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**Working Week Regulation and Moonlighting
in Selected OECD Countries**

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WORKING WEEK REGULATION AND MOONLIGHTING
IN SELECTED OECD COUNTRIES

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In this paper we analyze the impact of hours regulation on the decision of holding two jobs. The understanding of this relationship is important in order to assess the real impact of time sharing policies on reducing unemployment. Using data for 8 OECD countries, we found that decreasing the working week increases the probability of moonlighting. Moreover, higher overtime premia positively affect the probability of holding two jobs. We conclude that while time sharing policies may create incentives for firms to allocate their demand from an intensive to an extensive use of labor, they will induce an increase in the supply of moonlighters, thus offsetting the number of job created in the economy.

Introduction

A century ago, the average working week was significantly longer than it is today¹. This fact can partly be explained by new equilibria in the labor market brought on by an increase in the general wealth of the workers: assuming that leisure is a normal good, the theory would predict a decrease in the number of hours supplied in response to an increase in wealth. However, the regulation of the working time has undoubtedly contributed to this trend². Regulation of working time can happen either at the government level or through labor contracts between unions and employers, and it aims at imposing a limit on the working hours per week beyond which employers have to pay

¹ Conternsou and Vranceanu [2000].

a premium (overtime premium). The current working week averages around 40 hours among most OECD countries, while the overtime-premium spans from 25 to 100 percent (see Table 1).

Table 1. Working hour regulation in selected countries, 1996.

	Statutory weekly hours	Premium wage for overtime (in excess of normal hours)	Normal weekly hours set by collective agreements
Australia	38-40	50% the first 4 hours, then 100%	35-40
Austria	40	50%	36-40
Belgium	40	50% (100% during the weekend)	38
Canada	40-48	50%	35-40
Czech Rep.	40.5	25%	37
Denmark	37	50 % the first hour, then increasing	37.5-40
Finland	40	50 % for 2 hour, then 100%	39
France	39	25 % for 8 hour, then 50%	35-39
Germany	48	25%	40
Greece	40	25% the first 60 hours per year, then 50%	
Hungary	40	50%	38-40
Ireland	48	25%	36-44
Italy	48	25%	40-44
Japan	40	25%	40
Korea	44	50%	36-40
Luxemburg	40	25% blue collars, 50% white collars	40
Mexico	48	100	
Netherlands	45	Collectively bargained	36-40
New Zealand	40	Collectively bargained	40
Norway	40	40%	37.5
Portugal	40	50 % the first hour, then 75%	35-44
Spain	40	Collectively bargained	38-40
Sweden	40	Collectively bargained	40
Switzerland	45 (50)	25%	40-42
Turkey	45	50%	
UK	none	Collectively bargained	34-40
US	40	50%	35-40

Source: OECD, *Employment Outlook*, 1998

² See Table 5.13 in “*Employment Outlook, 1998*” for a complete summary of current OECD countries measures designed to regulate working time.

Lately, the issue of the working time has attracted more political attention, especially in Europe, where the decade-long high level of unemployment has led governments to think about “time-sharing policies.” Time-sharing policies are aimed at stimulating employment through a reorganization of working time. Usually, an employers have the option to allocate their demand for labor between number of workers and number of hours per worker. By imposing stricter legal weekly hours or a higher overtime premium, a time-sharing policy gives the employer the incentive to opt for more workers with fewer hours per capita. Both Germany and France are moving in this direction. On May 1998, the French government enacted a legislation that decreased the statutory working week from 39 to 35 hours as January 1, 2000 (Aubry law). Italy is seriously thinking about adopting a similar policy. Germany experienced the same level of reduction in the weekly hours, but through the unions’ active negotiation of labor contracts. According to a report of the French Ministry for Employment and Solidarity³ by March 2000 about 175,000 jobs were created or saved by the Aubry law. Still the effectiveness of these policies has not been proven [see OECD (1999) and Hunt (1999)]. In fact, imposing a shorter working week does not guarantee that the employer would opt for more employees versus more hours per employee. If the fixed costs of hiring a new employee are high enough, a profit maximizing employer would still prefer to pay the overtime premium and reduce his demand for labor. Theory predicts that the lower the fixed costs of a new hire or the higher the overtime premium the more an employer would shift from an intensive to an extensive use of labor.

