The Pay and Requirements of Part-time Work: What can we learn from establishment surveys?

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Abstract

There is a great deal of literature surrounding the wage gap between full-time and part-time jobs. Generally, studies control for potential differences in the type of work performed either by using occupational controls (typically dummy variables), controls for individual attributes (education, experience, etc.), or both. None of these appropriately control for the actual job tasks and working conditions, mainly due to lack of data availability.

The Bureau of Labor Statistics has two surveys of businesses that obtain information on the type of work being done on the job – the National Compensation Survey and the Occupational Requirements Survey. We use these two surveys to examine the types of work performed part-time, the changing nature of part-time work, and how work requirements differ between part-time and fill-time jobs.

1. **Introduction and Literature Review**

Wage gaps between full-time and part-time workers are well-documented in economics literature. As noted by Hirsch (2005), however, the literature on part-time work is actually rather limited. Many models of compensation rely on an augmented Mincerian wage specification with standard controls beyond experience and education that include race, gender, part-time status, and other factors. There is a general expectation that the coefficient on a part-time dummy variable in such models will have a negative coefficient, but very few studies actually focus on the appropriate specification approach one should take if the key variable of interest is, in fact, part-time work status.

The expectation of wage disadvantages for part-time work, especially among U.S. workers, is rooted in productivity and cost theory. A traditional Becker model of wages based on marginal revenue product suggests that it is rational for firms to invest in less training for part-time workers since the returns on these costs are generally lower for those working fewer hours. This renders these workers less productive which should translate into lower wages.

This logic extends to the worker's decision of whether to incur costs in education and training – if they expect to work part-time and receive lower wages from firms then there is an incentive to underinvest in human capital, making themselves less productive. Regardless of the source, then, the negative return to productivity of workers results from lower labor productivity assumed by these models. Empirical tests of this require careful controls of individual human capital, including both observed and unobserved worker characteristics.

Even if this approach to estimation is followed, there still may be a negative return to part-time work that results from cost. Many costs of hiring and retaining employees are fixed

and since they are amortized over fewer hours for part-time workers, firms may compensate them less to offset some of these costs. There are also arguments that productivity varies naturally over the work day or work week in such a way that part-time workers never achieve the average productivity per hour or day of a full-time worker. Evidence for this is mixed, with multiple studies suggesting that there are diminishing returns to productivity over the workday or workweek that actually result in higher average productivity for part-time workers.

A cost advantage to part-time work may exist in certain groups of industries or occupations with seasonal or other temporal fluctuations that result in cost savings from using a flexible pool of part-time labor.[1] This, however, would be the exception rather than the rule, and the most often cited studies of part-time labor, particularly those of Blank (1990 and 1998), suggest that the majority of part-time jobs are "bad jobs.

As mentioned earlier, it is empirically incorrect to simply use a part-time dummy variable in a wage equation to assess whether part-time jobs are "bad" as workers with lower productivity self-selecting into these jobs. Thus, some of the differential is due to different compositions of workers in full-time and part-time jobs. A few studies have used unique approaches to dealing with this by controlling for the type of work being performed.

Lettau (1997) uses data from the Bureau of Labor Statistics Employer Cost of Employee Compensation establishment data to determine whether part-time and full-time jobs in the same "job" at the same establishment exhibit pay gaps and, with some exceptions, finds a pay disadvantage for part-time workers in the same job (where job is defined by 3-digit Census

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[1] There is also literature that centers on institutional factors that contribute to part-time wage differentials, though these generally focus on non-U.S. countries that have explicit government policies intended to encourage or discourage part-time work.

occupation code). He concludes that this provides evidence that part-time jobs can be considered a "secondary" labor market. However, his models includes limited controls. In addition to a part-time dummy variable, Lettau includes controls for union coverage and government sector (and interactions between the terms), but no other characteristics of the job. As this is an establishment survey, there is no way to control for worker characteristics, and it is also impossible to assess whether the "jobs" he identifies within one establishment are, in fact, the same since the only indicator is whether they possess the same 3 digit Census occupation code, which is not equivalent to being the same job.

Hirsch (2005) uses the Current Population Survey (CPS) augmented with O*NET data on the characteristics of jobs to examine the part-time wage gap. While this approach allows him to control for both characteristics of the individual and characteristics of occupations, there are two limitations of matching O*NET data to the occupation reported in the CPS. First, the O*NET data are summary statistics, so there will be no variation of the O*NET components for individuals within a job. Second, O*NET does not contain any breakouts by covariates, such as whether the data is for a full-time or part-time job.

