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# What makes a job better? Survey evidence from job changers

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#### Abstract

Changes in pay and benefits alone incorrectly predict self-assessed changes in overall job quality 30 percent of the time, according to survey evidence from job changers. Job changers also place more emphasis on their interest in their work than they do on pay and benefits in evaluating whether their new job is better. Parents particularly emphasize work-life balance, and we find some indications that mothers value it more than fathers. Improvements in pay are highly correlated with improvements in other amenities for workers with less education but not for workers with a bachelor's degree or more. The higher positive correlation implies that differences in pay and benefits understate differences in total job quality to a greater degree among workers with less education.

Keywords: Job quality, Amenities, Surveys, Employment JEL Numbers: J62, J32, J16, M12, L23

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People value characteristics of jobs beyond their paychecks, and differences in job characteristics can lead to compensating wage differentials that obscure differences in job quality.<sup>1</sup> But economists still know much more about empirical differences in how much workers are paid than about how much they gain in terms of other characteristics, partially because of severe limitations in available data.

In this paper, we use new survey questions asked of individuals who changed jobs to analyze how characteristics beyond pay relate to overall perceived job quality. Specifically, we use survey responses to whether the overall job was better, the same, or worse than the individual's previous job combined with changes in pay and benefits, opportunities for advancement, the individual's interest in the work, the physical demands of the job, the COVID-19 policies and exposure risk, and the work-life balance associated with the job.

We find strong evidence that workers value characteristics beyond pay and benefits in evaluating their new jobs, although pay and benefits remain important predictors of job quality. Predicting whether a job was better or not using only changes in pay and benefits gives an incorrect inference about whether a job was better 30 percent of the time. Interest in the work is particularly important, even after controlling for changes in pay and benefits. Holding other characteristics fixed, an improvement in a worker's interest in the work is associated with a 30 percent increase in the likelihood of the job being improved overall. For pay and benefits the increase is smaller, at 22 percent. Work-life balance is also highly valued, with improved work-life balance being associated with a 19 percent increase in the likelihood of the job being better.

Job changes among workers with a high school education or less show different correlations between characteristics. In particular, improvements in pay and benefits have a robust, positive correlation with improvements in other characteristics for workers with a high school education or less. There are smaller correlations, however, among workers with a bachelor's degree or more. So improvements in pay and benefits tend to accompany improvements in work-life balance, opportunities for advancement, and interest in the work to a much greater degree among workers with a high school education or less relative to workers with a bachelor's degree.<sup>2</sup> Our correlation results suggest that pay and benefits changes for job changes among less-educated workers understate the overall change in job quality compared to job changes for workers with a bachelor's degree.

There are several advantages to surveying job changers. The first is being able to ask simple and understandable questions. People who change jobs are able to easily say how the two jobs compare overall and how specific characteristics have changed. In a survey we can ask them about each characteristic directly, as opposed to trying to infer changes indirectly or asking them to assess their job quality relative to other jobs, the knowledge of which is likely to depend on their personal experiences. The second is that we are able to examine workers' preferences about jobs that they actually moved to, which allows us to go beyond hypothetical comparisons. The third is that job changers are a particularly relevant group, as they are the people actively comparing jobs. Hence, they are most likely to have their decisions affected by any job quality shifts. By focusing on job changers, we are also able to speak to actual changes – in particular, characteristics for the same worker. A caveat, however, is that by focusing on job changes, we identify differences in characteristics between jobs among job changers and not levels of satisfaction with characteristics across all workers.

We test the relative importance of job characteristics by assessing how well changes in single, self-reported

<sup>&</sup>lt;sup>1</sup>Lavetti (2023) provides a recent and readable surveys of the literature on compensating wage differentials.

 $<sup>^{2}</sup>$ Previous work on the distribution of job characteristics by income suggests that high-income workers have better job characteristics all around (Rothwell and Crabtree, 2019) so perhaps their job changes are less likely to result in improvements across all characteristics even if they have better job amenities. Note also that in referring to workers with a bachelor's degree, we include those who also have an advanced degree that has a bachelors' degree as a prerequisite, such as a masters' degree, a law degree, or a doctorate.

job characteristics, like pay and benefits, predict changes in overall self-reported job quality. First, we show how accurately changes in each characteristic summarize changes in overall job quality. Predicting overall job quality using only that characteristic gives an assessment of how accurate it would be to make assessments using only that characteristic, as is commonly done using measures of workers' pay.<sup>3</sup> Second, we estimate a linear probability model to show how much more likely someone is to say that their new job is better conditional on a change in a particular characteristic, holding the others fixed.