In order to conduct a complete evaluation of the effectiveness of any time-sharing policy, one should look also at its implication on labor supply. Reducing the legal working week could lead some workers to a situation of underemployment. The evidence emerging from several surveys about a general dissatisfaction of the workers with their actual working hours confirms that at least part of the decrease in the hours supplied derives from some form of regulation rather than from individual rational choice. In 1997 the International Social Security Program conducted a survey about the labor market situation in selected countries. Table 2 reports the results from that survey that pertain to the working hour satisfaction.

Table 2 – Preferred working time and income, 1997

	more hours more income	same hours same income	less hours less income
Germany	21.89%	69.08%	9.03%
UK	22.81%	70.91%	6.27%
US	30.99%	59.35%	9.66%
Hungary	38.14%	56.72%	5.14%
Italy	33.33%	59.74%	6.93%
Netherland	19.16%	69.33%	11.51%
Norway	11.62%	73.47%	14.90%
Sweden	17.25%	66.28%	16.47%
Czech Republic	37.62%	56.92%	5.46%
Slovenia	36.09%	60.75%	3.16%
Poland	55.93%	41.58%	2.49%
Bugaria	67.69%	31.22%	1.09%
Russia	76.49%	22.72%	0.79%
New Zealand	30.42%	62.61%	6.97%
Canada	28.93%	61.37%	9.70%
Philippines	48.54%	44.08%	7.38%
Japan	23.65%	60.27%	16.08%
Spain	29.85%	63.43%	6.72%
France	20.03%	65.06%	14.91%
Portugal	45.09%	50.68%	4.22%

³ http://www.35h.travail.gouv.fr/actualite/communiqu/index_communique.htm

Denmark	10.76%	75.58%	13.66%
Switzerland	13.41%	69.79%	16.80%
AVERAGE	32.71%	58.68%	8.61%

Source: <http://www.za.uni-koeln.de/data/en/issp/codebooks/s3090cdb.pdf>

As pointed out by Table 2, almost one third of all workers would like to work more hours. A closer look at the European countries reveals more interesting insights. The European Commission periodically runs a labor market survey to address the situation in the states members. As shown in Table 3, the '90s experienced a dramatic increase in the percentage of workers that would have liked to work more hours at their present working wage, possibly as a consequence of the tightening of the hours regulation in some countries.

Table 3. Preferred working time in EU. Source: European Commission (1995)

	1989	1994
<i>Less</i>	37%	29%
<i>As long</i>	51%	48%
<i>Longer</i>	8%	21%
<i>No reply</i>	4%	2%

Workers with a desire to work more hours than they are allowed have two possible options to overcome their constraint: either they can seek a second job or their spouse could decide to enter into the labor market⁴.

This paper looks at the relationship between working hours regulation and the decision to hold two jobs. In particular, we want to shed light the on the effect of standard hours and overtime regulation on the probability of moonlighting. It is well established in

⁴ This option is available, of course, only to married people and it follows from Becker's idea of the time allocation inside the household. As a matter of fact, Krishnan (1990) has found evidence that the decision of the wife to enter in the labor market is a substitute for the decision of the husband to get a second job.

the literature that higher levels of overtime premium decreases the amount of overtime worked, since it decreases the quantity demand for overtime. If higher overtime premiums command a lower level of overtime worked, we would expect higher levels of dual job holding in countries with lower standard hours. However no study presents any empirical evidence of the impact of hours regulation on dual job holding. This has important policy implications, since it could be that any work-sharing policy is ineffective in raising employment, because it would actually cause more people to be looking for jobs, creating a situation in which workers seeking for a second job are competing against unemployed.