Thus, a gap in both Lettau (1997) and Hirsch (2005) is that though they attempt to control for the type of work done by part-time versus full-time workers, data limitations prevented them from fully controlling for this. Our approach is to use two data sets that contain information on the nature of work performed in jobs – the National Compensation Survey (NCS) and Occupational Requirements Survey (ORS).

This paper is structured as follows: section 2 describes the NCS, highlights the changes in part-time work from 2005-2015, and examines the role of work level in explaining differences in

pay between full- and part-time jobs. Section 3 describes the ORS and provides descriptive

statistics on the differences in job requirements between full-time and part-time jobs. Section

4 concludes and presents some suggestions for future research using ORS data.

2. The National Compensation Survey

Background

The National Compensation Survey (NCS) is an establishment survey used as the basis

for the Employment Cost Index (ECI) and the Employer Costs for Employee Compensation

(ECEC) estimates produced quarterly by the Bureau of Labor Statistics. Data are collected on

wages, salaries, and a series of employer-provided benefits.

The NCS samples private sector and state and local government establishments with

one or more workers, and excludes the federal government, military, agriculture and private

household workers. Jobs within an establishment are sampled through probability selection –

for private industry establishments between 4 and 8 jobs are typically sampled. The probability

of a job being selected is proportional to the employment in the job within the establishment.[2]

Jobs are coded into occupations (6 digit codes based on the Standard Occupational

Classification) and for each job, data is collected on the components of compensation.

The characteristics of the job include whether it is part-time or full-time, covered by a

collective bargaining agreement, paid based on time or incentive, and supervisory or not.

Unlike household surveys, the NCS does not collect information on the characteristics of the

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[2] The National Compensation Survey sample design is described in the BLS Handbook of Methods, Chapter 8, available at: http://www.bls.gov/opub/hom/.

workers in a particular job, such as age, gender, or race/ethnicity. The microdata are at the job-level, not person-level. Additionally, for each establishment there is information on total employment and industry (using the North American Industry Classification System).

A unique element of the National Compensation Survey is a series of elements that determine "job level." Field economists assess the duties and responsibilities, skills, education, training, and physical requirements of the job and assign points to the job. These points are aggregated to obtain the job level and then jobs are assigned grades akin to those used in federal pay setting.[3]

Part-time work from 2005 to 2015

We first examine the prevalence of part-time jobs by 2 digit SOC for 2015. Data used are from the September quarter of the NCS and include only private sector jobs. Figure 1 shows the share of part-time jobs within 2-digit SOC categories. The occupational groupings that rely heavily on part-time work are food preparation and serving, personal care and service, sales and related, and health care support. These are also jobs that are considered relatively low skill. High skill occupational groups, including management, business and financial operations, architecture and engineering, and the sciences have very low prevalence of part-time work.

