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The Introduction of a Living Wage in Ireland

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Abstract:

In June 2022 the Irish government announced intentions to replace the existing national minimum wage with a new Living Wage (LW) set at 60% of median wages. In this paper we review the evidence on the impact of a LW on wages, employment, inequality and poverty, We then use data from the EU-SILC to examine the characteristics of workers likely to be affected by the new LW and empirically examining the potential impact of the proposed LW on wages inequality and poverty. When examining the impact on labour market outcomes we also compare the impact of the proposed LW with a number of alternative LWs. While the proposed policy will increase the wages of the most vulnerable workers, we show that the introduction of a national LW would have a relatively small effect on inequality, poverty and the gender wage gap. In keeping with previous work, this shows how policies aimed only at workers fall short of addressing concerns about poverty and inequality; addressing these issues requires more powerful public policies.

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Introduction

Minimum wages provide a wage floor below which employers cannot pay workers and are intended to reduce exploitation of workers. While advocates support a minimum wage on the grounds that they reduce poverty, the empirical evidence on this is mixed. A living wage (LW), on the other hand, explicitly sets out to establish an hourly wage rate that provides employees with sufficient income to achieve an agreed acceptable minimum standard of living. In that sense, the LW is an income floor like the minimum wage, but one that allows employees to afford the essentials of life. Earnings below a LW suggest employees are forced to do without certain essentials so they cannot make ends meet. In the terms of reference for this report, the Low Pay Commission (LPC) notes that a living wage "may be defined as the minimum income necessary for a single adult worker in full time employment, with no dependents, to meet his or her basic needs and afford a minimum acceptable standard of living." This and alternative concepts of the LW are discussed in more detail later in the report.

The concept of a LW has a long history. Stabile (2008) traces the concept back to Plato and Aristotle in Ancient Greece. However, rising wage inequality, automation and increases in the incidence of low paid work has seen a renewed interest in the concept over the last 20-30 years, largely driven by a broad set of social actors, including grass-roots local activist movements and religious groups. For instance, the original impetus for the first modern LW campaign – in Baltimore in 1994 – came from religious workers working in soup kitchens and homeless shelters. In Ireland, the Vincentian Partnership for Social Justice (VPSJ), a faith-based NGO, has been one of the strongest advocates of an Irish Living Wage. To date, over 140 municipalities in the United States have passed wage ordinances for some groups of

workers, while in Ireland, several employers, including Aldi[2], Ikea[3] and Lidl[4], have voluntarily committed to paying a LW to all their workers. A small number of countries go as far as mentioning the concept of a LW in their constitutions (e.g. Mexico and Brazil), although they are often vague regarding the precise meaning of a LW or what standard of living it should guarantee.

In practice, a LW is distinct from the minimum wage;. it is an estimate of what wage is necessary to provide a sufficient "income to achieve an agreed acceptable minimum standard of living". This may or may not be set by law. Furthermore, when choosing a minimum wage, policy makers often consider its potential effect on competitiveness and employment; for example, when making recommendations for the minimum wage the Irish LPC is obliged to have regard for likely effects on the cost of living, national competitiveness and the level of employment and unemployment. Such considerations are typically absent from the choice of a LW.

In this report we outline the approaches available for calculating a LW, describe the systems currently existing in other countries and review the empirical evidence on the impact of a LW on wages, employment, inequality and poverty. We examine Irish micro data in order to characterize the workers likely to be affected by alternative living wages if introduced in Ireland, as well as considering the likely impact on employers' wage bills. We also use these data to examine the impact of alternative LW rates on the gender wage gap, earnings inequality and poverty, as well as considering the interaction of any proposed LW with the current tax/benefit system in Ireland.

[2] https://www.aldi.ie/living-wage#:~:text=In%202020%2C%20we%20increased%20wages,place%20for%20our%20store%20colleagues.
[3] https://www.thetimes.co.uk/article/ikea-builds-up-salaries-with-new-living-wage-nmltpbgj5
[4] https://corporate.lidl.ie/press-room/pressreleases/20181105-living-wage

1. National and International Experiences of Living Wages

2.1 Calculation of the Living Wage

Living Wages can take various forms. In the US, they have tended to take the form of legal ordinances mandating firms in a specific city or area that are in receipt of public funding to pay their workers a specific LW. In most countries, the LW has been implemented as a voluntary scheme in which cooperating employers are accredited. In addition to a voluntary scheme, the UK introduced a statutory LW in 2016.

Countries also vary in how the LW is calculated. Anker (2011) reviewed and critically analyzed 26 LW methodologies and concluded that there was no standard methodology for measuring the LW that could be recommended. In the following sub-sections, we will outline and discuss the assumptions underlying alternative approaches to the calculation of the LW and establish to what extent a consensus approach has emerged. There are two broad approaches. The first approach is a formal needs-based approach, in which a basket of goods needed to achieve an agreed living standard is chosen and the wage needed to reach this standard is designated the Living Wage. This is known as the Minimum Essential Standard of Living Approach (MESL). The second approach uses a benchmark measure, which is usually some proportion of the median wage or the poverty line. For example, the UK government used 0.60 of the median wage as its guide in constructing a National Living Wage in 2016 and has since updated this to 0.66 of the median wage, to be implemented by 2024.

2.1.1 Minimum Essential Standard of Living Approach

The Minimum Essential Standard of Living (MESL) approach to the LW establishes a basket of goods and services needed to meet some agreed living standard and calculates the wage needed to achieve this standard. For example, Anker and Anker (2017) define a LW as the

"[r]emuneration received for a standard work week by a worker in a particular place sufficient to afford a decent standard of living for the worker and her or his family. Elements of a decent standard of living include food, water, housing, education, healthcare, transport, clothing and other essential needs, including provision for unexpected events." The Irish Living Wage Technical Group[5] (2021a) define a LW as the average gross salary which will enable full-time employed adults (without dependants) to afford a socially acceptable standard of living. The emphasis is on needs rather than wants and delivering a standard of living that involves no enforced deprivation of goods and services considered essential for a 'decent' standard of living, based on a social consensus.

This raises the important question of how to define a 'decent' or 'socially acceptable' standard of living and how this standard is agreed in practice. What is considered 'decent' is largely subjective and will vary with time, geography and cultural norms. For example, the Irish Commission on Social Welfare in 1986 defines an adequate income as a payment that prevents poverty, and the concept of poverty used in Ireland is a relative one. On the other hand, the United States adopts a subsistence-based approach in order to determine the LW; the official poverty line is taken to represent an adequate standard of living. In recent years, many researchers have questioned the adequacy of this subsistence method, which is largely based on food requirements. The most extensive survey of these issues was sponsored by the National Research Council (Citro and Michael, 1995). According to this survey, establishing overall poverty thresholds on the basis of food costs alone presents many problems. Food costs have fallen relative to those for housing since the initial government surveys. In addition, the

[5] The Living Wage Technical Group was established in March 2014 and worked to establish a methodology for calculating the Republic of Ireland Living Wage. The current members are drawn from academics, Social Justice Ireland, Society of St. Vincent de Paul, Vincentian Partnership for Social Justice, Nevin Economic Research Institute, TASC and SIPTU.

increasing relative costs of childcare are not accurately reflected in the US methodology. This has become increasingly important over time as labour force participation by mothers has risen.

A preferred approach among advocates of a LW is to develop a standard of living rooted in social consensus, the so-called Consensual Budget Standard (CBS) approach. In this approach, a Minimum Income Standard is defined, based on the income members of the public believe households require in order to have a minimum acceptable standard of living. In particular, focus group members (informed by knowledge from experts, such as nutritionists and heating engineers) are asked to identify a basket of goods and services which it would be 'indecent' to be without, according to existing social norms. Davis et al. (2016) state that

> "A minimum standard of living [in the UK today], includes but is much more than just food, clothes and shelter. It is about having what you need in order to have the opportunities and choices necessary to participate in society"

The focus group discussions typically involve up to 20 groups (of 6–10 people in the UK and 8–12 in Ireland) from a mixture of socioeconomic backgrounds, with group participants discussing expenditure items appropriate for their household type. Meetings usually last 3-5 hours depending on the stage of the process. Members are asked not to think of their own needs and tastes but rather those of hypothetical case studies in their situation. To help in this, participants are asked to consider 'case history families'. The discussions are moderated by experts/researchers and aim to develop a negotiated consensus, with meetings conducted over multiple sessions (Davis et al, 2016; Living Wage Technical Group, 2021a).

The focus groups used in Ireland are sampled from a network of community groups developed by the VPSJ (MacMahon et al., 2006). At first, the focus group is used to produce a working definition of a Minimum Essential Standard of Living (MESL) and develop a list of items that they believe to be an essential minimum requirement for households with characteristics similar to their own. Groups are encouraged to avoid considerations of costs at this stage. The completion of this phase usually requires three or four meetings each lasting

two to three hours. On completion of this stage, nutritional experts are consulted regarding the food choices and their feedback is taken into account (e.g. an increase in intake of brown bread relative to white). A second group then reviews the items in that list to examine and identify possible concerns. Particular attention is given to determining if any item could be regarded as non-essential. Any changes deemed necessary are then implemented. The list devised at Stage 2 is then rechecked by a third and different focus group and a final consensus reached.