The survey questions we use were added to the Survey of Household Economics and Decisionmaking (SHED) in 2021, a period when labor markets were relatively tight and inflation was higher than in previous years. Analyzing responses since 2021 illustrates the importance of other job characteristics in determining changes in overall job quality when workers had more bargaining power to determine working conditions, pay, and benefits. Employers may also have been making tradeoffs between pay, benefits, and other job characteristics to attract workers while maintaining profitability while prices were increasing.

Our most direct antecedents in the literature are studies asking workers about job characteristics both actual and hypothetical. Maestas et al. (2023) use a survey of workers to collect information about job characteristics and pair it with valuations of workers' willingness to pay for job characteristics based on hypothetical job choices. Similarly, Rothwell and Crabtree (2019) estimate job quality based on workers' evaluations of job characteristics combined with a directly elicited rating of the importance of the characteristic to the worker. In contrast, our measures are asked of people who changed jobs, allowing us to draw conclusions about people who are on the margin between two different jobs since we observe them changing jobs. So the approach blends this literature with studies of job search behavior, including Hall and Mueller (2018).

Another contribution is to provide additional evidence for the broader literature about the importance of nonwage job amenities. One prominent example of this literature is Sorkin (2018), who finds that a substantial proportion of job quality is due to nonpay attributes. There also is substantial public policy interest in the concept of measuring workers' job quality (Katz et al., 2022) to promote policies that help to create "good jobs" (Congdon et al., 2020).

#### Question and overall results

Our data come from the 2021 and 2022 versions of the SHED, an annual survey of more than 11,000 adults conducted each fall since 2013 that focuses on people's financial lives (Board of Governors of the Federal Reserve System, 2022). The survey contains extensive information about people's financial well-being as well as their employment situations and sources of incomes. The survey is conducted online with respondents drawn from Ipsos' KnowledgePanel. The survey is nationally representative based on a probability sample where households that do not initially have internet access are provided with it. All analyses use weights designed to match the demographic characteristics of the national population according to the Current Population Survey.<sup>4</sup>

The specific questions that we focus on were new in 2021 and are asked of job changers – individuals who reported being employed at the time of the survey, reported starting a new job, and whose current main

<sup>&</sup>lt;sup>3</sup>The academic literature following Abowd et al. (1999) explicitly focuses on job changers' earnings differences between firms without considering differences in other characteristics, primarily due to data availability. Policy programs are also often focused on creating pathways from low- to high-paying jobs (including Holzer et al., 2011; Wardrip et al., 2015).

 $<sup>^{4}</sup>$ Larrimore et al. (2015) show that weighted results from a previous vintage of the survey based on the same online panel are comparable to several other commonly used surveys produced by the U.S. Census Bureau.

job is different from their main job a year before. Job changers are presented with a series of characteristics alongside the question, "Are each of the following better, the same, or worse at the main job you have now than the one you had a year ago?" The characteristics are the following: pay or benefits, opportunities for advancement, your interest in the work, physical demands of the job, COVID-19 policies and exposure, and work-life balance. People are then asked, "Overall, is the main job you have now better, the same, or worse than the one you had a year ago?"

