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ABSTRACT

Unfair Chances and Labor Supply*

We conduct an online experiment to study how the unfairness of chances leading to wage inequality affects labor supply decisions. We find that, at a given wage, disadvantageous wage inequality reduces labor supply, but whether this inequality stems from fair or unfair chances does not matter. That is, a procedure with fair chances does not compensate for wage inequality. Our results stand in stark contrast to prior empirical evidence showing that individuals care about fair chances when making equity judgments.

JEL Classification: D63, D90, J22, J31, M52
Keywords: unfair chances, labor supply, workplace inequality

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I. Introduction

Employees are frequently exposed to chances, from hiring and bonus payments to promotions and dismissals. These chances may be fair, but often are not.[1] Prior research has shown that unequal pay can impact workers' behavior, e.g., reducing labor supply and productivity and increasing job separations (e.g., Gächter and Thöni, 2010; Cohn et al., 2014; Ockenfels et al., 2014; Bracha et al., 2015; Breza et al., 2018; Dube et al., 2019; Gagnon et al., 2025).[2] Another prominent stream of literature in welfare economics argues that unfair chances play a central role in equity judgments (e.g., Diamond, 1967; Sen, 1970; Epstein and Segal, 1992), and empirical work on redistributive behavior provides support for this view (e.g., Bolton et al., 2005; Karni et al., 2008; Krawczyk and Le Lec, 2010; Brock et al., 2013; Cappelen et al., 2013; Cettolin and Riedl, 2016; Grimalda et al., 2016; Trautmann and van de Kuilen, 2016). Therefore, it is a priori plausible that the unfairness of chances to receive unequal wages also affects workers' behavior.[3]

We present the first investigation of the causal impact of unfair chances behind unequal wages on labor supply decisions. We examine this by conducting an experiment on an online platform, where we hire workers who individually engage in a real-effort task at a fixed piece-rate wage. In the experiment, workers are matched in pairs and we vary (i) the piece-rate wage, which can be low or high, (ii) the absence or presence of piece-rate wage inequality between workers, and (iii) the chances leading to wage inequality, which can be fair or unfair. We employ four payment schemes, two with wage equality and two with wage inequality. In our payment schemes with wage equality, there are no chances involved, and the two workers receive the same piece-rate wage, either both the low wage or both the high wage. In our payment schemes with unequal wages, one of the workers receives the low wage while the other receives the high wage. In these schemes, workers are first informed of the chances they have to obtain a high (low) piece-rate wage. In the case of fair chances, each worker has a 50% chance. In the case of unfair chances, the chance is 25% for one worker and 75% for the other. After learning both their own and their paired worker's realized wages, workers decide individually how much to work. Our core research question is whether workers' labor supply is affected by whether wage inequality resulted from fair or unfair chances, holding piece-rate wages constant.

In our theoretical framework, we extend the model of wage inequality-induced effects on labor supply developed in Card et al. (2012) and Breza et al. (2018) by incorporating the social preferences model of aversion to unfair chances by Saito (2013). In our framework, workers engaged in identical work dislike piece-rate wage inequality, and this dislike is more pronounced

[1] For instance, recent work suggests that women evaluated for tenure in economics departments face lower chances than men of equal ability (Sarsons et al., 2021).

[2] A longstanding literature suggests that unfair wages can decrease work morale (Adams, 1965; Akerlof and Yellen, 1990; Pfeffer and Langton, 1993; Bewley, 1999). Wage differentials may instead be viewed as equitable if they reflect productivity differentials (e.g., Abeler et al., 2010; Breza et al., 2018).

[3] Psychologists have also suggested that procedures regarded as unfair can engender undesirable work behavior, such as decreased productivity and retaliation (e.g., Leventhal et al. 1980, Skarlicki and Folger 1997).

if the wage inequality results from unfair chances. Both piece-rate wage inequality and unfair chances increase the marginal disutility of working, thereby reducing labor supply.

In the experiment, we implement three features to cleanly identify the effect of wage inequality and unfair chances. First, labor supply decisions affect only the worker's own earnings, that is, there is no way to reward or punish an employer. Second, peer effects are excluded as workers do not interact in any way and do not receive any information about other workers' labor supply. Third, risk is not a factor in workers' labor supply decisions as chances are realized and piece-rate wages are assigned before they start working.

Our main result is that the unfairness of chances to receive unequal wages does not affect workers' labor supply. This holds for both disadvantageous and advantageous unfair chances. That is, low-wage (high-wage) workers supply the same amount of labor, regardless of whether their wage disadvantage (advantage) results from unfair or from fair chances. This result contradicts our theory-based hypotheses and stands in stark contrast to what one would expect given the literature on the effect of unfair chances in redistribution decisions (e.g., Bolton et al., 2005; Krawczyk and Le Lec, 2010; Brock et al., 2013; Cappelen et al., 2013; Cettolin and Riedl, 2016). Specifically, whereas initial chances have been shown to influence income redistribution, we show here that they have no impact on workers' labor supply decisions.

At the same time, we do find that disadvantageous wage inequality reduces labor supply relative to equality, which is consistent with prior findings on inequality aversion in labor settings (e.g., Breza et al., 2018; Dube et al., 2019). Specifically, low-wage workers paired with high-wage workers under fair chances reduce their labor supply by 13% or 0.20 standard deviations relative to low-wage workers under wage equality (i.e., when paired with another worker who also receives the low wage). The effect is significant before a multiple hypothesis correction and marginally significant after correction. Moreover, we find that advantageous piece-rate wage inequality relative to wage equality has no significant effect on labor supply.

