letter-search questions accurately regardless of whether they cared about donating to the American Cancer Society. As a result, their accuracy on the first five letter-search questions provided a useful benchmark for their letter-search skill.

Participants who selected the mission-driven job (Job B) in both conditions were then told how their performance on the experimental task would affect the social mission of supporting the American Cancer Society. More specifically, participants were told, “we will donate to the American Cancer Society at a rate of $0.05 per each correctly completed letter-search question, up to a maximum of $2.00 per each participant.” Participants were also promised the option to receive an email receipt directly from the American Cancer Society for the amount they would earn for the charity. As mentioned earlier, we use the piece-rate for the contribution to the American Cancer Society to create an environment where we clearly establish how participants’ performance on the job (i.e., experimental task) directly contributes to the organization’s social mission. This piece-rate for the contribution is not intended to be viewed as a separate form of compensation. However, if participants view this as a separate form of compensation, the extent to which this piece-rate pay motivates their effort will depend on their level of value congruence. As a result, it will not prevent us from testing our theory.  

In summary, our design models an environment with the following characteristics. First, compensation is fixed and is contingent on achieving an easy performance threshold. In the real world, this form of compensation is most often used in environments where contracting explicitly on measures of output is costly or impractical. In these environments, employee

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5 If participants view this as a separate form of compensation and thus evaluate this piece rate relative to their own salary, this piece rate for donating to the American Cancer Society can seem relatively larger to those receiving a salary of $0.80 than to those receiving a salary of $1.20. This can potentially lead the former to work harder and perform better than the latter. We run a supplemental experiment to rule out this alternative explanation and discuss the supplemental experiment in the results section.
selection can serve as an important control mechanism (Campbell 2012). Second, employees’
efforts on the task for which they are hired to perform contribute directly to the social mission of
the organization. Third, the value of their contribution to the social mission can be significantly
greater than their salary. The last two characteristics make the alternative option of accepting a
higher-paying job and donating to a social cause outside of employment less desirable. For
example, a TOMS designer’s effort toward creating a desirable pair of shoes can contribute
significantly more to the mission of giving shoes to children than the designer could have
achieved by working at a different organization that pays a higher salary (e.g., Vans) and
donating shoes to needy children out of his or her own compensation.

After learning about their minimum performance requirement and how exactly their
effort contributes to the social mission (for those who selected the mission-driven job),
participants performed the letter-search task by advancing through a series of eight letter-search-
question blocks with each block displaying five letter-search questions. Qualtrics informed
participants when they had correctly completed five letter-search questions. At this point,
Qualtrics also informed participants how much money they had earned for the American Cancer
Society. For example, a participant who correctly completed the first five letter-search questions
was shown the following:

You have completed at least 5 questions correctly, so you will be paid your compensation
and you will be given a 100% approval rating from us for your hard work. In addition,
you’ve earned $0.25 for the American Cancer Society.

Answering more questions correctly won’t affect your compensation, but each additional
question you answer correctly will earn an additional $0.05 in donation for the American
Cancer Society.

Then, participants chose whether to continue to the next five letter-search questions or to
advance to the end of the study. From this point on, after each letter-search block, participants
were asked to choose between advancing to the next five letter-search questions or directly to the post-experimental questionnaire.

Once a participant opted to advance to the end of the study or had completed all eight letter-search blocks, he/she completed a post-experimental questionnaire that included demographic questions and questions measuring value-congruence as described further in the results section. After completing the post-experimental questionnaire participants who selected the mission-driven job (Job B) learned the amount they had earned for the American Cancer Society. We then obtained permission from these participants to donate the amount they had earned for the American Cancer Society on their behalf and gave participants the opportunity to provide their email address so they could receive a receipt directly from the American Cancer Society. We then paid all participants the amount associated with the job they selected. We sent the amount earned for the American Cancer Society by our participants to the American Cancer Society and requested an individual receipt for all participants who had requested one. This concluded the experimental procedures for our main experiment.