	Workers	Job changers	Job changers	Job changers
		(all years)	(2021)	(2022)
Laid off last year	0.07	0.20	0.23	0.17
High school or less	0.24	0.18	0.18	0.19
Some college, no BA	0.32	0.32	0.31	0.33
BA or more	0.44	0.49	0.51	0.48
Age 30 or younger	0.23	0.42	0.44	0.41
Age 30 to 44	0.32	0.36	0.33	0.38
Age 45 or greater	0.44	0.22	0.23	0.21
Child under 6	0.13	0.15	0.15	0.15
Child under 13	0.23	0.25	0.26	0.24
Child under 18	0.31	0.31	0.32	0.30
Woman	0.48	0.52	0.53	0.51
Family income less than \$25,000	0.21	0.29	0.28	0.30
Family income \$25,000 to \$49,999	0.14	0.16	0.18	0.14
Family income \$50,000 to \$99,999	0.25	0.25	0.24	0.26
Family income more than \$100,000	0.39	0.30	0.30	0.30
White	0.63	0.60	0.62	0.59
Black	0.12	0.13	0.12	0.14
Hispanic	0.17	0.17	0.16	0.18
Asian	0.06	0.06	0.06	0.06
Outside an MSA	0.12	0.11	0.12	0.11

#### Table 1: Demographics of job changes

Note: A relatively small share of people change jobs each year. Job changers are younger, better educated, and come from households with lower earnings than the general population. They also are more likely to have been laid off. The top row of this table shows the share of people who changed jobs in both 2021 or 2022 as well as the separate proportions in 2021 and 2022. The following rows give the share of people in the specified category as a share of all workers, people who changed jobs in either year, and people who changed jobs in the specified year. Statistics are weighted using cross-sectional weights in each year.

We analyze responses among the 13 percent of workers who changed jobs in the past year. Job changes were more common in 2022, with 15 percent of all workers changing jobs in 2022 compared to 11 percent in 2021. We show summary statistics for all workers in our sample, those with job changes in either year, and those with job changes in either 2021 or 2022 separately. The biggest differences between employed individuals in general and those who change jobs are that job changers are more likely to be young. We also see small differences by education and income, which interestingly show opposite effects: Higher-educated

individuals are more likely to change jobs while individuals with lower family income are also more likely to change jobs. The final column shows that, in keeping with the higher share of job changes and the strong job market in 2022, a smaller share of job changers were laid off in 2022 than in 2021.

Figure 1 shows that 70 percent of job changes resulted in a job that the respondent felt was better overall than their previous position, while 23 percent were the same overall and 8 were worse. Improvements in pay or benefits accompanied 60 percent of job changes, and a greater interest in the work accompanied 54 percent. Somewhat fewer, though still substantial, shares of job changers saw improvements in opportunities for advancement and work-life balance. Work-life balance and pay and benefits were tied as the most likely attributes to be worse at 15 percent.



Figure 1: Change in overall job quality and individual job characteristics

Note: Shown are people's answers about particular job characteristics and the overall quality of their new job compared to their old job among people who changed jobs over the prior year. Percentages may not sum to 100 due to rounding.

Table 2 breaks out job changes overall and by year, showing that people tended to make more positive job changes in 2022 than they did in 2021. The biggest difference between 2021 and 2022 was in terms of the share of people saying that pay and benefits were better at their new job relative to other categories. The increases in pay and benefits are consistent with strong wage and benefits increases over the period (U.S. Bureau of Labor Statistics, 2023).

	Jo	b change	ſS
	All years	2021	2022
Improved job overall	0.70	0.66	0.72
Improved pay and benefits	0.60	0.56	0.63
Improved opportunities	0.50	0.48	0.51
Improved interest in work	0.54	0.53	0.55
Improved physical demands	0.33	0.32	0.34
Improved work-life balance	0.43	0.43	0.43
Improved COVID-19 exposure	0.26	0.25	0.26

Table 2: Changes in job characteristics by year

Note: People tended to make more positive job changes in 2022 than they did in 2021. The top row of this table shows the share of people who changed jobs in either 2021 or 2022 as well as the separate proportions job changes in 2021 only and 2022 only. The following rows give the share of job changes where there was an improvement in the specified category in both years and separately in 2021 and 2022.

### How well do characteristics predict overall job quality?

To understand which characteristics are most predictive of a job being better overall, we compute an error rate, which is the fraction of observations where the characteristic is better but the job is the same or worse OR the characteristic is the same or worse and the job is better overall. The error rate is the smallest for interest in the work, followed by pay, advancement opportunities, and work-life balance. Changes in physical demands and COVID policies appear less predictive of whether a job is better.<sup>5</sup>

In columns two through four we calculate the share of jobs that are better overall conditional on the specific characteristic being better, the same, or worse, respectively. It is clear that the measured job characteristics are associated with overall job quality; job changes where characteristics improved are the most likely to be better overall, and those where the characteristic was worse have the lowest shares of overall job improvements.

