European Work Time Regulation, Surplus-Value and Underemployment: A Cross-Sectional Analysis

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Abstract

This paper investigates surplus-value rates and work time patterns among full-time workers in five European Union economies — France, Germany, Italy, Spain and the UK — using macroeconomic EUROSTAT data and individual-level data extracted from the 2009 Labour Force Survey. This is considered in terms of the constituent drivers of the rate of surplus-value, in particular working hours. France and the UK are of most interest in terms of work time regulation because of the exceptional nature of their relationship to the European Working Time Directive (1993). The UK is characterised by absolute surplus-value production, whereas we can partially attribute low levels of surplus-value in France to lower working hours. While this signals some success for workers, evidence indicates this may also have repercussions for income levels and the family. In the French case reductions in hours may have also depressed real wages (somewhat counteracting the effect of reduced hours in producing low levels of surplus-value), causing underemployment for some, particularly in the 'technicians and associate professionals' and 'all other occupations' categories. We argue this accounts for the stated desire of some French workers in (relatively) low-paid occupations to work more hours than they do at present.

1. Introduction

Marxian and radical economics remain extremely important heterodox economic traditions. The intention of this paper is to illustrate this through an investigation of conflict over the distribution of income, and struggle over the intensity and duration of work, in a number of large European Union economies. Developing an approach outlined in Dunne (1991) — termed quantitative Marxism — we utilise EUROSTAT data to examine three areas of interest to Marx: (i) the rate of surplus-value: (ii) the legal restrictions on working hours; (iii) workers' preferences vis-à-vis work time. The policy context, specifically the EU Working Time Directive (WTD), provides a backdrop to this debate, as does the extent of implementation of work time regulation in two exceptional countries: the UK and France.[1]

The UK is noteworthy for its *laissez-faire* approach to labour market regulation. Its specific incarnation of the WTD, the Working Time Regulations (WTR), which were

implemented in October 1998, involve a voluntary opt-out whereby workers may sign a waiver foregoing their rights under EU law. In contrast, in France, the Aubry Laws (e.g. law No. 2000-37), effective from February 2000, legislated for a statutory maximum work week of 35 hours for companies employing more than 20 people in exchange for social security rebates paid to firms for each employee. These laws turned attention to employment generation and productivity increase, coupled with reductions in working hours. Work-time reductions were to be achieved with no loss of pay, in exchange for work-time reorganization and labour flexibility (Fagnani and Letablier, 2007). However, implementation of the WTD in both the UK and France has come under scrutiny.

The French economy experienced an initial positive economic response to reductions in working hours (LaJeunesse, 2009, 213; Hayden, 2006; Durand et al, 2004) with the majority of employees reporting improved work-life balance (Fagnani and Letablier, 2007). However, it has since been argued that these positive outcomes were a coincidence of economic recovery in France at this time, and that initial implementation may have actually retarded the French economy and increased work intensity and stress for a significant minority of workers (Philpott, 2005; Fagnani and Letablier, 2007). Amendments, including the addition of an opt-out in certain sectors (e.g. health), have since relaxed the Aubry Laws in France. Meanwhile, continued evidence of long hours in the UK, and judgements at the European Employment Council (on the 9th June 2008) regarding the working conditions of doctors, oil rig workers and those whose job involves being "on call", has led to a series of revisions seeking stronger application of the WTD in the UK. Interestingly, recently, the UK coalition government has sought to revise the application of the working time directive in the UK (see Guardian, 2011), this being consistent with the anti-WTD policies of previous Conservative administrations (Philp, 2001). It is in this context that this paper examines work time in comparison to EU economies, seeking to ascertain the impact of French and UK legislation.

In other work on the UK we have argued that working time reduction is often desirable, focussing on managerial and professional workers (Wheatley et al 2011; Philp and Wheatley 2011).[2] This notwithstanding, we must also be mindful that stagnant wages are a concern of workers more generally, and there is a trade-off, in terms of wellbeing, between low wages and long hours. In other words, at particular junctures there is the

possibility of underemployment, such as when full-time workers (i.e. those working above 30 hours a week) desire more work and associated pay. This has been observed in various countries in recent years, with workers facing problems emanating from the financial sector, and the implementation of austerity measures by government, coupled with labour shedding in the private sector. In this context, in the present study, we are going to be concerned with the following question posed on the 2009 Labour Force Survey (LFS): *Do you wish to work usually more than the current number of hours?* In examining this question we are interested in whether there is a problem of underemployment, particularly in the French case of the Aubry Laws. Our study focuses on full-time workers — those working more than 30 hours a week — therefore we will not be considering involuntary part-time working, which is another form of underemployment, causing particular hardship.

