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Skills Diversification and Labour Market Mobility

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Abstract:

The inter-related dynamics of dual job-holding, human capital and occupational choice between primary and secondary jobs are investigated, using a panel sample (1991-2005) of UK employees from the British Household Panel Survey (BHPS). A sequential profile of the working lives of employees is examined, investigating, first, the determinants of multiple job-holding, second, the factors affecting the occupational choice of a secondary job, third, the relationship between multiple-job holding and job mobility and, lastly, the spillover effects of multiple job-holding on occupational mobility between primary jobs. The evidence indicates that dual job-holding may facilitate job transition, as it may act as a stepping-stone towards new primary jobs, particularly self-employment.

Keywords: Moonlighting, Occupational Choice, Human Capital, Mobility.

JEL Classification Codes: J22, J24, J62

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1. Introduction

The shift to greater labour market flexibility in recent years (Harrison, 1998) has led to lowering employer-employee loyalty, rising unemployment risk and far shorter job durations compared to the past (OECD, 1997; Gregg and Wadsworth, 1995; 1999). In the face of these changes, the need on behalf of individuals to seek for alternative ways of ensuring employment security and a continuous and higher income stream has become paramount. In addition, with rapid technological changes requiring continuous skills updating and lifelong learning, occupational mobility has come to command a higher return in modern job markets (Gregg and Wadsworth, 1996; European Commission, 2002; EurActiv, 2010). In coping with the above volatility, a large number of workers have thus been required to foster an active strategy of *multiple job-holding* or *moonlighting* (Bell *et al.*, 1997; Farber, 1998; Neumark, 2000).

Multiple job-holding can act as a means of tackling financial constraints, ensuring uninterrupted employment spells and as a conduit for further career progression via the accumulation of necessary occupational expertise. The phenomenon of moonlighting has become an important characteristic of the British labour market during the time period of exacerbating labour market flexibility. An examination of the employment data over recent years suggests that since 1995 more than 1.2 million people in the UK have held multiple jobs (Simic and Sethi, 2002). Böheim and Taylor (2004) report that moonlighting rates were about 8-10% for the UK labour market for the period 1991 and 1998. Importantly, the number of people holding second jobs increased by 68% between 1984 and 2001, a disproportionate rise compared to the increase in the number of people in employment over the same period of 18%.

Despite the increasing incidence of moonlighting as another facet of atypical employment, the issue remains fairly under-researched with most available studies focusing exclusively on the determinants of the decision to moonlight (Perlman, 1966; Bell *et al.*, 1997; Conway and Kimmel, 1998; Böheim and Taylor, 2004; Dickey and Theodossiou, 2006; Renna and Oaxaca, 2006; Wu *et al.* 2008). However, with the notable exception of Paxson and Sicherman (1996), the literature has been surprisingly silent with respect to the important role of multiple job-holding as facilitator of skills accumulation and as determinant of the job/occupational transition process.

A close examination of the links between occupational experience, the incidence of moonlighting and job/occupational mobility, however, is crucial not only for a fuller understanding of individual income

growth and career progression, but also for the purposes of future labour market policy design. Moreover, multiple job-holding has wider implications on employee health, productivity, work-life balance and overall well-being.

The aim of this study is to examine the links between multiple job-holding and job and occupational mobility using a panel sample of male employees observed over 15 years (1991-2005) in the UK. The empirical strategy benefits from techniques that take into consideration the dynamic character of moonlighting and simultaneously allow for individual-specific effects in outcome equations of occupational choice, defined over non-random sub-populations of moonlighters and job-movers. The evidence suggests that non-transferable occupation-specific experience and financial constraints are contributing factors towards the selection of similar occupations in the primary and secondary jobs by individuals who decide to moonlight. Nonetheless, those who eventually switch to a different occupation in their second job, relative to their first one, are more likely to be occupationally mobile in their primary job in the future, exhibiting a particular tendency to move into self-employment.

The structure of the remainder of the paper is as follows. *Section 2* provides a brief review of the available literature on the economics of multiple job-holding, drawing out any implications for job and occupational mobility. *Section 3* describes the data, while *Section 4* outlines the empirical strategy. *Section 5* discusses the main empirical results and, finally, *Section 6* concludes.

2. Literature Review

The literature on multiple job-holding has identified four main potential motives behind moonlighting activities (Böheim and Taylor, 2004; Wu *et al.*, 2008). The early empirical research focuses primarily on the “hours constraints” motive and suggests that the predominant explanation for multiple job-holding is financial need, *i.e.* multiple-job holding is used as a survival strategy for low income households. According to the standard labour-leisure model, employees may be *hours constrained*, *i.e.* willing to work more but not being offered the chance to do so in their primary occupation (Perlman, 1966). As the willingness to work more hours is related to the provision of low or insufficient wages in the first job, this is also often referred to as the *financial* motive. A number of empirical studies have found an association between the level of a worker’s earnings and the propensity to moonlight, showing that as the level of

earnings in the primary job rises the incidence of multiple job-holding declines (Hamel, 1967; Guthrie, 1969; Shisko and Rostker, 1976; Krishnan, 1990). Böheim and Taylor (2004) also find evidence that a permanent contract reduces the chances of holding a second job, suggesting an association between job security and moonlighting. However, in a recent study Robinson and Wadsworth (2007) fail to find that the introduction of the minimum wage in the UK had any significant impact on the decision to moonlight.