Focus groups discuss not only the items that are necessary but also the quality of those items, how they long they last and where they should be bought. In Ireland, budgets have been developed for sixteen areas of expenditure: food, clothing, health related costs, household goods, household services, communications, household fuel, childcare, insurance, savings, contingences, housing, social inclusion and participation, education, transport and personal care. The latest MESL for Ireland identified a basket of over 2000 items that focus groups deemed essential for enabling a socially acceptable minimum standard of living. This information is then used to calculate minimum household budgets, with items being priced at various stores by the research team. Costs are presented on a weekly basis. When an item is not purchased on a weekly basis, the overall cost is converted to a weekly value by dividing by the number of weeks an item is expected to last.

Table 1 summarises the main expenditure categories established by the consensual budget approach for Ireland in 2021. Costs are collected separately for four different geographical areas and averaged using population weights. The four areas correspond to Dublin, other cities (Cork, Galway, Limerick and Waterford), towns (population 5000 and above) and rural. The weighted average is in proportion to the population of the labour force in each region based on the 2016 census. As of 2020, the weights are Dublin (0.30), other cities (0.09) (Cork, Galway, Limerick and Waterford), towns (0.197) (population 5000 and above) and rural (0.41) The first four columns show the individual regional components of this

weighted average, while the final column shows the expenditure shares in the final weighted average used in constructing the living wage. Housing rent accounts for over 41% of all household spending in the final expenditure category. While housing is the biggest expenditure item in all regions this is particularly true in Dublin where housing accounts for 55% of final expenditure. Three other categories constitute more than 10% of total household spending; these are transport, food/drink and social participation, with transport being particularly high in rural areas, where it accounts for 18% of expenditure.

Table 1: Expenditure Shares by Category used by the Living Wage Technical Group

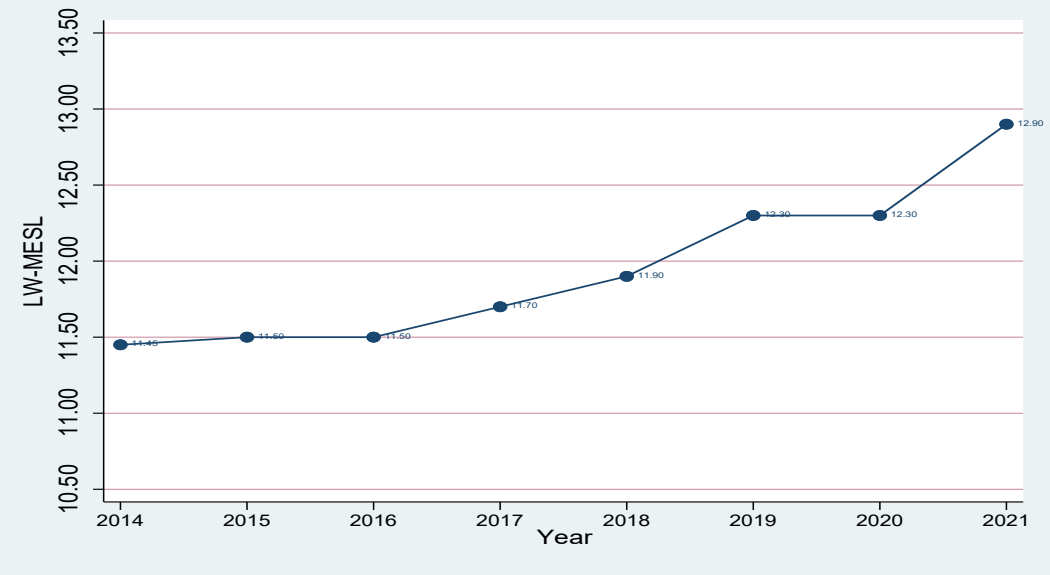
Expenditure Category	Dublin	Other Cities	Towns	Rural	All
Clothing	0.02	0.03	0.03	0.03	0.03
Communications	0.03	0.04	0.03	0.04	0.04
Education	0.01	0.01	0.01	0.01	0.01
Food	0.09	0.12	0.11	0.13	0.11
Health	0.01	0.01	0.01	0.01	0.01
Household Energy	0.04	0.05	0.04	0.07	0.05
Household Goods	0.01	0.01	0.01	0.02	0.01
Household Services	0.01	0.01	0.01	0.01	0.01
Housing	0.55	0.45	0.36	0.28	0.41
Insurance Car	0.00	0.00	0.02	0.02	0.01
Insurance Health	0.02	0.02	0.02	0.03	0.02
Insurance Home	0.00	0.00	0.00	0.00	0.00
Personal Care	0.02	0.02	0.02	0.02	0.02
Personal Costs	0.01	0.02	0.02	0.02	0.02
Savings/Contingencies	0.02	0.02	0.02	0.03	0.02
Social Participation	0.10	0.13	0.12	0.11	0.11
Transport	0.07	0.07	0.15	0.18	0.13

Source: Living Wage Technical Group (2021a)

Once these expenditure items have been costed, the MESL approach then determines the earnings required to afford these items after taxes have been deducted and benefits added to household income. The Minimum Income Standard (MIS) for Ireland establishes the gross salary required in order for a household's net income to allow that household type's MESL to be afforded. The MIS is based on the assumption that each adult in the household is employed

full-time (39 hours a week). The MIS is updated each year to take account of relevant changes in the Irish tax and social welfare system. The Living Wage Technical Group (LWTG) defines the hourly wage that yields the MIS for a one-person household with no dependants as the Irish Living Wage. Figure 1 shows the evolution of the LW as calculated by the LWTG in Ireland from 2014-2021, which we call LW-MESL.

Figure 1: Evolution of the LW-MESL Living Wage in Ireland



The value of the LW-MESL for 2021/22 is €12.90, which is 22.9% above the 2022 National Minimum wage (NMW) of €10.50. While the NMW lies at about 50-55% of the median hourly wage rate in the Irish economy, the LW-MESL would be a much higher proportion of the median hourly wage rate – in the region of 66-70%. In 2020/21, the LW-MESL wage was €12.30, so the rise to €12.90 in 2021/22 represented a 4.87% increase from the previous year. During that year, there were decreases in the costs associated with some of the items included in the LW calculation. These included small reductions in clothing costs, cheaper weekly food costs, lower social inclusion costs (books, newspapers, cinema tickets), and cheaper car insurance. However, the effects of these decreases were outweighed by

increases in other areas of expenditure. The most notable were increases in housing (rent) costs. As housing costs are the largest component of weekly expenditure in the LW calculation, such substantial increases wiped out the effects of the aforementioned decreases in other living costs. If housing costs had stayed at 2020 levels, the 2021/22 LW would be €12.45 per hour (Living Wage Technical Group, 2021b).

Issues that arise in constructing an MESL include whether or not to use the consensus-based approach; the size, recruitment and representativeness of focus groups; what household type to use as the basis of the LW; and how to make annual adjustments to the LW if particular components of the basket (e.g. housing) are volatile.

2.1.2 Fixed Threshold Approach

The main alternative approach to the MESL approach is to construct a LW on the basis of a particular income threshold, such as a percentage of the median wage (Hurley, 2021). This approach is similar to the approach commonly used to define a poverty threshold. People or households are often considered to be at risk of poverty when their income is less than a particular threshold. In the EU, the threshold has been set at 60% of median equivalized income. The threshold approach calculates the LW as a percentage of the median wage; the median is typically preferred to the mean when calculating the threshold as it is considered more robust.

This approach has been adopted by the UK government. Prior to April 2016, the adult rate of the National Minimum Wage (NMW) in the UK stood at 52.5% of median hourly pay for employees aged 25 and over (excluding first year apprentices). After winning the May 2015 election, the new Conservative Party government called an emergency budget in which the Chancellor unexpectedly announced the introduction of the National Living Wage (NLW). The

ambition for the NLW was that it should increase to reach 60% of median pay by 2020. This changed the structure of minimum wages by introducing a new minimum wage rate for workers aged 25 or above, while leaving the minimum wage rates for younger workers unchanged. The first step in moving towards this target involved the government setting the initial NLW rate of £7.20 in April 2016. The UK Low Pay Commission (LPC) was then charged with devising a path for the NLW to reach the 60% target by 2020, which was predicted to be £9.16 by April 2020 (UK LPC, 2016, page 4).

This first stage of the NLW, beginning in 2016, marked a significant change to the LPC recommendations, resulting in increases relative to median wages that were typically much higher than previously. Having reached the target rate in 2020, the UK LPC's remit was changed once again. The new remit, applying from 2020, set a target for the NLW to reach two-thirds of the median hourly pay for employees aged 21 and over by October 2024. Notably, the new remit granted the LPC the flexibility to recommend changes to the target, the timeframe for meeting it or the path taken to do so if the economic evidence warranted it.

In July 2022 the Irish government announced that it would begin the process of phasing in a LW corresponding to 60% of the median wage. The process would be completed by 2026 at which time the national minimum wage will be abolished and the wage floor set by the LW.

2.2 Existing Living Wage Programmes

Both minimum wages and LWs are introduced to deal with low pay for employees but minimum wages are generally statutory and compulsory while in many cases LWs are voluntary. LWs have been enacted via local ordinances in the US but only apply to certain cities or counties and not to all firms. We have identified some form of LW arrangement in the US, UK, Ireland, Canada and New Zealand. These vary across many dimensions and are described in Table 2. It is important to note that no country has a national statutory LW based

on the MESL; only the UK has a statutory national LW, and that is based on a fixed earnings threshold.