Interest in the work stands out as a very important job characteristic, with 90 percent of job changes where the individual was more interested in the work being associated with a job improvement overall and only 20 percent of job changes where the individual was less interested in the work being associated with the job being better overall. COVID policies stand out as the least predictive of job quality.

 $<sup>^{5}</sup>$ Differences between the error rates are generally statistically significant. One exception is that the difference between interest in the work and pay is insignificant at the 10 percent level. The difference between opportunities for advancement and work-life balance is significant at the five percent level but not the one percent level.

	Error rate	Share with bet	ter job given ch	aracteristic is:
		better	same	worse
Pay	29%	84%	54%	40%
Opportunities for advancement	34%	86%	58%	37%
Interest in the work	27%	90%	53%	20%
Physical demands	49%	82%	67%	48%
COVID policies	55%	79%	69%	49%
Work-life balance	37%	88%	60%	47%

Table 3: Errors and probabilities of better overall jobs conditional on specific characteristics

Note: Interest in the work is the characteristic most likely to predict whether a job is better or worse, in the sense of having the lowest error rate in the first column, with pay following shortly after. Opportunities for advancement and then work-life balance come after. The probability of a job being better is highest conditional on the work being more interesting and lowest based on it not being more interesting.

#### Which characteristics do workers value when changing jobs?

In this section, we use a linear probability model to assess the importance of changes in each characteristic in terms of changes in overall job quality. The linear probability model is a regression of an indicator for whether the new job is better than the old job  $(\mathbf{1}(q_j > q_{j'}))$  on indicators for whether each characteristic is better or worse (with the characteristic being the same as the omitted category). The result is a series of coefficients, whose interpretation is the average increase in the probability that the job is better if the given characteristic k is better  $(\beta_k^B)$  or worse  $(\beta_k^W)$ , relative to the characteristics being the same, conditional on all of the others:

$$\mathbf{1}(q_j > q_{j'}) = \sum_k \left[ \beta_k^B \mathbf{1}(a_k > a_{k'}) + \beta_k^W \mathbf{1}(a_k < a_{k'}) \right] + (\epsilon_j - \epsilon_{j'}) \tag{1}$$

Consistent with our error rate analysis, the most meaningful characteristic is interest in the work. The first column, labeled "All", of Table 4 gives results for the entire sample of 1,692 job changers. In terms of statistical and economic significance, the most important characteristic is interest in the work. Being more interested in the work makes a job changer 25 percent more likely to say the job is better, the highest increment for any characteristic. Additionally, being less interested in the work makes someone 25 percent less likely to say the job is better.

Improvements in pay and benefits as well as work-life balance are also very predictive of a job being better quality, holding other characteristics constant. Better pay and benefits makes someone 19 percentage points more likely to say the job is better and better work-life balance makes them 20 percent more likely to say the job is better according to our baseline specification in column 1 of Table 4. Better work opportunities are associated with a 9 percent higher likelihood of the job being better, but other characteristics – physical demands, and COVID policies and exposure – have small and statistically undetectable effects.

Next, we show some evidence in Table 4 that parents particularly value changes in work-life balance by breaking out estimates by the presence of children. Moving across the columns of Table 4 shows that parents of a child under 13 have a 26 percent greater probability of saying a job is better conditional on work life balance being better. The relationship is smaller for non-parents, with only a 19 percentage point increase in the likelihood of saying the job is better based on work-life balance being better.