The first study looking at overtime and dual job holding dates back to Perlman (1966). Perlman spells out the theoretical condition for overtime and moonlighting to occur as possible responses to inflexibility in work schedule. However nothing is said about the linkage between these two alternatives. Paxon and Sicherman (1996) found some evidence in the US of dual job holding as a temporary solution to situations of underemployment, while looking for the job with the optimal hours of work. Friesen (2001) explicitly explores the effectiveness of working time regulation in terms of increasing employment in Canada. Standard hours and overtime pay vary across the Canadian provinces, thus creating the necessary conditions for the empirical evaluation of work-sharing policies. Her results do not support the idea that reductions in the working week can be used to promote employment. She finds, also, that moonlighting is higher in regions with stricter limits in the weekly hours. Using international data, this study analyzes how moonlighting responds to variations in the hour regulation. A bivariate

probit model specifies the joint probability of either working overtime or holding a second job.

Data

This study uses data from the Luxembourg Employment Survey (LES). The LES is a project that aims at harmonizing the labor force surveys of 16 different countries. Here, a sample of 8 OECD countries has been chosen to analyze the effect of hours regulation on the probability of holding two jobs for men. Table 4 reports the list of the countries in this study, their original dataset and the reference year for the data available.

Table 4. Countries, years and survey data.

COUNTRY	YEAR	SURVEY NAME
<i>Canada</i>	1997	Labour Force Survey
<i>Finland</i>	1990	Työvoiman vuosihaastattelu sysky
<i>France</i>	1997	Enquête sur l'emploi
<i>Luxembourg</i>	1992	Enquête annuelle sur les forces de travail
<i>Spain</i>	1993	Encuesta de poblacion activa
<i>Sweden</i>	1990	Svenska arbetskraftsunders-ökningen (AKU)
<i>Switzerland</i>	1997	Enquête suisse sur la population active (ESPA)/ Schweizerische Arbeitskräfteerhebung (SAKE)
<i>United Kingdom</i>	1997	National labour force survey (NLF) ⁵

In each survey, the respondents answered questions related to their employment condition during the reference week. Table 5 reports some descriptive statistics about the labor market characteristics in each country in this study.

⁵ Material from NLF is Crown Copyright; has been made available by the Office for National Statistics through the ESRC Data Archive; and has been used by permission. Neither the Office for National Statistics nor the ESRC Data Archive bear any responsibility for the analysis or the interpretation of the data reported here."

Table 5. Summary statistics

COUNTRY	# Observation	% moonlighting	% overtime	Average Overtime Hours
<i>United Kingdom</i>	11670	3.41	63.32	10.35
<i>Finland</i>	11851	8.31	46.32	6.57
<i>France</i>	31588	2.67	9.04	7.89
<i>Luxembourg</i>	4287	0.91	7.58	9.08
<i>Spain</i>	38640	2.11	0.68	11.63
<i>Sweden</i>	23527	8.33	33.59	9.29
<i>Switzerland</i>	5178	4.44	40.87	8.19
<i>Canada</i>	30397	5.05	19.63	10.14

The rate of moonlighting varies substantially across the 8 countries, from a lowest of about 1 percent for Luxembourg up to more than 8 percent for Finland and Sweden. Even more dramatic is the variability of the share of workers reporting some overtime during the reference week, with Spain having the lowest rate (less than 0.7 percent) and UK the highest use of overtime (more than 60%). On average, workers that reported some overtime worked only 6.5 extra hours in Finland, but more than 10 hours in the UK and Canada.

On average, people working on only one job work just above 40 hours per week (see Table 6). Except for Luxembourg, moonlighters work fewer hours on the main job. This may be due to either the constraint on the hours they can work on the main occupation or to a desire to shift some working time from the main to the secondary job. We have to bear in mind that individuals do not moonlight only to respond to an hour constraint. Even in a world without any hours constraint, we could still observe some individuals holding two jobs, simply because the second job has some non-pecuniary characteristics that are not available on the other job.