Figure 1: Share of Part-time jobs by 2-digit SOC, September 2015

[3] For additional information on job leveling, see, "National Compensation Survey: Guide for Evaluating Your Firm's Jobs and Pay," at http://www.bls.gov/ncs/ocs/sp/ncbr0004.pdf.
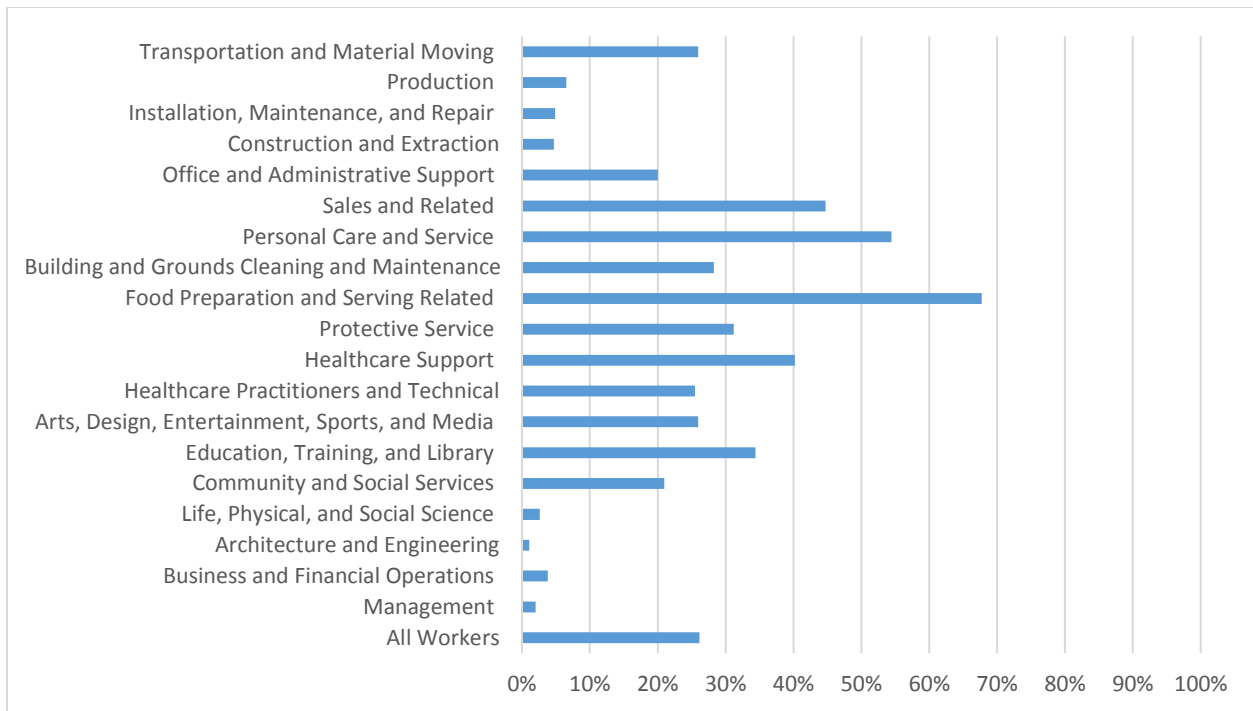
The share of part-time work changed roughly three percentage points between 2005 and 2015, from 23% to 26% of all jobs. In most 2 digit SOC groupings, the share of part-time jobs did not change significantly over this period; the increase in the overall share of part-time work was driven by two groups. Among healthcare support occupations, the share of part-time work increased from 29% to 40% and among food preparation and serving occupations, the percent part-time increased from 58% to 68%.

We next examine the trends in part-time share by work level in the NCS from 2005 to 2015. In the mid- to late 2000s, the approach to measuring work level in the NCS changed from nine factors to four factors (Carney, 2004). Because the original nine factors do not directly map into the revised four factors, our cross-period comparisons rely on aggregate work levels, which are available for both 2005 and 2015. Figure 2 shows the share of part-time jobs in each work level between 2005 and 2015 for levels 1-11.

Figure 2: Share of Part-Time Workers by Work Level, 2005-2015
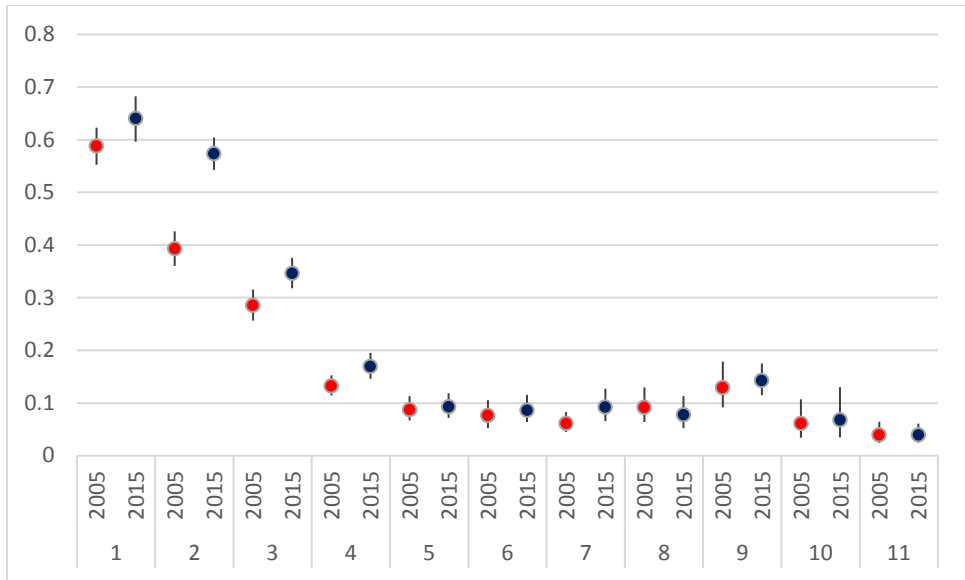
Source: Authors' calculations from NCS microdata, September 2005 and September 2015

Consistent with the share of part-time workers by occupational groups, the share by level shows a density of part-time work in relatively low-skill jobs – those in levels 1 and 2. Jobs in level 1 for example, would typically be characterized with no education required beyond a high-school diploma, fairly simple tasks with easy to follow directions, and little interaction with the public, for example, janitors and cleaners. Incrementally increasing either the task complexity or requiring interaction with the public would move the job to level 2. An example of this is nursing assistant.