Apart from financial constraints, the literature has identified some additional motives for moonlighting. Heineck and Schwarze (2004) provide evidence that workers may take up a second job for other monetary benefits, acquisition of new skills or to gain experience in alternative occupations. In addition, employees may choose to find a second job in order to smooth their consumption, or as an alternative to precautionary savings, even if they are not experiencing immediate negative financial shocks (Guariglia and Kim, 2004). Furthermore, individuals might derive different sources of satisfaction from the first and the second job. In other words, job heterogeneity might provide a motivation to moonlight on its own, such as singing in a band during the evening (Böheim and Taylor, 2004). This is the so-called *heterogeneity motive* (Kimmel and Conway, 2001; Renna and Oaxaca, 2006).

The above arguments imply that apart from securing a continuous income stream and hedging against the risk of primary job loss, individuals may choose to take up a second job to learn about new occupations, to gain training or new credentials, to engage in activities of interest to them which provide satisfaction not received from the primary job, or to maintain flexible work schedules (*e.g.* women requiring childcare may take up two part-time jobs).

The literature also highlights some other interesting patterns governing the moonlighting phenomenon. Alden (1971) finds a higher incidence of multiple job-holding in the rural regions of the UK. He also shows that self-employment is the predominant form of employment in a secondary job. Lundberg (1995) investigates moonlighting in the context of a job with amenities and argues that multiple job-holding can be explained by individuals having some emotional or other attachment to a specific sector or job that would lead them to turn down offers of higher earnings in other sectors. Krishnan (1990) explores how a husband's decision to moonlight is affected by his wife's decision to work, and finds that increased participation by wives deters multiple job-holding. Kimmel and Powell (1999) find

that gender and marital status also appear to affect the decision of multiple job-holding, with women, those who are never married and young individuals more likely to take up second jobs. Alden and Spooner (1982) highlight gender differences in the preferences over the type of second job, with females tending to be paid employees, as opposed to men who are mostly self-employed in their second job. In contrast, Averett (2001) finds no substantive differences in the factors that lead men and women to moonlight.

While a large part of the literature favours the “hours constraints” explanation, particularly for the developed world, little evidence has been presented on the view of multiple job-holding as a hedging strategy. Bell *et al.* (1997) find little evidence of behaviour of this type in the UK. They suggest that since moonlighting is more of a persistent/permanent phenomenon, this constitutes evidence in favour of the job heterogeneity explanation. In contrast, evidence from transition economies suggests that dual job-holding is more likely to be transitory and correlated with future job mobility. Guariglia & Kim (2006) find that moonlighting in Russia is transitory and is generally associated with career shifts, often tending towards self-employment. This finding is in agreement with the view of the secondary labour market or the informal sector acting as a potential effective incubator for setting up new self-employed businesses, by fostering the development of new human capital (Levenson and Maloney, 1998; Demirgüç-Kunt *et al.*, 2011).

In an interesting unifying framework, Paxson and Sicherman (1996) introduce a stochastic dynamic model where the decisions to take a second job and change primary job are taken simultaneously. According to the authors, the “hours constraints” explanation can lead to a dynamic process of moonlighting and job mobility. Workers who want to work more search for a portfolio of jobs that provide desirable bundles of characteristics. They may then use dual job-holding to learn about new occupations or to gain training. Moonlighting can thus facilitate the process of transition to a different occupation.

employment, as well as promotion and salary prospects and travel to work time are estimated to play a significant role in job mobility outcomes.

[Insert Table 5 about here]

5.4 *Multiple Job-Holding and Occupational Choice in the New Job*

As the estimates in *Table 5* (Panel A) highlight the importance of dual job-holding for job mobility, the issue is now further explored by examining the occupational choices individuals make when changing jobs (either by becoming self-employed, getting a new job, or obtaining a new position with their current employer). As before, particular attention is paid on the effect of holding two jobs and the occupational choice in the second job.

The occupational choice model in equation (9) is estimated separately for those who become self-employed, get a new job or a new position at period $t+1$, with the job mobility models of columns A1-A4 serving as first stage regressions that correct for the potential incidental truncation bias¹⁴. Linear probability models are thus estimated in the second stage, incorporating the inverse Mills ratios obtained in the first stage. The dependent variable takes the value 1 if individuals work in a different occupation in (a) self-employment (*column B1*); (b) new job with a new employer (*column B2*); and (c) new position with the same employer (*column B3*). The estimates are presented in *Table 5* (Panel B).

Similar to above, three alternative specifications are used in order to capture the effect of multiple job-holding on occupational transitions between primary employments. What becomes evident is that the occupational choices that individuals make as multiple job-holders (specification II) can play an important role in terms of affecting their selected occupations in their new primary employment. In particular, individuals who carry out the *same occupation* in the primary and secondary job at period t are less likely to perform a different occupation in the new primary job at period $t+1$. The opposite is true for those who do *different occupations* in their primary and secondary jobs at the previous period t . These findings suggest

¹⁴ The exclusion restriction variables used for identification are: private sector, permanent job, promotion prospects in primary job, travel to work time and annual increments. Limited evidence of sample selection bias is found, with the inverse Mills ratio negative and significant only for those who get a new position. This suggests that the characteristics that make individuals more likely to get a new position with their current employer makes them less likely also to do a different occupation in that new position.

that there are human capital spill-over effects between primary and secondary employment. Individuals may use multiple job-holding as a conduit for obtaining new skills and expertise and as a stepping stone to a new career, particularly one that involves self-employment. The other two alternative specifications (I and III) reveal further information regarding the occupational choice in the new primary job. According to the first specification, multiple job-holders are more likely to do a different occupation that entails self-employment, compared to those who only have one job. This result appears to be driven by those who are “serial moonlighters”, as can be seen by the findings of the third model.

