

Modelling the Impact of an Increase in Low Pay in the Republic of Ireland

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Research for new economic policies

Outline

- 1. Context**
- 2. Motivation**
- 3. Data**
- 4. Methodology**
- 5. Who is Effected?**
- 6. What will be the effect on the Wage Bill and Employment Levels?**
- 7. Conclusion**

Context

- Low Pay is back on the agenda
 - Predistribution; Low Pay Commission; Government commitments...
- Introduction of National Living Wage in the UK for those aged 25+ as part of the intention to “*tackle low pay and ensure that lower wage workers can take a greater share of the gains from growth*”
 - 2016 – 55% of 25+ median wage
 - 2020 – 60% of 25+ median wage
- Eurostat (2012) define someone who is on low pay as an employee earning a wage that is below two thirds of the median hourly wage in that country.

Motivation/Aim

- To model an increase in the minimum wage to a level equivalent to the low pay threshold by 2020
 - A level that has a bite of 66.6% of the 2020 median wage for all employees
 - We have 2013 earnings distribution
 - Model this to 2020 (details next)
 - 2020 median = €18.79
 - 66.6% = **€12.50**
 - So, paper model an increase in low pay to an hourly minimum rate of **€12.50 per hour in 2020**
 - This modelled increase equates to a 36.6% increase in the minimum wage or an increase of €3.35 an hour

- Equivalent to the previous increase in the minimum wage between October 2002 and July 2007 – 36.2% increase in the wage floor

Table 1: Ireland's Adult Minimum Wage Rate, 2000-2016

Date	€ per hour	IRL£ per hour
1st April 2000	€5.58	£4.40
1st July 2001	€5.97	£4.70
1st October 2002	€6.35	£5.00
1st February 2004	€7.00	
1st May 2005	€7.65	
1st January 2007	€8.30	
1st July 2007	€8.65	
1st February 2011	€7.65	
1st July 2011	€8.65	
1st January 2016	€9.15	

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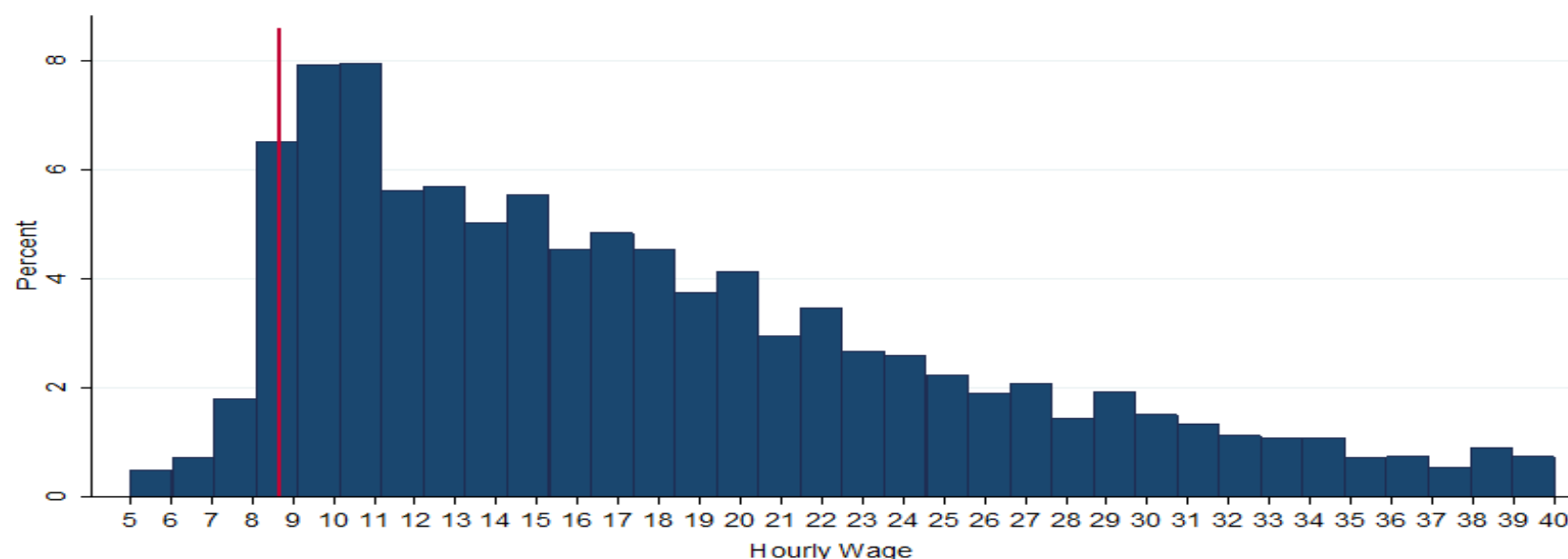
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Data