Table 6. Hours worked

COUNTRY	<i>hours on job 1 (non dual jobholders)</i>	<i>hours on job 1 (dual jobholders)</i>	<i>total hours for dual jobholders</i>
<i>United Kingdom</i>	43.95	41.30	53.35
<i>Finland</i>	41.63	38.62	53.37
<i>France</i>	41.35	38.08	51.62
<i>Luxembourg</i>	41.79	44.08	60.77
<i>Spain</i>	40.92	37.01	53.39
<i>Sweden</i>	41.17	38.92	51.07
<i>Switzerland</i>	43.00	36.57	48.6
<i>Canada</i>	41.00	37.26	52.09

We believe that the unusual results for Luxembourg are driven from the small numbers of moonlighter present in this dataset (only 39 observations). As expected moonlighters have more hours per week than people working on just one job do.

Table 7 breaks down the pool of moonlighters according to the occupation on their main job. Here the International Standard Classification of Occupations 1988 (ISCO-88) provided by the International Labour Organization has been used to define the different classes of occupations⁶.

Table 7. Moonlighting and Occupation on the First Job

	SWITZERLAND	FINLAND	FRANCE	LUXEMBOURG	SPAIN	SWEDEN
<i>Officer</i>	0.9%	0.6%	0.7%	0.0%	0.2%	3.6%
<i>Manager</i>	0.0%	8.6%	9.2%	17.9%	10.9%	7.1%
<i>Professional</i>	11.3%	7.1%	11.0%	5.1%	11.1%	5.5%
<i>Teaching</i>	4.5%	6.4%	10.0%	7.7%	5.2%	6.4%
<i>Other Prof.</i>	6.3%	4.3%	5.8%	2.5%	4.2%	5.5%
<i>Technicians</i>	19.4%	12.8%	15.6%	7.7%	6.0%	11.7%
<i>Clerks</i>	9.0%	5.0%	4.9%	17.9%	8.5%	6.9%
<i>Service</i>	6.8%	4.3%	2.4%	5.1%	6.7%	10.3%

⁶ UK and Canada used a country specific code for the occupation classification, thus they are not included in the table.

<i>Agriculture</i>	10.4%	11.9%	14.4%	0.0%	14.4%	3.0%
<i>Craftsmen</i>	30.6%	21.1%	10.9%	12.8%	11.8%	23.2%
<i>Operators</i>	0.5%	10.2%	10.1%	12.8%	8.2%	8.4%
<i>Laborers</i>	0.5%	6.9%	4.2%	10.3%	12.3%	7.5%
<i>observations</i>	222	985	1144	39	1009	1965

On average across all countries, almost 1 dual jobholder out of 5 is a craftsman on his first job, thus making this occupation the main supplier of moonlighters. Interestingly, craftsmen appear to be the occupation with the heaviest use of overtime too (see Table 8), thus suggesting that the hour constraint is a serious concern for these workers.

Table 8. Percentage of workers using overtime by Occupation

	SWITZERLAND	FINLAND	FRANCE	LUXEMBOURG	SPAIN	SWEDEN
<i>Officer</i>	14.43%	0.52%	0.14%	0.02%	0.12%	3.60%
<i>Manager</i>	-	10.28%	6.77%	10.36%	8.17%	5.63%
<i>Professional</i>	7.39%	5.06%	5.55%	4.96%	2.91%	4.23%
<i>Teaching</i>	1.55%	2.77%	2.62%	3.39%	2.56%	3.75%
<i>Other Prof.</i>	3.40%	2.84%	2.11%	2.44%	1.60%	3.40%
<i>Technicians</i>	14.24%	13.64%	15.51%	8.69%	5.79%	13.28%
<i>Clerks</i>	11.50%	5.18%	6.55%	16.19%	8.53%	5.54%
<i>Service</i>	6.01%	4.81%	5.52%	5.33%	9.50%	11.55%
<i>Agriculture</i>	6.80%	8.65%	5.21%	2.21%	10.60%	2.36%
<i>Craftsmen</i>	43.80%	24.70%	25.05%	27.35%	25.03%	29.08%
<i>Operators</i>	2.95%	13.56%	17.37%	11.61%	13.68%	8.84%
<i>Laborers</i>	0.88%	7.24%	6.13%	7.27%	10.96%	7.72%
<i>observations</i>	4642	10978	29434	4015	36932	17539

Individuals working in a public establishment tend to have a higher participation rate in the secondary job market (Table 9). However, when we split people working in the private sector between employees and self-employed, we do not find significant a difference between the moonlighting rate for people in the public sector and self employed.

