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SUMMARY OF THE MAIN FINDINGS

- Public health measures to tackle the Covid-19 crisis have been implemented in many countries throughout the world. Many non-essential employees have lost their jobs or been furloughed due to business closures. Some employees have been able to retain their jobs while working from home.
- Understanding the ability of employees to work from home is important for a number of reasons. Firstly, homeworking can limit job losses and the associated economic contraction. Secondly, as public health measures are relaxed and economies reopen, ensuring as many people as possible work from home will help control against another spike in virus cases. Thirdly, the ability to work from home may alleviate short-term childcare pressures in light of school and crèche closures. However, combining working from home with childminding is not a sustainable long-term option.
- Before the Covid-19 crisis, 14 per cent of employees in Ireland worked from home in some formal capacity, either sometimes or usually. While homeworking in Ireland is somewhat above the European average, figures vary widely, from just 1 per cent in Bulgaria to over 30 per cent in Sweden.
- The education, ICT and finance sectors contain the highest percentage of employees that work from home, at 37 per cent, 36 per cent and 26 per cent respectively, while just 2 per cent of employees in accommodation and food work from home.
- Just 6 per cent of essential employees can work from home, compared to 16 per cent of non-essential employees.
- Results from our econometric model indicate that males, Irish nationals, workers aged over 30, full-time employees and those in higher-paid occupations have a higher probability of working from home, as do non-essential employees relative to essential employees. Couples with children are more likely to work from home compared to lone parents.

1. INTRODUCTION

To comply with public health measures introduced to combat the Covid-19 health crisis, employees have been asked to work from home. This will only be possible for certain groups of employees. Employees in non-essential occupations who cannot work from home will be more likely to lose their jobs (Adams-Prassl et al., 2020). The roles of essential employees such as doctors, nurses and certain retail workers typically do not lend themselves to working from home.

There are benefits to having a high number of employees working from home. Firstly, from a public health perspective, working from home is more compatible with social distancing. Secondly, given the closure of schools and crèches, the ability to work from home could alleviate short-run pressures relating to childcare. However, it is important to note that combining childcare and homeworking is not a sustainable long-term option. Thirdly, if non-essential employees can work from home, they can retain their job and income, leading to lower unemployment, lower welfare claims and less economic disruption.

Following the onset of the Covid-19 crisis, evidence has started to emerge for some countries on the potential for homeworking. For the US, Dingel and Neiman (2020) examine the feasibility of working from home. They use responses to the Occupational Information Network (O*NET) regarding working arrangements in order to assess whether it is feasible for an occupation to be performed at home. If, for example, an occupation requires daily 'work outdoors', work from home is deemed not feasible. Dingel and Neiman (2020) find that 34 per cent of US jobs can plausibly be performed at home, and homeworking is more feasible in certain industries, including ICT, finance and education. However, in accommodation and food, just 3 per cent of jobs could be done from home.

The Office for National Statistics (2020) examines the extent to which people can work from home in the UK. They find that approximately 12 per cent of workers reported working at least one day from home during the past seven days. They find sectors such as transportation, accommodation and food, wholesale and retail provide very few opportunities for homeworking, while occupations requiring higher qualifications offer more opportunities to work from home.

In this paper, we examine the current (pre-Covid) extent of homeworking in Ireland. We find that 14 per cent of employees 'usually' or 'sometimes' work from home. The incidence of homeworking is highest in the ICT, finance and education sectors and lowest in accommodation and food. Homeworking is less likely among

women, essential employees, non-Irish nationals and young workers, and far more likely in higher paid occupations compared to elementary occupations.

1.1 DATA

We use data from the Irish Labour Force Survey (LFS) to measure the percentage of employees that work from home in Ireland. The LFS contains a variable, *HOMEWK*, that indicates whether the individual ‘usually works at home’, ‘sometimes works at home’ or ‘never works at home’. Given the importance of this variable in our analysis, we look to the explanatory notes in the Eurostat LFS user guide to get more details on what exactly this variable captures. The following definition is provided by Eurostat:

In the case of employees, “working at home” should be interpreted strictly in terms of formal working arrangements, where it is mutually understood by the employee and the employer that a certain part of work is to be done at home.