- CSO's 2013 EU Survey on Income and Living Conditions
 - 4,922 Households and 12,663 Individuals
- Detailed data on income, earnings and living conditions
 - Income data cross checked with tax and welfare records
 - Sampling frame and weighting procedures are designed to ensure the sample is representative of the population
- Employees
 - 3,369 employees
 - PES=at work
 - Detailed personal and household characteristics
 - Hourly wage

Methodology

Chart 1: Distribution of Hourly Earnings and Selected Pay Thresholds, Ireland 2013 (% of employees)



Source: EU Survey on Income and Living Conditions

Notes: 2013 Earnings distribution compiled using EU-SILC 2013 data. The red line represents the minimum wage of €8.65. There are some entries with spurious values where the hourly wage is very low; earnings less than €5 an hour are dropped to give a more robust data basis

The earnings graph only shows the earnings for those earning a wage less than €40 an hour. 6.9% of employees earn a wage above €40 an hour

Assumptions

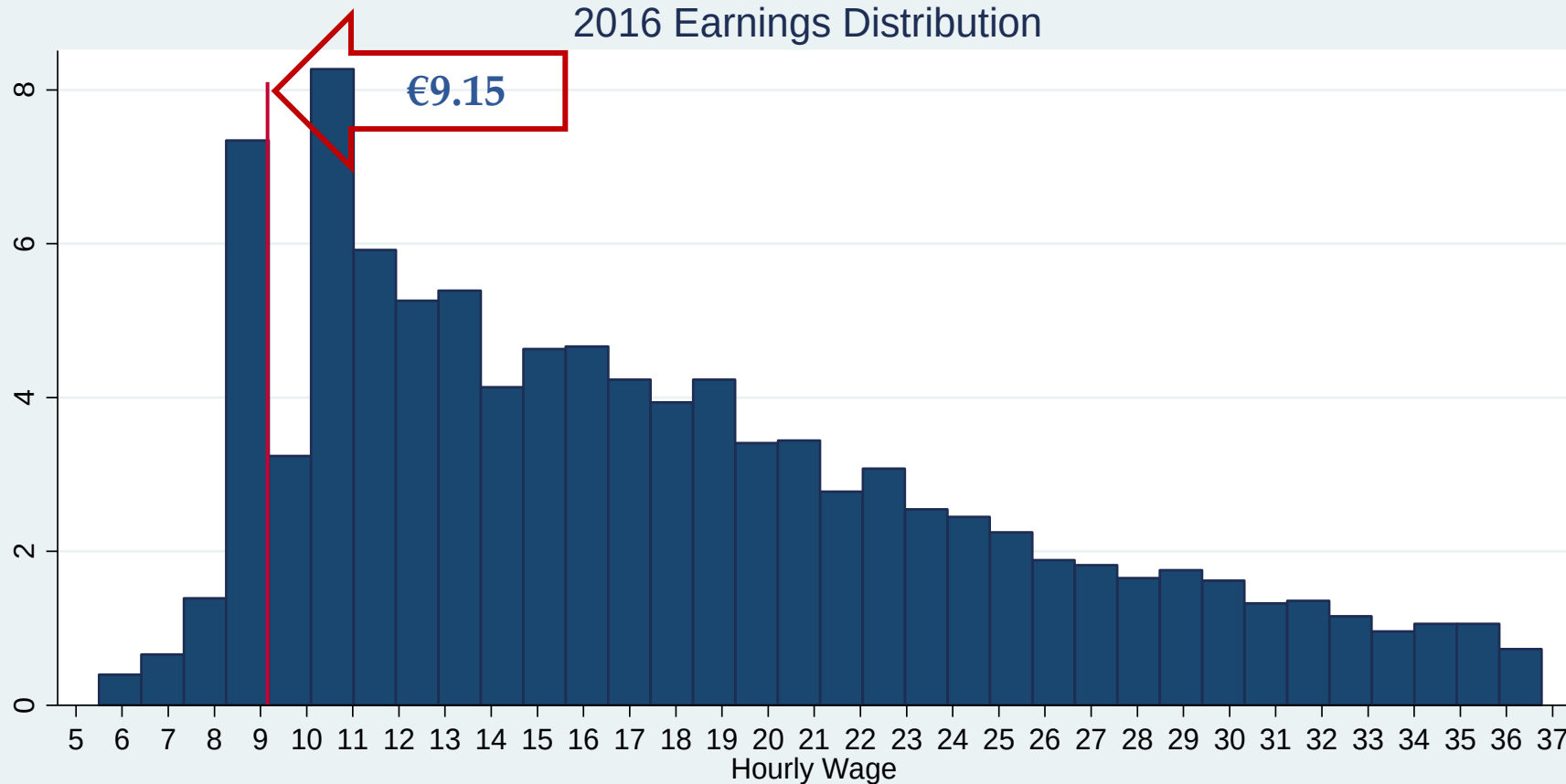
- The composition and size of the workforce remains constant at 2013 levels
- For all unaffected employees: incorporate average annual wage growth for 2014 of 1.4% (CSO, 2015) and an estimate of 2% for 2015-2020
- For simplicity of estimation we assume that the sub-minima rates increase by the nominal increase in the minimum wage
- There will be spillover effects to an increase in a wage floor as employers may want to maintain some pre-measures wage differentials
- Spillovers will be implemented using Lee (1999) formula with a central assumption of a spillover parameter of 0.03