Table 9. Moonlighting and sector of the establishment on the main job

COUNTRY	PUBLIC	PRIVATE	SELF EMPLOYED
<i>United Kingdom</i>	5.80%	3.46%	4.96%
<i>Finland</i>	11.98%	7.44%	8.92%
<i>France</i>	3.98%	2.70%	5.62%
<i>Spain</i>	3.51%	1.86%	3.06%
<i>Sweden</i>	15.14%	9.15%	11.83%
<i>Canada</i>	5.96%	4.89%	6.23%

Unfortunately we cannot have a comprehensive picture of the occupations on the second job, since only five countries reported this information, three of which use the standard ISCO-88 classification. Table 10 reports the composition of the occupations on the second job for the set of countries that use the ISCO-88 classification.

Table 10. Occupation on the second job

	SWITZERLAND	SWEDEN	SPAIN
<i>Officer</i>	8.55%	8.14%	13.45%
<i>Manager</i>	-	20.00%	10.76%
<i>Professional</i>	7.26%	4.02%	10.39%
<i>Teaching</i>	16.67%	5.29%	6.11%
<i>Other Prof.</i>	9.83%	8.65%	5.50%
<i>Technicians</i>	17.52%	5.14%	7.46%
<i>Clerks</i>	2.99%	6.36%	3.18%
<i>Service</i>	7.26%	15.27%	7.95%

<i>Agriculture</i>	8.55%	4.33%	33.13%
<i>Craftsmen</i>	6.84%	6.92%	3.91%
<i>Operators</i>	3.42%	5.70%	4.40%
<i>Laborers</i>	11.11%	9.06%	5.87%

No common trend can be extrapolated for these three countries. In Switzerland individuals end up moonlighting mainly as teachers or technicians. In Sweden they moonlight primarily in the “service” while in Spain an overwhelming portion of the dual jobholders (33.13%) moonlights in agriculture⁷.

Results

An underemployed worker may either work overtime or seek for a second job. Hence we model our problem as a bivariate probit, where one equation defines the probability of working overtime and the other defines the probability of holding two jobs. The set of variable appearing in the two probit equation is identical. Two variables are included in the model to capture the features of the country’s working week regulation: the usual number of hours worked on the main job (H1), and the overtime premium (OP). When the overtime premium is not regulated by the country’s law, but is left to collective contract agreements, we use the average overtime premium paid in that country⁸. Using one overtime premium rate for every worker in a given country is not the ideal way of analyzing the impact of the overtime regulation on the decision to hold two jobs. In fact

⁷ Less overwhelming, but still relevant is the proportion of people moonlighting in agriculture for France : 15.53%

⁸ The average paid overtime premium has been found to be 25% in UK, 50% in Spain, and 88% in Sweden. Source: “*Structure of Earning Statistics-1995*”, EUROSTAT.

even in countries with a statutory overtime premium, parties can bargain for higher premium. Moreover, unpaid overtime is not an unheard of phenomenon, especially for professional, managerial and self-employed workers who lack entitlements to overtime payments. Finally, collective contracts sometimes allow the employer to compensate overtime with paid vacations rather with an increase in the hourly wage. Thus, by using only one premium rate we definitively lose some information. Unfortunately, this is the best we can do since information about the overtime premium is not available in the LES project. We identified a total of 4 overtime regimes: 25, 50, 88, and 100% more than the regular pay. The overtime premium can affect the probability of working overtime in two different directions. On one hand, an increase of the premium should increase the probability of accepting overtime, but it also decreases the number of hours for overtime a firm will demand. Since it is been consistently found in the literature that higher levels of overtime premium command less overtime worked, we expect moonlighting to increase with an increase in the rate of the overtime premium. Similarly, we expect a negative correlation between H1 and moonlighting, i.e. shorter working week should increase the probability that workers feels underemployed and needs to integrate their hours supplied on the main job with a second job to fulfill their target of hours per week