The point estimates also suggest that mothers value changes in work-life balance more than fathers. In terms of the coefficients in Table 4, mothers of children under 13 have a higher coefficient of 0.30 compared with 0.22 for fathers. Overall, women also have a larger estimated coefficient on work-life balance than men. But the modest sample sizes make the estimates imprecise and they are not statistically different. Previous research has documented some gender differences in willingness to pay for job attributes with Mas and Pallais (2017) finding that women with young children were more willing to give up more in salary to avoid irregular schedules and to work from home than women generally or men with children, and Maestas et al. (2023) find that women have a higher willingness to pay for paid time off and lower physical demands of work.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	All	Child under	No child	Woman	Woman with	Man	Man with
Variables		age 13			child		child
Devendhensfitz Detter	0.10	0.15	0.21	0.16	0.00	0.22	0.20
Pay and benefits - Better	0.19	0.15	0.21	0.10	0.09	0.23	0.20
David have fits Warra	(0.02)	(0.03)	(0.02)	(0.04)	(0.07)	(0.03)	(0.06)
Pay and benefits - worse	-0.09	-0.17	-0.07	-0.11	-0.17	-0.00	-0.17
	(0.04)	(0.08)	(0.04)	(0.05)	(0.10)	(0.05)	(0.10)
Opportunities - Better	0.09	0.04	0.11	0.09	0.09	0.09	-0.00
	(0.03)	(0.05)	(0.03)	(0.04)	(0.08)	(0.03)	(0.05)
Opportunities - Worse	-0.04	-0.07	-0.06	-0.04	-0.03	-0.05	-0.16
	(0.04)	(0.07)	(0.04)	(0.06)	(0.09)	(0.06)	(0.10)
Interest in the work - Better	0.25	0.22	0.25	0.22	0.21	0.29	0.22
	(0.02)	(0.04)	(0.02)	(0.03)	(0.06)	(0.03)	(0.06)
Interest in the work - Worse	-0.25	-0.12	-0.28	-0.28	-0.11	-0.22	-0.17
	(0.04)	(0.08)	(0.05)	(0.06)	(0.13)	(0.06)	(0.09)
Physical demands - Better	0.01	-0.04	0.03	0.02	0.01	-0.00	-0.08
	(0.02)	(0.03)	(0.02)	(0.03)	(0.06)	(0.02)	(0.04)
Physical demands - Worse	-0.01	-0.03	0.02	-0.04	0.04	0.02	-0.08
	(0.04)	(0.08)	(0.04)	(0.05)	(0.10)	(0.05)	(0.15)
COVID policies - Better	-0.05	-0.08	-0.06	-0.01	-0.09	-0.10	-0.08
COVID policies Detter	(0.03)	(0.04)	(0.03)	(0.01)	(0.07)	(0.04)	(0.06)
COVID policies - Worse	-0.04	-0.13	-0.02	-0.03	-0.18	-0.03	-0.10
	(0.03)	(0.08)	(0.03)	(0.06)	(0.13)	(0.04)	(0.09)
Work-life balance - Better	0.20	0.26	0.19	0.23	0.30	0.17	0.22
	(0.02)	(0.04)	(0.03)	(0.03)	(0.06)	(0.03)	(0.07)
Work-life balance - Worse	-0.04	-0.03	-0.05	-0.01	0.04	-0.06	-0.09
	(0.03)	(0.08)	(0.03)	(0.04)	(0.10)	(0.04)	(0.11)
Observations	1,692	416	1,183	847	192	845	224

#### Table 4: Effects of job characteristics on job quality by parenthood status

Note: Interest in the work is the most predictive of a job being better, both positively and negatively. Work-life balance is more predictive of improvements in job quality for parents of both genders relative to nonparents. Shown are coefficients from a linear probability model of indicators for changes in each characteristic on whether a new job is better than the old one overall. The column labeled "All" gives the results for all people who changed jobs, 'Child under age 13" gives results for parents of children under 13, "No child" gives results for people without a child under the age of 18, "Woman" gives results for all women, "Woman with child" gives results for women with children under 13, "Man" gives results for all men, and "Man with child" gives results for men with children under 13. Standard errors are in parentheses and are clustered at the state level.

Table 5 shows the same specification broken out by age and education. Notably, pay and benefits have larger coefficients for younger workers compared to older workers, consistent with results from the RAND Working Conditions Survey (Maestas et al., 2017). Workers over 45 are only 14 percentage points more likely to say a job is better if pay and benefits are better compared to 24 percentage points among workers under 30. Having greater interest in the work is also more predictive of changes in overall job quality for older workers, though the magnitude of the coefficient on having a less interesting job is also lower. We also find that changes in work-life balance are more predictive of overall job quality for job-changers under 45, which could reflect their higher likelihood of having young children at home (table 4).<sup>6</sup> Surprisingly, we find no evidence that opportunities for advancement are more important for younger workers after controlling for other characteristics, though the estimates are noisy. Also, unlike Maestas et al. (2017), we do not see detectable differences in the role of physical demands of the job by age.