While the share of part-time jobs in level 1 did not increase significantly between 2005 and 2015, it is notable that the share of part-time jobs in levels 2 through 4 did increase significantly, with the largest increase in level 2. Viewed a different way, as seen in Figure 3,

the bulk of part-time work moved from level 1 to level 2, signaling an increase in the skill level

of part-time work between 2005 and 2015.[4]

Figure 3: Job Level Share for Part-time Jobs, 2005 and 2015
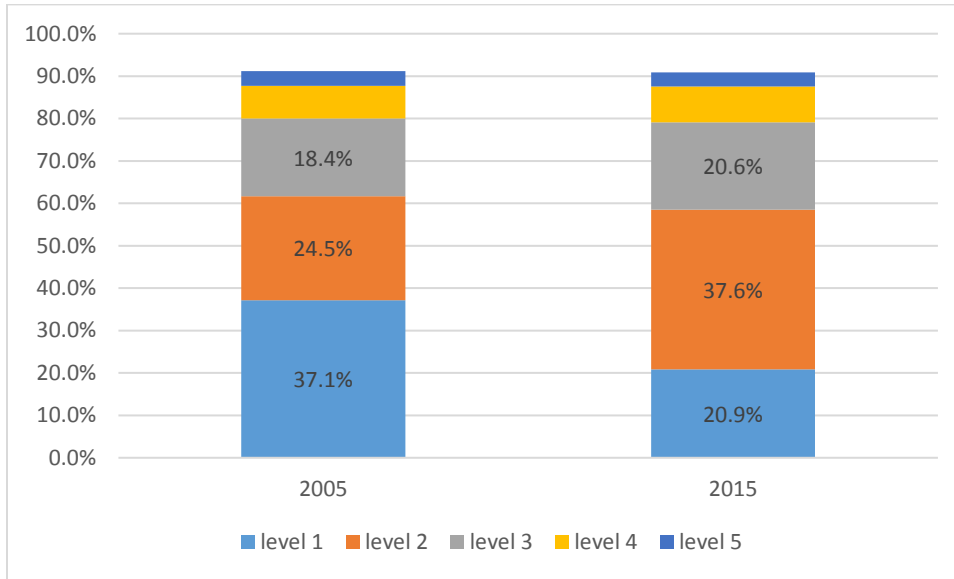
Source: authors' calculations from National Compensation Survey, September 2005 and 2015

Returns to part-time jobs

In order to examine the pay gaps between full- and part-time jobs, we use an Oaxaca

decomposition. The dependent variable is the log of hourly pay and the explanatory variables

include broad controls for industry and occupation (nine occupation and eight industry dummy

variables), whether the job is covered by a collective bargaining agreement, and establishment

size controls (1-49, 50-99, 100-499, and 500+). In the first specification (seen in Table 1), we

control for work level in the form of the aggregate work level categories (levels 1-15) to allow

comparison between 2015 and 2005 results. In the second specification (see in Table 2), using

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[4] The distribution of full-time jobs is more disperse, with the highest density in levels 3-7 (roughly 50%) and this distribution did not change significantly over the 2005-2015 period.

2015 data only we include the points for each of the four factors – knowledge, job controls and

complexity, contacts, and physical environment.