The arrangement between employer and employee does not need to be explicitly stated in the terms of employment. The Eurostat guide states that the arrangement is recognised if ‘an employee is equipped with a computer in his home in order to perform his work’. With regard to the responses, ‘usually’ working from home involves doing more than half of the work from home, whereas ‘sometimes’ amounts to less than half of all work being done from home. ‘Never’ working from home is self-explanatory. We combine the ‘sometimes’ and ‘usually’ groups to form one working from home variable.

We profile the individuals that work from home using various socio-demographic factors included in the LFS. In addition, we create a variable to identify ‘essential employees’. These are employees identified as essential by the Irish government, such as doctors, nurses, police officers and some retail workers. Our method for identifying essential employees is shown in the Appendix.¹ Approximately 23 per cent of employees are in the set of essential occupations that we examine. Table 1 shows the characteristics of essential employees compared to all employees. Essential employees have a higher concentration of women, Irish nationals, part-time workers, young workers (age 15 to 29) and lone parents.

¹ It is difficult to precisely identify all essential workers using LFS data. Our estimate is an approximation. It will not be perfect, as it may include some non-essential employees while excluding some essential employees.

TABLE 1 CHARACTERISTICS OF EMPLOYEES

	All employees (%)	Essential employees (%)
Male	50.1	34.9
Irish national	82.6	86.0
Part-time	20.7	30.7
Age 15–29	24.0	26.8
Age 30–49	53.7	50.0
Age 50–64	22.2	23.4
Couple (no children)	17.0	15.3
Couple (with children)	43.8	42.1
Lone parent	6.0	8.5
Living with parents	17.0	19.6

Source: Labour Force Survey (2017 to 2019). Sample sizes: all employees (n=155,506), essential employees (n=36,281).

2. RESULTS

Table 2 shows the incidence of homeworking, overall and by sector. It shows that 13.8 per cent of employees in Ireland report some level of working from home. The education, ICT and finance sectors contain the highest percentages of employees that work from home, at 37 per cent, 36 per cent and 26 per cent respectively, while just 2 per cent of employees in accommodation and food work from home.