We find evidence that improvements in work-life balance are more predictive of overall job quality improvements for workers with a high school education or less compared to workers with a BA or more. Column 5 shows that an improvement in work-life balance leads to a 26 percentage point increase in the likelihood that a worker with a high school degree or less says that their new job is better. Among workers with a BA or more in column 6, an improvement in work-life balance has a smaller coefficient of 17 percentage points. There also is some evidence that opportunities for advancement are more predictive of job quality and that interest in the work is less predictive for workers with a BA or more. However, imprecision in coefficients for workers with a high school degree or less makes it hard to draw a definitive conclusion.

 $<sup>^{6}</sup>$ The coefficient is also consistent with perceptions that Millennial and Generation Z workers prioritize work-life balance more than older generations.

	(1)	(2)	(3)	(4)	(5)	(6)
	All	Under 30	30 to 45	Over 45	High school	BA or more
Variables					or less	
Pay and benefits - Better	0.19	0.24	0.16	0.14	0.26	0.14
	(0.02)	(0.05)	(0.04)	(0.06)	(0.06)	(0.04)
Pay and benefits - Worse	-0.09	-0.12	-0.09	-0.07	0.04	-0.16
	(0.04)	(0.06)	(0.07)	(0.07)	(0.09)	(0.05)
Opportunities - Better	0.09	0.09	0.08	0.11	0.04	0.11
	(0.03)	(0.04)	(0.04)	(0.04)	(0.07)	(0.04)
Opportunities - Worse	-0.04	-0.03	-0.03	-0.07	0.02	-0.04
	(0.04)	(0.07)	(0.06)	(0.07)	(0.09)	(0.07)
Interest in the work - Better	0.25	0.22	0.23	0.35	0.29	0.22
	(0.02)	(0.04)	(0.04)	(0.06)	(0.09)	(0.03)
Interest in the work - Worse	-0.25	-0.27	-0.29	-0.16	-0.22	-0.26
	(0.04)	(0.05)	(0.06)	(0.07)	(0.11)	(0.06)
Physical demands - Better	0.01	0.07	-0.07	0.06	0.02	0.00
	(0.02)	(0.03)	(0.03)	(0.05)	(0.05)	(0.02)
Physical demands - Worse	-0.01	0.06	-0.08	-0.07	0.06	-0.08
	(0.04)	(0.05)	(0.07)	(0.06)	(0.08)	(0.06)
COVID policies - Better	-0.05	-0.12	-0.02	0.02	-0.09	-0.03
	(0.03)	(0.03)	(0.04)	(0.04)	(0.09)	(0.03)
COVID policies - Worse	-0.04	-0.07	0.02	-0.07	0.00	-0.05
	(0.03)	(0.04)	(0.06)	(0.08)	(0.11)	(0.04)
Work-life balance - Better	0.20	0.22	0.22	0.13	0.26	0.17
	(0.02)	(0.04)	(0.03)	(0.04)	(0.07)	(0.02)
Work-life balance - Worse	-0.04	-0.05	-0.03	-0.01	-0.07	-0.05
	(0.03)	(0.05)	(0.05)	(0.06)	(0.10)	(0.04)
Observations	1,692	622	637	433	219	954

Table 5: Effects of job characteristics on job quality by age and education

Note: Interest in the work is the characteristic most predictive of a job being better, both positively and negatively. Older workers put less emphasis on pay and possibly more on interest in their work. Workers under age 45 place more emphasis on work-life balance. Workers with a high school education or less have similar views of characteristics as do those with BAs, though they place more emphasis on work-life balance. Shown are coefficients from a linear probability model of indicators for changes in each characteristic on whether a new job is better than the old one overall and for the specified subgroups. Standard errors are in parentheses and are clustered at the state level.

## Correlations between characteristics

Overall, changes in job amenities are positively correlated. Table 6 gives a correlation matrix of improvements in each of the characteristics among job changers. The first column gives similar results as our other analyses.