IV. RESULTS

Sample Description and Dependent Variables

We recruited 200 participants, of whom 150 were randomly assigned to the Below-Market condition (i.e. the mission-driven job pays 20% less than the competing job) and 50 were randomly assigned to the Above-Market condition (i.e. the mission-driven job pays 20% more than the competing job).\(^6\) Out of the 150 participants assigned to the Below-Market condition, 58 participants (39%) selected the below-market mission-driven job over the

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\(^6\) We expect that a significant higher percentage of participants will select the above-market job than the below-market job. As a result, we assigned 150 (50) participants to the below-market (above-market) condition in order to keep the number of participants for the below-market and above-market job relatively comparable.
competing job. Out of the 50 participants assigned to the Above-Market condition, 42 (84%) selected the above-market mission-driven job over the competing job. The smaller percentage of those selecting the below-market mission-driven job relative to those selecting the above-market mission-driven job (39% vs. 84%) is expected and provides indirect evidence suggesting below-market pay is a more effective screening mechanism.

Our primary dependent variable is participants’ performance on the letter-search task as measured by the number of correctly counted boxes. We also collected a measure of participants’ value congruence. Given the mission of the mission-driven job is to donate to the American Cancer Society, our goal when measuring value congruence is to capture the extent to which participants personally value this mission (Value Congruence). In our post-experimental questionnaire, participants rate their agreement with the following statement, “Donating to the American Cancer Society is personal to me”, using a seven-point Likert scale ranging from “strongly disagree” to “strongly agree”. Higher scores represent a higher degree of value congruence. To verify that our measure of value congruence reflects a relative stable personal value and does not just capture their transient attitude toward donating to the American Cancer Society, we also asked participants to indicate whether someone in their family or a close friend has suffered from cancer (Cancer Experience). As expected, Value Congruence is highly correlated with Cancer Experience (r = 0.33, p < 0.001). 7 Table 1 presents summary statistics for our performance and value congruence variables by condition and job selection.

7 We also asked participants to rate their agreement with the following two statements: “Donating to the American Cancer Society is very important to me” and “I am passionate about donating to the American Cancer Society.” These measures are not correlated with Cancer Experience (p = 0.22 and 0.21, respectively) and as a result, we do not use them in our main analyses.
As seen in Table 1, participants who selected the mission-driven job (Job B) answered 19.59 (Below-Market condition) and 16.48 (Above-Market condition) search boxes correctly. Their performance on average is much higher than the minimum performance requirement of five correct search boxes. Participant who selected the competing job (Job A) answered on average 7.52 (Below-Market condition) and 6.38 (Above-Market condition) search boxes correctly. Their performance on average is close to the minimum performance requirement and does not different significantly between conditions (p = 0.52). As our research question examines the effect of pay level on the performance of employees on a task that advances an important social mission, we exclude from our analyses participants who chose and worked on the competing job (Job A) from our analyses.

**Test of Hypotheses**

H1a posits that relative to individuals selecting the above-market mission-driven job, individuals who select the below-market mission-driven job perform better on a task that contributes directly to the organization’s social mission. To test H1a, we estimate the following OLS regression model:

\[ \text{Performance} = \beta_0 + \beta_1 \text{Pay level} + \beta_2 \text{Skill} + \epsilon \quad (\text{Model 1}) \]

Because the Shapiro-Wilk test for normality indicates that the number of correctly completed letter-search questions is not normally distributed (p < 0.01, untabulated), we use the ranked number of letter-search questions correctly answered as the measure for Performance.\(^8\) We rank-order participants such that the worst performer receives the lowest rank (i.e., 1) and the best performers receive the highest rank. Thus, higher ranks indicate greater performance. Pay Level is set equal to zero for the Below Market pay condition and one for the Above Market pay

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\(^8\) Rank-transformation is an appropriate procedure when normality is violated (Conover and Inman 1981).
condition. We expect a negative coefficient on Pay Level. We include participants’ letter-search skill (Skill) as a covariate. Since all participants must complete five letter-search questions correctly to earn their compensation, we believe participants will be most careful completing the first five questions. As a result, we use participants’ score on the first five questions as a measure of their letter-search skill (Skill). We expect a positive coefficient on Skill. As reported in Columns 2 and 3 of Table 2, we find a negative coefficient on Pay Level (Coefficient = -9.76, p = 0.05, one-tailed), indicating that that those selecting the below-market mission-driven job obtain higher Performance than those selecting the above-market mission-driven job. This result provides support for H1a. The coefficient for Skill is positive and marginally significant (p = 0.08, one-tailed).