In the next section we will outline a basic Marxian surplus-value model, comparing the case of France, Germany, Italy, Spain and the UK. This will be related to the working hours of full-time employees and we will consider the patterns of surplus-value extraction in these large EU economies. In the subsequent section we will consider the preferences for increased hours in the countries to be investigated, seeking to ascertain the extent of underemployment among full-time employees, via a focus on workers' stated preferences for increased hours. After initial investigation of the descriptive statistics we consider the characteristics of those individuals (men and women) who report a preference for more hours. In the final section we conclude, arguing that the WTD is a progressive legislative structure. However, deviations from it can create problems of overwork (in the case of the UK Working Time Regulations) or underemployment (in the case of the Aubry Laws). That said, we do not believe the latter problems are insurmountable if accompanied by targeted legislation aimed at alleviating problems of low pay in particular occupations. Our argument is that it is this that should be the focus of French legislators, rather than further weakening of the Aubry Laws.

2. Macroeconomic Context: Surplus-Value and Descriptive Statistics

In our empirical analysis we adopt a quantitative Marxist approach, i.e. we use quantitative data to examine and test Marxian theoretical propositions and models. In

this section we use simple descriptive statistics to examine distribution and working hours in a surplus-value framework. In the next section we address the issue of workers' preferences for hours using data extracted from the 2009 European Labour Force Survey (ELFS). First, however, we shall offer some justification of the approach used.

There are many valid critiques of mainstream economics and its ubiquitous application using econometrics. These critiques are diverse, ranging as they do from those which suggest that mainstream economics relies centrally on mathematisation and the application of econometrics (McCloskey, 1986; Spencer, 2009, 129), to those who see more fundamental problems lying behind such an approach to social scientific investigation (Lawson, 2003). In the present paper we use econometric techniques to explore issues of traditional interest to Marxists. This will be unacceptable to those who see such techniques as fundamentally flawed, but we would argue such techniques have some limited use, which we will hope to demonstrate.

Data considerations are important since we use EUROSTAT and the ELFS to investigate issues of traditional interest to Marxian economists. Broadly, there are three approaches which can be adopted in selecting the quantitative Marxist data for examination (Dunne, 1991): (i) researchers can attempt to measure Marxian categories directly; (ii) orthodox data could be adjusted to make it closer to the required Marxist categories; (iii) we can use Marxist theory to attempt to explain the movement in the orthodox statistics. Of these three approaches the first is most difficult in terms of data gathering, leading to problems with small samples and a lack of aggregate evidence. The second approach has offered important insights into capitalist economies (e.g. Gouverneur, 1990), but often the categories map unsatisfactorily and the most appropriate types of data are gathered infrequently. The final approach is least problematic in terms of data requirements, but the specific Marxian insights we can garner are limited (though, we contend, not eradicated). The implication is that no one method of data acquisition is unproblematic, and we would concur with Dunne who suggests: 'these approaches should complement each other, using different types of data to answer different questions at different levels of abstraction' (1991, 9-10).

Orthodox macroeconomics concerns itself with growth rates, inflation, unemployment and the balance of payments. In heterodox economics distribution is a central topic for investigation, both as an end in itself and in relation to how it affects, and is affected by, other variables (e.g. growth). In Marxian economics surplus-value is a key distributive variable. In this context, surplus-value is defined as the total of profits, interest and rents, divided by variable capital advanced to workers. At this point it is important to recognise that theoretical problems have confronted Marxian economists, with the relationship between value and price having been deemed by some to be particularly problematic. In the early 1980s an approach developed — the "new interpretation" — which sought to place Marx's theory within a macroeconomic framework which focussed on distribution of the *net* product (for example see Duménil, 1983-4; Foley 1982, 1986). In money terms the net product would be divided between aggregate profits (inclusive of interest and rent) and aggregate wages. Equivalently, the labour time involved in producing the net product can be divided between the time taken to produce the equivalent of what the worker consumes, set in contrast to the residual (which accrues to the capitalist class). Thus, according to Mohun (1994), the new interpretation provides the basis for unifying these different aspects of Marx's reasoning in a non-dualist framework: 'net output as an aggregate of labour-times is divisible into aggregate necessary labour and aggregate surplus labour, and as a money-value sum into aggregate variable capital and aggregate surplus-value' (403).

In Marx's (1976) treatment of surplus-value in the first volume of *Capital* he focusses on three elements which are important drivers in changing the rate of surplus-value. First, if the length of the working day increases for workers, all else being equal, this increases the labour time devoted to producing the capitalist income stream (or surplus labour time). Accordingly, the rate of surplus-value will rise since there is an increase in the quantity of surplus labour time performed by workers: this implies a process of absolute surplus-value production. A second way to increase the rate of surplus-value is via relative surplus-value production. If there is productivity increase (caused by more effective monitoring of workers, using machinery, or a more extensive division of labour) this suggests that a given real wage can be produced more quickly by workers. In turn, for a given working day, the rate of surplus-value rises as the time taken to produce the real wage falls, while the time devoted to producing surplus-value increases. In this case

the numerator of the rate of surplus-value is rising, while the denominator is falling. In Marx's historical analysis he pointed to absolute surplus-value production being important in Britain in the early nineteenth century, whereas relative surplus-value predominated in the late nineteenth century (as a result of the Factory Acts restricting hours worked). It is also interesting that in the wake of more recent restrictions on working hours in France (associated with the Aubry Laws) attention turned towards increasing work intensity (Fagnani and Letablier, 2007), this being consistent with a shift from absolute to relative surplus-value production. A final way to increase the rate of surplus-value is to reduce the real wage (the so-called immiseration thesis). *Ceteris paribus*, this implies that the time the worker takes to produce the equivalent of their income is reduced, since the latter has fallen.