Due to space limitations we refrain from an extensive discussion of the remaining results, though some findings merit further attention. In particular, individuals with lengthier occupation-specific experience are estimated to be less likely to change occupations in their new primary job. This is a finding that one would expect *a priori*, since individuals are expected to enjoy larger wage premiums by performing tasks on which they have already accumulated the necessary skills and experience. Also, those with higher seniority in their primary job at period t are more likely to do a different occupation when they get a new position at period $t+1$. This may capture the effect of accumulated seniority on the probability of being promoted.

For those who get a new job at the next period, the probability of deciding to do a different occupation than before is reduced as the local unemployment rate increases. It appears that increased labour market uncertainty, as captured by the local unemployment rate, deters people from pursuing different career paths and exploring new occupations. Also, higher earnings and job satisfaction in the previous primary job are estimated to reduce the probability of changing occupation once a job transition has taken place.

6. Conclusion

This study has investigated the inter-related dynamics of multiple job-holding, human capital and occupational choices between primary and secondary jobs, using a panel sample of UK employees from the British Household Panel Survey (BHPS) for the years 1991-2005. The sequential profile of the working lives of employees has been examined, investigating the motives of multiple job-holding, its

impact on the probability of job mobility and the associated spillover effects on occupational transition between alternative main jobs.

The analysis reveals that multiple job-holding, in addition to being a temporary response to hours-constraints, increased labour market uncertainty, and financial shocks, contains a permanent labour market element as it appears to be persistent over time. The examination of the occupational choice in the second job also provides some interesting insights. Individuals facing increased commitments or financial constraints are found to be more likely to do the same occupation in both their primary and secondary job, exploiting the higher earnings opportunities that their accumulated occupational experience may entail. This result is further strengthened by the fact that individuals with lengthier occupational experience in their primary job are less likely to choose a different occupation in their second job. Nevertheless, individuals who enjoy a relative sense of financial security are found to be more likely to explore different occupational paths in their secondary employment to satisfy their intrinsic preferences.

Multiple job-holding is estimated to be an important determinant of job mobility decisions. Moonlighting is found to increase the probability of becoming self-employed or getting a new job, while it decreases the probability of becoming unemployed or inactive, compared to remaining in the same job. The estimates also suggest that there are human capital spill-over effects between primary and secondary employment. The occupational choices that individuals make as multiple job-holders play an important role in the occupational paths that they follow afterwards. In particular, individuals who carry out the same occupation in the primary and secondary job at period t are less likely to perform a different occupation in the new primary job at period $t+1$. The opposite is true for those who do different occupations in their primary and secondary jobs at the previous period t . The evidence provided in this study suggests that individuals may be using multiple job-holding as a conduit for obtaining new skills and expertise and as a stepping stone to new careers, particularly ones that involve self-employment.

From a policy point of view, the findings suggest that, depending on the motives behind moonlighting, different approaches with distinct priorities and objectives may be pursued by policymakers (?). The evidence indicates that for more vulnerable groups of people, particularly those on low incomes and with low education, moonlighting may be more of a necessity rather than a choice. In contrast, more

financially stable individuals can “afford” to use multiple job-holding as an avenue to develop and enrich their skills, explore alternative career paths and pursue possible entrepreneurial activities through self-employment. The policy priorities in the first case should probably focus more on strengthening job security and on safeguarding a stable income stream to the vulnerable segments of society. Furthermore, issues related to work-life balance and overall well-being may warrant particular attention, since individuals who face financial hardships may be induced to compromise their physical and mental health when working in multiple jobs. For the second group of people, moonlighting may be a useful avenue through which labour market flexibility, innovation and entrepreneurship can be fostered. There is an increasing policy interest for nurturing the employability of individuals within a highly mobile and flexible labour market (Employment in Europe, 2004). Based on the results of this study, moonlighting is found to be a potential mechanism that can facilitate this process. Policy priorities could therefore focus on identifying ways through which multiple job-holding can lead to the more efficient acquisition of skills, and to promote future potential entrepreneurial initiatives.