INSERT TABLE 2 HERE

H1b predicts that the positive performance effect of below-market pay is mediated by the level of value-congruence of the hired employees. That is, relative to employees who select the above-market job, employees who select the below-market job work harder and perform better because they are more value congruent. Our results suggest that participants who select the below-market job indeed have a higher level of Value Congruence than those who select the above-market job (5.00 vs. 4.21, p = 0.01, untabulated). In addition, to formally test the mediating mechanism posited in H1b, we estimate the following OLS regression model:

\[
Performance = \beta_0 + \beta_1 Pay level + \beta_2 Value Congruence + \beta_3 Skill + \varepsilon \quad (Model 2)
\]

Performance, Pay Level, and Skill are defined in the same way as in Model 1. Value Congruence is measured by the extent to which a participant agrees with the following statement, “Donating to the American Cancer Society is personal to me” on a seven-point Likert scale ranging from

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9 Results are robust to not including Skill as a control variable.
“strongly disagree” to “strongly agree”. Higher scores represent a higher degree of value congruence. Columns 4 and 5 in Table 2 report the results of Model 2. Our regression results indicate that Value Congruence is positively associated with Performance (p < 0.01, one-tailed), and after controlling for Value Congruence, the relation between Pay Level and Performance is no longer statistically significant (p = 0.36, two-tailed), suggesting that the effect of pay level on performance is full mediated by the value-congruence level of employees who selected the mission-driven job (Baron and Kenny 1986; MacKinnon et al. 2002).

Furthermore, we follow the recommendation of MacKinnon et al. (2002) and employ a bootstrapping-based mediation analysis (Preacher and Hayes 2004; 2008). The results of 1,000 bootstrapped samples with replacement support the conclusion that the effect of pay level on task performance is mediated by participants’ level of value congruence (p < 0.05, two-tailed). These results support H1b and our theory that individuals who select the below-market mission-driven job work harder and perform better because, on average, they are more value-congruent than those selecting the above-market mission-driven job.

**Supplemental Analysis**

*The Selection Effect of Pay Level on the Perceived Value Congruence of Others*

We also collected a measure of employees’ perceived value congruence of others. More specifically, in our post-experimental questionnaire, participants rate their agreement with the following statement, “I think donating to the American Cancer Society is very important to other workers who also selected job B”, using a seven-point Likert scale ranging from “strongly disagree” to “strongly agree”. Interestingly, we find that this measure is greater for those who selected the below-market job than those who selected the above-market job (5.74 vs. 5.26, p = 0.03, two-tailed, untabulated). This result suggests that those who selected the below-market job
are not only more value congruent themselves, they also think that their co-workers are more value congruent.

These results suggest that the productivity-enhancing selection effect of below-market pay may be even greater on a group task where uncertainty exists about how much one’s group members are willing to contribute. That is, selecting into a below-market mission-driven job can increase one’s perception about one’s coworkers’ willingness to contribute to the common cause. To the extent that most people’s contribution to a group endeavor increases as they anticipate greater contribution by their group members (Fischbacher, Gächter, and Fehr 2010), our results suggest that the effect of below-market pay on performance can be amplified for tasks that require collaboration among group members.

**Supplemental Experiment**

In our main experiment, we keep the piece-rate for the contribution to the American Cancer Society constant at $0.05 per each correctly counted box across conditions. However, if participants evaluate this piece rate relative to their own pay, this piece rate for donating to the American Cancer Society can seem relatively larger to those receiving a salary of $0.80 than to those receiving a salary of $1.20. This can potentially lead the former to work harder and perform better than the latter; therefore, we ran a supplemental experiment to rule out this alternative explanation. The procedures for the supplement experiment are the same as the main experiment except that participants recruited for the supplemental experiment were not given a job choice. Instead, they were randomly assigned to either the above-market or below-market mission-driven job. More specifically, those who were randomly assigned to the above-market (below-market) mission-driven job were told the following:

*In this study, you will work on a search task and a short questionnaire.*
• This job pays $1.20 (0.80) to you plus your work on this job can earn up to $2.00 for the American Cancer Society.