It is important to note that in Marx's analysis he framed these conflicts in term of their adverse effects on workers (i.e. increased intensity of work, longer working hours and reduced real wages). However, over the last century and more the long run trend in developing countries has been for falling working hours (the opposite of absolute surplus-value production) and rising real wages. There may be periodic reversals of these secular trends, but they tend to be short-lived. And, we contend, it has been possible for capitalism to maintain viable surplus-value rates through an on-going process of relative surplus-value production, which makes reduced working hours and increased wages possible in capitalist production.

The experience of the five countries identified at the outset of our paper is, however, by no means the same in this regard. In the context of work time the relationship between average full time working hours and levels of GDP per capita (which we will use to proxy net product per person) for the five countries we are investigating is outlined in figure 1. In the UK working hours for full-time workers were highest, averaging 45.4 hours per week. In Germany such working hours were 41.9, in France 40.7, in Italy 40.5, and in Spain 40.0 hours per week. Concurrently, GDP per capita in Germany was 116% of the EU27 average. In the UK this was 111%, in France 108%, in Italy 104% and in Spain 103% of the EU 27 average. This data appears to indicate there is a positive relationship between these two variables, with full time employees in the northern European economies tending to work longer average working hours (with higher GDP

per capita) than is the case in Spain and Italy. This trend notwithstanding, it is also apparent that the UK is an outlier, with full time employees working far longer than their counterparts in the other European economies under investigation. Recent research also identifies a continued incidence among some UK employees (17.7% of employees in 1995-2006) of working 'excessive hours' i.e. hours over 48 hours per week (Messenger, 2011, 302). This may be attributed to the voluntary "opt-out" which workers can elect to take under UK work time regulation. This would result in fewer workers expressing a desire to increase hours; but, the corollary to this is that management coercion vis-à-vis long working hours is more likely, with pressure being placed on employees to sign the waiver, even though this doesn't reflect their true preferences (Wheatley et al 2011). In contrast, in France, proportions working over 48 hours per week declined between 1995 (approximately 10.5%) and 2000 (9%) following implementation of the Aubry Laws (see Messenger, 2011, 302), although it should be noted they have increased following more recent amendments to the French policy. Although, long hours are evident in Germany, work-time reductions have been achieved in recent years. This has primarily been the result of the collective bargaining of trade unions, and increased incidence of work sharing (LaJeunesse, 2009, 221) especially since the on-set of the global financial crisis.

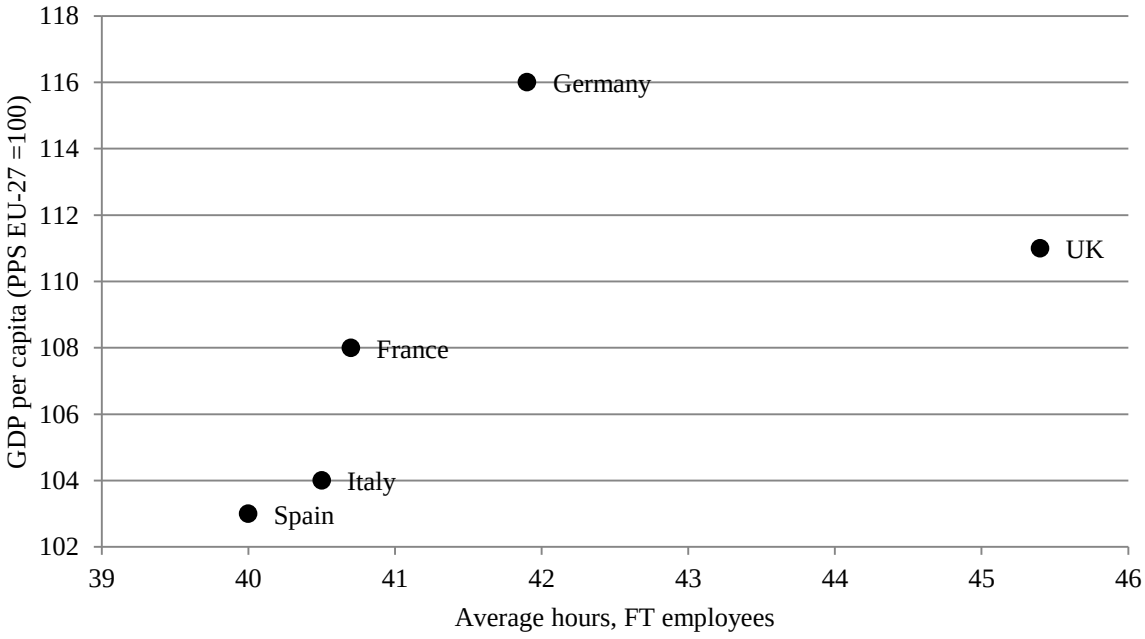

Figure 1: GDP per Capita and Average Full Time Working Hours

As noted above, surplus-value is a key Marxian macroeconomic variable. In figure 2 we provide an estimate of the rate of surplus-value in each of the five economies under consideration. Using data extracted from EUROSTAT, we calculate total corporate profits for private sector financial and non-financial corporations, and divide by the remuneration paid to employees in those organisations. This gives an estimate of the rate of surplus-value (which excludes the wages of the self-employed and public sector workers in the denominator).[3]