Previous studies⁹ have found evidence that a great number of dual jobholders work on two jobs for reasons different than the hours constraint. For these people the decision to hold two jobs should be unaffected by the weekly hours regulation. Unfortunately the LES does not collect information about the motivation for holding two

⁹ See Averett (2001) and Kimmel and Conway (2001).

jobs. However, to correctly estimate the impact of the hours regulation on moonlighting we have to control for these different motivations that may induce dual job holding. Thus, we proceed at the following way. First of all, we restrict our estimation to employees only, since self-employed can freely decide how many hours to work¹⁰, hence making the hours constraint an unreasonable assumption for this class of workers. Furthermore, it overtime premium has no meaning for self-employed, since they are not remunerated according to a predetermined hourly wage. Hence, any overtime-premium regulation should leave the decision to moonlight unchanged for these individuals¹¹.

It can be also assumed that people with higher levels of education most likely will work in occupations not heavily controlled by union contracts and hence more flexible. Adding a variable that identify the education level attained by the individual, can control for this factor. Since each of the 8 countries in the study adopted a different education system, we decided to simply create a dummy variable that takes the value of 1 if the individual has a certificate classifiable as “ISCED (International Standard Classification of Education) Level 3” or lower (NOCOLLEGE). Therefore, workers that earned a higher degree of ISCED level 3 are the reference group. ISCED Level 3 is equivalent to a High School Diploma and it corresponds to either 12 or 13 years of schooling, according to the country’s education system. Moreover, we included the dummy variable “WHITE” that identifies if the main occupation of the worker can be considered a white collar,

¹⁰ An exception to this rule is the regulation in some European countries on the time that shops can be open for business.

¹¹ We run a bivariate probit for self employed workers. In support of our assumption we found that the coefficient on OP is insignificant for this class of workers.

because it can be assumed that white collars are less inclined to face an hours constraint on their occupation.

Table 11 shows the results of the probit estimation. Pooling the 8 surveys together, we obtain a total of 96,505; 4.29 percent of the individuals in the sample reported two jobs in the reference week, while 20.6 percent reported some overtime.

Table 11: Results for the Bivariate Probit Regression*

VARIABLE	MOONLIGHTING	OVERTIME
Constant	-3.3918 (0.000)	-28.7422 (0.000)
H1	-0.0256 (0.000)	-0.0045 (0.000)
OP	0.0048 (0.000)	-0.0030 (0.000)
NOCOLLEGE	-0.1414 (0.000)	-0.1793 (0.000)
WHITE	0.1325 (0.000)	2.0050 (0.000)
YEAR	0.0315 (0.000)	0.3297 (0.000)
UNEMPL	-0.7525 (0.000)	-3.6440 0.000
AGE 30-34	0.0277 (0.311)	0.0322 (0.071)
AGE 35-39	0.0648 (0.017)	0.0298 (0.098)
AGE 40-44	0.1057 (0.000)	0.0002 (0.993)
AGE 45-49	0.0746 (0.009)	-0.0603 (0.002)
AGE 50-54	0.0540 (0.080)	-0.0688 (0.001)
AGE 55-59	-0.0088 (0.802)	-0.1779 (0.000)
MARRIED	0.0735 (0.000)	0.0178 (0.138)
Rho		-0.0347
Likelihood Ratio Test (rho =0)		10.0772