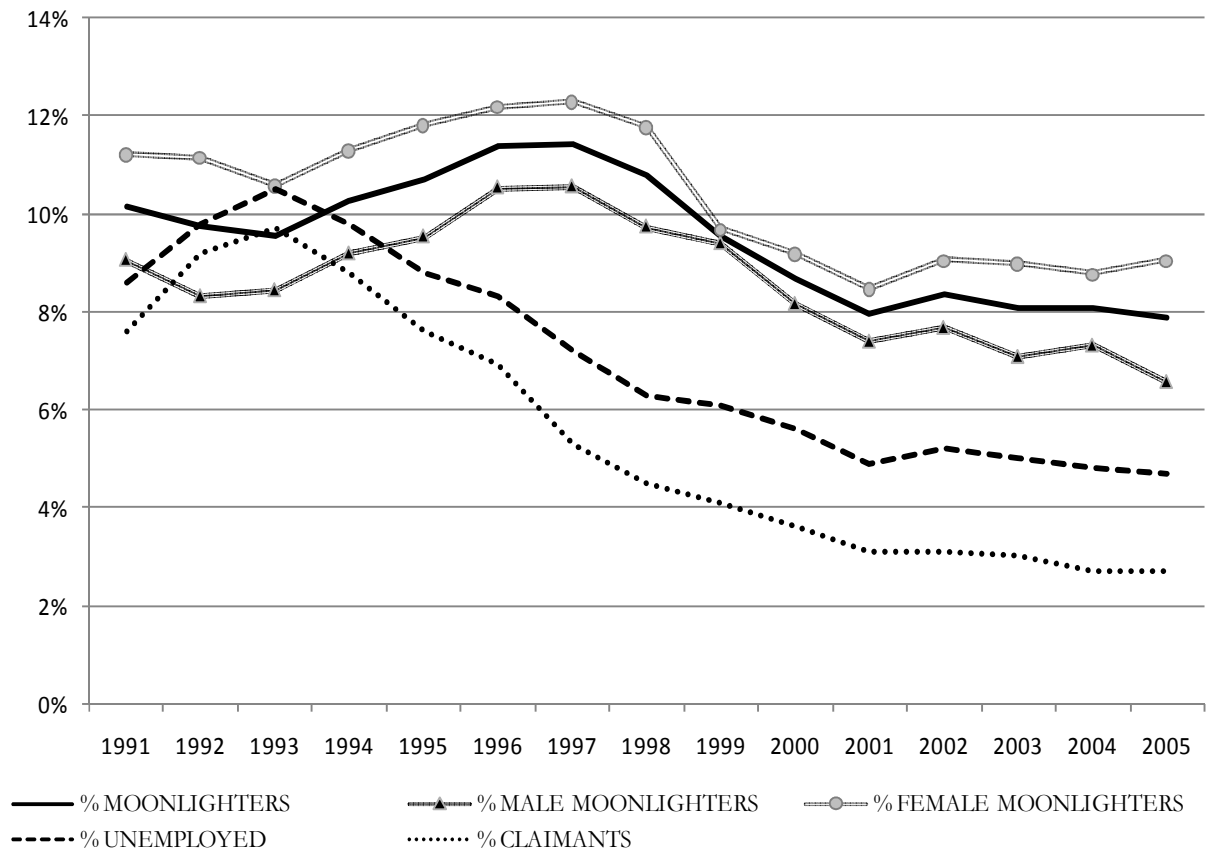
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Figure 1
The Incidence of Male Dual Job-Holding and Unemployment Rates



Notes:

Moonlighting data are from the BHPS. Unemployment and Local Claimants' rate data are from National Statistics Online.

Table 1
Summary Statistics for Primary and Secondary Jobs

<i>Sample of paid employees in primary job</i>	Primary Job	Secondary Job
Number of Observations	37,772	3,211
Number of Individuals	5,590	1,221
Dual Job Holder	8.5%	-
<u>Hours of Work</u>		
Weekly Hours (St.Dev.)	39.41 (7.6)	5.64 (5.46)
Monthly Hours (St.Dev.)	169.0 (31.9)	24.27 (23.5)
Real Monthly Earnings (St.Dev.)	1,328.88 (877.5)	209.74 (400.9)
Self-Employed	-	46.32%
Paid Employee	-	52.46%
Different 1-digit occupation from primary	-	67.3%
Same 1-digit occupation as in primary	-	32.7%
Serial Moonlighter		61.9%
<u>Occupation</u>		
Managers & administrators	17.9%	6.94 ⁰ %
Professional occupations	10.5%	10.68 ⁰ %
Assoc. professional & technical occ.	10.7%	21.92 ⁰ %
Clerical & secretarial occupations	9.7%	3.83 ⁰ %
Craft & related occupations	18.6%	18.09 ⁰ %
Personal & protective service occ.	6.5%	18.33 ⁰ %
Sales occupations	4.6%	3.32 ⁰ %
Plant & machine operatives	14.7%	5.31 ⁰ %
Other occupations	6.9%	11.60 ⁰ %