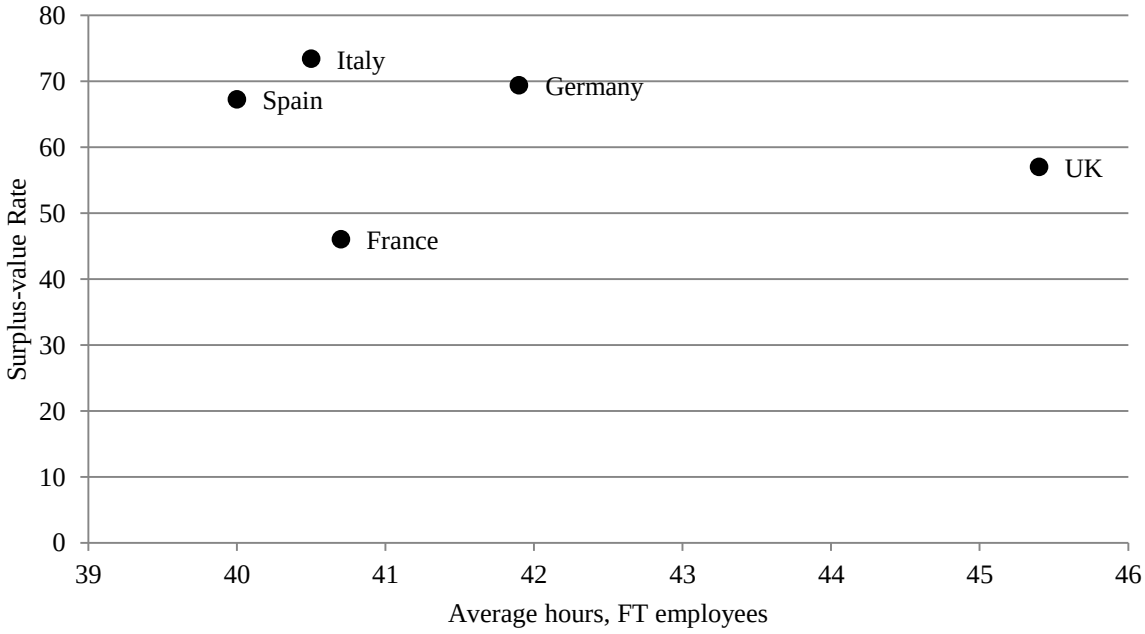

Figure 2: Surplus-Value Rate and Average Full Time Working Hours

Evidence on surplus-value rates is interesting. The rates appear to be high in Italy, Spain and Germany, whereas they are somewhat lower in the UK and, especially, France. As we might expect these rates are supported in Italy and Spain by low private sector earnings (see table 1). The French case is interesting, too, with private sector earnings in 2009 averaging €2517 less than UK earnings, and €5570 less than average gross annual private sector earnings for full-time employees in Germany. This suggests that both wages and profits have been somewhat impacted by reduced working hours in France, but the main driver in the low surplus-value rate is reduced working hours relative to Germany and the UK.

Overall, the evidence on the five economies under investigation tends to suggest the following. France is a middle-earning, low surplus-value economy, characterised by relatively short working hours. Germany is a high productivity, high wage economy where emphasis is placed on relative surplus-value production. Italy and Spain are characterised by relatively low wages which drive high rates of surplus-value. UK private sector earnings are high, but the hours worked are the longest in the examples studied. This may indicate a low level of relative surplus-value production. These results accord with what we might have expected *a priori*. However, in the next section we shall relate the macroeconomic context to individuals' preferences concerning work-time. In so doing we shall try to ascertain the extent of underemployment among full-time employees in the countries under investigation.

France	35 530
Germany	41 100
Italy	27 419
Spain	26 316
UK	38 047

Table 1: Average Gross Annual Private Sector Earnings (Full-Time Employees), €

3. Preferences for Increased Hours

In the paper thus far we have considered the patterns of work-time, wages and surplus-value. Using 2009 macroeconomic data we presented the differences in the rates of surplus-value in these countries, focussing on differences in work-time and the regulatory framework in place in each. Germany, Italy and Spain have endorsed the WTD, albeit with a shorter maximum working week of 40 hours in Spain (but with allowances of lengthier hours within a reference period), and a daily limit of 8 hours of work in Germany, rather than a weekly limit (Eurofound, 2008). In France a more stringent form of regulation — the Aubry Laws — is adopted. In the UK the WTR provide a framework which resembles the WTD, except in one vital regard: workers can opt-out of the regulations if they sign a voluntary waiver. In this section we will explore these countries paying careful attention to whether full-time workers desire longer hours. This will indicate the extent of dissatisfaction with the restrictions the WTD

entails, and will also allow us to ascertain whether there is underemployment among full-time employees in the countries under investigation.