For countries that use the MESL approach, some noteworthy differences arise. For example, New Zealand does not use a focus group-based consensual approach to the estimation of living costs on the grounds that "it generated estimates that were considerably higher than what might in the end be agreed as a defensible and achievable level for the living wage" (King and Waldegrave 2012). Instead, they rely on independent data sources for the expenditure data. For most of the items, the estimated costs are based on the average expenditures by households with two adult and two dependent children, whose incomes were in the bottom half of the income distribution, as reported in the Household Economic Survey; this survey records what households actually spend within various income deciles, rather than measuring need per se (Waldegrave at al. 2018). As mentioned previously, the US LW is based on estimated poverty lines rather than the CBS approach. Furthermore, the focus on households with two adult and two dependent children in New Zealand and the US is in contrast to the Irish case, where the headline LW rate refers to a single adult with no dependants working full-time. Finally, while the UK, Canada and New Zealand operate voluntary schemes with employer accreditation, the voluntary scheme operated in Ireland has no such accreditation system in place.

Table 2: Living Wage Scheme Characteristics, Selected Countries

Country	LW per hour	LW as % of Median	Start Date	Mode of Operation
Canada	Varies by province and community. Examples: $22.08 in Toronto; $14.54 in Winnipeg		2008	Formal accreditation process for firms, varying rates.
Ireland	€12.90	~70%	2014	Consensus-based MESL approach. Voluntary, no accreditation scheme for firms. Base household: single adult with no dependants.
New Zealand	$22.75	>80%	2013	Voluntary, with employer accreditation. Does not use a focus group-based approach to calculating the wage but instead uses average expenditure data from Household Expenditure Survey. Base household: two adults and two children.
UK	'Real' LW: £9.50 (£10.85 London) NLW: £8.91[6]	67% (April 2021) NLW: 63%	Real: 2011 NLW:2016	'Real' LW: voluntary, with firm accreditation, MESL approach. NLW: Statutory National Living Wage which targets a given % of the median wage.
US	Varies by city		1998	Legally binding, mainly apply to employees working for firms in receipt of public funding or with a service contract with the city or county. Rate set in relation to poverty line. Base household: usually two adults and two children

Attempts have been recently made in Slovenia and Romania to bring the minimum wage closer to a LW. For example, in 2020, Romania passed a new minimum wage law stating that statutory minimum wages should take into account the value of a calculated living wage as 'the main criterion'. However, implementation of this law proved difficult. Despite the law being in force, the MESL approach was not used in setting the 2021 minimum wage. In response to criticism from trade unions, the government announced its intention to draft a bill in 2021 that would provide a mechanism for setting the minimum wage based on inflation and labour productivity, rather than the MESL.

[6] This applies to people 23 and over. There are lower rates for workers under 23.

2. Current Evidence

3.1 Living Wage Evaluations

In this section, we survey the empirical evidence that is relevant in evaluating the effects of LWs. Such evaluations are difficult for two reasons. Firstly, in many countries, participation is voluntary. Secondly, even in countries where participation is not voluntary, the number of employees affected is often small; for example, in the US, estimates of the share of workers covered by LW laws are about 1% (Neumark et al., 2012).

For a LW to be effective in reducing poverty, it must raise the wages of those in the covered sector and most of the gains must accrue to workers in low-income families. Early analyses of LWs were based on simulation studies that used pre-LW labour market data along with assumptions about likely behavioural responses to simulate the likely effects of the LW (Brenner, 2004; Pollin, 2005). These studies generally predicted modest increases in overall operating costs (1-2%), although potentially larger effects in low-wage industries. They also predicted negligible employment effects. While providing a useful basis for understanding the specific aspects of a city's labour market, results of such studies depend heavily on the assumptions made.

An alternative approach is to estimate the causal effect of the LW by comparing a treated group with a control group, i.e. a comparable group that was not subject to the LW ordinance. Finding an appropriate control group requires thinking carefully about the reasons states or cities did or did not implement the legislation. Adams and Neumark (2005) compare the experiences of cities implementing the legislation in the US with cities in which the legislation was initially approved but then overturned by judicial rulings. Neumark et. al (2012) provide a recent update on the effects of LWs based on this approach using US data. Their work uses 'before and after' difference-in-difference analysis, comparing cities that

implemented the LW with those that did not. They find that LWs tend to raise wages for most low-skilled workers, with some reduction in employment. For broadly applied LW ordinances, there is evidence of some modest reductions in urban poverty.

A 2008 survey by Holzer concludes that:

> "Living wage laws have both modest benefits and modest costs for low-wage workers. Living wage laws raise the wages of the lowest-wage workers. They may also result in . . . modest reductions in poverty. However, they lead to modest reductions in employment for the lowest-wage workers . . . Living wage laws can be useful but meaningful increases in the earnings of low-wage workers and reductions in poverty require more powerful public policies" (pp. 2–3).

In a recent paper, Datta and Machin (2021) examine the impact of the imposition of a LW for one large UK company. They exploit the fact that the organisation had over 300 establishments located across the UK, and that the that local government units with which the company had contracts signed up to the LW at different times. As a result, different establishments within the same company were exposed to LWs on a staggered basis. They exploit this staggered treatment, along with the discontinuity in the age-wage profile generated by the fact that younger workers are not eligible for the LW, to examine the impact on wages and hours. They find that the LW raised costs but did not affect aggregate hours. However, there was some evidence that the company substituted towards younger workers as a result of their ineligibility for the LW. Their results suggest that the LW's introduction affected the way hours are distributed across workers within the establishment but not the total number of hours worked.

3.2 Minimum Wage Evaluations

While there has been relatively little work evaluating LWs, this is not the case for minimum wages, where there exists a large body of research evaluating their effects. Dube (2019) and Neumark and Shirley (2021) provide recent summaries of the impact of minimum wages on

wages, employment and poverty. Dube (2019) states that the evidence "points to a very muted effect of minimum wages on employment, while significantly increasing the earnings of low paid workers." Neumark and Shirley (2021), on the other hand, state that "[i]n its totality, this body of evidence and its conclusions point strongly toward negative effects of minimum wages on employment of less-skilled workers." While there is still disagreement in this respect, it is clear that the old consensus which was skeptical of the benefits of a minimum wage has been eroded. In 2015, a survey conducted by the University of Chicago found that only 26% of economists surveyed worried that a minimum wage of $15 would lead to significant employment losses (Clemens, 2019).

LPC (2019) summarises recent work on the minimum wage in Ireland. Since its establishment, the Low Pay Commission recommended increases in the NMW of 50 cent (2016), 10 cent (2017), 30 cent (2018), 25 cent (2019), 30 cent (2020), 10 cent (2021) and 30 cent (2022). In partnership with the ESRI, the Low Pay Commission has published a number of evaluations of the impacts of these increases. They found no evidence of an increase in unemployment following the NMW increase, although there was some evidence of a reduction in hours worked by NMW workers, with workers on temporary contracts experiencing an average reduction of approximately 3.5 hours per week. The 2016 NMW increase was also found to have been effective in increasing the wages of low-paid workers and in reducing hourly wage inequality.

While the work on minimum wages in general is interesting, much of this work has focused on minimum wages that are set at a much lower level than that proposed as a LW. For instance, the average ratio of the state minimum wage to the median wage in the US is 0.48 (Dube and Lindner, 2020). Likewise, a recent paper on the impact of the German minimum wage (Dustmann et al., 2021) follows the labour market outcomes of individual workers before and after the introduction of the national minimum wage in Germany and finds that the

minimum wage boosted wages but did not increase the probability of low wage workers becoming unemployed. Interestingly they find that the minimum wage led to increased worker mobility, with low wage workers reallocating from smaller, lower paying firms to larger, higher paying, more productive firms. Consistent with this increased mobility at a worker level, they find that small businesses were more likely to exit the market, that average establishment size increased in areas more exposed to the minimum wage and that the minimum wage induced an increase in the average predicted productivity of establishments in more relative to less exposed areas. However, when introduced in 2014 the ratio of the German minimum wage to median wage was 0.48. LWs tend to be set or proposed at a much higher level than this. For example, the UK national living wage is set at 0.60 of the median wage with a target of 0.66 by 2024. 0.60 of the median wage is also the target of the latest of the latest LW proposed by the Irish government. In the US, the proposed Raise the Wage Act would gradually raise the federal minimum wage from the current rate of $7.25 per hour to $15 per hour by 2025, after which, it would automatically increase each year at the same rate that median wages increase. Nationally, this would amount to a minimum wage of 0.67 of the median wage, but in some low-wage states such as Alabama and Mississippi, it would have been as high as 0.8. Likewise, Colombia, Chile, Costa Rica, Turkey, Portugal and New Zealand have minimum wages set close to or above 66% of the median wage. Economic theory predicts that minimum wages that are set at too high a rate will cause unemployment, even with imperfect labour markets (i.e. markets in which firms retain some power when setting wages). The key question for this report then is "how high is too high?" and whether a relative minimum wage of 0.60 or higher would exceed the acceptable threshold. For this report, we therefore focus on evaluations of minimum wages that are relatively high.

Cenzig et al. (2019) propose a modified difference-in-difference estimator to estimate the impact of minimum wage changes on the distribution of jobs across the wage distribution.