2013 → 2016

1. Forecast 2016 hourly wage distribution before the minimum wage increase
 - Incorporate average wage growth from 2013-2016
2. Implement the increase in the minimum wage from €8.65 - €9.15
 - Increase wages of all those earning a wage between €8.22 and €9.08 to €9.15
 - Increase sub-minima rates by the nominal increase in the minimum wage
 - Incorporate spillover effects to those earning a wage just above the new minimum – spillover effects start at the 10th percentile and extend to the 25th percentile

2016 Distribution

2016 Earnings Distribution



2016 → 2020

3. Forecast the 2020 hourly wage distribution prior to any increases in low pay
 - Incorporate average wage growth from 2016-2020
 - 2020 median wage is €18.79
 - Value that represents a bite of **66.6% of median earnings = €12.50**

4. Implement an increase in the minimum wage to €12.50
 - Increase the wages of those earning a wage between €9.15 - €12.50 to the €12.50 wage floor
 - Increase sub-minima wages by the nominal increase in the minimum wage
 - Incorporate spillover effects to those earning a wage just above the new minimum

2020 Distribution

2020 Earnings Distribution

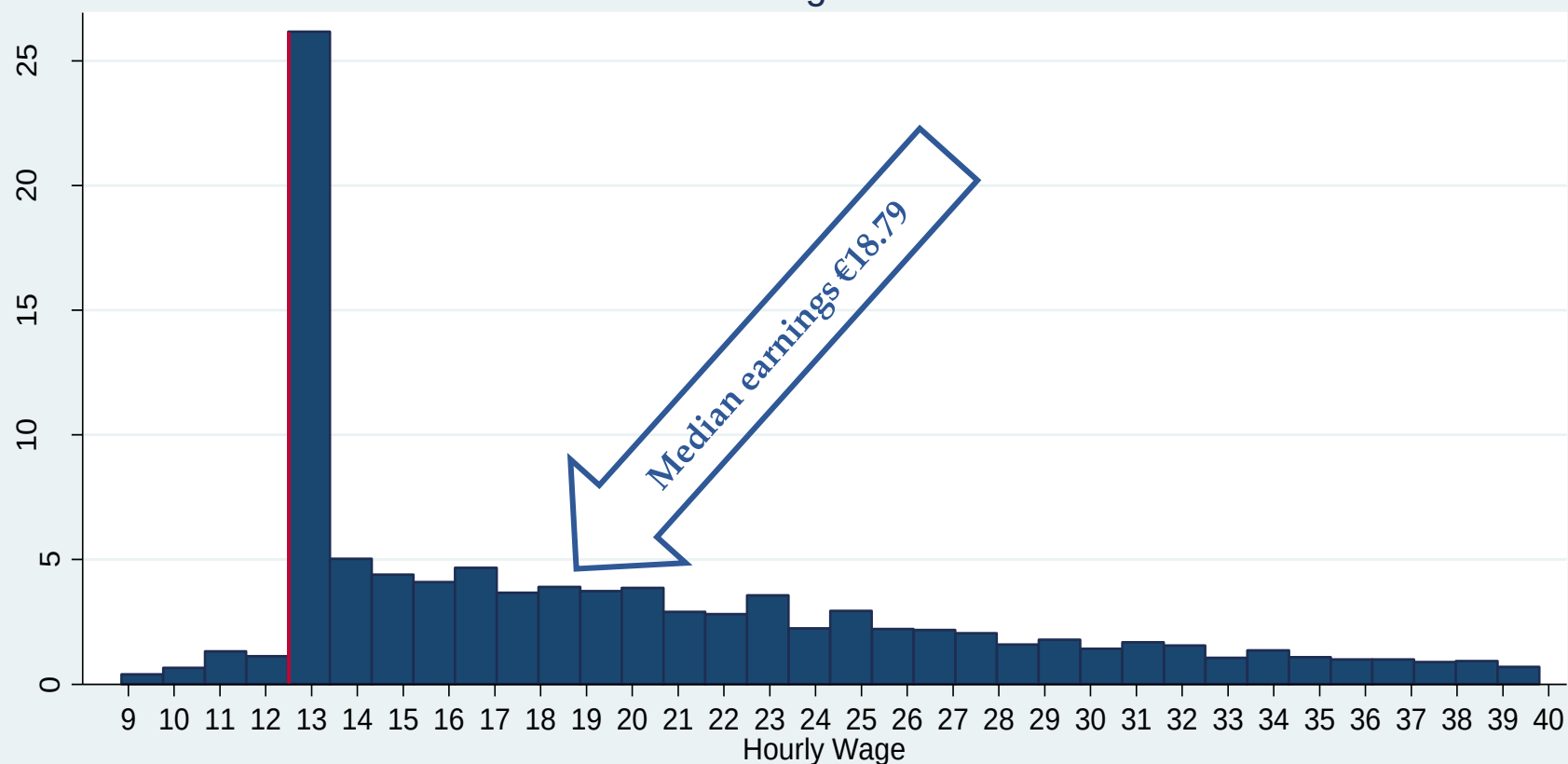
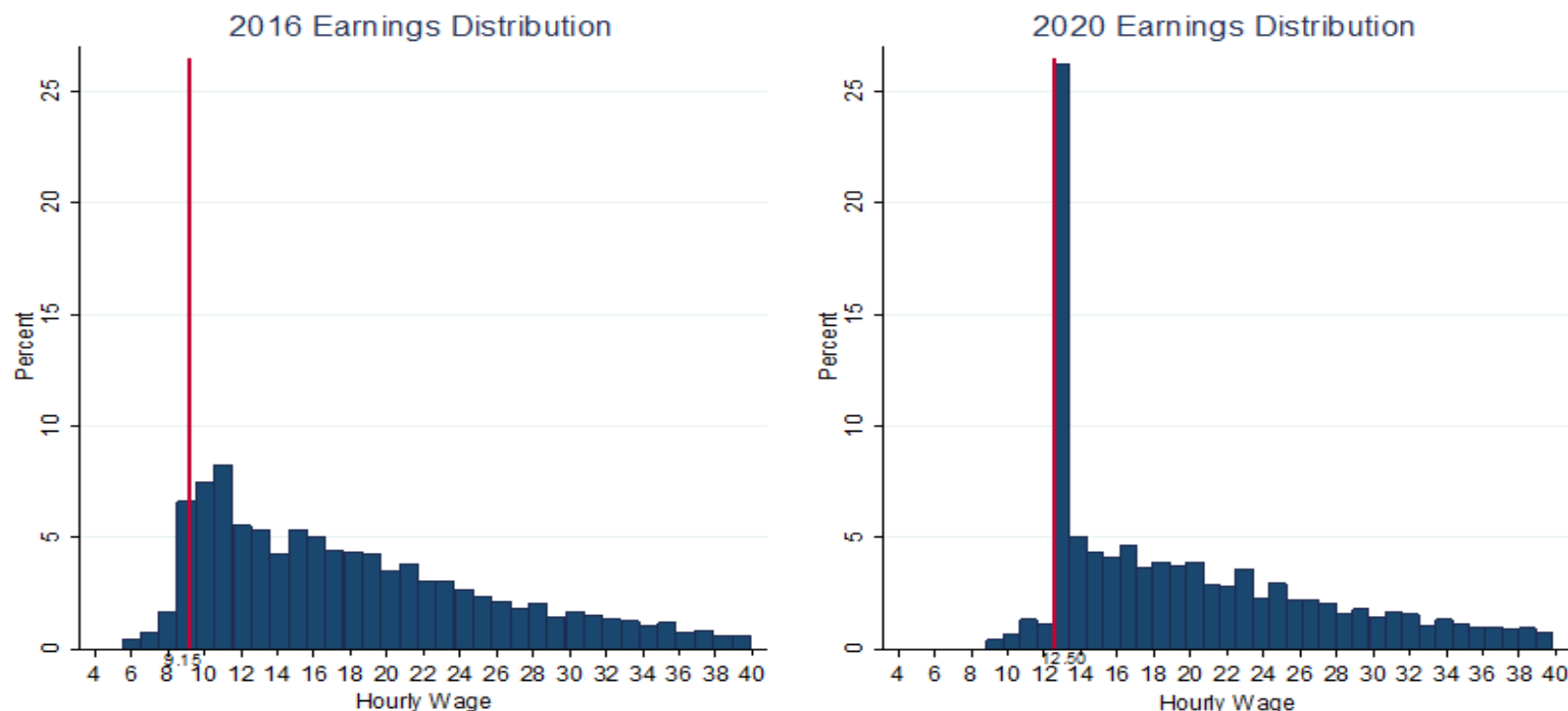