The ELFS provides micro-data for EU nations in respect to a range of relevant time-use, occupational (using *International Standard Classification of Occupations* (ISCO 88) Major Groups), and demographic variables. This data is also chosen as, for the first time, the 2009 data provides detail on incomes (using a decile measure), with the exception of Spain. An alternative data source used in other research examining a range of European economies, including Mandel and Semyonov (2005), is the *Luxembourg Income Study* (LIS). However, the LIS only provides periodic data (last available data 2004/5 at the time this research was conducted), and offers a smaller sample size. The use of the 2009 ELFS centres the analysis on a post-financial crisis, but pre-Eurozone crisis, cross-sectional reference point.

Interpreting working hours' descriptive statistics summarised in Table 2, it is evident that working hours are longest in the UK, as are proportions working over 48 hours.[4] This is the case among all occupation groups, but is particularly pronounced among managerial occupations. Previous work has sought to connect managers' attitudes to their role in reinforcing long hours of labour in the UK labour market (Wheatley et al., 2011). These trends in work time are indicative of the minimal approach to labour market intervention in the UK, and symptomatic of absolute surplus-value production. Alongside these extensive hours of work, proportionately less workers report preferences for more hours, this being consistent with research cited previously which indicates that significant proportions of workers show preferences for reduced hours in the UK. It should be noted, though, that there has been significant growth, since 2007, in part-time working in the UK. Approximately 8.1m are employed part-time, with 1.4m of these individuals reporting preferences for increases in hours (ONS, 2012). This suggests a polarisation in employment in the UK with increases in underemployment among some groups, while extensive hours remain prominent among full-time workers.

Working hours are shorter in Italy and Spain (thus absolute surplus-value production is less significant). However, workers' preferences for more hours are also the lowest among the sampled nations, which can be contrasted with other nations under

investigation (Germany, UK) where the "protestant work ethic" may be a historical-cultural factor. Low hours may relate to social norms in southern Europe, concerning child and elder care, which has particular impacts on women's employment; thus, there is a tendency in Spain and Italy for a dichotomy between women working full-time, or being outside of the labour market entirely (Lewis, 2009, 5, 29). In Italy this is manifest with female participation rates remaining under 50% (2009, 30). Among full-time Italian and Spanish workers there is a reduced propensity for women to work excessive hours, as evident in Table 2. Further evidence of gender divisions is present in respect to preferences for more hours, which are generally lower among women (with the exception of women managers in France and Germany) likely reflecting their greater household contribution (Garcia et al, 2011; Philp and Wheatley, 2011). In comparison to Italy and Spain, preferences for more hours are greater in Germany despite hours being longer. But, while average hours in Germany are similar to those reported in France, preferences for more hours are not as pronounced. France is somewhat of an outlier with respect to preferences for more hours of work, especially among non-managerial and professional occupations. This may reflect the stringent application of working hours legislation in France since 2000, especially in the public sector, where working hours are limited to 35 hours per week (albeit this policy has been reformed in recent years). Nevertheless, what is noticeable is that even among those groups where low paid workers are likely to be concentrated — 'Technicians and associate professionals' and 'All other occupations' — the proportion expressing a desire for more hour remains fairly low, at 14.2% and 16.8% for men respectively, and 11.5% and 12.9% for women. While these rates are above those for other comparable occupation groups in the countries under investigation, the increase is not great, and the vast majority of full-time workers do not report a desire for increased hours.

Binary Logistic Regression Analysis

In order to generate a greater understanding of the drivers of preferences for more hours we shall now use binary logistic regression to consider the complex processes which underpin individuals expressing a desire for more work. Binary logistic regression models are used in this paper, as the dependent variable is dichotomous. The models consider all full-time working individuals aged 16-65. Separate models are produced for men and women. 'Preferences for more hours' is the dichotomous

dependent variable, where yes = 1, and no = 0. This variable is regressed against a range of time-use, employment, and demographic characteristics and the results of the regression analysis are summarised in Table 3 and 4.