The remainder of the paper is organized as follows. Section II presents the theoretical framework, Section III details the experiment, hypotheses, and results, and Section IV discusses our findings and outlines future research lines.

II. Labor Supply Framework

We adapt the theoretical framework developed by Card et al. (2012) and Breza et al. (2018) and extend it to account for how workers may react not only to unequal piece-rate wages but also to the unfair chances leading to those wages.[4] In the original framework, piece-rate wage inequality between workers engaged in identical work decreases work morale because workers are inequality averse. This decrease in work morale is modeled as an increase in the marginal cost of work, leading to lower optimal labor supply. Building on this, we add an aversion to

[4]In Gagnon et al. (2025), we present a version of the model accounting for aversion to gender discrimination. Our full model, including responses to wages, chances, and discrimination, can be found in Gagnon et al. (2020). For simplicity, and unlike Breza et al. (2018), we assume that work is fully contractible.

unfair chances, in the spirit of Saito (2013), so that also unfair chances in the process leading to unequal piece-rate wages decrease work morale. As a result, wage inequality stemming from unfair chances decreases labor supply more than the same inequality arising from fair chances.

Specifically, consider two workers, i and j, engaged in identical work and receiving piece-rate wages w_i and w_j, which are known to both workers. Worker i chooses labor supply l_i by taking into account the wage w_i, the other worker's wage w_j, the chances that lead to the respective piece-rate wages, captured through the expected wages Ew_i and Ew_j, and the cost of providing labor. Worker i chooses whether to work and receive utility from work, or not to work and instead receive outside utility R_i. Worker i's utility from work when providing labor supply l_i is

$$U_i(w_i, w_j, l_i) \;=\; w_i l_i \;-\; \frac{\theta_i}{1+\gamma} l_i^{1+\gamma} \;-\; P_i(w_i, w_j) l_i \;-\; A_i(Ew_i, Ew_j) l_i. \tag{1}$$

The first term on the right-hand side of equation (1) corresponds to the utility from monetary earnings. The second term is the utility cost of providing labor, where $\theta_i > 0$ is the individual cost parameter and $\gamma > 0$ is the curvature parameter determining the elasticity of labor supply.[5]. The third term is the disutility from ex post wage inequality, consistent with models of inequality aversion (Fehr and Schmidt, 1999; Bolton and Ockenfels, 2000) and used in Breza et al. (2018). We assume that inequality in wages creates a marginal disutility, i.e., $P_i(w_i, w_j) > 0$ if $w_i \neq w_j$ and $P_i(w_i, w_j) = 0$ if $w_i = w_j$. The fourth term reflects the disutility from ex ante wage inequality, due to unfair chances, consistent with the notion of aversion to unfair chances (Bolton et al., 2005; Trautmann, 2009). We assume that inequality in expected piece-rate wages before the wage realization create a marginal disutility that lasts after the actual wages are known, i.e., $A_i(Ew_i, Ew_j) > 0$ if $Ew_i \neq Ew_j$ and $A_i(Ew_i, Ew_j) = 0$ if $Ew_i = Ew_j$.[6]

Moreover, we posit that disadvantageous inequality and unfair chances create more disutility than advantageous ones, i.e., $w < w'$ implies $P_i(w, w') > P_i(w', w)$ and $Ew < Ew'$ implies $A_i(Ew, Ew') > A_i(Ew', Ew)$. This assumption is based on empirical findings by Bracha et al. (2015), Breza et al. (2018), and Dube et al. (2019), which show stronger responses to disadvantageous wage inequality.[7]

Worker i chooses to work only if $U_i(l_i^*, w_i, w_j) \geq R_i$, where l^* denotes the utility-maximizing labor supply. Assuming an interior solution, the optimal labor supply is given by

$$l_i^* \;=\; \left[\frac{w_i \;-\; P_i(w_i, w_j) \;-\; A_i(Ew_i, Ew_j)}{\theta_i} \right]^{\frac{1}{\gamma}}. \tag{2}$$

Thus, both unequal piece-rate wages and unfair chances of obtaining a high wage reduce optimal labor supply. In addition, disadvantageous wages and chances reduce optimal labor supply

[5]The labor supply elasticity $(\partial l_i^* / \partial w_i) \times (w_i / l_i^*)$ equals $1/\gamma$ when A_i and P_i are zero (see equation (2))

[6]The terms P_i and A_i may take many specific forms, including those proposed by Fehr and Schmidt (1999) and Bolton and Ockenfels (2000) for P_i and those proposed by Bolton et al. (2005) and Trautmann (2009) for A_i.

[7]The literature on social preferences often makes the weaker assumption that individuals are more sensitive to disadvantageous than to advantageous inequality or are equally sensitive to both (e.g., Fehr and Schmidt, 1999).

more than advantageous wages and chances do.

III. Experiment

III.A. Design and Hypotheses

We hired UK workers on the online labor platform Prolific to perform a basic clerical task: enter lines of random characters. Each worker was assigned the same task and individually entered one line at a time. The payment was made per correctly entered line. If a line was entered incorrectly, the worker received immediate feedback and was required to correct the error before proceeding.[8] While performing the task, workers were free to choose how many lines to complete: this decision constitutes our measure of labor supply. Workers could stop working and leave the experiment at any time without the possibility of reentering. They were instructed that they could work for at most 65 minutes.