Using state-level data for the US, they estimate the number of excess jobs paying at or slightly above the new minimum wage and compare this to the number of missing jobs paying below it ('upgraded jobs'). They then use the difference between the two to infer the employment effect. This is sometimes called a 'bunching' approach because of the focus on the spike or bunching of jobs in the vicinity of the minimum wage. They consider 138 distinct minimum wage changes between 1979 and 2016 and for each change estimate the employment effect using the bunching approach. They then consider how the employment effect of a minimum wage varies with the relative minimum wage by plotting the results against the relative minimum wage associated with each event.

Consistent with expectations, they find that events with higher minimum to median wages are associated with substantially more missing jobs. However, nearly all these jobs seem to have been upgraded rather than destroyed. In other words, events with a bigger bite entail a greater number of missing jobs but also a greater number of excess jobs, so that the overall employment effect is close to zero and does not vary with the bite. To examine whether the profile of workers differed between the missing and excess jobs they consider whether there is a shift from low-skill to high-skill workers at the bottom of the wage distribution. To do this they partition workers into groups based on education and age. Comparing the number of excess jobs at or above the new minimum wage and missing jobs below it across age-by-education groups shows no evidence that low-skilled workers are replaced with high-skilled workers following a minimum wage increase. However, it is important to recognize that even in the high-impact events considered by Cenzig et al. (2019), the minimum wage was at most 0.59 of the median.

Cenzig et al. (2019) conclude that

> " the level of the minimum wages that we study – which ranges between 37% and 59% of the median – have yet to reach a point where job losses become sizeable. ***However, the employment consequences of a minimum wage that surpasses the ones studied here remain an open question***." [emphasis ours]

Dube (2019) uses the same approach to examine if there was any more recent evidence that a critical point has yet been reached with the minimum wage. He looks at seven states that raised their minimum wages substantially between 2016 and 2018, by an average of 30%; after implementation, the average minimum to median ratio in these seven states was 0.53. As with Cenzig et al. (2019), he finds a clear fall in jobs paying below the new minimum wage, although the magnitude of the fall was more than twice that found in the earlier work. However, again the number of jobs paying at or slightly above the new minimum wage was virtually identical to the number of missing jobs, so that the overall employment effect was zero.

In a recent study, Clemens and Strain (2021) look at the issue of nonlinear minimum wage effects using data on US states from 2011-2019. The use of recent data means the authors' analysis includes states with relatively high minimum wages. They classify states into policy regimes based on the size of the minimum *increase*. States that increased their minimum wage by more than $1 between 2013 and 2015 are defined as large increases. They find significant nonlinear effects associated with minimum wage increases. The effects of small minimum wage increases are both economically and statistically indistinguishable from zero. However, the employment effects of large minimum wages increases are substantially more negative, with a wage elasticity of –1, suggesting that the percentage fall in employment is approximately equal to the percentage increase in the wage rate. Such a negative effect is very high relative to previous findings (Dube, 2019; Neumark and Shirley, 2021). In addition, it implies a very large degree of heterogeneity over a relatively small range – the average minimum wage

increase was roughly 25% in their 'small' increase group and roughly 35% across their 'large' increase group. Finally, while previous work has defined the bite of the minimum wage based on the ratio of the minimum wage to the median, this paper uses the magnitude of the *change* in the minimum wage to define its bite – in this case a minimum wage increase from $7 to $8 would be treated as the same as an increase from $14 to $15.

Another recent US study by Godoey and Reich (2021) allows us to consider the impact of minimum wages with higher bites. They use granular data at the local area level to look for heterogeneity of employment effect by local area wage levels. Within each state, counties vary considerably in their median wage. Since the minimum wage is constant across all counties within a state, this generates considerable variation in the ratio of minimum wages to county level medians. The authors examine the effects of minimum wages separately in high-impact counties (where the relative minimum wage ranges from 0.56 to 0.82) and low-impact counties (where the relative minimum wage ranges from 0.26 to 0.46). They focus on those workers most exposed to the minimum wage, including those with a high school education or less, teens, and workers in food service and retail. They use event study and difference-in-difference estimation techniques that exploit differences in the timing of state minimum wage changes. The models are estimated separately on high- and low-impact localities. They find positive wage effects and substantial reductions in household poverty, especially in high impact counties, but no evidence that employment or hours of work were negatively affected, even in areas where the minimum wage was high relative to the median wage.

A recent feature of the US labour market is the move by several large cities to set their own minimum wages, exceeding not only the federal minimum wage (of $7.25) but also the state minimum wage. In 2010 there were only three cities with their own minimum wage but by 2020 this had risen to 42 (Dube and Lindner, 2020). Of these, 22 cities have a minimum wage that is €15 per hour or above. In Seattle, a 2019 law raised the minimum wage for

employees of businesses with more than 500 employees to $16 per hour, while boosting minimum pay for employees of smaller businesses to $12 an hour, or $15 an hour if those employees receive neither medical benefits nor tips. Zipperer and Schmitt (2017) estimate that the initial increases in Seattle's minimum wage resulted in a minimum to median ratio of 0.51.

Given the magnitude of these changes, Seattle has become a test case for the impact of minimum wages with relatively high bites. However, studies of the effects of the Seattle wage hike have had mixed findings. Jardim et al. (2017) uses high quality administrative data to examine all categories of low-wage workers across all industries. To identify the effects, they use both a simple difference-in-difference approach comparing employment in Seattle to neighbouring counties and a synthetic cohort approach, which uses pre-policy observations to find a set of control regions from the state of Washington that closely mimic economic circumstances in Seattle prior to the legislation. Using these approaches, they found that while hourly wages went up by 3%, hours worked declined by 9%, resulting in a reduction in average monthly earnings of $125. In addition, they found larger impacts when the minimum wage was raised from $11 to $13 than when raised from $9.47 to $11, suggesting a non-linearity in the reactions of firms. Their estimated employment elasticity with respect to wages is -2.18, which is larger than estimated in most minimum wage studies.

However, the methodology and data used in this study has been criticized by other researchers, such as Zipperer and Schmitt (2017). They argue that the approach used biases the results in the direction of finding job loss, even where there may have been none. They note that Jardim et al. (2017) exclude workers working for employers with businesses in multiple locations, who represent roughly 40% of the workforce. Zipperer and Schmitt (2017) claim that this leads Jardim et al. to find implausibly large employment effects in parts of the labour market where there should be no effect. For instance, the Jardim et al. (2017) results imply that the minimum wage caused large gains in the number of jobs paying above €19 an hour and in

the number of hours worked in those jobs, even though those jobs are above the wage range where a €13 minimum wage would be expected to have a measurable effect. Zipperer and Schmitt conclude that the best explanation of these anomalies is the failure of Jardim et al. (2017) to properly isolate the effect of the minimum wage from other factors that resulted in a strong labour market in Seattle during this period.

In a follow-up study, Jardim et al. (2018) use longitudinal panel data and a triple-difference approach to examine the impact of the minimum wage increase on individuals employed in low wage jobs immediately beforehand. Their approach compares the differences in treated and control workers' outcomes after enforcement to those at baseline and then compares this difference with the result from the same exercise applied to a placebo cohort of Seattle and Washington workers observed in an earlier period before the local minimum wage law. The third difference controls for the possibility that Seattle workers may diverge from their matched counterparts for reasons unrelated to the minimum wage. In this study, the minimum wage was found to raise earnings by $8-$12 a week, with the gains accruing to workers with above median experience. They find no evidence that the minimum wage reduced the probability of employment among those employed in the quarters prior to the law's implementation, though they do find evidence of reductions in hours of work.

Reich et al. (2017) use a synthetic cohort approach similar to Jardim et al. (2017) but focus on the Seattle food service industry, rather than all low-wage workers. In addition, they use counties from outside of the state of Washington when constructing their synthetic control group. They argue that the use of these counties ensures that the control group is not contaminated by wage spillovers from Seattle and allows them to find control groups that experienced a Seattle-like boom without a corresponding minimum wage increase. Using this approach, they find that the Seattle wage increases increased pay but did not lead to job losses in this sector.

Allegretto et al. (2018) analyse the effects of citywide minimum wages in Chicago, Washington DC, Oakland, San Francisco and San Jose. On average across these five cities, they find that a 10% increase in the minimum wage increases earnings in the food sector by between 1.3% and 2.5%, with no significant employment effects; the employment effects ranged from a 0.3% decrease to a 1.1% increase. It is important to note, however, that while the minimum wages under analysis in this study are quite high relative to the federal minimum, the ratio of minimum wage to median wage ranged from 0.32 to 0.50 in the cities considered, still well below the 0.6-0.7 often proposed for a LW.

Dube and Lindner (2020) provide an overall assessment of city-level minimum wages implemented as of 2018. They consider the overall impact on low-wage jobs rather than focusing on particular sectors. Using the bunching estimator of Cengiz et al. (2019) discussed above, they find that these cities lost jobs below the minimum but that the excess jobs created above the minimum wage almost totally compensated for these losses. The implied employment elasticity is estimated to be -0.12, which is relatively low. However, even in these high-wage cities, the relative bite of the minimum wages used in the analysis was 0.56, still low relative to many LWs.

While most of the relevant literature has focused on the US, the experiences of two European countries, France and Hungary, as well as that of New Zealand, are also worth considering as minimum wages in these countries have a relatively large bite. A national minimum wage was first introduced in France in 1950, and today the French minimum wage is one of the highest among OECD countries, both in absolute and relative terms. Lubker and Schulten (2021) note that the ratio of the minimum wage to the median wage is 0.61, making it the highest in European Union. For this reason, the French experience may be particularly relevant in the context of a national living wage.