	Men				Women			
	Mean total usual hours	**Working over 48 hours (%)**	**Prefer more hours (%)**	**n**	**Mean total usual hours**	**Working over 48 hours (%)**	**Prefer more hours (%)**	**n**
France								
Legislators, senior officials, managers	48.0	47.8	4.9	5186	43.7	24.7	5.7	3398
Professionals	43.9	29.7	6.6	9636	39.5	16.3	5.9	7431
Technicians and associate professionals	40.2	12.3	14.2	12636	38.5	5.3	11.5	11372
All other occupations	39.2	8.1	16.8	40906	38.1	6.2	12.9	28132
Total France	**40.7**	**14.9**	**13.6**	**68364**	**38.8**	**8.7**	**10.9**	**50333**
Germany								
Legislators, senior officials, managers	46.7	39.6	3.2	551	43.4	22.0	4.3	200
Professionals	43.8	21.9	5.0	1494	42.3	15.1	4.6	801
Technicians and associate professionals	41.5	11.5	7.8	1656	39.8	3.8	6.0	1800
All other occupations	41.1	8.8	9.0	5884	39.7	3.1	6.3	2522
Total Germany	**41.9**	**13.1**	**7.7**	**9585**	**40.3**	**5.8**	**5.8**	**5323**
Italy								
Legislators, senior officials, managers	44.8	32.2	2.5	2646	42.5	19.5	2.1	917
Professionals	37.6	13.9	2.2	6852	30.9	4.7	1.8	7087
Technicians and associate professionals	40.6	9.8	2.8	15465	34.9	2.0	2.0	16275
All other occupations	40.6	6.5	5.4	64667	39.0	3.6	3.8	30256
Total Italy	**40.5**	**8.4**	**4.4**	**89630**	**36.8**	**3.5**	**2.9**	**54535**
Spain								
Legislators, senior officials, managers	43.8	32.5	2.2	680	40.2	19.5	1.6	238
Professionals	39.3	14.1	3.4	2136	36.7	5.7	2.5	2855
Technicians and associate professionals	39.9	13.1	5.1	2211	38.5	4.7	4.0	1899
All other occupations	39.5	5.6	6.7	1183	38.5	1.8	5.9	2081
Total Spain	**40.0**	**14.1**	**4.0**	**6210**	**37.8**	**4.7**	**3.6**	**7063**
UK								
Legislators, senior officials, managers	49.6	47.9	3.7	7618	45.2	30.9	2.9	3777
Professionals	46.1	34.4	4.6	5856	46.8	36.7	3.1	3921
Technicians and associate professionals	43.0	25.6	6.1	4282	41.2	16.2	4.7	3764
All other occupations	44.2	26.2	8.2	19833	39.2	10.3	6.3	11232
Total UK	**45.4**	**31.9**	**6.5**	**37598**	**41.8**	**19.2**	**4.9**	**22694**

Notes: Figures are for full-time workers. Only a sub-section of the German Labour Force Survey sample is provided in the anonymised EU LFS. Source: EU Labour Force Survey, 2009.

Table 2: Working hour descriptive statistics

The results of the regression analysis suggest that lengthier working hours reduce preferences for more hours. This is consistent across all five EU economies under investigation. Levels of overtime (paid and unpaid) are more inconsistent as paid and unpaid overtime are positively associated with preferences for more hours in France and the UK, but negatively in the remaining nations. In respect to paid overtime this may simply reflect employees in some occupations attempting to increase their incomes given low wage rates. Managers are less likely to report preferences for more hours. This is consistent with the descriptive findings and is a reflection of the longer hours worked in these occupations (Wheatley et al, 2011). It also corresponds with the view that those in managerial employment will show greater resistance to work-time reductions (Bielenski et al, 2002, 13). The only exception to this is among women in Italy, but this may reflect the industries and nature of the managerial occupations undertaken by many women in Italy and/or the household and caring constraints faced by Italian working women (Lewis, 2009). As individuals age and progress through their careers, they are less likely to show preference for more hours. However, number of dependent children appears a key driver among men in Italy and Spain. This is likely to reflect the financial compunction felt by fathers when children are present, acting as a driver for preferences for more hours to increase incomes. Thus long hours are connected to financial pressure. Married men are more likely to report preferences for more hours in Italy. In contrast, married women with dependent children are less likely to desire more hours, reflecting the constraining influence of greater household responsibilities, including care (Garcia et al, 2011).

	Parameter Estimates				
	France (n = 20796)	Germany (n = 8420)	Italy (n = 82967)	Spain (n = 17039)	UK (n = 19928)
Constant	0.814***	-0.108	-1.004***	-1.411***	-0.345**
Usual hours	-0.042***	-0.056***	-0.048***	-0.043***	-0.048***
Paid overtime hours	0.024***	-0.011	-0.067***	0.007	0.032***
Unpaid overtime hours	0.042***	-0.022	-0.098***	-0.069**	0.020**
Major occupation group: reference is legislators, senior officials, managers					
Professionals	-0.123	0.084	-0.170	1.334***	0.330***
Technicians and associate professionals	0.456***	0.458*	0.351*	1.673***	0.680***
Clerks	0.657***	0.519**	0.346*	1.865***	0.886***
Service, shop and market sales	0.637***	0.479*	0.146	2.041***	0.999***
Skilled agriculture and fishery workers	0.595***	0.595	0.293	2.132***	0.354*
Craft and related trade workers	0.615***	0.619**	0.795***	2.248***	0.639***
Plant and machine operators and assemblers	0.759***	1.008***	1.226***	2.247***	1.063***
Elementary occupations	0.870***	0.784***	0.490**	2.549***	1.139***
Income (deciles)	-0.050***	-0.040**	-0.213***	—	0.004***
Age	-0.027***	-0.023***	0.001	-0.031***	-0.025***
No. dependent children (under 15)	-0.007	0.000	0.166***	0.103***	-0.004
Married	-0.003	0.128	0.350***	0.114	-0.125**
Level of Education: reference is low					
Medium	0.106**	0.640***	0.044	-0.034	0.104*
High	0.097	0.733***	0.079	-0.173**	0.037
Model Diagnostics	p-value = 0.000 Cox & Snell R^2 = 6.8 Nagelkerke R^2 = 11.0	p-value = 0.000 Cox & Snell R^2 = 4.9 Nagelkerke R^2 = 10.0	p-value = 0.000 Cox & Snell R^2 = 3.1 Nagelkerke R^2 = 9.7	p-value = 0.000 Cox & Snell R^2 = 5.2 Nagelkerke R^2 = 10.4	p-value = 0.000 Cox & Snell R^2 = 6.7 Nagelkerke R^2 = 14.6