Our treatments—the four different payment schemes—are summarized in Table 1. Workers were randomly assigned to one payment scheme, in which they were anonymously paired with another worker performing the exact same task. The schemes determine the wages within a worker pair and the procedure leading to these wages. In the schemes EQLOW and EQHIGH, no chances are involved and both workers receive the same piece-rate wage. In EQLOW, workers receive the low piece-rate wage of £0.03, whereas they receive the high piece-rate wage of £0.06 in EQHIGH. In the three other schemes, the two workers face chances to obtain a high wage or a low wage in a lottery. The lottery draw is dependent, with one worker receiving the high wage and the other worker receiving the low wage. In UNEQFAIR, both workers have a fair chance (50%) to receive the high wage. In UNEQUNFAIR, one worker faces a low chance (25%) of receiving the high wage, whereas the other worker faces a high chance (75%).[9]

Each worker in a pair was first informed about the procedure that would determine the piece-rate wages of the two workers. Subsequently, after the wages were realized, each of them was informed which wage was assigned to whom in the pair. Importantly, workers only started working after all uncertainty about piece-rate wages was resolved. Figure 1(a) provides a screenshot example of how we informed workers about the procedure leading to the wages, and Figure 1(b) shows a screenshot example of what workers saw when they were informed about the resulting wages.

Workers were invited via the online platform in January 2018.[10] In total, 891 workers

[8]The task became progressively more difficult as line lengths increased, simulating a rising marginal cost of labor. There was a maximum of 85 lines and workers were not informed about this beforehand. We provide screenshots of the tasks in Figure A1, and the instructions in Appendix B.

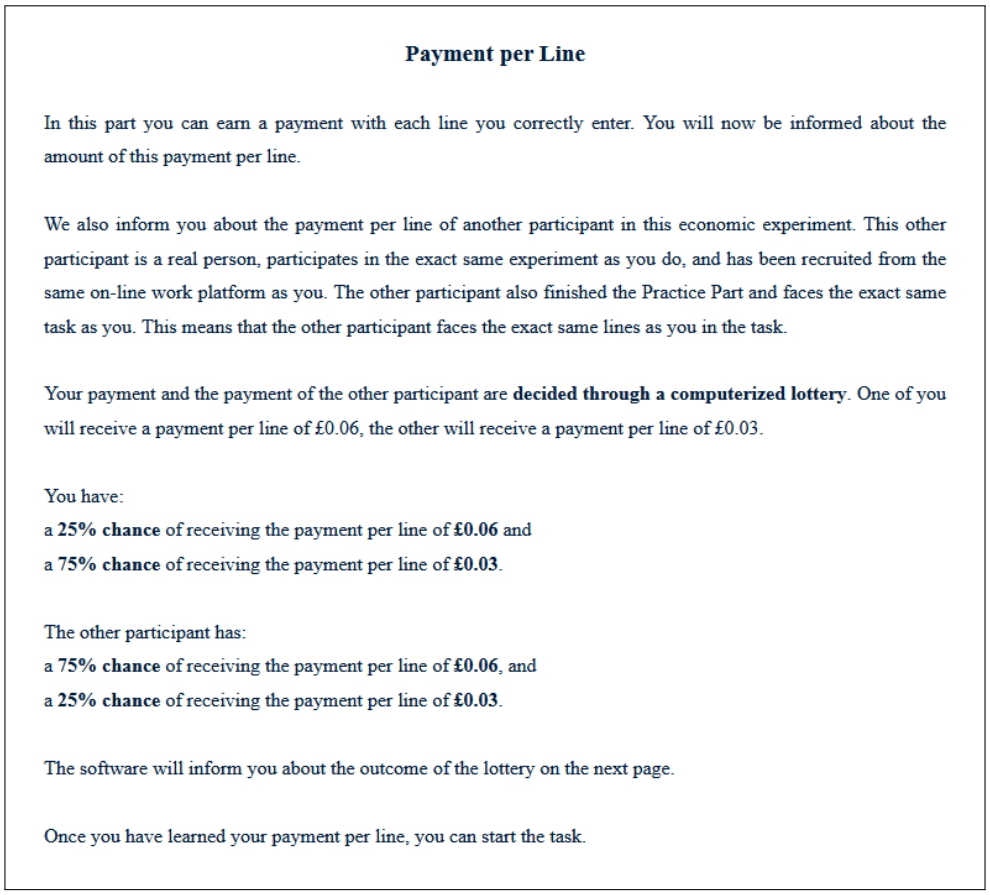
[9]Our experiment had an additional payment scheme where we introduced gender discrimination as the reason for wage inequality. We do not present this treatment here because it is part of the study reported in Gagnon et al. (2025), where we followed the advice of the editorial team to streamline the analysis by focusing on discrimination and leaving out payment schemes involving (gender-neutral) chances. The combined results are provided in Gagnon et al. (2020). Nevertheless, here we do account for the additional scheme whenever we run tests and correct for multiple hypothesis testing accordingly.

[10]Appendix B shows the invitation email.

Table 1: Piece-Rate Wages and Chances of Paired Workers for each Payment Scheme

Scheme	Chances of Paired Workers to Receive the High Wage	Wages of Paired Workers	*N*
EQLOW	.	£0.03, £0.03	128
EQHIGH	.	£0.06, £0.06	128
UNEQFAIR	50%, 50%	£0.03, £0.06	252
UNEQUNFAIR	25%, 75%	£0.03, £0.06	383

Note: In UNEQUNFAIR, 25% of the workers beat the odds (i.e., low-wage (high-wage) workers who had a 75% (25%) chance of receiving the high wage). Because these workers are not relevant to our hypotheses, we placed more workers in this scheme.



Payment per Line

In this part you can earn a payment with each line you correctly enter. You will now be informed about the amount of this payment per line.

We also inform you about the payment per line of another participant in this economic experiment. This other participant is a real person, participates in the exact same experiment as you do, and has been recruited from the same on-line work platform as you. The other participant also finished the Practice Part and faces the exact same task as you. This means that the other participant faces the exact same lines as you in the task.