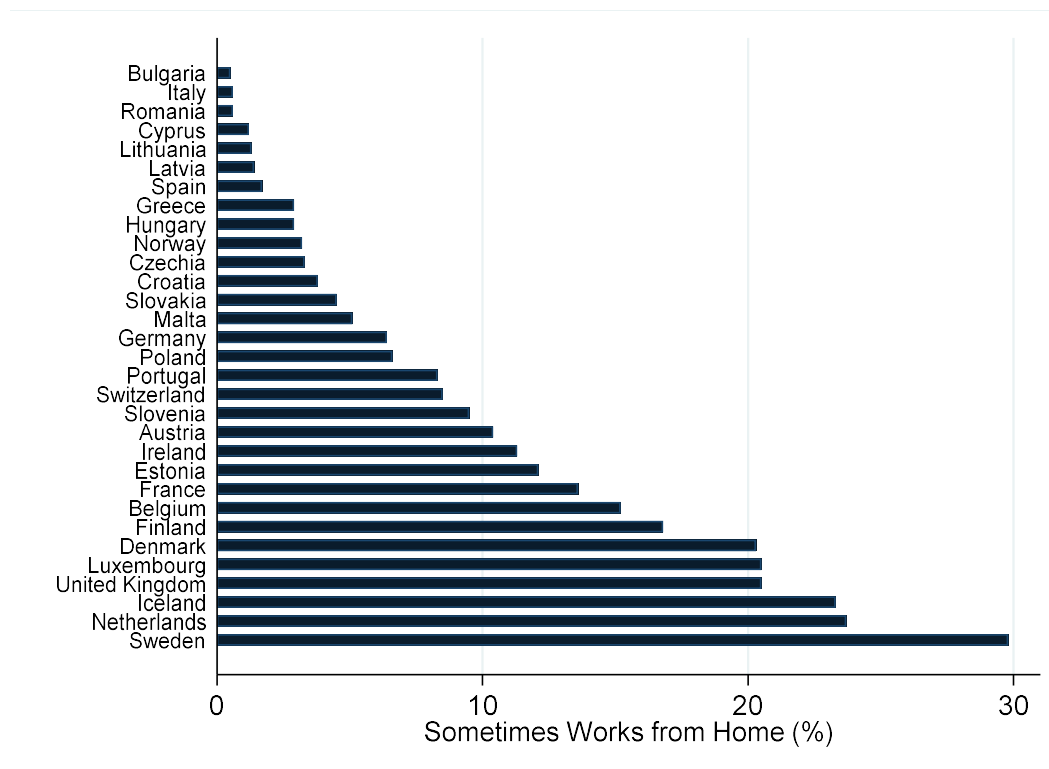
TABLE 2 INCIDENCE OF WORKING FROM HOME IN IRELAND

	Work from home (%)
All employees	13.8
<i>By sector</i>	
Education	37.3
ICT	36.2
Finance	25.5
Professional	23.6
Agriculture	14.3 ²
Industry	11.7
Defence	10.8
Other	9.6
Administrative	8.7
Health	7.3
Construction	6.9
Retail	6.9
Transport	6.8
Accommodation & food	2.4

Source: Irish Labour Force Survey (2017 to 2019). Based on a sample of 155,267 employees. 'Other' captures all jobs in sectors other than the ones specified.

Figure 1 shows the incidence of homeworking across the 31 European countries for which we have data. Sweden and the Netherlands have the highest incidence of homeworking, at 30 and 24 per cent respectively. In Bulgaria, Italy and Romania, less than 1 per cent work from home. Ireland is somewhat above average in comparative terms, ranked 11th of 31 countries in terms of the incidence of homeworking.

² The figure for agriculture seems surprisingly high; however, just under 60 per cent of homeworkers in the agricultural sector were in non-agricultural occupations: managers, professionals, clerical, etc.

FIGURE 1 PERCENTAGE OF EMPLOYEES THAT WORK FROM HOME ACROSS EUROPE (2019)

Source: EU-LFS (2019). <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20200206-1>

In Table 3, we show the percentage of employees that work from home broken down by employee characteristics. Just 6 per cent of essential employees can work from home, compared to 16 per cent of non-essential employees. With schools and crèches closed, and a relatively high number of essential employees with caring responsibilities because they are disproportionately female and/or lone parents (Table 1), the inability to work from home exacerbates childcare difficulties. Many essential employees also work in the lowest earning occupations, which constrains their ability to pay for private sector childcare.³ For non-essential employees, the inability to work from home will cost jobs. A higher percentage of males compared to females, and Irish nationals compared to non-Irish nationals, can work from home. With regard to age, over-30s are more likely to work from home compared to the 15–29 age category. Working from home is also much more prevalent among high-paid, highly qualified occupations. Approximately 30 per cent of managers and professionals work from home, compared to just 1 per cent of employees in elementary occupations.

Finally, we run a probit model where the dependent variable is a binary variable indicating whether the employee works from home (Table 4). Males, Irish nationals, older workers (over 30), full-time employees and those in higher paid

³ It is currently not possible to purchase private-sector childcare services, consequently many employees are likely to be heavily reliant on relatives, such as grandparents, to assist with childcare needs.

occupations have a higher probability of working from home, as do non-essential employees relative to essential employees. Couples with children are more likely to work from home compared to lone parents. This presents challenges for lone parents trying to combine work and childcare. We have shown that a relatively high percentage of essential employees are lone parents. Therefore, it is important that childcare facilities are provided to allow these employees continue working in essential services. With respect to occupation, despite the likelihood of sharing characteristics with professional and associate professional occupations, such as being mainly office-based with a high reliance on ICT, workers in clerical occupations are much less likely to work from home.

TABLE 3 **PERCENTAGE OF EMPLOYEES THAT WORK FROM HOME**

	Work from home (%)
Essential employee	5.6
Non-essential employee	16.3
Male	14.3
Female	13.4
Irish national	14.6
Non-Irish national	10.3
Age 15–29	7.4
Age 30–49	16.6
Age 50–64	14.0
Armed forces	5.9
Managers	29.3
Professionals	31.0
Associated professionals	15.0
Clerical	9.0
Services	3.2
Agriculture	10.4
Craft	4.0
Plant	1.7
Elementary	1.4
Couple (no child)	16.0
Couple (with child)	16.7
Lone parent	11.1
Living with parents	6.0
Not living with family	13.0

Source *Irish Labour Force Survey (2017 to 2019). Based on a sample of 155,267 employees.*