Gautie and Laroche (2018) provide a comprehensive summary of existing empirical evidence on the impacts of the minimum wage on the French labour market. The research indicates that the minimum wage in France may have a had a small negative effect on employment; on average, a 10% increase in the minimum wage was found to lead to a 1.06% reduction in employment, which is equivalent to modest elasticity of –0.106. However, there is substantial heterogeneity across studies. For example, a series of studies by Abowd et al. (1997, 1999, 2000) found much larger effects, with elasticities exceeding one. However, Gautie and Laroche (2018) report evidence of publication bias, a form of bias that means that research is more likely to be published if results are statistically significant. When account is taken of this publication bias, the negative employment effects of the French minimum wage are less clear.

It should be noted that there have been very few studies of the French minimum wage in the last twenty years. This is because changes to the minimum wage in France have, since 2008, followed wage changes in the wider economy, so there is no variation in the minimum wage bite over time. In addition, minimum wage increases have been accompanied by active labour market policies for the young, low-skilled workers who are mostly affected by the minimum wage. As a consequence, properly identifying the effect of recent changes to the French minimum wage has proven almost impossible. Finally, it is worth noting that French unemployment has been persistently high over many years, with the OECD recommending that the minimum wage should grow more slowly than the median wage in order to increase employment (OECD, 2015).

In 1999, Hungary increased its minimum wage from 0.35 to 0.55 of the median wage of full-time workers over the course of two years. To put this in perspective, the wage corresponding to 0.55 of the median wage for full-time workers in Ireland was €10.65 in 2019. Harasztosi and Lindner (2019) evaluate the impact of these changes on labour market outcomes

using a variety of methods. They find a moderate negative effect on jobs; each 10% increase in the minimum wage was associated with a 2% decline in employment. In addition to employment, they also consider other adjustment channels, including profits and prices. They find a substantial increase in consumer prices along with some reduction in profits following the minimum wage increase. They estimate that 25% of the increased cost of labour that resulted from the minimum wage increase was paid by firms in the form of reduced profits, while 75% was paid by consumers in the form of higher prices.

Mare and Hyslop (2021) review recent trends in the minimum wage in New Zealand and analyse how it has affected workers there. They report that in 1997 the adult minimum wage in New Zealand was 56% of the median hourly wage, but this had risen to 71% by 2020, making it one of the highest minimum wages in the OECD. They estimate that approximately 9.3% of employees were paid the minimum wage. Although the review of the literature yields a variety of employment effects, with some implying reductions in employment for low-skilled workers, they conclude that, on balance, the evidence finds no clear adverse employment effects despite the large bite of the minimum wage, while noting the possibility of downside risks for youth and low-skilled employment. However, it should be noted that the empirical strategy used to identify the effect of the minimum wage on employment in this paper relies primarily on time series variation in the minimum wage and employment levels and does not adopt the more recent empirical approaches that have been developed in the literature. As minimum wage workers are spread across the distribution of household income, they conclude that the minimum wage is largely ineffective as a tool for income redistribution.

While the studies surveyed in this section provide some evidence on the heterogenous effect of the minimum wage as the bite of the minimum changes, the majority of the evaluations of minimum wages have considered situations where the bite is lower (and in most cases substantially lower) than 0.7. The introduction of a statutory wage floor at this level would be

done in the absence of convincing empirical evidence as to its likely consequences. On the other hand, there is some evidence that a minimum wage set at about 0.6 of the median wage may have small or no employment effects but larger effects on other outcomes such as hours and prices.

3.3 Evaluations of the UK National Living Wage

In this section, we examine a number of early evaluations of the recently introduced UK national LW. In 2015 the UK government announced a NLW that would apply to those aged 25 and over, with the first step in the transition to 0.60 of the median wage implemented in April, 2016. This first step saw the NLW introduced at an initial rate of £7.20, which represented an annual increase of 10.8% over the existing NMW. This implied an increase in the bite of the UK minimum wage for the relevant age group from 0.53 of the UK median wage to 0.56 (UK LPC, 2016).

McVicar et al. (2017) attempt to exploit the discontinuity in the minimum wage caused by the border between Northern Ireland (NI) and Ireland to examine the effects of the introduction of both the NMW in 1999 and the NLW in 2016. The bite of the NLW in 2016 was estimated to be well over 0.60 in NI. McVicar et al. (2017) conduct a difference-in-difference analysis using Ireland as the control group. They find a small decrease in the employment rate of 22-64 olds in NI in the year following the introduction of the NMW in 1999 but no effect following the introduction of the NLW in 2016. However, as the authors note, there are several reasons to be concerned about the validity of the identification strategy used to estimate the LW effect; these include the appreciation of sterling in 1999, the rise in Ireland's minimum wage in January 2016 and the Brexit referendum in June 2016. For this reason, the authors themselves caution against interpreting any estimated negative employment effect from their model as causal (page 16).

Aitken et al. (2019) use a difference-in-difference approach to examine the effects of the NLW introduction and its 2017 uprating on employment and hours worked in the UK. They compare two groups of workers on the basis of their pre-uprating earnings; the treated group had initial wages below the incoming NLW level and so were directly affected by the NLW, while the control group were already earning at or above the new NLW. They find clear evidence of greater wage growth for low paid workers. In most specifications, the effects on employment are imprecisely estimated so that moderate to large positive and negative effects of the NLW cannot be rejected. The large confidence intervals suggest that there is not enough variation in the data to precisely estimate the effects of the NLW. However, they do find some evidence of adverse effects on employment of women working part-time and for some of the lowest paid workers in the retail sector.

Adascalitei et al. (2019) provide survey evidence on the way in which employers in the retail and hospitality sectors responded to the NLW, focusing on two urban sub-regions, Greater Manchester and Sheffield. 50% of the 40-50 establishments surveyed reported that the NLW had led them to increase prices; a similar percentage reported that the NLW led them to not replace workers who left the firm; some interviewees said that the NLW had encouraged them to hire workers aged less than 25 rather than older workers; and 25% of employers report having responded to the new NLW by increasing work intensity. However, all the results in this paper are based on self-reported response to questionnaires, which is not an appropriate methodology for establishing causal effects in economics. Furthermore, the response rate to the surveys was significantly below the 20% target, which raises additional concerns regarding sample sizes and selection bias when interpreting the findings.

Forth et al. (2019) use employers' responses to a survey conducted by the Chartered Institute for Personnel and Development to examine the impact of the NLW on establishments, using a broader set of establishments than Adascalitei et al. (2019). Like Adascalitei et al.

(2019), they find that around one quarter of organisations that responded said that they required staff to take on additional tasks or be more flexible in their hours of work. Around 15% of affected organisations reported they had reduced employment and 10% had reduced hours of work. 21-23% responded that they had raised prices, while approximately one third reported making lower profits; this was particularly pronounced in smaller firms (2-49 workers), 42% of whom claimed to have absorbed the higher costs in the form of lower profits. To overcome the problems associated with self-reported outcomes, the authors match the surveyed firms to the administrative FAME database to get objective measures of employment changes in response to the NLW. Using this approach, they find no effect on the firms' employment levels or profit margins. However, only a small number of establishments could be successfully merged to the FAME database so, as acknowledged by the authors, these results suffer from selection bias and small samples and therefore cannot be regarded as reliable.

Baily et al. (2020) examine the effects of the NLW on businesses, paying particular attention to employment and prices. They find that the prices of goods produced by firms who rely more heavily on minimum wage workers increased modestly following the introduction of the NLW and that employment growth was around 2% lower in the affected firms than in the control group three years after its introduction. However, they also found negative employment effects in periods during which the changes to the minimum wage were small, raising doubts over the identification strategy used in the paper. The authors themselves concede that "they cannot be confident that the lower employment effects we find in firms which are more reliant on minimum wage labour are in fact related to the introduction of the NLW."

The most recent and most convincing evaluation of the UK NLW is that of Cribb et al. (2021). They first adapt the 'bunching' approach of Cengiz et al. (2019) to jointly estimate the effect of the NLW on wages and employment up to 2019. Since there is no geographical

variation in minimum wages in the UK, Cribb et al. (2021) exploit differences in wage levels between areas that arise because of differences in living costs. The aim is to identify the causal effect of the minimum wage by examining employment changes in each nominal wage 'bin' relative to the change observed for the same job type in higher wage regions. The higher wage regions act as the control group since they are less affected by NLW legislation. They find that rises that entailed higher minimum to median wages were substantially more likely to result in missing jobs. However, in keeping with the US research, they find that nearly all these jobs have been 'upgraded' rather than destroyed. The overall employment elasticity is -0.16 and does not vary with the bite. The authors conclude that this bunching approach suggests little employment effect of the NLW in 2015-2019. In keeping with Cengiz et al. (2019) they also decompose the missing and excess jobs by worker characteristics such as gender, education and hours of work. They find little change in the profile of employed workers across these dimensions following the minimum wage changes.

They also look at hours of work and do not find much evidence of an effect on this margin, although there is some evidence that the employment effect is more negative for women than men. Since the NLW applied only to over 25s, they also consider the possibility that it had effects on those under this age as firms could substitute from slightly older to younger workers or could be forced to raise wages for those under 25 to maintain the existing pay gradient. There is little evidence of such effects.