Table 1: Oaxaca Decomposition of Wages by Part-time Work, 2005 and 2015

	2015			2005		
	Coefficient	Standard Error	P>|t|	Coef.	Std. Err.	P>|t|
Overall						
Full-time	2.972	0.009	0.00	2.750	0.009	0.00
Part-time	2.356	0.015	0.00	2.169	0.015	0.00
Difference	0.617	0.017	0.00	0.581	0.017	0.00
endowments	0.509	0.019	0.00	0.466	0.020	0.00
Coefficients	0.113	0.013	0.00	0.128	0.011	0.00
Interaction	-0.005	0.017	0.77	-0.012	0.015	0.42
Endowments						
Union	0.007	0.001	0.00	0.013	0.002	0.00
Occ	0.016	0.015	0.28	0.068	0.013	0.00
Ind	0.062	0.010	0.00	0.046	0.011	0.00
Estab. size	0.012	0.004	0.00	0.009	0.004	0.02
Work level	0.411	0.021	0.00	0.330	0.018	0.00
Coefficients						
Union	0.006	0.002	0.00	0.002	0.002	0.27
Occ	-0.115	0.114	0.31	0.121	0.077	0.12
Ind	0.016	0.034	0.63	-0.044	0.040	0.27
Estab. Size	0.014	0.012	0.23	0.018	0.010	0.06
Work level	0.018	0.022	0.41	0.031	0.018	0.08
_cons	0.173	0.127	0.18	0.000	0.096	1.00
Interaction						
Union	0.005	0.001	0.00	0.002	0.002	0.27
Occ	-0.012	0.016	0.42	-0.053	0.014	0.00
Ind	-0.012	0.012	0.31	0.010	0.011	0.35
Estab. size	-0.001	0.004	0.85	0.001	0.004	0.82
Work level	0.015	0.019	0.41	0.028	0.016	0.08

The results are largely the same for 2015 and 2005. The difference between full- and

part-time pay is roughly 0.60 log points (an 82% pay gap), with 80% of the pay gap explained by

difference in characteristics of part-time jobs (characterized as "endowments" in Table 1).

Work level has the largest impact and the impact is larger in 2015 than in 2005. In 2005, the

lower work level of part-time jobs comprised roughly 70% (0.33/0.466) of the endowment

factors. In 2015, the share of work level was 80% among the endowment factors.

Table 2: Oaxaca Decomposition of Wages by Part-time Work Using Four Level Factors, 2015

	Coefficient	Standard Error	P>|t|
overall			
group_1	2.9557	0.010	0.00
group_2	2.3483	0.015	0.00
difference	0.6074	0.017	0.00
endowments	0.5080	0.019	0.00
coefficients	0.1426	0.014	0.00
interaction	-0.0433	0.016	0.01
endowments			
Union	0.0071	0.001	0.00
Occ	0.0022	0.015	0.88
Ind	0.0662	0.010	0.00
Estab. Size	0.0097	0.004	0.01
Knowledge	0.2253	0.026	0.00
Job Controls and Complexity	0.2049	0.023	0.00
Contacts	-0.0072	0.007	0.31
Physical Environment	-0.0002	0.001	0.78
coefficients			
Union	0.0063	0.002	0.00
Occ	-0.2422	0.104	0.02
Ind	0.0180	0.034	0.60
Estab. Size	0.0182	0.012	0.12
Knowledge	-0.0252	0.026	0.34
Job Controls and Complexity	-0.0329	0.022	0.14
Contacts	0.0479	0.025	0.05
Physical Environment	0.0139	0.026	0.59
_cons	0.3386	0.117	0.00
Interaction			
Union	0.0047	0.001	0.00
Occ	0.0097	0.015	0.53
Ind	-0.0108	0.012	0.35
Estab. Size	0.0005	0.004	0.89

Knowledge	-0.0255	0.027	0.34
Job Controls and Complexity	-0.0352	0.024	0.14
Contacts	0.0138	0.007	0.06
Physical Environment	-0.0005	0.001	0.59

The second specification with the individual factor levels included, allows an examination of what is driving the job level. The two key factors are knowledge and job controls and complexity. Their combined factor total is approximately equal to the total impact of work level from specification 1 and captures the bulk of the human capital required in these jobs. Knowledge encompasses required education, training, and experience and controls and complexity captures the cognitive demands of the work. Physical environment is not statistically significant in the model and includes both the strength required of a job as well as the environment in which the job is performed. To get a more nuanced picture of the importance of the nature of work performed and how that differs between part-time and ffull-time jobs, we next turn to an analysis of the ORS.

3. The Occupational Requirements Survey

The ORS, developed in collaboration with the Social Security Administration (SSA), collects elements in four categories -- educational and experience requirements, mental and cognitive demands, physical demands and environmental working conditions. ORS was developed for evaluation by SSA as a data source in disability adjudication, however, the estimates available provide a great deal of detail on the nature of work.

To put the data elements into perspective we provide a very brief overview of the disability adjudication process. For the purposes of Social Security Administration disability

adjudication, the law defines disability as the inability to do any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months. SSA uses a five step sequential process to determine disability. By the end of the third step[5], the claimant who has met current earnings and medical hurdles has his/her residual functional capacity to perform work-related activities classified according to the five exertional levels of work: sedentary, light, medium, heavy, and very heavy. The final two steps require occupational information to compare the functional capacities of an individual to those required by available jobs:

- Step 4. *Previous work test.* Can the applicant do the work he or she had done in the past? If the individual's residual functional capacity equals the previous work performed, the claim is denied on the basis that the individual can return to his/her former work. If the claimant's residual functional capacity is less than the demands of his or her previous work, the application moves to Step 5.

