Minimum Wage Non-Compliance: Evidence from Ireland

Seamus McGuinness
Paul Redmond
Judith Delaney

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Seamus McGuinness
Economic and Social Research Institute, Trinity College Dublin and IZA

Paul Redmond
Economic and Social Research Institute and Trinity College Dublin

Judith Delaney
Economic and Social Research Institute, Trinity College Dublin, IZA and University College London

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ABSTRACT

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We use a unique question from the Irish Labour Force Survey that captures the reasons for workers being paid below the minimum wage. Compared to existing work, this allows us to more precisely identify sub-minimum wage workers. We find that 5.6 percent of minimum wage workers are paid below the minimum wage for reasons other than those permitted under legislation. This is considerably lower than estimates reported in the existing literature.

Corresponding author:
Seamus McGuinness
Economic and Social Research Institute
Whitaker Square
Sir John Rogerson's Quay
Dublin 2
Ireland
E-mail: seamusmcguinness@esri.ie

1. Introduction

There is a substantial literature examining the effect of the minimum wage (MW) on employment. An assumption which often underlies this literature is that the MW is perfectly enforceable. In reality, there is likely to be some degree of non-compliance, which could attenuate the estimated wage and employment effects of minimum wage policies.

Estimating non-compliance is difficult. For the US, the Bureau of Labor Statistics (2019) estimate the percentage of workers earning on or below the federal MW using self-reported wage data from the Current Population Survey. An estimated 2.1 percent of all hourly-paid workers earn at or below the federal MW. Of these workers, an estimated 25 percent earn the federal MW with the remaining 75 percent earning below the MW. However, this is not an estimate of non-compliance as certain workers may be not be covered by MW laws due to exclusions or exemptions in the statutes. The UK Low Pay Commission (2019), using an administrative dataset, found that 23% of individuals were paid below their entitled MW rate. However, as with the BLS (2019) study, workers who are legitimately exempt from the MW could not be identified. Another concern relates to the fact that employers report the wage data of employees. Employers who are knowingly non-compliant are unlikely to admit this in the survey.

In this letter, we use a unique question from the Irish Labour Force Survey (LFS) to explore the issue of MW non-compliance. The precise nature of the question allows us to overcome many of the problems with the literature to date, including distinguishing sub-MW workers that are legally exempt, from those that are entitled to, but not receiving, the MW.

2. Data and methods

We use data from a MW question introduced into the Irish LFS from quarter 2, 2016. The question indicates the current MW rate to the respondent and asks them if they are being paid more than, exactly, or less than the MW. If the respondent indicates that they are in receipt of an hourly wage that is below the MW they are asked to give the reason for this. The four response options for the sub-minimum question are: (a) a special training rate (b) an age-related rate (c) a first job rate over 18 and (d) other. As such, responses (a), (b) and (c) cover the legal exclusions permitted under the legislation for paying a sub-minimum rate.

One aspect of the legislative exemptions not covered by the data relates to individuals employed by family members. However, the LFS MW question is not administered to individuals with a labour force status of "assisting relatives" which should, effectively, automatically remove this final exemption from the data.[1]

3. Results

Table 1 reports the incidence of MW employment both including and excluding those on sub-minimum rates. It should be noted that the 2016 incidence relates to the last 3 quarters only (Q2-Q4) and, as such, is not an annual rate. The total MW incidence was 10 percent in 2016 and remained constant at 8.1 percent between 2017 and 2018. Excluding sub-minimum wage employees, the rates were lower, at 8.6 percent in 2016, and 6.9 and 6.7 percent in 2017 and 2018 respectively. Therefore,

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[1] It is possible that some individuals who are working with family members classify themselves as "employees", instead of "assisting relatives".

over this period, the incidence of sub-MW employment ranged between 1.2 and 1.4 percent of total employment.

On average, 15 percent of employees earning at or below the MW earned sub-minimum rates over the period 2016-2018. Table 2 reports the reasons given for sub-MW employment. Approximately 50 percent of sub-minimum workers report being on a training rate or an age related rate, with just over 10 percent reporting being in receipt of a first job rate. Approximately one third of sub-minimum workers report "other" reasons for being paid below the MW. Given that all legal exclusions are accounted for in the data, we take this category as our estimate of non-compliance. In Table 3, the "other" sub-MW group are expressed as a percentage of all MW workers. Approximately 5.6 percent of MW workers reported being paid below the MW for reasons other than those permitted under the legislation.