Your payment and the payment of the other participant are **decided through a computerized lottery**. One of you will receive a payment per line of £0.06, the other will receive a payment per line of £0.03.

You have:
a **25% chance** of receiving the payment per line of **£0.06** and
a **75% chance** of receiving the payment per line of **£0.03**.

The other participant has:
a **75% chance** of receiving the payment per line of **£0.06**, and
a **25% chance** of receiving the payment per line of **£0.03**.

The software will inform you about the outcome of the lottery on the next page.

Once you have learned your payment per line, you can start the task.

(a) Chances

The lottery outcome is the following:

Your payment per line is **£0.03**.
The other participant's payment per line is **£0.06**.

(b) Wages

Figure 1: Presentation of the Procedure Determining the Wages

successfully completed the comprehension questions and participated in the experiment. Table A1 summarizes their demographic characteristics. On average, workers spent 26 (SD = 15) minutes in the experiment, and were paid 2.60 (SD = 1.54) pounds.[11]

Using our theoretical framework in Section II, we derive three hypotheses that compare labor supply—measured by the number of completed lines—across the different payment schemes. The hypotheses pertain to all workers in EQLOW, EQHIGH, and UNEQFAIR, and to workers who did not beat the odds in UNEQUNFAIR.[12]

Recall that, at a given piece-rate wage, the presence of wage inequality and of unfair chances each increases the marginal cost of labor supply, thereby reducing optimal labor supply.[13] This leads to our first two hypotheses, one for low-wage workers and one for high-wage workers.

HYPOTHESIS 1, LOW-WAGE WORKERS. Labor supply ranks across schemes as follows: EQLOW > UNEQFAIR > UNEQUNFAIR.

HYPOTHESIS 2, HIGH-WAGE WORKERS. Labor supply ranks across schemes as follows: EQHIGH > UNEQFAIR > UNEQUNFAIR.

Since disadvantageous wage inequality and disadvantageous chances both increase the marginal cost of labor supply more than, respectively, advantageous wage inequality and advantageous chances, our third hypothesis compares the labor supply reactions of low-wage and high-wage workers.

HYPOTHESIS 3, DISADVANTAGE VS. ADVANTAGE. The reduction in labor supply is greater for low-wage workers than for high-wage workers: (i) when moving from EQLOW/EQHIGH to UNEQFAIR, and (ii) when moving from UNEQFAIR to UNEQUNFAIR.

III.B. Results

Figure 2 summarizes labor supply across payment schemes for the 794 workers who did not beat the odds (Table A2 provides more details). The three bars on the left present the labor

[11] Of the workers who logged into the experiment, the following were excluded. First, any individual who did not complete the comprehension questions (the software automatically prevented them from being assigned to a payment scheme and starting the task). Second, the few individuals who quit at the end of the comprehension questions or during the practice phase, before learning about the payment scheme. Third, the 34 individuals who exceeded the 65-minute time limit. This strict time limit was clearly stated in the experiment description and reinforced during the task via an on-screen countdown. Fourth, the five individuals whose reported gender in the experiment did not correspond to the gender listed in the platform database. We implemented this procedure for the original experiment because the gender discrimination treatment required the correct identification of gender.

[12] That is, in UNEQUNFAIR, we exclude low-wage (high-wage) workers who had high (low) chances of obtaining the high wage. By design, we cannot consider workers who beat the odds because there are too few of them for a meaningful statistical analysis.

[13] Optimal labor supply is based on the interior solution. We conducted a pilot study to ensure that the experiment's parameters do not produce too many corner outcomes where workers do not work at all or finish all lines.

supply of low-wage workers, and the three bars on the right present the labor supply of high-wage workers. For low-wage workers, the scheme EQLOW generates the largest mean labor supply, followed by UNEQUNFAIR and UNEQFAIR, with little difference between the latter two. For high-wage workers, all schemes produce similar mean labor supply.[14]

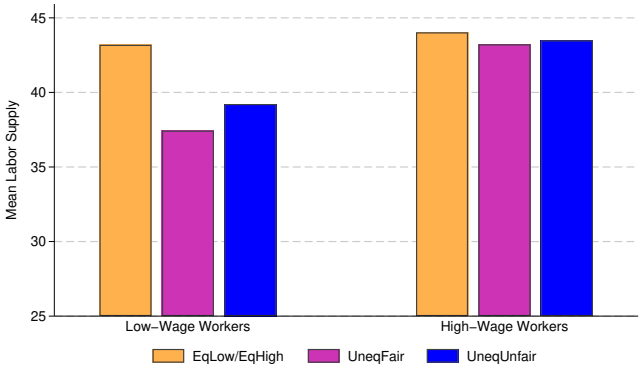


Figure 2: Mean Labor Supply per Payment Scheme

Note: Labor supply is measured by the number of lines completed and ranges from 0 to 85. N ranges from 127 to 143 workers per scheme. For low-wage workers, mean labor supply is 43.20 in EQLOW, 37.44 in UNEQFAIR, and 39.22 in UNEQUNFAIR; for high-wage workers, it is 44.03 in EQLOW, 43.23 in UNEQFAIR, and 43.50 in UNEQUNFAIR.

To test our hypotheses, we employ non-parametric rank tests as well as Tobit regressions to account for the censoring of labor supply (4% of workers provide zero labor supply and 18% reach the maximum). Whenever the two techniques lead to different results in terms of statistical significance, we give priority to the rank tests. Before we test Hypotheses 1 and 2 in detail by comparing schemes pairwise, we test for the equality of labor supply in all schemes with Kruskal-Wallis (KW) tests and Wald tests.[15] The tests show that labor supply does not differ significantly across the three schemes for low-wage workers ($p \geq .202$, two-sided tests[16]) or high-wage workers ($p \geq .947$; two-sided tests). Nevertheless, we proceed to pairwise comparisons since those are directional, while our KW and Wald tests are not.