Notes: ***, **, *respectively, refer to p-values less than 1 percent, 5 percent, and 10 percent.
The reductions in total sample size reflect non-response to certain questions. Full-time workers only.
Only a sub-section of the German Labour Force Survey sample is provided in the anonymised EU LFS.
Income data was not available for Spain.
Source: EU Labour Force Survey, 2009

Table 3: Logistic regression: prefer to work more hours (men)

	Parameter Estimates				
	France (n = 14353)	Germany (n = 4410)	Italy (n = 47835)	Spain (n = 11265)	UK (n = 11118)
Constant	1.060***	-0.832**	-0.250	-0.413	-0.276*
Usual hours	-0.039***	-0.052***	-0.048***	-0.083***	-0.057***
Paid overtime hours	0.061***	0.047**	-0.056***	0.039***	0.051***
Unpaid overtime hours	0.069***	0.031	-0.088**	0.020	0.048***
Major occupation group: reference is legislators, senior officials, managers					
Professionals	0.045	0.412	-0.553**	1.994***	0.240*
Technicians and associate professionals	0.366**	0.569	-0.362	2.328***	0.561***
Clerks	0.461***	0.487	-0.292	2.680***	0.409***
Service, shop and market sales	0.398***	1.035***	-0.252	2.774***	0.869***
Skilled agriculture and fishery workers	-0.301	0.644	-0.106	2.467***	0.616*
Craft and related trade workers	-0.084	1.033**	0.585**	2.809***	0.505
Plant and machine operators and assemblers	0.438**	0.844*	0.982***	2.951***	0.849***
Elementary occupations	0.693***	1.175**	0.342	3.341***	1.039***
Income (deciles)	-0.135***	-0.031**	-0.191***	—	0.002***
Age	-0.023***	-0.013***	-0.012***	-0.037***	-0.019***
No. dependent children (under 15)	-0.011	-0.018***	-0.036	-0.031	0.002
Married	-0.488***	-0.225**	-0.023	-0.170**	-0.493***
Level of Education: reference is low					
Medium	-0.022	0.435***	-0.052	-0.099	-0.067
High	-0.058	0.609***	0.113	-0.249***	0.092
Model Diagnostics	p-value = 0.000 Cox & Snell R^2 = 10.8 Nagelkerke R^2 = 17.3	p-value = 0.000 Cox & Snell R^2 = 6.9 Nagelkerke R^2 = 12.6	p-value = 0.000 Cox & Snell R^2 = 4.5 Nagelkerke R^2 = 13.8	p-value = 0.000 Cox & Snell R^2 = 16.3 Nagelkerke R^2 = 29.0	p-value = 0.000 Cox & Snell R^2 = 7.6 Nagelkerke R^2 = 15.4

Notes: ***, **, *respectively, refer to p-values less than 1 percent, 5 percent, and 10 percent.
The reductions in total sample size reflect non-response to certain questions. Full-time workers only.
Only a sub-section of the German Labour Force Survey sample is provided in the anonymised EU LFS.
Income data was not available for Spain.
Source: EU Labour Force Survey, 2009

Table 4: Logistic regression: prefer to work more hours (women)

Incomes are negatively correlated with preferences for more hours in France, Germany and especially Italy (data not available for Spain). This is indicative of the central role of wage rates in determining relative preferences for hours. Where wage rates are lower employees trade-off more hours of work in order to generate a desired (or necessary) level of income. In the case of France reductions in hours have resulted in the

intensification of work among some sizeable minorities (Fagnani and Letablier, 2007), which we would attribute to relative surplus-value production in the face of work time regulation (in a way which was analogous to Marx's account of capitalists' response to legal restrictions on working hours in Victorian England). And, more than half of workers moving to 35 hour weeks experienced freezes on wages (Hayden, 2006, 518), suggesting retarded wage growth. In the face of inflation this may be generating a short-run period of immiseration for some workers. These changes thus increased the relative surplus value extracted from some French workers, as increased hourly productivity has not been exchanged for higher wage rates, consistent with our findings in Table 1. And, real wages have been impacted negatively, coupled with underemployment for some, particularly in the 'technicians and associate professionals' and 'all other occupations' categories. Nevertheless, the effect of lower working hours is the principal driver of the low rate of surplus-value we observe in the French economy.