Table 2
Summary Statistics and Mean Differences

Variable	Panel	Sample	Employed		Dual Job Holders		
			(A) Pooled	(B) Dual-Job	Single-Job	(C) Same	Different
Real gross usual monthly earnings			1,340.8	1,229.6	1,351.3***	1,367.7***	1,163.1
Hourly wage			7.50	7.19	7.54***	7.95***	6.82
Low-paid group			8.3%	13.2%***	7.9%	10.5%	14.6%***
Real equivalized household income			20,915.6	19,945.6	21,008.6***	21,458.1***	19,228.0
Financially vulnerable group			18.0%	22.7%***	17.6%	23.3%	22.4%
Cohabiting/Married and partner employed			58.0%	55.7%	58.2%***	56.7%	55.3%
Cohabiting/Married and partner not employed			15.8%	14.9%	15.9%	19.4%***	12.8%
Single/Divorced			26.3%	29.4%***	25.9%	24.0%	32.0%***
Age			37.50	36.18	37.62***	36.49	36.03
Potential Labour Market Experience (Age-School Leaving Age)			20.74	18.95	20.91***	18.98	18.95
Occupational Experience			11.18	10.69	11.23***	11.37***	10.37
Job Tenure			5.70	5.43	5.72***	5.79**	5.25
High education			17.3%	20.9%***	16.9%	26.0%***	18.4%
Middle education			58.8%	59.6%	58.7%	51.4%	63.5%***
Low education			23.2%	19.0%	23.6%***	21.9%***	17.7%
Usual Weekly Hours of Work			39.44	38.25	39.55***	38.57	38.10
Full-time job			96.5%	92.5%	96.9%***	92.6%	92.5%
Wants to work more hours in primary occupation			6.9%	10.5%***	6.5%	8.4%	11.6%***
Wants to work the same hours in primary occupation			55.5%	55.9%	55.5%	56.9%	55.7%
Wants to work less hours in primary occupation			35.6%	31.3%	36.0%***	32.4%	31.0%
Paid Overtime hours of work			3.03	2.35	3.10***	2.44	2.31
Minutes traveling to work			26.05	23.72	26.27***	24.80*	23.19
Occupation:							
Skilled Non-Manual Occupations			47.0%	47.1%	47.0%	56.9%***	42.3%
Skilled Manual Occupations			10.7%	11.8%**	10.6%	17.5%***	9.1%
Unskilled Non-Manual Occupations			20.8%	22.1%*	20.6%	14.9%	25.6%***
Unskilled Manual Occupations			21.6%	19.0%	21.8%***	10.8%	23.0%***
Managers & administrators			17.9%	14.3%	18.2%***	8.3%	17.2%***
Professional occupations			10.5%	15.2%***	10.1%	20.6%***	12.6%
Assoc. professional & technical occ.			10.7%	11.8%**	10.6%	17.5%***	9.1%
Clerical & secretarial occupations			9.7%	8.2%	9.8%***	3.2%	10.7%***
Craft & related occupations			18.6%	17.6%	18.7%	28.0%***	12.5%
Personal & protective service occ.			6.5%	8.9%***	6.3%	10.2%*	8.2%
Sales occupations			4.6%	5.0%	4.6%	1.5%	6.7%***
Plant & machine operatives			14.7%	11.7%	14.9%***	5.2%	14.9%***
Other occupations			6.9%	7.3%	6.9%	5.6%	8.2%***
Job Transitions in the next year:							
Self-Employed			2.3%	4.1%***	2.1%	4.0%	4.1%
Paid Employee			93.6%	92.2%	93.7%***	92.5%	92.1%
Employed in a New Job with a New Employer			11.8%	14.2%***	11.5%	14.1%	14.3%
Employed in a New Position with the Same Employer			13.9%	14.2%	13.9%	12.9%	14.7%
Employed in the Same Position with the Same Employer			74.4%	71.6%	74.6%***	73.0%	71.0%
Unemployed			2.3%	2.1%	2.3%	2.3%	2.0%
Inactive			1.9%	1.7%	1.9%	1.3%	1.7%

Notes: * p<0.10, ** p<0.05, *** p<0.01 from a t-test between mean differences.

Table 3: The Profile of the Dual Job-Holder
Wooldridge Estimator: Dynamic Random Effects Probit with Mundlak terms

<i>Dependent Variable: Dual-Job Holder</i>	<i>Coef.</i>	<i>[S.E.]</i>	<i>M.Eff.</i>	<i>[S.E.]</i>
I. Model Specification				
Moonlighting _(t-1)	1.170***	[0.046]	0.111***	[0.013]
Moonlighting _(Year1)	1.164***	[0.075]	0.107***	[0.011]
Log(Equivalized household income) _{t-1}	-0.114***	[0.044]	-0.004**	[0.001]
Local unemployment rate	0.024*	[0.012]	0.001*	[0.000]
Log(Experience)	-0.151	[0.094]	-0.005	[0.003]
Log(Occupational experience)	0.011	[0.034]	0.001	[0.001]
Log(Tenure)	0.068**	[0.026]	0.002**	[0.001]
Wants to work more hours in primary job	0.203***	[0.072]	0.008**	[0.003]
Wants to work the same hours in primary occupation	[REF.]		[REF.]	
Wants to work less hours in primary job	-0.079*	[0.044]	-0.002*	[0.001]
Log(Weekly hours in primary job)	-0.073	[0.105]	-0.002	[0.003]
Log(Paid overtime hours)	-0.037***	[0.012]	-0.001***	[0.000]
Cohabiting/Married and spouse employed	-0.084	[0.074]	-0.003	[0.002]
Cohabiting/Married and spouse not employed	-0.039	[0.093]	-0.001	[0.003]
Single/Divorced	[REF.]		[REF.]	
Log(No. of children)	0.008	[0.022]	0.001	[0.001]
Private sector	-0.154*	[0.090]	-0.005	[0.004]
Permanent job	-0.050	[0.100]	-0.002	[0.004]
Promotion prospects in primary job	-0.105**	[0.045]	-0.003**	[0.002]
Annual increments	-0.088**	[0.044]	-0.003**	[0.001]
High education				
Middle education	0.190	[0.204]	0.006	[0.006]
Low education	-0.142	[0.332]	-0.004	[0.009]
Managers and administrators	[REF.]		[REF.]	
Professional occupations	0.170	[0.105]	0.006	[0.005]
Associate professional & technical occupations	0.119	[0.090]	0.004	[0.004]
Clerical & secretarial occupations	0.158	[0.102]	0.006	[0.004]
Craft & related occupations	0.157	[0.105]	0.006	[0.004]
Personal & protective service occupations	0.365***	[0.136]	0.017*	[0.009]
Sales occupations	0.256**	[0.123]	0.011	[0.007]
Plant & machine operatives	0.147	[0.107]	0.005	[0.004]
Other occupations	0.208*	[0.119]	0.008	[0.006]
Means:				
Local unemployment rate	-0.045**	[0.019]	-0.001**	[0.001]
Log(Experience)	0.166	[0.102]	0.005	[0.003]
Log(Occupational experience)	-0.135**	[0.062]	-0.004**	[0.002]
Log(Tenure)	-0.157***	[0.048]	-0.005***	[0.002]
Wants to work more hours in primary job	0.160	[0.173]	0.005	[0.006]
Wants to work the same hours in primary occupation	[REF.]		[REF.]	
Wants to work less hours in primary job	0.026	[0.096]	0.001	[0.003]
Log(Weekly hours in primary job)	-0.007	[0.185]	-0.001	[0.006]
Log(Paid overtime hours)	0.046**	[0.022]	0.001**	[0.001]
Cohabiting/Married and spouse employed	-0.113	[0.108]	-0.004	[0.003]
Cohabiting/Married and spouse not employed	-0.391***	[0.149]	-0.013***	[0.005]
Single/Divorced	[REF.]		[REF.]	
Log(No. of children)	0.073**	[0.032]	0.002**	[0.001]
Private sector	-0.217*	[0.119]	-0.007*	[0.004]
Permanent job	-0.547***	[0.197]	-0.018***	[0.006]
Promotion prospects in primary job	-0.201**	[0.087]	-0.006**	[0.003]
Annual increments	-0.029	[0.090]	-0.001	[0.003]
Constant	0.695	[0.694]		
ρ	0.435***	[0.022]		
II. Calculated Permanent Effects:				
Local unemployment rate	-0.021	[0.014]	-0.001	[0.000]
Log(Experience)	0.016	[0.045]	0.001	[0.001]
Log(Occupational experience)	-0.123**	[0.052]	-0.004**	[0.002]
Log(Tenure)	-0.090**	[0.040]	-0.003**	[0.001]
Wants to work more hours in primary job	0.363**	[0.156]	0.012**	[0.005]