Table 2 presents the p-values of the one-sided tests for the two main comparisons of the first two hypotheses, both with and without the Benjamini-Hochberg (BH) correction for multiple hypothesis testing within each hypothesis.[17] For low-wage workers, the table shows that

[14] A comparison between low and high piece-rate wages under equality reveals no significant difference in labor supply (EQLOW vs. EQHIGH, $p \geq .593$; two-sided t-tests or Mann-Whitney tests). The implied wage elasticity of labor supply for our task is 0.02, consistent with low elasticities estimated on online labor platforms. For example, Dube et al. (2020) estimate the market-wide elasticity on Amazon Turk to be around 0.10, and the elasticity for the pooled studies on Prolific in Gagnon et al. (2025) is 0.06.

[15] Wald tests on the restriction that all scheme coefficients from the regression are equal to zero, separately for low-wage and high-wage workers.

[16] Labor supply does differ significantly across the four original schemes (including the discrimination scheme).

[17] We use Dunn's test (Dunn, 1964) to conduct pairwise comparisons following the KW test. The BH correction (Benjamini and Hochberg, 1995) is a widely used False Discovery Rate procedure that controls the probability of false positives among significant results.

Table 2: *p*-values of Predicted Differences in Labor Supply between Payment Schemes

	Low-Wage Workers				High-Wage Workers			
Predicted Inequality	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Technique	Dunn	Tobit	Dunn	Tobit	Dunn	Tobit	Dunn	Tobit
BH Correction	No	No	Yes	Yes	No	No	Yes	Yes
UNEQUNFAIR < UNEQFAIR	.878	.513	.878	.513	.780	.473	1.000	.709
UNEQFAIR < EQLOW/EQHIGH	.017	.165	.050	.248	.185	.387	.556	1.000
N in three schemes	396	392	396	392	398	397	398	397

Note: One-sided *p*-values. Columns (1)–(4) are for low-wage workers, and columns (5)–(6) are for high-wage workers. We present the *p*-values for the two predicted inequalities following the KW and Tobit regressions using all original schemes. BH corrections are for three tests per type of worker to account for multiple hypothesis testing (i.e., we account for the additional scheme about discrimination that was part of the experiment but which is not used here, see Gagnon et al., 2020). For low-wage workers, the exact *p*-value for UNEQFAIR < EQLOW/EQHIGH is .0503. Tables A4 and A5 provide the regression estimates. Table A3 shows the *p*-values for the two predicted inequalities following the KW and Tobit regressions using only the three schemes employed in this article and BH corrections are for two tests per type of worker; the only difference is that, for low-wage workers, the *p*-value with the BH correction for UNEQFAIR < EQLOW/EQHIGH is significant at .039. We include the following controls in the regressions: age, gender, ethnicity, student status, employment status, platform experience, an index for the quality of previous platform participation, and day/time of participation.

low chances do not negatively affect labor supply relative to fair chances (UNEQFAIR < UNEQFAIR). However, at significant levels using Dunn's tests without the BH correction and at marginally significant levels with the BH correction, disadvantageous wage inequality under fair chances does decrease labor supply compared to equal wages (UNEQFAIR < EQLOW). The detected effect is meaningful from an economic standpoint: mean labor supply decreases by 13% or 0.2 standard deviations in UNEQFAIR compared to EQLOW.[18] Thus, our data do not support the part of Hypothesis 1 concerning the labor supply effect of unfair chances, but do support the part concerning the effect of wage inequality. For high-wage workers, the table reveals that none of the labor supply effects formulated in Hypothesis 2 hold. That is, high-wage workers have similar labor supply across payment schemes. We summarize our first two results as follows.

RESULT 1, LOW-WAGE WORKERS. *Unfair low chances do not decrease labor supply compared to fair chances. Disadvantageous wage inequality reduces labor supply compared to equal wages.*

RESULT 2, HIGH-WAGE WORKERS. *Neither unfair high chances nor advantageous wage inequality affects labor supply.*

Finally, we evaluate Hypothesis 3, which posits that unfair chances and wage inequality have a greater impact when they are disadvantageous than when they are advantageous. Our Tobit regression provides no support for this hypothesis.[19] First, unequal wages do not have

[18]The difference between UNEQUNFAIR and EQLOW is marginally significant using Dunn's test and corresponds to 0.14 standard deviations. Without BH corrections, our design with one-sided tests can detect differences of approximately 0.2 (0.3) standard deviations at the 5% significance level with 50% (80%) statistical power. In Gagnon et al. (2025), using multiple similar studies including this one, we find a smaller effect of a disadvantageous unequal piece-rate wage relative to equal piece-rate wages, which is 0.05 standard deviations and marginally significant with a one-sided test.

[19]A Wald test rejects a joint restriction on the two inequalities ($p = .929$), but we proceed with testing the individual inequalities for completeness since these are one sided, whereas the Wald test is not. Table A8 shows

a greater impact on the labor supply of low-wage workers than on the labor supply of high-wage workers (comparing the difference between UNEQFAIR and EQLOW with the difference between UNEQFAIR and EQHIGH; one-sided $p = .503$). Second, unfair chances do not have a larger impact on low-wage workers than on high-wage workers (comparing the difference between UNEQUNFAIR and UNEQFAIR of low- and high-wage workers; one-sided $p = .374$ ($p = .561$ with a BH correction). We state our third result as follows.