- Step 5. *Any work test.* Does the applicant's condition prevent him or her from performing "*any other kind of substantial gainful work which exists in the national economy?*," meaning work that "*exists in significant numbers*" either in the region of residence or in several regions of the country.[6] If yes, the application is accepted and benefits are awarded. If not, the application is denied. In this step, the residual functional capacity is applied against a vocational grid that considers the individual's

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[5] Step 1. Is the claimant engaging in substantial gainful activity? Step 2. Does the claimant have a severe impairment? Step 3. Does the impairment(s) meet or equal SSA's medical listings?
[6] Quotations are from the Social Security Act Section 223(d)(2).

age, education and the transferability of previously learned and exercised skills to other jobs. The vocational grid directs an allowance or denial of benefits.

The elements of ORS are designed with the needs of Steps 4 and 5 of disability adjudication in mind. As noted earlier, there are four different categories of information that are collected. Educational and experience requirements include whether literacy is needed, degrees required with respect to formal education, any required certifications, licenses and training, prior work experience and post-employment training. These elements are used to calculate specific vocational preparation. Mental and cognitive elements include task complexity, work control and routine, and interaction with regular or other contacts.[7] Data are collected on a wide range of physical demands, including hearing, use of keyboarding, visual acuity, sitting, standing, stooping, kneeling, crawling, crouching, pushing, pulling, reaching, strength, climbing, and manipulation. Environmental conditions include such elements as exposure to extreme heat and cold, fumes, humidity, and wetness.

The goal of ORS is to collect and publish occupational information that meets the needs of SSA at the level of the eight-digit standard occupational classification (SOC) that is used by the Occupational Information Network (O*NET).[8]

The ORS sample was drawn from the same frame as the NCS, the Quarterly Census of Employment and Wages, which includes all establishments covered by state unemployment insurance laws, and a supplementary file of railroads. As in the NCS, for each establishment in

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[7] The wording of the mental and cognitive elements have been changed for production. A sample of the collection form is available at http://www.bls.gov/ncs/ors/occupational_requirements_survey_elements_private.pdf.
[8] The occupational classification system most typically used by BLS is the six-digit SOC (www.bls.gov/soc/), generally referred to as "detailed occupations". O*NET uses a more detailed occupational taxonomy (www.onetcenter.org/taxonomy.html), classifying occupations at eight-digits and referring to these as "O*NET-SOC 2010 occupations". There are 840 six-digit SOCs and 1,110 eight-digit SOCs.

the ORS sample, jobs were selected for inclusion in the survey with probability proportional to incumbent employment. The ORS microdata set used for this analysis was collected from May 2015 through July 2016 and contains 19,166 observations. It is important to keep in mind that the unit of observation for ORS is the job, not the individual, so the number of workers represented by the microdata far exceeds 20,000, as it is typical for multiple individuals at an establishment to have the same "job."

Part-time and Full-time Work in the ORS

Before presenting a set of summary statistics for full-time and part-time jobs, it is important to emphasize a few points about ORS. First, the data elements are collected for a set of jobs at an establishment. Thus, the data reflect requirements for jobs, not information on the workers who hold those jobs. Second, since the data are being collected for disability adjudication, the thresholds for classifying the categorical responses are set based on SSA's needs.

We start by presenting estimates on three key ORS elements: decision making, specific vocational preparation (SVP), and strength. In the survey, decision making measures the level of comprehension, memory, and application of information needed to perform the typical duties of an occupation and is categorized into four categories –from little/no decision making to complex decision making .

Similarly we reaggregate SVP into four categories – short demonstration/1month, 1 month to 1 year, 1 year to 4 years, and 4 years or more. Finally, strength is reaggregated into three categories – sedentary/light work which is occasional[9] lifting of a negligible amount of weight up to 20 pounds, frequent lifting of negligible amount of weight up to 10 pounds, or constant

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[9] Here "occasional" refers to 2% up to 33% of the workday, "frequent" is 33% up to 67% of the workday, and "constant" is 67% or more of the workday.

lifting of a negligible amount., medium work which is occasional lifting of 20 pounds to 50

pounds, frequent lifting of 10 pounds to 25 pounds, or constant lifting of a negligible amount of

weight up to 10 pounds, and heavy/very heavy work includes higher lifting/carrying amounts

than the other thresholds.