We recruited 100 participants for the supplement experiment. 50 participants were assigned to the Below-Market condition and 50 were assigned to the Above-Market condition.10 One participant in the Above-Market condition did not complete the experiment and did not receive compensation. This individual was excluded from our final sample. As a result, our final sample consists of 50 participants in the Below-Market condition, and 49 participants in the Above-Market condition. On average, participants who were randomly assigned to the below-market (above-market) job completed on 16.48 (16.26) search boxes correctly. These averages are similar to the average performance of those who selected the above-market job in our main experiment (16.48), but are lower than the performance of those who selected the below-market job (19.59). In addition, mean Value Congruence for those randomly assigned to the below-market (above-market) job is 4.40 (4.20). Again, these means are similar to the mean of those who selected the above-market job in the main experiment (4.21), but lower than the mean Value Congruence for those who selected the below-market job (5.00). More importantly, neither performance nor value congruence differs between the two conditions in the supplement experiment (p = 0.93 and 0.57, untabulated).

These results provide additional evidence that the positive performance effect of below-market pay observed in our main experiment is driven by employee selection and not by a direct effect of the compensation contracts. These results also suggest that, consistent with our theory, above-market pay is not an effective screening mechanism for mission-driven organizations as the sample of employees who are attracted to above-market pay resembles a random sample of

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10 MTurk workers who had completed our main experiment were not eligible to participate in the supplemental experiment.
the population. By contrast, below-market pay more effectively selects value-congruent employees.

V. CONCLUSION

We conduct an experiment in a real online labor market to investigate the effects of pay levels on the attraction of value-congruent employees to an organization with a social mission. We hypothesize and find that compared to those selecting above-market pay, participants selecting below-market pay work harder because their personal values are more congruent with the organization’s social mission. To the extent that a social purpose is an important component of a for-profit organization’s mission (i.e., public benefit corporations, B Corp certified organizations and other mission-driven organizations), our results suggest that employee compensation can be used to facilitate the advancement of this mission by selectively attracting value-congruent employees who are naturally inclined to work hard for a mission that they value personally.11

Although we focus on organizations with a social mission in our study, our theory and results should generalize to organizations with other types of missions or other attributes (e.g. an intrinsically interesting job) that employees care about as long as the following criteria are met: 1) the organizational mission or the attribute is an important part of the organization’s business model and strategy; 2) potential employees vary on the extent to which they value the organizational mission or the attribute; and 3) the employees’ performance increases with the extent to which they value the mission or attribute. For example, Google’s mission to “organize the world’s information and make it universally accessible and useful” can be potentially

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11 However, we acknowledge that a potential drawback for using this strategy is that it may take longer to fill a vacancy. Thus, organizations need to weigh the need to attract value-congruent employees against the need to fill a vacancy quickly when deciding on initial pay levels.
enhanced by its hiring practice as explained by Google’s former CEO Eric Schmidt and former Senior Vice President of Products Jonathan Rosenberg: “In fact, the compensation curve should start low. You can attract the best smart creatives with factors beyond money: the great things they can do, the people they’ll work with, the responsibility and opportunities they’ll be given, the inspiring company culture and values…” (Schmidt and Rosenberg 2014: 126).

Extant contract selection research has primarily examined how compensation contracts can be designed to attract employees with the requisite skills. However, as Hales, Wang and Williamson (2015) point out, in dynamic environments where employees often face new challenges, attracting individuals with high skill may not suffice. We show that compensation schemes can be designed to select employees based on value congruence. In doing so, we provide evidence consistent with a growing literature suggesting that organizations can rely on employee selection as a potential solution to contracting problems (e.g., Akerlof and Kranton 2005; Campbell 2012; Prendergast 2008; Swaney 2014).

Limitations of our study provide opportunities for future research. First, we design an experiment that does not provide an opportunity for the employees to select on ability. Theoretical models of efficiency wage suggest that higher wages can attract more able employees if workers are heterogeneous in ability, and ability and workers’ reservation wages are positively correlated (e.g., Yellen 1984). In practice, the sorting process is more complex and employees often select into organizations based on multiple dimensions, including ability, personality, and preferences (Dohman and Falk 2011). Future research can examine the extent to which pay levels, or other elements of compensation contact design, can simultaneously attract employees with high ability as well as high value congruence. Furthermore, future research can explore the boundary conditions under which the results of our experiment hold. For example,
we conjecture that the cost-benefit trade-off of providing below-market pay varies depending on the importance of skills vs. value congruence for an organization. For organizations with an important social mission in environments where skill requirements are constantly changing, paying relatively lower wages may be beneficial by selectively attracting more value-congruent employees. However, in environments where skill requirements are high and relatively stable, paying above-market wages may accrue greater benefits to an organization by attracting those with higher skill.