In the second part of the analysis, Cribb et al. examine the effects on household income of the NLW. To do this, they simulate not just the mechanical effects of raising the minimum wage on household income but the actual effects incorporating employment and wage spillover effects, as estimated from the bunching approach. They find increases in household income throughout the distribution, with the largest absolute gains accruing to households in the middle of the distribution (deciles 4-7). Once taxes are taken into account, the mean percentage change

in net household income is in the range of 0.20%-0.25% for households in deciles 1-6, falling to 0.10% or below for households in the top three deciles. Wage spillovers and employment increases are shown to be an important part of these income changes.

Finally, two papers have examined the impact of the introduction of the NLW on the care homes industry, which is a particularly low wage industry (Giupponi and Machin, 2018, Vadean and Allan, 2021). Both studies find that the introduction of the NLW in 2016 resulted in a substantial increase in wages in the home care sector, both for those directly affected by the legislation but also for those under aged under 25 as a result of spillover effects. Neither study finds clear evidence of a detrimental effect of the NLW on employment. However, there is interesting evidence that employers may have adjusted along other dimensions. Giupponi and Machin (2018) find evidence of a significant deterioration in the quality of service provided following the introduction of the NLW, while Vadean and Allan (2021) find evidence of a reduction in total weekly hours worked following the wage increases. These results highlight the importance of considering the full range of potential adjustment channels when considering a firm's response to the introduction of a NLW.

3. Implications of Moving to a Living Wage

As noted earlier the Irish government recently announced plans to phase in a LW corresponding to 60% of the median wage. The process would be completed by 2026 at which time the national minimum wage will be abolished and the wage floor set by the LW. To understand the potential impact of such a LW on labour costs, poverty and the wage distribution, we use the European Union Survey of Income and Living Conditions (EU-SILC) to empirically examine the impact of a range of LWs on employer costs, inequality and poverty.

As well as the proposed LW, based on 60% of the median wage, we also consider a LW set at 66% of the median wage, as well as the level proposed by the LWTG using the MESL approach, which was €12.30 in 2019; we use the 2019 LW rather than the more recent 2021 rate of €12.90 because the most recent EU-SILC data available refers to 2019. We also consider a LW based on 50% of the mean wage, which is one of the thresholds mentioned in a recent proposed EU Directive on Adequate Minimum Wages.

To aid exposition, for the remainder of the report, we refer to LWs based on percentages of the median wage as LW60 and LW66; to the LW calculated by the LWTG as LW-MESL; and to the LW based on 50% of the mean wage as LW-Mean.

4.1 Alternative Living Wages: the Proportion Affected and their Characteristics

Accurate estimation of the median wage is essential for this component of the analysis. Accordingly, we paid particular attention to ensuring that our estimates of the parameters of the wage distribution were consistent with previous estimates. Our initial exploration revealed some differences with previous estimates; having liaised closely with other researchers, we have established that there have been revisions to the EU-SILC data since previous estimates were produced, and that any differences between our estimates and previous ones are due to these revisions, with our estimates reflecting the most recent revisions.

Table 3: Alternative LWs and the Proportions of Workers Affected

	2017	2018	2019
Median Hourly Wage Rate	**€16.74**	**€16.83**	**€18.33**
Alternative threshold levels:			
NMW	€9.25	€9.55	€9.80
LW60	€10.04	€10.10	€11.00
LW66	€11.05	€11.11	€12.10
LW-MESL	€11.70	€11.90	€12.30
LW-Mean	€10.57	€10.62	€11.74
As % of median:			
NMW	55.27%	56.75%	53.47%
LW-MESL	69.90%	70.71%	67.12%
LW-Mean	63.15%	63.12%	64.03%
% of employees earning up to:			
NMW	6.74%	7.46%	6.10%
LW60	14.70%	13.49%	15.27%
LW66	20.85%	19.82%	23.70%
LW-MESL	25.89%	25.37%	24.40%
LW-Mean	17.48%	16.65%	20.96%
N	3625	3397	3291

Note: EU-SILC data, all workers aged 16-64

The first row of Table 3 provides estimates of the median hourly wage rate for 2017-2019. We consider all employees aged 16-64 and limit the analysis to individuals with just one job. It can be seen that the median wage was largely unchanged between 2017 and 2018, but then rose sharply in 2019 as the labour market improved. The next set of rows show the value of a LW calculated at various percentages of the median for each year. For example, in 2019, the threshold-based LW is €11.00 for LW60 and €12.10 for LW66. The next three rows report the NMW, LW-MESL and LW-Mean. They show that the NMW falls between 53% and 57%

of the median over the three years considered, while the LW-MESL falls between 67% and 71% of the median. The remaining six rows of Table 2 show the proportion of people earning less than or equal to the NMW and each of the alternative LWs. In 2019, about 24% of employees earn up to LW66. The corresponding figures for the NMW and LW-MESL are 6% and 24%.

Figure 2 illustrates some of the above figures graphically. It shows the kernel density distribution of the hourly wage in 2019, together with the various thresholds. The coloured areas represent the proportions of employees working for less than or equal to the thresholds of interest.

Figure 2: Distribution of 2019 Hourly Wages with Alternative Thresholds

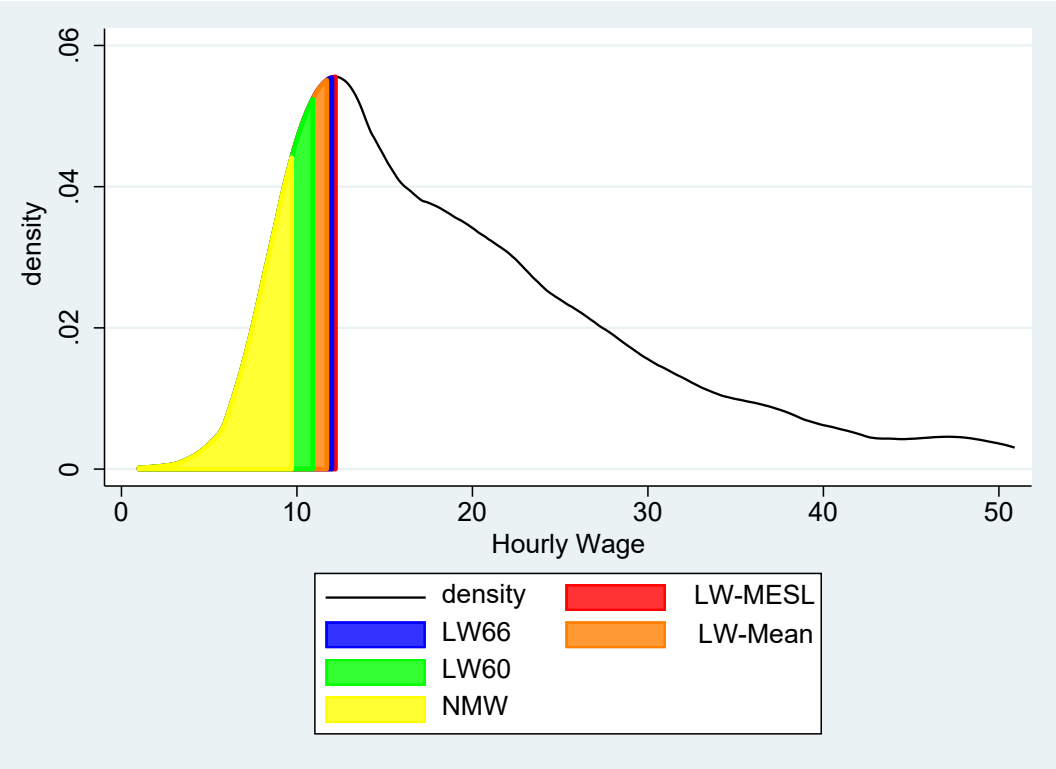


Table 4 compares the characteristics of all employees aged 16-64 with those earning less than each of the alternative LWs. As we might expect, younger workers, those working in Wholesale/Retail and Accommodation/Food and part-time workers are over-represented in the

groups with wages below the NMW and the lower LW thresholds, but to a lesser extent in the group with wages below LW66. For example, workers aged up to 24 make up 41 % of those earning up to the NMW but this falls to 25% when we consider the LW66 threshold.

Table 4: Selected Characteristics of Employees Earning Up to Various Earnings Thresholds, 2019, Percentages

	All	NMW	LW60	LW66	LW-MESL	LW-Mean
Aged up to 24	10.08	41.34	28.90	24.57	24.20	25.35
Male	50.11	53.41	44.67	46.00	46.02	44.56
Part-time	22.16	36.76	42.78	39.71	39.72	41.56
Irish Citizen	84.42	79.68	76.80	79.21	79.26	78.78
Wholesale/ Retail	12.53	21.38	21.09	19.78	20.01	20.67
Accommodation /Food	6.77	18.18	17.99	17.11	16.62	17.28

The last two rows of Table 4 indicate that certain sectors are more likely to be affected by a LW than others. Table 5 examines this issue further by reporting the effective bite of a the government proposed LW (LW60) across NACE sectors, where the bite refers to the wage threshold as a percentage of the median wage *in a given sector*. We see that the bite is considerably higher than the economy-wide average of 60% in sectors such as Agriculture, Wholesale/Retail, Accommodation/Food, Administration/Services, Residential Services and Arts. It is striking that LW60 is very close to the median wage in Accommodation & Food. On the other hand, the bite is considerably lower than 60% in Finance, Information/Communication and Education.