Table 3 continued in next page

Table 3 continued from last page

Wants to work the same hours in primary occupation	[REF.]	[REF.]
Wants to work less hours in primary job	-0.054 [0.085]	-0.002 [0.003]
Log(Weekly hours in primary job)	-0.081 [0.153]	-0.003 [0.005]
Log(Paid overtime hours)	0.009 [0.019]	0.001 [0.001]
Cohabiting/Married and spouse employed	-0.197** [0.078]	-0.006** [0.003]
Cohabiting/Married and spouse not employed	-0.430*** [0.114]	-0.014*** [0.004]
Single/Divorced	[REF.]	[REF.]
Log(No. of children)	0.082*** [0.023]	0.003*** [0.001]
Private sector	-0.372*** [0.076]	-0.012*** [0.003]
Permanent job	-0.597*** [0.174]	-0.019*** [0.006]
Promotion prospects in primary job	-0.306*** [0.075]	-0.010*** [0.002]
Annual increments	-0.116 [0.079]	-0.004 [0.003]
Average Predicted Probability		0.0425
No. of Observations		28,851
No. of Individuals		5,220
Log Likelihood		-5,111.3
Wald χ^2		1,993.0***
LR χ^2 ($q=0$)		513.25***

Notes:

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The specification also includes a constant term and the means of all independent variables; The coefficients and standard errors of the permanent effects are derived from tests of the linear constraint that the summation of the level and the mean effect of each variable are equal to zero, e.g. $\beta_{(\text{Local Unemployment Rate})} + \delta_{(\text{Local Unemployment Rate})} = 0$.

Table 4
Dual Job Holding and Occupational Choice

<i>Dep. Var.: Different 1-digit SOC between 1st and 2nd job</i>	Linear Probability Model	
	<i>Coef.</i>	<i>[B.S.E.]</i>
Difference in hourly wage (primary occ. vs. next best)	-0.092***	[0.030]
Local unemployment rate	0.005	[0.008]
Log (Equivalised annual household income) _{t-1}	-0.041	[0.025]
Log(Experience)	0.050***	[0.015]
Log(Occupational experience)	-0.047***	[0.014]
Log(Tenure)	0.013	[0.011]
Wants to work more hours in primary job	0.030	[0.032]
Wants to work the same hours in primary occupation	[REF.]	
Wants to work less hours in primary job	-0.017	[0.020]
Log(Weekly hours in primary job)	-0.052	[0.041]
Log(Paid overtime hours)	-0.009*	[0.005]
Cohabiting/Married and spouse employed	-0.082***	[0.025]
Cohabiting/Married and spouse not employed	-0.214***	[0.037]
Single/Divorced	[REF.]	
Log(No. of children)	-0.006	[0.008]
Private Sector	-0.054**	[0.027]
Permanent job	0.034	[0.048]
Promotion prospects in primary job	0.060***	[0.021]
Annual increments	-0.009	[0.021]
High education	[REF.]	
Middle education	0.033	[0.030]
Low education	-0.105***	[0.039]
Managers and administrators	[REF.]	
Professional occupations	-0.296***	[0.039]
Associate professional & technical occupations	-0.323***	[0.037]
Clerical & secretarial occupations	-0.029	[0.037]
Craft & related occupations	-0.331***	[0.034]
Personal & protective service occupations	-0.276***	[0.041]
Sales occupations	0.027	[0.039]
Plant & machine operatives	0.055*	[0.032]
Other occupations	-0.057	[0.043]
Mills Ratio	0.055	[0.051]
Constant	1.211***	[0.283]
No. of Observations	2,364	
No. of Individuals	919	
No. of Observations (1 st stage equation)	36,980	
Log Likelihood	-1,365.7	
Wald χ^2	634.7***	

Notes:

* p<0.10, ** p<0.05, *** p<0.01

The specification includes year fixed effects and a constant term. Bootstrapped standard errors in Columns (1) and (2), based on 1,000 replications. The estimates presented are from 2nd stage regressions. The 1st stage is a selection equation as proposed by [Wooldridge \(1995\)](#) and [Semykina and Wooldridge \(2005\)](#). The reference groups remain the same as in Table 3.