Chart 2: Projected Distribution of Hourly Earnings, Ireland 2016 and 2020 (% of employees)



Notes: The 2016 earnings distribution is modelled to account for the direct and indirect effects of the increase in the minimum wage to €9.15. The 2020 distribution includes a further increase in the minimum wage to €12.50 and includes both the direct and indirect effects resulting from this increase. We assume there are no changes in the minimum wage between 2016 and 2020 and the composition and size of the workforce remains constant at 2013 levels.

5. Who is Effected?

Table 3: Projected Distribution of Earnings per Selected Pay Threshold in 2020 (% of employees)

Threshold	% above	% at each category	Average Hourly Increase	Average Annual Increase
Below €12.50	96.63%	3.37%	€3.35	€4,599
At €12.50	76.04%	20.59%	€2.28	€3,345
Above €12.50 with spillovers	69.05%	6.99%	€1.16	€1,876
Other Employees	0.00%	69.05%	€2.19	€3,948

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Table 7: Characteristics of those who Directly Benefit from the Minimum Wage Increase

	Share of Employees Affected (%)	Share of all Affected (%)	Average Hourly Gain	Average Yearly Gain
Total	20.59	100	€2.28	€3,345.2
Gender				
Male	17.87	41.30	€2.17	€3,784.5
Female	23.07	58.70	€2.36	€3,072
Age group				
18-29yrs	39.40	33.30	€2.36	€3,541.4
30-39yrs	19.26	30.56	€2.29	€3,502.1
40-49yrs	13.96	16.80	€2.31	€3,305
50-59yrs	14.06	13.28	€2.13	€2,839.1
60+yrs	22.01	6.06	€2.19	€2,917.3
Hours				
Full-time	14.60	51.17	€2.23	€4,516.5
Part-time	36.18	48.83	€2.35	€2,215.6
NACE Sector				
Agri, Forestry/Fishing	-	-	-	-
Industry	14.14	11.07	€2.41	€4,335.3
Wholesale and Retail	33.94	23.31	€2.28	€3,132.7
Accommodation and Food	49.78	18.22	€2.45	€3,145.3
Admin & Support Services	43.60	5.84	€2.24	€3,160.1
Health and Social Work	18.86	14.30	€2.13	€2,938.9
Pub Adm. Defence & Education	7.41	6.26	€2.10	€2,661.8
All Other Sectors	14.37	17.61	€2.27	€3,627.9

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Effect on the Economy's Wage Bill?

Table 10: Increase in the Total Wage Bill as a Result of the Minimum Wage Increase

	Increase in Wage Bill	% Increase in Wage Bill
Strict Direct Effects	€748,694,317	1.19%
Direct Effects (sub-minima and minimum wage increases)	€987,262,626	1.56%
Total Effect (including spillover effects)	€1,013,857,530	1.60%

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Effect on Employment?