Again we see that a greater interest in the work is most correlated with the job being overall better, followed by pay and benefits, advancement opportunities, and work-life balance. The second column of statistics shows that improvements in pay and benefits are positively correlated with improvements in all of the other characteristics. The pay and benefit changes associated with a job change are most correlated with opportunities for advancement and are positively but more weakly correlated with interest in the work, physical demands, COVID policies, and work-life balance. Put together, the positive correlations imply that much of the variation is due to differences in jobs' overall quality as opposed to an equilibrium with compensating differentials for lower–quality amenities (Lavetti, 2023).

When we examine the correlations more broadly to see which characteristics tend to change together, we find that interest in the work is correlated with most other characteristics. Interest has a correlation of 0.36 with opportunities for advancement, 0.25 with work-life balance, 0.30 with physical demands, and 0.18 with pay and benefits. This suggests that being more interested in a job is associated with a work environment that provides other amenities, like opportunities for advancement and an ability to fulfill obligations outside of work.

There are big differences between job changers with and without a bachelor's degree. Most notably, the second column of statistics in Panel A of Table 7 shows smaller correlations. For workers with a bachelor's degree, unlike workers overall, work-life balance has a smaller correlation with pay and benefits. Physical demands and COVID policies and exposure also have a small correlation with pay and benefits.

In contrast, correlation levels between job characteristic changes are larger for those with lower levels of education, although the general patterns are similar. Panel B of Table 7 shows that overall job quality increases are most correlated with interest in the job, followed by pay, work-life balance, and opportunities for advancement. Changes in pay and benefits are still most correlated with opportunities for advancement but also highly correlated with interest in the work and work-life balance. One particular difference is that changes in work-life balance are much more correlated with changes in pay, interest in the work, opportunities for advancement, and overall job quality for those with a high school degree or less relative to those with a bachelor's degree or more.

Looking at the correlations suggests that variation in amenities mostly reflects overall job quality for workers without a BA, unlike workers with a BA. If one characteristic like pay and benefits improves, then it is likely that the other ones do as well. So different levels of pay and benefits understate differences in overall job quality, taking into account all possible amenities for less-educated workers. It also could be that there is less of a tradeoff between amenities if it is less costly to improve work-life balance for workers without a BA relative to those with a BA. Finally, it is also important to note that previous work suggests that workers without a bachelor's degree generally have lower levels of pay, less workplace flexibility, and higher physical demands in their jobs (Maestas et al., 2017).

### Conclusion

We use questions in a large, nationally representative survey to show that job changes lead to improvements in a number of job characteristics beyond pay and benefits. Focusing on pay and benefits leads to incorrect predictions about job changes 30 percent of the time, and the most predictive characteristic is interest in the work. Parents, regardless of their gender, weigh work-life balance more heavily in assessing whether their new job is better than do nonparents.

We also show large differences in terms of the correlations between different amenities between workers

	Overall	Pay	Opportunities	Interest	Physical	COVID	Work-life
Overall	1.00						
Pay	0.38	1.00					
Opportunities	0.36	0.32	1.00				
Interest	0.47	0.18	0.36	1.00			
Physical	0.18	0.03	0.18	0.30	1.00		
COVID	0.11	0.06	0.10	0.14	0.33	1.00	
Work-life	0.34	0.10	0.18	0.25	0.31	0.35	1.00
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Note: Pay is highly correlated with opportunities for advancement and overall job quality. Interest in the work is highly correlated with overall quality, opportunities for advancement, physical demands, and work-life balance. Work-life balance is weakly correlated with pay and similarly correlated with overall job quality, interest in the work, physical demands, and COVID policies and practices. Shown is a correlation matrix of indicators for improvements in the specified job characteristics.