Table 4 compares the average characteristics of sub-MW workers in the non-compliance category with legally compliant MW workers. Relative to legally complaint MW workers, those in the non-compliance category are more likely to be older, male, Irish, lower educated, be on temporary contracts, live in the Mid-West, and have a tenure of above three years. Regarding occupations, the non-compliant group are more likely to work in personal care services, childcare and agriculture. The non-compliant group are also much more likely to work alone (i.e., in firms with a single employee). Those in single-person firms are predominantly working in personal care and child care and so may be likely to be au-pairs or carers.

Table 5 extends the analysis beyond bivariate relationships by estimating a probit model, where the outcome variable is 1 if the person belongs to our non-compliant group and zero if they are a legally compliant MW worker. We control for personal characteristics, region dummies, firm size, and separately add sector of employment and occupation. It should be noted that the sample size drops when firm size is added to the model due to missing responses to this question. To avoid dropping many observations, we include a dummy variable that indicates whether the firm size data is missing.

Table 5 shows that males are approximately 3 percentage points more likely to be in the non-compliant group while Irish nationals are approximately 2 percentage points more likely to be in the non-compliant group. Employees in the non-compliant group are also more likely to have primary education only, be aged 35 or over and are more likely to work in single person firms. There is also regional variation, with non-compliant MW workers disproportionately located in the Mid-East and Mid-West regions. The strongest sectoral effect relates to domestic personnel employed by households, with non-compliant MW workers 25 percentage points more likely to work in this sector compared to compliant MW workers. In addition, non-compliant MW workers were 8 percentage points more likely to work in childcare, 7 percentage points more likely to work in agriculture and 4 percentage points more likely to work in personal care occupations. Finally, we see that non-compliant workers are more likely to be on temporary contracts.

4. Conclusions

This letter uses data from the Irish Labour Force Survey to estimate the incidence of MW non-compliance. We estimate that 5.6 percent of all workers who are paid the MW or less, are being paid sub-minimum rates for reasons other than those permitted under legislation. Compared to legally compliant MW workers, non-compliant workers are more likely to be male, Irish, aged over 35, on temporary contracts and work on their own. Non-compliant MW workers are also more likely to work

in the domestic personnel sector and to hold childcare, personal care or agricultural occupations, compared to legally compliant MW workers.

References

US Bureau of Labor Statistics (2019). "Characteristics of minimum wage workers, 2018". Report 1078. https://www.bls.gov/opub/reports/minimum-wage/2018/pdf/home.pdf

UK Low Pay Commission (2019) "Non-compliance and enforcement of the National Minimum Wage". https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/797675/Non-compliance_and_enforcement_of_the_National_Minimum_Wage_WEB.pdf

Table 1: Incidence of MW Employment

	2016	2017	2018	Total
MW Workers (including sub-MW)	0.100	0.081	0.081	0.087
Observations	41,108	50,302	47,436	138,846
MW Workers (excluding sub-MW)	0.086	0.069	0.067	0.073
Observations	**40,466**	**49,664**	**46,715**	**136,845**

Table 2: Reasons for Sub-Minimum Wage Employment

	2016	2017	2018	Total
A Special Training rate	0.260	0.290	0.250	0.266
An Age Related rate	0.275	0.267	0.251	0.264
A First Job over 18 rate	0.128	0.111	0.121	0.120
Other Reason	0.337	0.332	0.378	0.350
Observations	**626**	**621**	**688**	**1,935**

Table 3: Estimated Non-Compliant Sub-MW Workers (as % of all MW Workers)

	2016	2017	2018	Total
Sub-MW Workers who report "other"	0.051	0.051	0.068	0.056
Observations	**4,131**	**4,054**	**3,847**	**12,032**

Table 4: Average Characteristics of Non-Compliant ("Other") Sub-MW Workers Vs MW Workers