Table 5: Bite of LW60 by Sector 2019

Sector	LW60 as Proportion of Sector's Median Wage
Agriculture, Forestry, Fishing & Mining	0.92
Manufacturing	0.57
Utilities	*
Construction	0.61
Wholesale & Retail	0.80
Transport	0.59
Accommodation & Food	0.97
Information and Communications	0.42
Finance	0.46
Scientific	0.51
Administration & Services	0.85
Public Administration	0.45
Education	0.43
Human Health	0.49
Residential Care & Social Work	0.74
Arts & Entertainment	0.88
Overall	**0.60**

* Utilities sector not included due to the CSO's statistical disclosure rules relating to SILC

Whereas Table 5 examines the differential impact of a LW on various sectors by focusing on the size of the LW relative to a sector's median wage, Table 6 takes an alternative approach by showing the proportion of workers earning less than LW60 by sector. Statistical disclosure rules relating to cell sizes prevent us from showing all sectors, but many of the lowest-wage sectors can be reported. We see that over 40% of workers in Accommodation and Food earn less than the LW60 threshold.[7] In fact there is a significant mass of workers in this sector located just below the sector-specific median. As a result, even a small increase in the LW above LW60 will have serious consequences for this sector. These results clearly illustrate the differential effects any proposed LW will have across sectors. Such heterogeneity

[7] The fact that this percentage is not closer to 50%, given that the LW60 corresponds to 97% of the median wage in in the Accommodation and Food sector, reflects the high concentration of workers with earnings in the narrow range between LW60 and the median in this sector.

needs to be borne in mind when considering the likely effects of any LW. We will return to this when we consider the impact of the introduction of LW on a firm's costs.

Table 6: Percentage of Employees Earning Up to LW60, Various Sectors, 2019

Sector	Percentage earning up to LW60
Manufacturing	9.31
Wholesale/Retail	25.72
Accommodation/Food	40.57
Admin/Services	29.02
Residential Care/Social Work	14.66
Overall	**15.27**

4.2 Living Wages, Inequality and Poverty

In this section we use the 2019 EU-SILC data to examine the impact of a LW on wage and gender inequality and on household income inequality and poverty. Table 7 looks at the impact of alternative LWs on wage inequality and the male-female wage gap. We use two measures of inequality, the standard deviation in hourly wages and the 90-10 ratio. The latter expresses the wage of high paid workers (those in the top decile of the distribution) relative to those of low paid workers (those in the bottom decile). We measure the Male/Female wage gap using the average percentage difference in wages between men and women. To examine the impact of a given LW, we mechanically bring up the wages of those currently below the LW to the specified LW and re-estimate the inequality measures using the new distribution. This is a partial approach in that it does not take into account spillover effects or any hours or employment changes that might arise as a result of the wage change.

The results show that if low-wage employees had their wages brought up to the LW66 threshold, the standard deviation of wages would fall from the level observed in 2019 of 0.56 to 0.50, while the 90-10 ratio would fall from 1.58 to 1.46. These are relatively small but non-negligible effects. The effect on the Male/Female wage gap is modest.

Table 7: Dispersion in Wages and Gender Wage Differential for Alternative LWs

Inequality Measure	**Actual 2019**	If Hourly Wage Rate is Increased to			
		LW60	LW66	LW-MESL	LW-Mean
Standard Deviation of Hourly Wage	**0.56**	0.52	0.50	0.50	0.51
90-10 Ratio	**1.58**	1.52	1.46	1.45	1.48
Male/Female Wage Differential	**0.050**	0.052	0.048	0.047	0.049

Table 8 considers the impact of the alternative LWs on households rather than individuals. We consider household income inequality and poverty using equivalized disposable household income[8]. Here we calculate what household income would be if employees' hourly wage rates were increased up to the various LW thresholds, assuming that hours remain unchanged. We also assume that other household income, taxes and benefits stay the same, so that wage gain is translated directly into disposable income. We then compare actual poverty and inequality rates with what they would be following the increases in income associated with the LW. We measure inequality using the 90-10 ratio; the risk-of-poverty rate is calculated as the percentage of individuals whose income is below 60% of median

[8] The OECD Equivalence scale is used to calculate household size. This scale assigns a value of 1 for the first adult, 0.66 for the second and all subsequent people age 14 and over and 0.33 for all members under 14.

equivalized household disposable income; and the risk of in-work poverty is defined as the percentage of workers working for more than six months who are at-risk-of-poverty, following the Eurostat definition.

The results show that the 90-10 ratio is estimated to be 3.29 in 2019; to two decimal points, this does not alter much with the various thresholds. The percentage in poverty falls from the actual 2019 rate of 12.78% to 12.07% when wages are brought up to LW60, and to 11.71% when wages are brought up to LW-MESL. These are small effects on overall poverty. However, since the LW is targeted at employees, we would expect to find a bigger effect on in-work poverty. Our findings show that the percentage in in-work poverty falls from the actual 2019 rate of 3.91% to 3.10% with LW60 and to 2.76% with LW-MESL. As expected, a LW has a bigger effect on in-work poverty than on overall poverty.

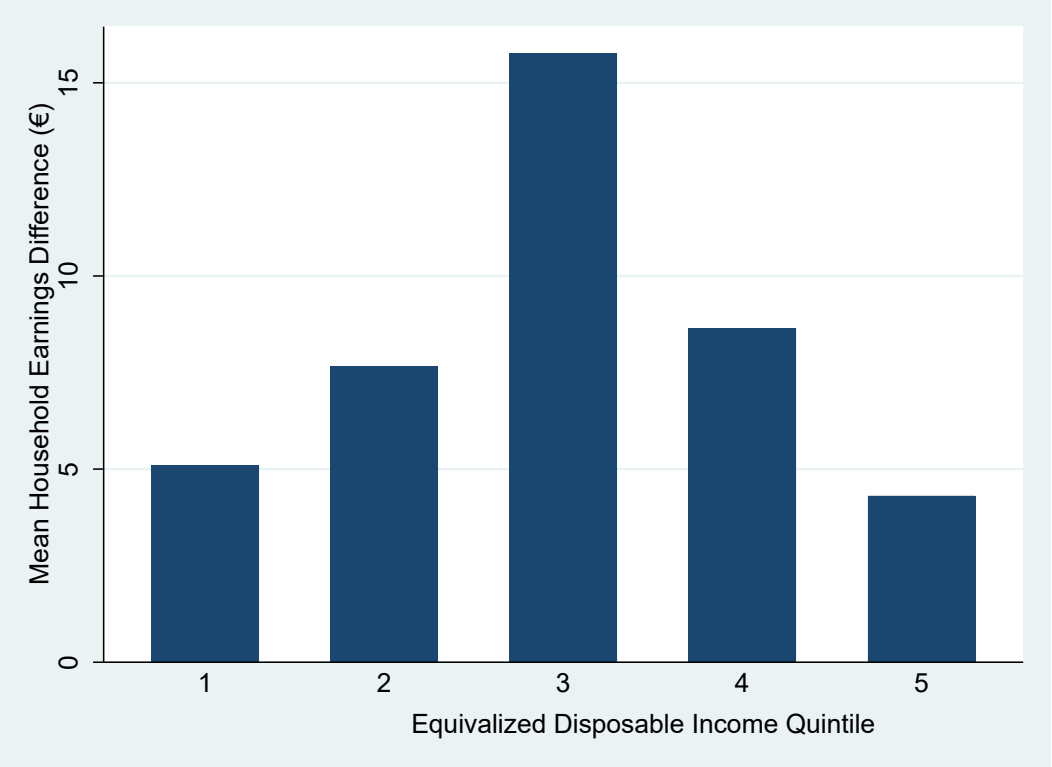
Table 8: Measures of Household Income Inequality and Poverty for Alternative LWs

Inequality/Poverty Measure	**Actual Equivalized Disposable Income 2019**	If Hourly Wage Rate is Increased to			
		LW60	LW66	LW-MESL	LW-Mean
90-10 Ratio	**3.29**	3.29	3.29	3.30	3.29
Risk of Poverty (%)	**12.78**	12.07	11.76	11.71	11.83
Risk of In-Work Poverty (%)	**3.91**	3.10	2.82	2.76	2.87

Overall, we find very little change in household inequality upon the introduction of a LW. This is in keeping with previous work on the minimum wage (Logue and Callan, 2017) and is due to the fact that many low-income households have no workers or only have workers on relatively low hours. By its nature, the LW will have little or no effect on these households.

We can see this more clearly in Figure 3, which shows the household earnings gains by quintile of the household disposable income distribution, following the introduction of LW60. The biggest income gains accrue to households in the middle quintile and not to those in the lowest quintile. This explains the modest reductions in household inequality and poverty resulting from a national LW.

Figure 3: Household Earnings Gains Due to Introduction of LW60, by Quintile of Household Equivalized Disposable Income



In summary, the results in this section echo those of previous researchers. Living wage laws can be a useful tool for increasing the wages of low paid workers. However, in order to achieve meaningful reductions in household inequality and poverty, more powerful targeted public policies are required in addition to increasing the wages of low paid workers.