4. Conclusion

From a Marxian perspective there are many manifestations of class struggle in capitalism. The intensity of work is one. Likewise, wages and the length of the working day also represent key elements in the conflict between capital and labour. In the absence of an imminent shift to a progressive post-capitalist form of economic organisation, radical economists might focus on how the lives of working people can be improved, and push for reform. In the UK there is a problem of overwork among certain categories of workers, and we have previously argued that the WTD needs to be implemented in its entirety, abolishing the voluntary waiver.

In the French case the Aubry Laws went considerably further in trying to address the problem of overwork and joblessness. However, the results have not been shown to unequivocally benefit all workers (Fagnani and Letablier 2007; Hayden, 2006). While, in the context of the class struggle, the surplus-value rate in France is much lower than that in the other countries investigated, the proportion of those expressing a desire to increase hours is marginally greater in the French case. This is particularly the case among 'technicians and associate professionals' and 'all other occupations' categories of employee. This misalignment between employee preferences and realised hours may

indicate that targeted aid of low-paid workers may be needed to reinforce the benefits of the Aubry Laws.

There is a tendency toward a relaxing of the working hour limits legislated in the WTD through amendments in EU member states (Eurofound, 2008). Moreover, the UK government, driven by Conservative pressure, has expressed its intent to further reduce the scope of the WTR. This represents a considerable area for concern as these amendments are likely to result in greater levels of dissatisfaction among employees in respect to long hours. Our research highlights the importance of the WTD as a tool for regulating hours of work, but indicates that issues of pay may also need to be considered to deliver a concerted improvement in workers' living standards.

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[1] The European Working Time Directive (Council Directive 94/103/EC) was adopted in the EU in November 1993. It imposes a maximum 48 hour working week (averaged over a 17 week reference period) and entitlement to four weeks paid leave per year to protect the health and safety of employees, with the option for member states to apply voluntary opt-outs.

[2] We have observed that there is dissatisfaction with excessive work time among many full-time professional workers in the UK (Philp and Wheatley, 2011). These jobs are generally well paid, and we concluded there is a problem of long hours for some in this category of worker. This research focussed on the following British Household Panel Survey question: 'Thinking about the hours you work, assuming that you would be paid the same amount per hour, would you prefer to work fewer hours than you do now?' We identified significant numbers of UK workers in professional occupations who stated they would prefer to work fewer hours by this criteria, and this was positively correlated with the hours people work.

[3] Another issue concerns productive and unproductive labour. In an orthodox Marxist framework it is only the wages of "productive workers" which comprise the denominator. Marxist economists have long disputed the nature of productive and unproductive labour and 'those who deny this distinction are frequently portrayed as of dubious adherence to Marxism's central tenets' (Harvie, 2007, 132). We do not wish to dwell on this issue here. However, while we would accept that the productive-unproductive labour distinction may be useful in an evaluative way, considering the wastefulness of the capitalist economy, and in a socioeconomic way, looking at the ways in which labour is dominated (Laibman, 1992, 86), we do not think it is essential in calculating the rate of surplus-value in a distributive sense.

[4] 'All other occupations' comprises clerks; service workers and shop and market sales workers; skilled agriculture and fishery workers; craft and related trade workers; plant and machine operators/assemblers, and; elementary occupations. Mean full-time total usual hours are statistically significant between occupations and genders for France (F = 2845.679, p-value 0.000), Germany (F = 305.041, p-value 0.000), Italy (F = 4116.025, p-value 0.000), Spain (F = 87.977, p-value 0.000), and UK (F = 745.138, p-value 0.000). Proportions working over 48 hours per week are statistically significant for France (Men (X^2 = 7644.616, p-value 0.000) and women (X^2 = 2005.916, p-value 0.000)),

Germany (Men (X^2 = 542.150, p-value 0.000) and women (X^2 = 270.292, p-value 0.000)), Italy (Men (X^2 = 2559.371, p-value 0.000) and women (X^2 = 829.004, p-value 0.000)), Spain (Men (X^2 = 253.089, p-value 0.000) and women (X^2 = 153.749, p-value 0.000)) and UK (Men (X^2 = 1268.998, p-value 0.000) and women (X^2 = 1686.316, p-value 0.000)). Proportions reporting preferences for longer hours are statistically significant for France (Men (X^2 = 1424.627, p-value 0.000) and women (X^2 = 476.014, p-value 0.000)), Italy (Men (X^2 = 578.451, p-value 0.000) and women (X^2 = 197.449, p-value 0.000)), Spain (Men (X^2 = 53.735, p-value 0.000) and women (X^2 = 59.349, p-value 0.000)) and UK (Men (X^2 = 231.002, p-value 0.000) and women (X^2 = 105.170, p-value 0.000)). Preferences for longer hours are statistically significant for men in Germany (X^2 = 62.052, p-value 0.000), but not women (X^2 = 5.297, p-value 0.151).