RESULT 3, DISADVANTAGE VS. ADVANTAGE. *Disadvantageous unfair chances and disadvantageous wage inequality do not reduce labor supply more than advantageous unfair chances and advantageous unfair wage inequality do.*

IV. Conclusion

We present a first study investigating whether unfair chances leading to wage inequality affect labor supply. We provide a theoretical framework predicting a negative effect of both wage inequality and unfair chances. Consistent with our prediction and existing evidence, we indeed find that disadvantageous wage inequality decreases labor supply, and the size of this decrease is economically relevant. However, we do not find any effect of unfair chances.

The latter result stands in stark contrast to theoretical arguments and empirical evidence on the importance of unfair procedures for fairness judgments and income redistribution decisions. Since Diamond (1967), many have argued that unequal outcomes are more acceptable when generated by fair chances rather than by unfair chances. In addition, experiments in non-labor settings—assigning chances in the manner we do—clearly show that individuals on average are more likely to accept an unequal outcome that results from fair chances than one that results from unfair chances (e.g., Bolton et al., 2005; Grimalda et al., 2016). Our results indicate that these results do not extend to labor supply decisions when unequal wages are the result of unfair procedures.

Even though workers may dislike unfair chances, the often-observed low positive elasticity of labor supply may limit their impact on workers' labor supply decisions.[20] Indeed, in our theoretical framework of Section II, a low labor supply elasticity reduces the effect of any change in factors affecting optimal labor supply—i.e., one's piece-rate wage, unequal wages, or unfair chances—compared to a high elasticity. Consistent with this, increasing the piece-rate wage from low to high—which doubles it—in our experiment does not significantly increase labor supply.[21] Thus, an interpretation of our results is that workers dislike unequal wages more than unfair chances, at least after wages are determined, so that their dislike of unfair chances is simply not strong enough to alter their labor supply.

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the p-values for the Wald test on each inequality, and Table A9 provides the associated regression estimates.

[20] Labor supply elasticity is low even on online platforms where it is easy to leave (Dube et al., 2020).

[21] In our framework, as a change in the piece-rate wage, changes in unequal wages and unfair chances affect the marginal return to labor supply.

We have designed our experiment so that we can explore the effects of unfair chances as cleanly as possible. Naturally, several extensions could be pursued in future research to account for additional interesting features of labor decisions. For instance, since employers often cannot fully contract effort, and employees tend to reciprocate higher wages with greater effort (e.g., Fehr et al., 1993, 1998), future research could examine how unfair chances affect reciprocal effort. The possibility of altering labor supply to negatively (positively) respond to an employer who sets unfair (fair) chances may reveal larger effects of wage inequality and unfair chances compared to our setting with complete contracts. Additionally, since promotion chances often take the form of multi-period tournaments where effort influences the likelihood of advancement (e.g., Lazear and Rosen, 1981), studying the effect of unfair chances in a more complex tournament-style design with repeated exposure to unfair chances may reveal negative effects.

Our research has implications for managerial policy. Managers might expect that providing workers with initially fair chances to earn higher wages will mitigate the negative effects of wage inequality on labor supply and effort. Workers might initially also value such fair chances. However, our results suggest that, ceteris paribus, workers do not factor the fairness of initial chances into their labor supply decisions once unequal wages are realized.

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*** For Online Publication ***

Online Appendices

We provide supplementary figures and tables in Appendix A and the invitation email and the instructions in Appendix B. We refer to figures and tables in the main text by their numbers.

A. Additional Figures and Tables

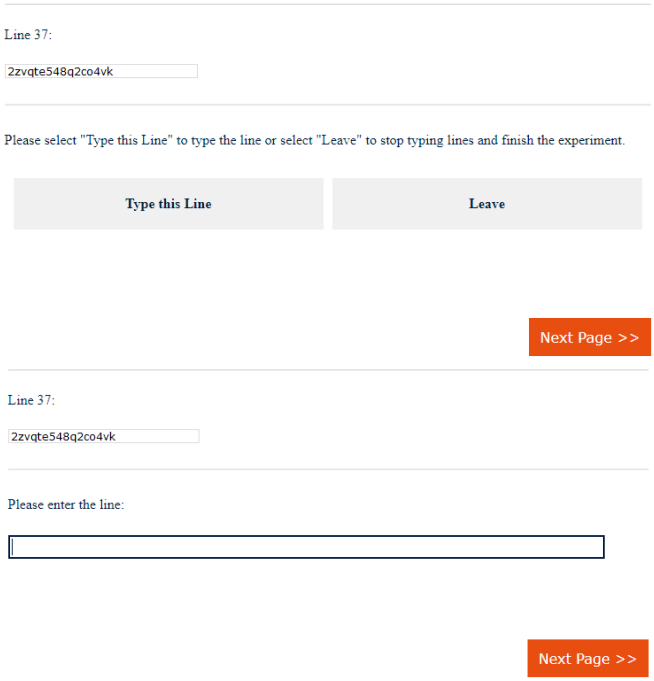

Figure A1: Task

Note: In the upper screenshot, the worker sees a line of characters, and decides whether to type the line or to leave the experiment. In the lower screenshot, if choosing not to leave, the worker is required to enter the line.