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4.3 Impact of a Living Wage on the Wage Bill

In a standard competitive model of the labour market, a key predictor of the impact of a wage increase on employment and hours of work is labour's share of total costs in firms. We use the EU-SILC to approximate likely changes in the wage bill by sector as a result of the proposed LW (LW60). We calculate the change in gross weekly wages that would result if the wages of workers below LW60 were brought up to that threshold for 2019 without any changes in hours. We present these results for all workers and separately by sector in Table 9 below. Overall, we estimate that the change in the wage bill is about 1%. However, the results vary by sector, with wage costs increasing by around 5% in Agriculture/Forestry/Fishing and Accommodation and Food but much less in Finance, Information and Communication, Education and Human Health. Although we do not have reliable information on the proportion of Total Costs that wage costs comprise, some indicative costs are available in O'Toole et al. (2021), which uses survey data on SMEs to estimate the impact of Covid on firms' costs and revenues. They report (Table 1) that wage costs comprise 35% of Total Costs on average for these small firms; they report a figure of 37% for Hotels and Restaurants. A back-of-the-envelope calculation indicates that an increase in wage costs of 4.5% (as would have pertained in the Accommodation and Food sector) would have translated into an increase in Total Costs of approximately 1.7%. From this analysis, we see that it is important to consider heterogeneous sectoral effects when introducing a LW as some sectors could be particularly strongly impacted by the introduction of a LW.

Table 9: Predicted Proportionate Change in Wage Bill Due to Introduction of LW60, by Sector

Sector	Change
Agriculture, Forestry, Fishing, Mining	0.055
Manufacturing	0.006
Utilities	*
Construction	0.026
Wholesale and Retail	0.017
Transport	0.013
Accommodation and Food	0.045
Information and Communications	0.002
Finance	0.000
Scientific	0.006
Administration and Services	0.020
Public Administration	0.004
Education	0.003
Human Health	0.002
Residential Care and Social Work	0.014
Arts	0.034
Overall	**0.010**

4.4 Interaction with Tax-Benefit System

LWs are designed to increase the earnings of low-wage workers. However, since taxes, social insurance payments and some benefits are based on earnings, the benefits of LWs can be offset by increased taxes or reduced benefits. It is also important to take these interactions between LWs and other policy instruments into account when evaluating their efficacy as a poverty reduction measure.

The Irish tax system is currently designed so that full-time workers on the NMW pay limited tax and Pay Related Social Insurance (PRSI) payments. However, a LW would result in individuals paying higher tax and PRSI payments. The introduction in 2016 of tapered PRSI payments for workers earning between €352 and €424 per week has eliminated the previous

cliff-edge, under which those whose earnings increased from €351 per week to €352 faced an increase in PRSI payable from €0 to €14.08. Nevertheless, it is important to consider the possibility of increased taxes as a result of increased earnings.

Of greater concern is the potential effect of the introduction of a LW on Working Family Payment (WFP) entitlements. The WFP is an in-work benefit paid to the parents of children whose earnings fall below a target that is increasing in the number of children in the household. Where earnings are above the relevant target, WFP payments are reduced by 60 cent for each euro above the target. Thus, if a parent's earnings rise from below the target to above it due to the introduction of the LW, some of the increase will be clawed back in the form of a reduction in the WFP.

In addition, household earnings are used to evaluate entitlement to social housing and/or the Housing Assistance Payment (HAP). There is no taper in the case of the HAP, so there may be some cases for whom increasing the hourly wage rate from the NMW to a LW will push households over the earnings threshold that determines eligibility. This will depend on both the number of children and the area band that the household lives in.[9]

Using a detailed analysis of the rules governing taxes, PRSI, WFP and HAP, we consider the likely effects of the introduction of the LW on different household types, assuming no behavioural effects, i.e. assuming that those currently working full-time would continue to do so. However, it is important to note that where benefits would be reduced or cut entirely – as in the cases of the WFP and HAP respectively – due to increases in earnings as a result of the introduction of the LW, behavioural effects would seem likely.

[9] Broadly speaking, Band 1, which has the highest earnings threshold, includes Dublin and surrounding counties, Cork and Galway; Band 2 includes Limerick, Waterford, Kilkenny, Wexford, Louth, Cork County and Kerry; and Band 3, which has the lowest earnings threshold includes the remaining, mostly rural, counties.

Table 10 illustrates the effect of the tax and benefit systems on earnings for workers in different household types currently earning the 2021 NMW of €10.20 per hour if their earnings were brought up to the 2020/21 LW-MESL of €12.30 per hour. We assume all workers work 39 hours per week, 52 weeks per year, and that the earners in dual earner households are both on the NMW.

The first row of the table indicates that the 'headline' difference between €10.20 and €12.30 is 20.6%. As can be seen from the table, no household type gains the full increase. This is partly because some income tax and PRSI contributions are payable; this point can be seen on the rows for workers with no children, whose net earnings increase by 15.6%. For workers with children, however, the benefit of the LW is far smaller, with single earners benefitting by just 4-6%. This is because of their reduced WFP entitlement. Under the rules of the WFP system, the 'taper rate' is 60%, so that for each additional euro earned, WFP is reduced by 60 cent. This is consistent with recent work by the OECD (2019) carried out for the LPC. They find that, in the absence of accompanying measures, such as raising means-tested benefits, only a small share (just over 10%) of a 5% increase in the NMW would end up in the pockets of a lone parent income earning the minimum. The WFP target earnings would therefore need be adjusted in line with changes in the LW to prevent earnings gains being eroded by reductions in benefits.

These figures can be converted into a 'marginal effective tax rate' (METR), which gives the percentage of the marginal euro earned that is paid by the worker in taxes and lost benefits. The METR is widely used as an indication of incentives to work for those already in work. The METRs for our household types are shown in the second last column of Table 10. While low-wage workers without children have relatively low METRs of 29.3%, those with children face very strong disincentives to increase their earnings, with METRs of over 64%. Once again, these findings echo those of the OECD (2019). They show that while the Irish tax-benefit

system does quite well in terms of incentivizing participation, the METR of increasing earnings is very high by international standards, being about 30 percentage points higher than the OECD average.

Table 10: Effect of Taxes and Benefits on Net Earnings of Minimum Wage and Living Wage Workers

Household Type	NMW	LW-MESL	**Percent Increase (NMW to LW)**	Marginal Effective Tax Rate (%)	Reverses HAP Entitlement?
	Gross Earnings (€)				
All	397.80	479.70	**20.6**	N/A	N/A
	Net Earnings (€)				
Single Earner					
No Children	370.16	428.03	**15.6**	29.3	No
One Child	479.10	508.51	**6.1**	64.1	Yes if Band 3
Two Children	539.70	569.11	**5.4**	64.1	No
Three Children	600.30	629.71	**4.9**	64.1	Yes if Band 2
Four Children	654.90	684.31	**4.5**	64.1	No
Dual Earner					
No Children	740.32	856.07	**15.6**	29.3	No
Four Children	796.53	856.07	**7.5**	63.7	No

Note: NMW of €10.20 and LW-MESL of €12.30

Finally, some single earner households who qualify for the HAP when paid the NMW would become disqualified as a result of the introduction of a LW. Given the value of the HAP payment to low-income households, these households would be worse off after the introduction of a LW of €12.30 per hour.

It has been suggested that by guaranteeing a minimum standard of living, a LW can take over the role currently played by key components of the welfare system, and in doing so, shift some of the burden for maintaining living standards from the state to employers. However, as noted by Manning (2012), in practice, it will be impossible for a LW to adequately substitute

for the supports provided by the welfare system. A household's standard of living is determined not only by the hourly wage but also by how many earners are in the family, how many dependants there are and how many hours each employee works. The tax and benefit system is designed to vary along all these dimensions in a way that is not practical using a LW. For these reasons, the welfare system will continue to play a pivotal role in supporting the living standards of low-income families, even in the presence of a LW. It is, therefore, very important that consideration be given to the structure of the WFP and the HAP if a LW is to be introduced.

4. Conclusion

This report outlines the alternative approaches available for calculating a LW, describes the systems that currently operate in other countries and reviews the empirical evidence on the impact of a LW on wages, employment, inequality and poverty. We compare the potential impact of the government proposal, which sets the LW at 60% of median wages, to LWs basedon alternative thresholds as well as a LW based on the MESL approach. At present, no country currently operates a national statutory Living Wage based on the MESL approach. Where such an approach does exist, it is either voluntary or restricted to employees contracted to the government. As it stands, the current LW-MESL would correspond to approximately 67-71% of the median wage. A statutory minimum wage set at this rate would be among the highest in the world and would represent a move into the unknown in terms of an evidence base.

Based on our reading of the international evidence, we believe there is some evidence that a statutory wage floor set at 60% of the median wage of all workers could be implemented without substantial effects on employment. There is much greater uncertainty around the potential effects of a floor set at 66% of the median, largely because very few countries have a

minimum wage in this range and for those that do, convincing evaluations are scarce. A statutory wage floor set at or near 70% of the median wage would be done in the absence of clear empirical evidence as to its likely consequences.

We then examine Irish micro data in order to characterize the workers likely to be affected by alternative living wages if introduced in Ireland, as well as considering the likely impact on employers' wage bills. We find that the proposed LW set at 60% of the median wage would result in wage increase for approximately 15% of workers. However, in keeping with previous research we show that the introduction of a national LW would have a relatively small effect on inequality, poverty and the gender wage gap. Policies aimed only at workers fall short of addressing concerns about poverty and inequality; addressing these issues requires more powerful public policies.

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