Table 5
Job Mobility, Occupational Choice, and Dual Job Holding

<i>Sample</i> Dependent Variable:	(A) Random Effects Probit				(B) Linear Probability Model with selectivity correction		
	<i>Employed:</i> Mobility _{t+1} into:				<i>Job Switchers</i> Different occupation in:		
	(A1) Self-Emp.	(A2) New Job	(A3) New Position	(A4) Not Employed	(B1) Self-Emp.	(B2) New Job	(B3) New Position
Multiple Job-Holding (three alternative specifications)							
(I) Moonlighter	0.014*** [0.003]	0.017** [0.007]	0.009 [0.008]	-0.007** [0.003]	0.091 [0.057]	-0.009 [0.027]	-0.014 [0.027]
(II) Different occupation in 2 nd Job	0.013** [0.005]	0.029** [0.013]	0.015 [0.015]	-0.007 [0.005]	-0.219*** [0.077]	-0.131*** [0.044]	-0.068 [0.044]
Similar occupation between 2 nd Job	0.015*** [0.004]	0.011 [0.008]	0.006 [0.010]	-0.007* [0.004]	0.248*** [0.064]	0.05 [0.034]	0.009 [0.032]
(III) Serial moonlighter	0.015*** [0.005]	-0.001 [0.010]	0.009 [0.012]	-0.010** [0.004]	0.204*** [0.077]	0.004 [0.044]	0.018 [0.037]
Temporary moonlighter	0.015*** [0.004]	0.029*** [0.010]	0.007 [0.011]	-0.004 [0.004]	0.051 [0.072]	-0.02 [0.034]	-0.043 [0.038]
Remaining regressors based on (I) specification							
Local unemployment rate	-0.001 [0.000]	-0.007*** [0.002]	-0.002 [0.002]	-0.001 [0.001]	0.019 [0.019]	-0.019** [0.008]	0.001 [0.007]
Log(Real gross monthly earnings)	-0.001 [0.001]	-0.035*** [0.005]	-0.001 [0.006]	-0.018*** [0.003]	-0.004 [0.047]	-0.121*** [0.023]	-0.015 [0.019]
Job satisfaction	-0.002*** [0.000]	-0.027*** [0.001]	-0.014*** [0.002]	-0.008*** [0.001]	-0.047*** [0.015]	-0.021*** [0.006]	-0.016*** [0.006]
Log(Experience)	-0.001 [0.001]	-0.034*** [0.003]	-0.039*** [0.004]	-0.002 [0.002]	0.045 [0.032]	-0.02 [0.013]	-0.002 [0.013]
Log(Occupational experience)	0.001 [0.001]	0.002 [0.003]	0.001 [0.003]	0.005*** [0.002]	-0.083*** [0.027]	-0.076*** [0.013]	-0.072*** [0.012]
Log(Tenure)	-0.004*** [0.001]	-0.061*** [0.003]	-0.043*** [0.003]	-0.007*** [0.001]	-0.025 [0.023]	0.02 [0.013]	0.028*** [0.011]
Wants to work more hours in primary job	0.003 [0.002]	0.019** [0.008]	0.025** [0.010]	-0.003 [0.004]	-0.131* [0.077]	-0.067** [0.030]	0.042 [0.029]
Wants to work same hours in primary job	{Ref.}	{Ref.}	{Ref.}	{Ref.}	{Ref.}	{Ref.}	{Ref.}
Wants to work less hours in primary job	-0.001 [0.001]	-0.004 [0.004]	-0.008 [0.005]	0.001 [0.002]	-0.01 [0.044]	0.007 [0.019]	-0.004 [0.017]
Log(Weekly hours in primary job)	0.001 [0.002]	0.056*** [0.010]	-0.021* [0.013]	-0.015*** [0.005]	-0.018 [0.070]	-0.026 [0.042]	-0.067* [0.039]
Log(Paid overtime hours)	-0.001*** [0.000]	0.001 [0.001]	0.002 [0.001]	-0.002*** [0.001]	-0.004 [0.011]	0.005 [0.004]	-0.007* [0.004]
Log(Number of minutes to work)	0.001 [0.001]	0.008*** [0.002]	0.006** [0.003]	0.004*** [0.001]	- -	- -	- -
Private sector	0.008*** [0.001]	0.044*** [0.005]	0.011* [0.006]	0.004 [0.003]	- -	- -	- -
Permanent job	-0.028*** [0.008]	-0.197*** [0.017]	-0.119*** [0.018]	-0.140*** [0.017]	- -	- -	- -
Promotion prospects	-0.006*** [0.001]	-0.019*** [0.004]	0.052*** [0.005]	-0.011*** [0.002]	- -	- -	- -
Receives annual increments	-0.006*** [0.001]	-0.016*** [0.004]	-0.005 [0.005]	-0.009*** [0.002]	- -	- -	- -
Mills Ratio	- [0.041]	- [0.021]	- [0.022]	- [0.022]	0.043 [0.041]	0.009 [0.021]	-0.069*** [0.022]
ρ	0.270*** [0.021]	0.101*** [0.014]	0.103*** [0.012]	0.240*** [0.022]	-	-	-
Observed Probability	0.2490	0.1328	0.1562	0.0411			
Predicted Probability	0.0140	0.1228	0.1430	0.0545			
Number of Observations	21,751	24,456	25,134	22,432	558	3,358	4,011
Number of Individuals	4,729	4,975	4,968	4,872	487	1,991	2,226
Uncensored Observations	-	-	-	-	22,421	25,553	26,197
Log-Likelihood	-2,262.2	-7,811.6	-9,890.1	-4,104.1	-333.8	-2,313.4	-2,686.6
Wald χ^2	355.0***	2433.5***	1,318.8***	886.6***	248.3***	260.6***	362.1***