Table A1: Demographic Characteristics of Workers

	Mean					
	All schemes	EQLOW	EQHIGH	UNEQFAIR	UNEQUNFAIR	F-test (p-value)
Age	38	37	38	38	38	.693
Platform studies	135	137	135	135	141	.976
Woman	.50	.49	.50	.50	.49	.967
Student	.16	.20	.16	.13	.18	.270
UK National	.93	.92	.94	.95	.94	.444
White	.88	.86	.91	.87	.90	.778
Employed Full-Time	.50	.44	.51	.52	.50	.527
Employed Part-Time	.21	.25	.22	.21	.18	.383
Job Seeker	.07	.05	.05	.06	.08	.331
Not in Paid Work	.17	.17	.19	.17	.20	.933
Other Work Situation	.05	.09	.04	.03	.04	.218

Note: We are missing characteristics for up to two participants per payment scheme.

Table A2: Labor Supply per Payment Scheme

	Low-Wage Workers					High-Wage Workers				
	Mean	SD	Min.	Max.	N	Mean	SD	Min.	Max.	N
EQLOW/ EQHIGH	43.20	27.63	.04	.16	128	44.03	28.93	.04	.20	128
UNEQFAIR	37.44	29.16	.06	.17	125	43.23	29.64	.03	.20	127
UNEQUNFAIR	39.22	27.76	.04	.15	143	43.50	28.85	.02	.20	143

Note: Descriptive statistics about labor supply for all workers except those who beat the odds in the UNEQUNFAIR payment scheme. Labor supply is measured by the number of lines completed and ranges from 0 to 85. Min. and Max. indicate the percentage of workers completing the minimum and maximum number of lines.

Table A3: p-values of Predicted Differences in Labor Supply between Payment Schemes

	Low-Wage Workers				High-Wage Workers			
Predicted Inequality	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Technique	Dunn	Tobit	Dunn	Tobit	Dunn	Tobit	Dunn	Tobit
BH Correction	No	No	Yes	Yes	No	No	Yes	Yes
UNEQUNFAIR $<$ UNEQFAIR	.875	.585	.875	.585	.774	.430	.774	.430
UNEQFAIR $<$ EQLOW/EQHIGH	.019	.141	.039	.282	.186	.467	.373	.467
N in three schemes	396	392	396	392	398	397	398	397

Note: One-sided p-values. Columns (1)–(4) are for low-wage workers, and columns (5)–(6) are for high-wage workers. BH corrections for two tests per type of worker account for multiple hypothesis testing (not accounting for the additional scheme about discrimination that was part of the experiment but which is not used here, see Gagnon et al., 2020). Table A6 and A7 provide the regression estimates.

Table A4: Tobit Regression of Differences in Labor Supply between Payment Schemes, Low-Wage Workers

	Low-wage workers
	(1)
UNEQFAIR	-4.144
	(4.337)
UNEQUNFAIR	-4.008
	(4.115)
F (p)	.001
Pseudo R^2	.011
N	533

Note: Tobit regression model with socio-demographic controls and robust standard errors. We include the additional original scheme about discrimination and employ an indicator for it among the independent variables. The scheme EQLOW serves as baseline. We include the following controls: age, gender, ethnicity, student status, employment status, platform experience, an index for the quality of previous platform participation, and day/time of participation. Two-sided p-values. $^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$.

Table A5: Tobit Regression of Differences in Labor Supply between Payment Schemes, High-Wage Workers

	High-wage workers
	(1)
UNEQFAIR	-1.309
	(4.547)
UNEQUNFAIR	-1.607
	(4.397)
F (p)	.010
Pseudo R^2	.008
N	542

Note: Tobit regression model with socio-demographic controls and robust standard errors. We include the additional original scheme about discrimination and employ an indicator for it among the independent variables. The scheme EQLOW serves as baseline. We include the following controls: age, gender, ethnicity, student status, employment status, platform experience, an index for the quality of previous platform participation, and day/time of participation. Two-sided p-values. $^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$.

Table A6: Tobit Regression of Differences in Labor Supply between Payment Schemes, Low-Wage Workers

	Low-wage workers
	(1)
UNEQFAIR	-4.672
	(4.338)
UNEQUNFAIR	-3.743
	(4.152)
F (p)	.007
Pseudo R^2	.012
N	392

Note: Tobit regression model with socio-demographic controls and robust standard errors. We exclude the additinal original scheme about discrimination. The scheme EQLOW serves as baseline. We include the following controls: age, gender, ethnicity, student status, employment status, platform experience, an index for the quality of previous platform participation, and day/time of participation. Two-sided p-values. $^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$.

Table A7: Tobit Regression of Differences in Labor Supply between Payment Schemes, High-Wage Workers

	High-wage workers
	(1)
UNEQFAIR	-.375
	(4.581)
UNEQUNFAIR	-1.159
	(4.483)
F (p)	.018
Pseudo R^2	.011
N	397

Note: Tobit regression model with socio-demographic controls and robust standard errors. We exclude the additional original scheme about discrimination. The scheme EQLOW serves as baseline. We include the following controls: age, gender, ethnicity, student status, employment status, platform experience, an index for the quality of previous platform participation, and day/time of participation. Two-sided p-values. $^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$.

Table A8: p-values of Predicted Differences in Labor Supply Effect of Payment Schemes between Low-Wage Workers and High-Wage Workers

	Low-Wage Workers	High-Wage Workers
Predicted Inequality	(1)	(2)
Technique	Tobit	Tobit
BH Correction	No	Yes
UNEQUNFAIR > UNEQFAIR is larger for low-wage workers	.374	.561
UNEQFAIR > EQLOW/EQHIGH is larger for low-wage workers	.503	.503
N in three schemes	392	397

Note: One-sided p-values. We present the p-values for the two predicted inequalities following the Tobit regressions using all original schemes. BH corrections are for three tests to account for multiple hypothesis testing (i.e., we account for a third inequality about the additional scheme about discrimination that was part of the experiment but which is not used here, see Gagnon et al., 2020). Table A9 provides the regression estimates.