3. CONCLUSION

The ability of employees to work from home will protect jobs and help safeguard against further outbreaks of Covid-19. In Ireland, 14 per cent of employees work from home, either sometimes or usually. This is roughly average in a comparative EU context. The prevalence of working from home is far higher in highly paid occupations and is higher in industries such as education, ICT and finance. Men, older employees (over 30) and full-time workers are more likely to work from home. Essential employees and lone parents, relative to couples with children, are less likely to work from home. Given the high numbers of lone parents among essential employees, this underscores the need for adequate childcare provision for essential employees given the closure of schools and crèches

From a policy perspective, the report gives an overview of homeworking in Ireland within a European context. The research also identifies a number of occupations and groups of workers where potential improvements could be made in respect to the incidence of homeworking. For example, it is likely that employees in some lower paid occupations, such as clerical jobs, have increased capacity to work from home. While working from home is quite prevalent among higher paid occupations, increasing this capacity among lower paid occupations may be key in combating the potential unequal consequences of job losses and the economic contraction that will follow the Covid-19 crisis. Increasing the capacity to work from home among women, non-Irish nationals, young workers and lone parents (relative to couples with children) may help to prevent certain groups facing disproportionately bad outcomes. The research also highlights that homeworking is less likely among essential workers.

TABLE 4 DETERMINANTS OF WORKING FROM HOME (PROBIT MODEL)

Variables	Home work
Essential employee	-0.069*** (0.002)
Male	0.014*** (0.002)
Irish national	0.027*** (0.002)
Part-time	-0.024*** (0.002)
Age (base group: age 15 to 29)	
Age 30 to 49	0.034*** (0.003)
Age 50 to 64	0.026*** (0.003)
Family (base group: lone parents)	
Couple (no children)	0.001 (0.004)
Couple (with children)	0.008* (0.003)
Lives with parents	-0.033*** (0.003)
Does not live with family	-0.013*** (0.003)
Occupation (base group: elementary occupations)	
Managers	0.436*** (0.011)
Professionals	0.425*** (0.009)
Associate professionals	0.262*** (0.010)
Clerical	0.179*** (0.009)
Services	0.117*** (0.007)
Agriculture	0.316*** (0.020)
Craft	0.054*** (0.007)
Plant	0.001 (0.007)
Armed forces	0.251*** (0.035)
Observations	155,119

Notes: Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

REFERENCES

Adams-Prassl, A., T. Boneva, M. Golin and C. Rauh (2020). 'Inequality in the impact of the coronavirus shock: Evidence from real time surveys', IZA Discussion Paper No. 13183. Bonn: Institute of Labor Economics.

Dingel, J.I. and B. Neiman (2020). 'How many jobs can be done at home?', NBER Working Paper No. 26948. Cambridge, MA: National Bureau of Economic Research.

Office for National Statistics (2020). 'Coronavirus and homeworking in the UK labour market: 2019' Working Paper. London: ONS.

APPENDIX

We combine ISCO sector codes with NACE occupation codes to identify essential employees using Irish Labour Force Survey (LFS) data for the years 2017 to 2019.

Combine *Health* NACE sector with ISCO *Professionals* category. Includes, for example, medical doctors, nursing and midwifery professionals.

Combine *Health* NACE sector with ISCO *Associate Professionals* category. Includes, for example, medical and pharmaceutical technicians, nursing and midwifery associate professionals.

Combine *Health* NACE sector with ISCO *Services and Sales* category. Includes, for example, healthcare assistants in hospitals, clinics and residential nursing care facilities.

Combines the *Public Administration and Defence* NACE sector with ISCO *Armed Forces* category. Includes all jobs held by members of the armed forces.

Combines *Public Administration and Defence* NACE sector with ISCO *Services and Sales* category. Includes, for example, police officers, prison guards, fire fighters.

Combines *Wholesale and Retail Trade* NACE sector with ISCO *Services and Sales* category. Includes, for example, shop sales assistants, shop keepers, shop supervisors, cashiers, service station attendants and food service counter attendants. While some retail outlets have been forced to close down during the Covid-19 crisis, others remain open. We cannot precisely distinguish between the two. Therefore, this category may include employees in retail outlets that have been forced to close down.

Combines *Transport, Storage and Communications* NACE sector with ISCO *Plant and Machine Operators* category. Includes, for example, bus, tram, train, taxi and lorry drivers.

Includes all employees in *NACE Agriculture* sector.

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