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. (A1)-(A4) present marginal effects and standard errors from a random effects probit model. (B1)-(B3) show coefficients and bootstrapped standard errors from a linear probability model (based on 1,000 replications). The specifications also include marital status, number of children, partner's employment status and dummy variables for: Occupation {9}; Education {3}; Wave {15}, and a constant term. The significance of the ρ -term is given from a LR test that $\rho = 0$.

Appendix:

A.1 Calculation of the difference in earnings (primary occupation vs. next best alternative) variable

The best alternative occupation is detected based on an equation describing the occupational choice in the second job, using a multinomial probit model. Specifically, we let y_{2j} denote the individual occupational choice of the second job, where y_{2j} can take the unordered multinomial values $j = \{0,1,\dots,9\}$ reflecting the 9 different 1-digit SOC groups. We then investigate how the set of conditioning variables $\mathbf{v} = \{y_{1j}, \mathbf{x}\}$, where y_{1j} is the occupation of the individual in the primary job and \mathbf{x} captures other demographic and primary job-specific variables, affect the probability of secondary-job selection, $P(y_{2j} = j|\mathbf{v})$, *ceteris paribus*.

Based on the estimates of this model, the predicted probabilities of occupational choice in the second job, conditional on the occupation of the primary job, are shown in *Table A1*. The best alternative occupations can be easily obtained by looking across each row of *Table A1* and selecting the cell with the highest predicted probability, excluding the elements of the diagonal. In doing so, it is evident that, for example, the best alternative occupation in the secondary job for those currently employed as Managers or Administrators in their primary job is an Associated Professional and Technical occupation.

Utilizing the information of *Table A1*, the predicted wages from the best alternative occupation are hence calculated based on an hourly wage equation model:

Table A1
Occupational Transitions between 1st and 2nd job: Predicted Probabilities

BHPS, Waves 1-15

	1 st Job	2 nd Job								
		Group 1 <i>Manag.</i>	Group 2 <i>Profess.</i>	Group 3 <i>Associate</i>	Group 4 <i>Clerical</i>	Group 5 <i>Craft</i>	Group 6 <i>Personal</i>	Group 7 <i>Sales</i>	Group 8 <i>Plant</i>	Group 9 <i>Other</i>
Group 1:	Managers & administrators	19.1%	13.0%	23.5	6.2%	8.1%	16.7%	2.8%	4.0%	6.7%
Group 2:	Professional occupations	8.0%	36.7%	34.3	2.7%	3.8%	5.4%	2.6%	2.1%	4.4%
Group 3:	Assoc. professional & technical occ.	7.7%	7.0%	46.2	9.3%	10.8	7.6%	4.6%	1.8%	5.2%
Group 4:	Clerical & secretarial occupations	2.0%	3.0%	20.6	15.9%	13.9%	20.3%	3.5%	5.3%	15.6%
Group 5:	Craft & related occupations	3.0%	0.7%	9.8%	0.3%	54.3	13.7	0.8%	6.1%	11.4%
Group 6:	Personal & protective service occ.	5.8%	3.1%	9.9%	1.4%	8.2%	40.2	4.9%	10.4%	16.0
Group 7:	Sales occupations	17.9%	1.5%	26.3	4.4%	11.4%	16.1%	10.0%	1.7%	10.8%
Group 8:	Plant & machine operatives	2.6%	0.2%	21.0%	3.0%	13.5%	26.4	2.6%	15.8%	15.0%
Group 9:	Other occupations	8.5%	0.7%	11.4%	2.6%	21.8%	22.8	3.2%	7.5%	21.7%

Notes:

The Table consists of predicted probabilities of 2nd job occupational choice, conditional on 1st job occupational choice, based on estimates of a Multinomial Probit model (available from the authors upon request).

$$\ln w_{it} = x'_{it}\beta + \zeta y_{1(j)it} + g_{it} \quad (A1)$$

where, for instance, the predicted wage for Managers or Administrators (SOC code 1) is obtained as

$\ln \hat{w}_{it(1)} = x'_{it}\hat{\beta} + \hat{\zeta} y_{1(3)it}$, which is the wage the individuals would receive if they were employed in the next best category of Associated Professional and Technical occupation instead (SOC code 3).

The difference in the earnings capacity between the current and the best alternative occupation is thus calculated as the difference between the wages received from the current occupation in the primary job and the predicted wages from the best alternative occupation in the second job.