			(a) Bachelor's	or more			
	Overall	Pay	Opportunities	Interest	Physical	COVID	Work-life
Overall	1.00						
Pay	0.30	1.00					
Opportunities	0.31	0.24	1.00				
Interest	0.41	0.10	0.33	1.00			
Physical	0.15	0.03	0.16	0.23	1.00		
COVID	0.11	0.04	0.07	0.10	0.35	1.00	
Work-life	0.26	0.04	0.07	0.15	0.31	0.35	1.00
			(b) High schoo	ol or less			
	Overall	Pay	Opportunities	Interest	Physical	COVID	Work-life
Overall	1.00						
Pay	0.46	1.00					
Opportunities	0.41	0.44	1.00				
Interest	0.58	0.38	0.48	1.00			
Physical	0.24	0.06	0.19	0.40	1.00		
COVID	0.08	-0.04	0.07	0.18	0.38	1.00	
Work-life	0.49	0.20	0.31	0.44	0.31	0.32	1.00
	Tal	ole 7: Con	elations between	n specific cl	naracteristics		

Note: Characteristics are much more correlated for people with a high school degree or less than they are for people with a BA or more.

with and without a bachelor's degree. Amenities are more positively correlated for workers without a bachelor's degree than those with a bachelor's degree, with a small positive correlation between pay and work-life balance for workers with a bachelor's degree. The differences in correlations suggest that using only one characteristic, like pay and benefits, understates differences in overall job quality by more for workers without a bachelor's degree relative to more-educated workers.

The results improve and generalize our understanding of the large and growing number of findings about differences in workers' pay, which is an imperfect proxy for job quality. Workers' emphasis on factors like their interest in the work, holding pay fixed, helps to explain the large amount of effort that businesses devote to their "cultures" beyond strict productivity enhancements. They also validate previous work focusing on moving workers without bachelor's degrees into higher-paying jobs, since those jobs tend to also be better in terms of other characteristics.

#### References

- Abowd, J., F. Kramarz, and D. Margolis (1999). High wage workers and high wage firms. *Economet*rica 67(2), 251–333.
- Board of Governors of the Federal Reserve System (2022). Report on the economic well-being of U.S. households in 2021. Technical report, Board of Governors of the Federal Reserve System.
- Congdon, W., M. Scott, B. Katz, P. Loprest, D. Nightengale, and J. Shakesprere (2020). Understanding good jobs: A review of definitions and evidence. Technical report, The Urban Institute.
- Hall, R. E. and A. I. Mueller (2018). Wage dispersion and search behavior: The importance of nonwage job values. *Journal of Political Economy* 126(4), 1594–1637.
- Holzer, H., J. Lane, D. Rosenblum, and F. Andersson (2011). Where Are All the Good Jobs Going? What National and Local Job Quality and Dynamics Mean for U.S. Workers. Russell Sage Foundation.
- Katz, B., W. Congdon, and J. Shakesprere (2022). Measuring job quality current measures, gaps, and new approaches. Technical report, The Urban Institute.
- Larrimore, J., M. Schmeiser, and S. Devlin-Foltz (2015). Should you trust things you hear online? Comparing SHED and Census Bureau survey results. Technical report, Board of Governors of the Federal Reserve System.
- Lavetti, K. (2023). Compensating wage differentials in labor markets: Empirical challenges and applications. Journal of Economic Perspectives 37(3), 189–212.
- Maestas, N., K. Mullen, D. Powell, T. von Wachter, and J. Wenger (2017). Working conditions in the United States: Results of the 2015 American Working Conditions Survey. Technical report, RAND.
- Maestas, N., K. J. Mullen, D. Powell, T. von Wachter, and J. B. Wenger (2023, July). The value of working conditions in the United States and the implications for the structure of wages. *American Economic Review* 113(7), 2007–47.
- Mas, A. and A. Pallais (2017). Valuing alternative work arrangements. American Economic Review 107(12), 3722–59.
- Rothwell, J. and S. Crabtree (2019). Not just a job: New evidence on the quality of work in the United States. Technical report, Gallup.
- Sorkin, I. (2018). Ranking firms using revealed preference. The Quarterly Journal of Economics 133(3), 1331–1393.

- U.S. Bureau of Labor Statistics (2023). Nonfarm business sector: Unit labor costs for all workers [prs85006112]. retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PRS85006112, December 4, 2023.
- Wardrip, K., K. Fee, L. Nelson, and S. Andreason (2015). Identifying opportunity occupations in the nation's largest metropolitan economies. Technical report, Federal Reserve System.