*P-value are reported in parenthesis

The probability of holding two jobs increases with age but not in a linear fashion, peaking between the age of 40 and 44 and declining afterward, until there is no systematic difference with respect to the reference group (age 25-29). Overtime is more frequent for people between the age 30-34. Since the surveys used in this study refer to different years, we included a time trend variable (YEAR) to capture possible international economic conditions that affected the moonlighting market. The trend variable indicates an increase in the rate of moonlighting during the 90's. At the same time we want to control for possible national macroeconomic conditions that may have influenced the local labor market. A possible solution to this problem would have been a regression that can condition out the country fixed effect. However, this procedure cannot be implemented in the probit regression¹². Furthermore, even if we had used a different procedure that allows for the fixed effect, since some overtime premia are country specific, we should have dropped this variable from the estimation. Conversely, in this paper we are interested in estimating the effect of the overtime premium on the decision to hold two jobs. Hence we decided to use a different approach, by introducing a variable that would vary across the countries, but would be constant for a country and could catch any macroeconomic factor specific to a country. We found the national rate of unemployment to be a natural choice for this variable (UNEMPL). We constructed this variable to be the ratio between the current unemployment rate and the long run unemployment rate, in order to capture deviations from it. We uses the average over the

¹² The fixed effect can be run only with the logit.

1990-1997 period as a proxy for the long run unemployment rate. The coefficient on this variable is negative and strongly significant.

Finally, our two hours regulation variables have the predicted sign. Lower standard hours increase the probability of overtime or moonlighting. In particular, our model predicts that decreasing the weekly hours from 39 to 35, as proposed in France, would increase the conditional probability of moonlighting by 1 percent points¹³. Given the static nature of the model estimated in this paper, strictly speaking we cannot make any behavioral interpretation out of these results. However, we would like to make some comparison with the statistics released by the French government. Since the French working population stood at 26 million in 2000¹⁴, our model would predict that because the Aubry Law the labor supply of moonlighters would have increased by 260,000 individuals. The official statistics of French government claim that the Aubry law created the demand for 175,000 new jobs in that year. We cannot directly compare these two numbers because the jobs created were full-time while, on average, a dual jobholder works only 15 hours on the second job. Moreover as March 8, 2000 only 42 percent of the employees were covered by contracts with the new statutory hours, so we don't have a complete picture of the total effect of the Aubry law. On the other hand, we should also point out that the statistics released by the French government are inflated since they do not take into account the positive effect on employment due to an overall improvement in

¹³ This results has been obtained by calculating the probability of observing a worker holding two job conditional on the probability of no overtime. We evaluated this conditional probability at the mean values of the dependent variables, excepted for UNEMPL for which we used 9.8% (i.e. the unemployment rate in France in 2000), the overtime premium of 25%, and YEAR=2000. We then take the difference between the estimated probability at H1=39 and the estimated probability at H1=35.

¹⁴ <http://www.france.diplomatie.fr/france/gb/geo/popu04.html>

the French economy in that year. In conclusion, we can assert that the impact of the Aubry law was less effective than anticipated and publicized.

We also found that the overtime premium has a very influential effect on the decision to moonlight and on the probability of working overtime. As shown in Table 9, the estimated conditional probability of holding two jobs (evaluated at the means of the independent variables) more than doubles when the overtime premium increases from 25 to 100 percent. Hence, in light of these results we conclude that an increase in the overtime premium decreases the amount of overtime being worked, thus inducing more people to seek for a second job.

Table 9.

Overtime premium	Estimated Conditional Probability
25	0.0267
50	0.0350
88	0.0514
100	0.0578

Conclusion

Concerned with the still high unemployment rates in most European countries, some governments have moved toward time sharing policies. Those policies aim at stimulating employment by shifting the demand for labor from an intensive to an extensive use of workers. By decreasing the working week, employers face an incentive to hire more workers, if the cost of a new hire is still lower than the cost of paying overtime. However, a reduction of the working week together with the lack of possible overtime may lead the individual to a situation of underemployment. In order to fill the gap between the desired

and the actual hours worked, an individual may decide to hold a second job. In this paper we find that the size of moonlighting is affected by the extent of the hours regulation. In particular we show that much of the alleged creation of new jobs in France from a stricter hours regulation is offset by an increase in the supply of moonlighters. This paper highlights that in order to make a correct assessment of a specific labor policy, both the effect on the demand and the supply side have to be addressed.

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