	MW Workers	"Other" Sub-MW Workers	Difference
Personal			
Age <=25	0.45	0.30	0.15***
Age 26 to 35	0.21	0.18	0.03
Age > 35	0.34	0.51	-0.17***
Female	0.57	0.46	0.11***
Lone parent	0.21	0.18	0.03
Low education	0.20	0.31	-0.11***
Medium education	0.62	0.45	0.17***
High education	0.19	0.24	-0.05***
Single household	0.16	0.21	-0.05***
Married	0.27	0.34	-0.07***
Number at work	0.78	0.78	0.00
Irish	0.79	0.84	-0.05***
EU	0.15	0.12	0.03***
Other nationality	0.05	0.04	0.01
No children	0.63	0.67	-0.04*
1-2 children	0.32	0.28	0.04*
More than 2 children	0.05	0.05	0.00
Regions			
Border	0.10	0.08	0.02**
West	0.10	0.10	0.00
Mid-West	0.12	0.15	-0.03**
South-East	0.11	0.12	-0.01
South-West	0.16	0.17	-0.01
Dublin	0.25	0.21	0.04**
Mid-East	0.10	0.12	-0.02
Midlands	0.06	0.06	0.00
Job			
Temporary contract	0.28	0.34	-0.06***
Hours	24.15	26.28	-2.13***
Part-time	0.59	0.53	0.06***
Firm size is 1	0.04	0.18	-0.14***
Firm size 2 - 5	0.15	0.19	-0.04*
Firm 6 -10	0.15	0.15	0.00
Firm 11 - 19	0.16	0.11	0.05**
Firm 20 - 49	0.16	0.09	0.07***
Firm >50	0.35	0.29	0.06**
Tenure: 1 year	0.52	0.43	0.09***
Tenure: 2 years	0.14	0.11	0.03*
Tenure: 3 years	0.08	0.07	0.01
Tenure: More than 3 years	0.26	0.38	-0.12***
Occupation			
Waiters/bartender	0.14	0.10	0.04***
Shop sales	0.23	0.09	0.14***
Child care	0.03	0.06	-0.03***
Person care	0.03	0.06	-0.03***
Agricultural, forestry and fishing labourers	0.01	0.05	-0.04***

Sector

Food/beverage sector	0.18	0.13	0.05***
Retail sector	0.24	0.11	0.13***
Crop Animal sector	0.03	0.10	-0.07***
Social Work sector	0.04	0.07	-0.03***
Public Admin sector	0.01	0.06	-0.05***
Membership sector	0.01	0.05	-0.04***
Domestic Personnel sector	0.01	0.05	-0.04***
Accommodation sector	0.09	0.04	0.05***
Observations	10,031	677	

*** denotes statistically different at 1%, ** at 5% and * at 10%.

Table 5: Probit Estimates of Non-Compliant Sub-MW Workers

VARIABLES	Non-compliance	Non-compliance
Age (ref: <25 years)		
Age 26 to 35	0.012	0.015**
	(0.007)	(0.008)
Age > 35	0.021***	0.029***
	(0.006)	(0.007)
Female	-0.025***	-0.029***
	(0.005)	(0.005)
Nationality (ref: Irish)		
EU	-0.014**	-0.017***
	(0.006)	(0.005)
Non-EU	-0.020***	-0.024***
	(0.008)	(0.007)
Education (ref: ISCED <2)		
Upper Secondary/ Post-Secondary Non-Tertiary	-0.021***	-0.022***
	(0.006)	(0.006)
Has at Least Some College	0.005	0.007
	(0.007)	(0.007)
Temporary contract	0.014***	0.017***
	(0.005)	(0.005)
Regions (ref: Border)		
West	0.016	0.017
	(0.012)	(0.012)
Mid-West	0.027**	0.033**
	(0.012)	(0.013)
South East	0.021*	0.023*
	(0.012)	(0.012)
South West	0.016	0.018*
	(0.010)	(0.011)
Dublin	0.012	0.014
	(0.009)	(0.010)
Mid-East	0.019	0.024**
	(0.012)	(0.012)
Midlands	0.010	0.011
	(0.013)	(0.013)
Firm size (ref: > 10)		
2-10	0.016**	0.020***
	(0.008)	(0.008)
1 person	0.072***	0.130***
	(0.021)	(0.025)
Firm size missing	-0.008*	-0.006
	(0.005)	(0.005)
Proxy response	-0.021***	-0.023***
	(0.005)	(0.005)
Sector (ref: Other)		
Retail Sector	-0.025***	

	(0.005)	
Crop and animal production, hunting and related service activities	0.108***	
	(0.021)	
Social Work	0.050***	
	(0.015)	
Public administration and defence	0.192***	
	(0.040)	
Activities of membership organisations	0.157***	
	(0.039)	
Activities of households as employers of domestic personnel	0.246***	
	(0.053)	
Accommodation	-0.015**	
	(0.007)	
Food/Beverage	-0.003	
	(0.006)	
Occupations (ref: other)		
Waiters & bartenders		-0.002
		(0.007)
Shop salespersons		-0.032***
		(0.005)
Child care workers and teachers' aides		0.075***
		(0.020)
Personal care workers in health services		0.036**
		(0.015)
Agriculture, forestry and fishery labourers		0.065***
		(0.024)
Observations	10,172	10,172

Notes: The dependent variable is 1 if the individual denotes "other" as the reason for being a sub-MW worker and 0 if they are paid the MW.