Table 3 presents proportions in each category for all workers as well as for select groupings

based on the 2 digit SOC codes with the highest shares of part-time jobs. Roughly 24% of

workers in the ORS are involved in part-time work. Part-time work is defined by the particular

establishment, and not based on a set number of hours per week or weeks per year.

	SOC		Decision Making				SVP				Strength		
			Little or no	Set choices	Assessing situation	complex	short demo / 1 mo.	1mo / 1yr	1yr / 4yrs	4yrs +	sedentary / light	medium	heavy / very heavy
All Workers		PT	25%	52%	17%	6%	68%	12%	17%	3%	29%	57%	15%
		FT	10%	33%	34%	23%	23%	17%	37%	22%	40%	41%	18%
Education, Training, Library	25	PT	7%	16%	56%	30%	--	--	56%	17%	55%	38%	7%
		FT	--	--	47%	38%	--	--	70%	17%	52%	41%	7%
Healthcare Practitioners and Technical	29	PT	--	--	44%	41%	--	--	69%	17%	27%	53%	21%
		FT	--	--	43%	40%	--	--	64%	25%	29%	50%	31%
Healthcare Support	31	PT	9%	57%	28%	7%	35%	42%	19%	4%	25%	50%	25%
		FT	14%	63%	21%	2%	25%	45%	29%	--	27%	49%	24%
Protective Services	33	PT		46%	30%		53%	33%	--	--	41%	24%	36%
		FT	2%	20%	29%	44%	16%	38%	36%	10%	12%	37%	51%
Food Preparation and Serving Related	35	PT	35%	58%	7%		86%	6%	--	--	25%	65%	10%
		FT	23%	55%	18%	4%	61%	16%	21%	3%	18%	71%	12%
Building & Grounds Cleaning & Maintenance	37	PT	57%	39%	--	--	90%	--	--	--	21%	68%	11%
		FT	42%	39%	15%	4%	68%	13%	15%	4%	11%	70%	19%
Personal Care and Services	39	PT	15%	49%	26%		58%	26%	--	--	32%	52%	16%
		FT	--	39%	39%	--	38%	--	34%	--	29%	47%	24%
Sales and Related	41	PT	23%	67%	--	--	82%	9%	--	--	16%	76%	8%
		FT	6%	35%	45%	14%	32%	16%	40%	13%	45%	45%	9%
Office and Admin Support	43	PT	15%	69%	--	--	69%	--	17%	--	49%	36%	16%
		FT	8%	50%	36%	6%	28%	21%	42%	8%	68%	26%	6%
Transportation and Materials Moving	53	PT	43%	49%	--	--	79%	--	11%	--	17%	44%	39%
		FT	19%	61%	17%	3%	42%	32%	24%	3%	12%	49%	40%

Across all workers there are significant differences in the decision making and SVP of the work performed by part-time and full-time workers, though no significant difference in the strength variable. Nearly 80% of all part-time jobs are classified as requiring little decision making or straightforward decision making, compared to 43% of full-time jobs. As one would expect, this translates to gaps for the SVP required to perform the work. Sixty-eight percent of part-time jobs require 1 month or less to successfully perform, three times higher than full-time (22%). Full-time jobs are over twice as likely as part-time jobs to require 1-4 years of SVP (37% versus 17%) and over seven times as likely to require 4 or more years of preparation (22% versus 3%).

While, on the surface, much of this can be attributed to the types of jobs that use full-time and part-time labor, these differences persist at the 2 digit SOC level and below. Part-time jobs in nearly every 2 digit SOC category require less SVP to successfully perform the duties of the job. Still, 2 digit SOCs remain fairly heterogeneous in the types of duties that workers perform. While disclosure and reliability restrictions prevent us presenting estimates at the detailed SOC level in a complete table, within many of these relatively homogeneous classifications, significant differences persist in the requirements of full-time and part-time work.

What does this imply about part-time work and the analysis of part-time work? In many categories of occupations, especially less complex and low SVP jobs, part-time workers appear to be used in different ways than full-time workers. This is not entirely unexpected. SOCs are not synonymous with "jobs," and are not intended to be. Occupational classifications are intended to group jobs by the types of work performed and skills possessed.