Table A9: Tobit Regression of Differences in Labor Supply Effect of Payment Schemes between Low-Wage Workers and High-Wage Workers

	All workers
	(1)
Low-wage workers, UNEQFAIR	-4.636
	(4.385)
Low-wage workers, UNEQUNFAIR	-4.432
	(4.098)
High-wage workers, EQHIGH	2.291
	(4.352)
High-wage workers, UNEQUNFAIR	-.315
	(4.392)
High-wage workers, UNEQUNFAIR	-.061
	(4.213)
F (p)	.000
Pseudo R^2	.008
N	1075

Note: Tobit regression model with socio-demographic controls and robust standard errors. We employ an indicator each scheme for low-wage workers except EQLOW (which serves as baseline), and an indicator for each scheme for high-wage workers. We include the additional original scheme about discrimination and employ one indicator for low-wage workers in it and another indicator for high-wage workers in it among the independent variables. We include the following controls: age, gender, ethnicity, student status, employment status, platform experience, an index for the quality of previous platform participation, and day/time of participation. Two-sided p-values. $^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$.

B. Invitation Email and Instructions of the Experiment

Invitation Email

[Note: Potential participants see the time limit that they have to complete the experiment]

We would like to invite you to participate in an online economic experiment about decision making. You will be paid a reward of £0.70 for about 5 minutes of participation. Thereafter, as will be explained in the instructions, you can earn more money with the decisions you make by participating in this experiment for a longer time.

IMPORTANT: All information provided will be collected and stored ANONYMOUSLY.

****

You receive this invitation because you are registered at Prolific. Please consult the Prolific website in case you want your data to be removed from the platform.

Instructions

Instructions

Welcome to this economic experiment,

You can earn a considerable amount of money with the decisions you make. Please read these instructions carefully. Importantly, unlike experiments in some other social sciences, economic experiments employ a strict non-deception policy. This means that all information you receive is truthful.

The only way to leave this economic experiment and be paid is to click on the button "Leave" and go to the next page. Once you do this, you will see a message that the experiment is now over and that you can close your browser page. You will not be paid if you leave at any moment by closing your browser window without clicking on the button "Leave" and going to the next page that tells you that the experiment is over.

This economic experiment consists of a Practice Part, where you cannot yet earn money, followed by a Task Part where you can earn money. The Practice Part consists of these Instructions, some comprehension questions, and a practice exercise. It is important that you answer the comprehension questions correctly by yourself. Please do not consult other people when answering these questions. In case you do not answer a question correctly, you will have two more chances to correct your answer. If you do not answer all questions correctly after these two additional chances, you will not be able to participate in the Task Part and the experiment ends for you. In that case you will be paid £0.45. When you have answered all comprehension questions correctly you can participate in the Task Part. In the Task Part, you can earn money by working on a task. You can stop working on the task whenever you prefer.

Recall, that to leave this economic experiment and **to be paid** you need to click on the "Leave" button and go to the next page. Once you have done this, you will see a message that the experiment is over for you and that you can close your browser page. You will **not be paid** if you leave the experiment without following the described procedure.

Note that you cannot leave the experiment and be paid before you finish the Practice Part (which lasts about 5 minutes). Thereafter you can leave the experiment at any time.

After you leave the experiment using the “Leave” button, the money you have earned will be paid to you through Prolific.

Task Part

In the Task Part of this experiment, you can earn money by working on a task. You can decide how much of the task you want to complete. The task is to enter preset lines of random numbers and/or letters on your computer. You will receive a payment for each line you copy correctly. Nobody else than yourself will derive any earnings from your work, including the experimenters. The lines of numbers and/or letters you enter have no further use for anyone.

You will see one line at the time. Once you have entered a line correctly, you can go to the next page to see the next line. Each time you see a new line, you can decide whether you would like to type this line or leave the experiment.

In case you make a mistake when entering the line, the software will tell you so. You will need to correct this mistake before you can proceed to the next line.

The length of the sequences of random numbers and/or letters will increase as you complete more lines. That is, lines will be relatively short at the beginning but get longer over time.

You will be informed of your payment per line at the beginning of the Task Part.

In the Task Part you may also receive anonymous payment information regarding another participant.

Leave the Experiment

You can stop entering lines at any moment. Note, however, that the only way **to stop and to be paid** is to **click on the "Leave" button and then go to the next page**. You will then see a message that the experiment is over for you, that you need to click on a Prolific link to validate your participation, and that you can then close your browser window.

You will see the “Leave” button whenever you are presented a new line. If you decide to leave, you will not be able to start working again. That is, **once you leave the experiment you cannot go back.**

Payment

When you leave the experiment according to the described procedure you will receive a **payment per line you entered correctly.** You will be informed about the amount of the payment per line when you see the first line to be entered. In addition, you will also receive a **fixed amount of £0.70**, irrespective of the number of lines entered.

Decision

The decision you make in this economic experiment is to choose how much of the task you want to complete. You are the only one deciding how much you work. Your decision only affects your own earnings.

Practice Part

In the Practice Part, we ask you to correctly answer a number of comprehension questions. It is important that you answer these comprehension questions by yourself. For each question you will have three chances. If you do not correctly answer all comprehension questions you will not be able to participate in the Task Part. In this case the experiment will end for you and you will be paid £0.45.

After having correctly answered all comprehension questions, you will enter two practice lines to make you familiar with the task. Neither can you earn payments per line with these practice lines, nor will these practice lines affect the Task Part in any way.

This is the end of the instructions.

I confirm that I have read the instructions carefully and I am ready to start the Practice Part. I will not be able to go back to the instructions once I go to the next page.