Second, we use a setting where some participants are willing and able to give up a portion of their compensation for a more meaningful job. However, employees in many professions do not have the luxury to trade off pay for meaning since each dollar they earn goes toward satisfying basic needs such as food and shelter. Kahneman and Deaton (2010) show that emotional well-being is positively correlated with income for an annual income below $75,000. However, income increase beyond $75,000 does not increase happiness. Assuming that $75,000 is the point at which basic needs can be comfortably satisfied for most people, then employees are more (less) likely to trade off compensation for meaning if they make above (below) $75,000. That is, high-paying jobs (i.e., jobs that pay well above $75,000) are likely to benefit from the productivity-enhancing selection effect of below-market pay. However, paying below-market wages for low-paying jobs (e.g., a job that pay significantly below $75,000) will likely backfire. Future study can test these predictions with field or survey data.

Third, we examine the effects of below-market pay on individual performance in our study. However, results of our supplemental analysis suggest that those who selected the below-market job are not only more value congruent themselves, but they also think that their co-workers are more value congruent. As discussed in the results section, the results from our
supplemental analysis suggest that the productivity-enhancing selection effect of below-market pay may be even more pronounced in environments that require collaboration among group members. Future research can provide empirical evidence for this prediction.

Finally, our study examines the initial selection effect of below-market pay. Future research can investigate the effect of compensation contracts and other management control systems on employee productivity after a group of value-cogngruent employees have been hired. To the extent that below-market pay helps mission-driven organizations attract the “right” people and develop a social norm where the mission of the organization is valued and supported initially, compensation contracts and other management controls systems can serve an important role in sustaining and enhancing the value congruence and performance of employees subsequent to their recruitment.
References


Table 1
Descriptive Statistics

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<th></th>
<th>Below-Market Condition</th>
<th>Above-Market Condition</th>
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<tr>
<td></td>
<td>Job A ($1.00)</td>
<td>Job B ($0.80)</td>
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<tr>
<td>Performance^a</td>
<td>7.52</td>
<td>19.59</td>
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<td></td>
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<td>(13.00)</td>
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<tr>
<td>Value Congruence^b</td>
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<td></td>
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<td>(1.65)</td>
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<tr>
<td>N</td>
<td>92</td>
<td>48</td>
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</table>

^a Performance represents the number of search boxes participants correctly counted.

^b Value Congruence represents participants' response to the following statement, "Donating to the American Cancer Society is personal to me," using a seven-point Likert scale.
**Table 2**
The Selection Effect of Pay Level on Task Performance

\[
\text{Performance} = \beta_0 + \beta_1 \text{ Pay level} + \beta_2 \text{ Skill} + \varepsilon \quad (Model 1)
\]
\[
\text{Performance} = \beta_0 + \beta_1 \text{ Pay level} + \beta_2 \text{ Value Congruence} + \beta_3 \text{ Skill} + \varepsilon \quad (Model 2)
\]

**OLS Regressions of Performance\(^a\)**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
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<tr>
<td></td>
<td>Parameter</td>
<td>Estimate</td>
<td>p-value(^e)</td>
<td>Parameter</td>
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<td>Intercept</td>
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<td>Pay Level(^b)</td>
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<td>-5.32</td>
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<tr>
<td>Value Congruence(^c)</td>
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<td></td>
</tr>
<tr>
<td>Skill(^d)</td>
<td>9.92</td>
<td><strong>0.08</strong></td>
<td>8.39</td>
<td><strong>0.11</strong></td>
</tr>
</tbody>
</table>

\(^a\) Performance is measured using the ordinal rank of the number of letter-search questions participants correctly answered. A larger number indicates better performance.

\(^b\) Pay Level is set to 1 for below-market pay and to 2 for above-market pay.

\(^c\) Value Congruence represents participants' response to the following statement, "Donating to the American Cancer Society is personal to me," using a seven-point Likert scale.

\(^d\) Skill represents the number of correctly answered letter-search questions out of the first five questions.

\(^e\) Reported significance tests for directional predictions are one-tailed and are indicated by **bold** face.