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Empirical studies of wage gaps, however, rely on occupational classifications (very few as detailed as the 6-digit SOC level) as part of their identification techniques. Given the heterogeneity we see between the requirements of part-time and full-time workers, simply controlling for occupation will likely not lead to correct inference regarding full-time and part-time wage gaps. We explore this further in the next section.

ORS Models and Estimation

The descriptive statistics presented in the prior section lack controls for establishment-level characteristics that might influence the occupational requirements of jobs. In this section we present basic models of the relationship between private sector part-time and full-time work and occupational requirements with establishment and job controls. Establishment controls include broad industry controls and establishment size dummy variables.

Three models are estimated. First, a logit for SVP, where the dependent variable is equal to 1 for jobs classified as with less than 1 month of vocational preparation. Second, a logit for decision making, with the dependent variable taking a value of 1 for jobs with little or no independent decision making. Finally, we estimate a logit model for strength, where the dependent variable takes a value of 1 for jobs classified as heavy or very heavy.

These models are estimates separately for groups of jobs, restricting our analysis to those jobs for which the ORS has a substantial number of observations in both full- and part-time work. This results in 10 subgroups, listed below along with their corresponding SOC codes.

1. Nursing assistants: SOC 311014

2. Cooks and food preparation workers: SOC 352

3. Food and beverage serving workers: SOC 353

4. Building cleaning workers: SOC 37201

5. Cashiers: SOC 412011

6. Retail salespersons: SOC 412031

7. Tellers: SOC 433071

8. Receptionists: SOC 434171

9. Secretaries: SOC 43601

10. Laborers and material movers, hand: SOC 53706

In addition to the establishment-level controls, all models contain controls for coverage by a collective bargaining agreement. Additionally, for SOC groups that are at the three digit or five digit level of detail, the models contain dummy variables for the 6 digit detailed SOC.

Table 4 presents the odds ratios on the full-time dummy variable as well as standard errors and p-values associated with this coefficient. Full-time jobs are significantly less likely to require less than one month of vocational preparation among nursing assistants, cooks, food servers, retail salespersons, and secretaries. We see a similar pattern in decision making – full-time jobs in food serving, retail sales, and labor/material moving are less likely to require little or no independent decisions-making and more likely to require more complex decisions. For most jobs analyzed there are not significant differences in the strength required – the sole exception to this is among laborers and material movers, where full-time jobs are less likely to require heavy work.

Table 4: Odds Ratios and Standard Errors of Coefficients on Full-time Job

Occupation	SVP < 1 month	Little or no decision making	Heavy or very heavy work
Nursing assistants	0.49 (0.18) **	1.56 (1.34)	0.85 (0.30)
Cooks and food preparation workers	0.38 (0.12) ***	0.85 (0.85)	1.32 (0.51)
Food and beverage serving workers	0.47 (0.13) ***	0.51 (0.15) **	0.75 (0.29)
Building cleaning workers	1.25 (0.58)	1.52 (0.61)	1.26 (0.63)
Cashiers	0.96 (0.36)	0.95 (0.34)	0.69 (0.32)
Retail salespersons	0.25 (0.07) ***	0.20 (0.08) ***	1.62 (0.80)
Tellers	1.37 (0.62)	0.88 (0.63)	--
Receptionists	0.52 (0.29)	0.70 (0.42)	--
Secretaries	0.23 (0.11) ***	0.74 (0.63)	--
Laborers and material movers, hand	0.49 (0.22)	0.41 (0.18) **	0.33 (0.14) ***

4. Summary and Discussion

Analysis using the National Compensation Survey shows the importance of work requirements in explaining wage differences between full-time and part-time workers. The Occupational Requirements Survey analysis shows, for a subset of occupations, that there can be significant differences in the work required of full-time and part-time jobs, even for detailed occupations. Taken together, these analyses suggest that studies of the wage gaps between part-time and full-time workers need to control for the requirements of work and that occupational controls likely are not adequate proxies for the differences in work performed..

Data from future waves of the ORS can likely be used to examine this issue more in-depth. This study was limited in the occupational groupings and econometric specifications examined due to sample size limitations. Given that the goal of ORS is to provide published estimates of

the survey elements at the 8-digit O*NET SOC level, using multiple years of data would allow a more careful analysis of the full complement of elements at a more disaggregated level.

We also point out that these ORS data are unique since they are not focused on the skills and education possessed by the workers in a job, but on the requirements that employers have. It will be possible to compare future waves of ORS estimates of job requirements to the training and education possessed by workers in detailed occupations from the American Community Survey, for example, and examine the implications for returns to education for those who are employed in jobs that require a lower level of SVP.

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