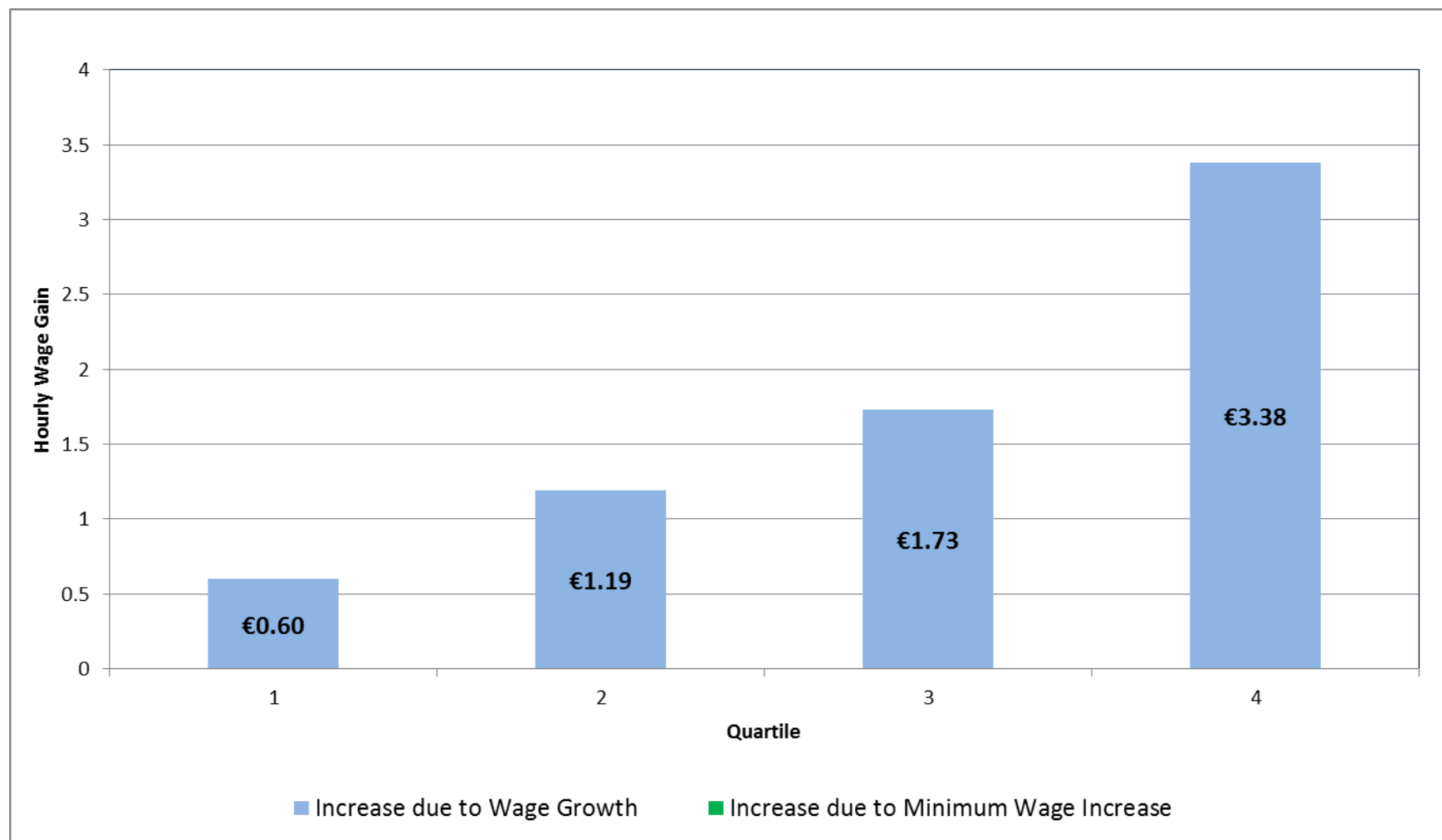
- Contrasting views in the literature
- Negative employment effects in previous literature is limited
 - Only minor increases in the minimum wage
- We are modelling a substantial increase in the minimum wage so it is likely to have some impact on employment levels
 - The extent to which employment levels are effected will depend on the economic environment at the time of its increase
 - Employment effects are likely to vary from sector to sector and from firm to firm
- Likely to be first round and second round effects of the minimum wage increase in firms
- May have an affect on the wider economy
 - Increase in minimum wage increases disposable income and consumption
 - Increase in consumption may increases consumer demand that may result in an increase in sales for firms, increasing profits

Effect on the Wage Distribution

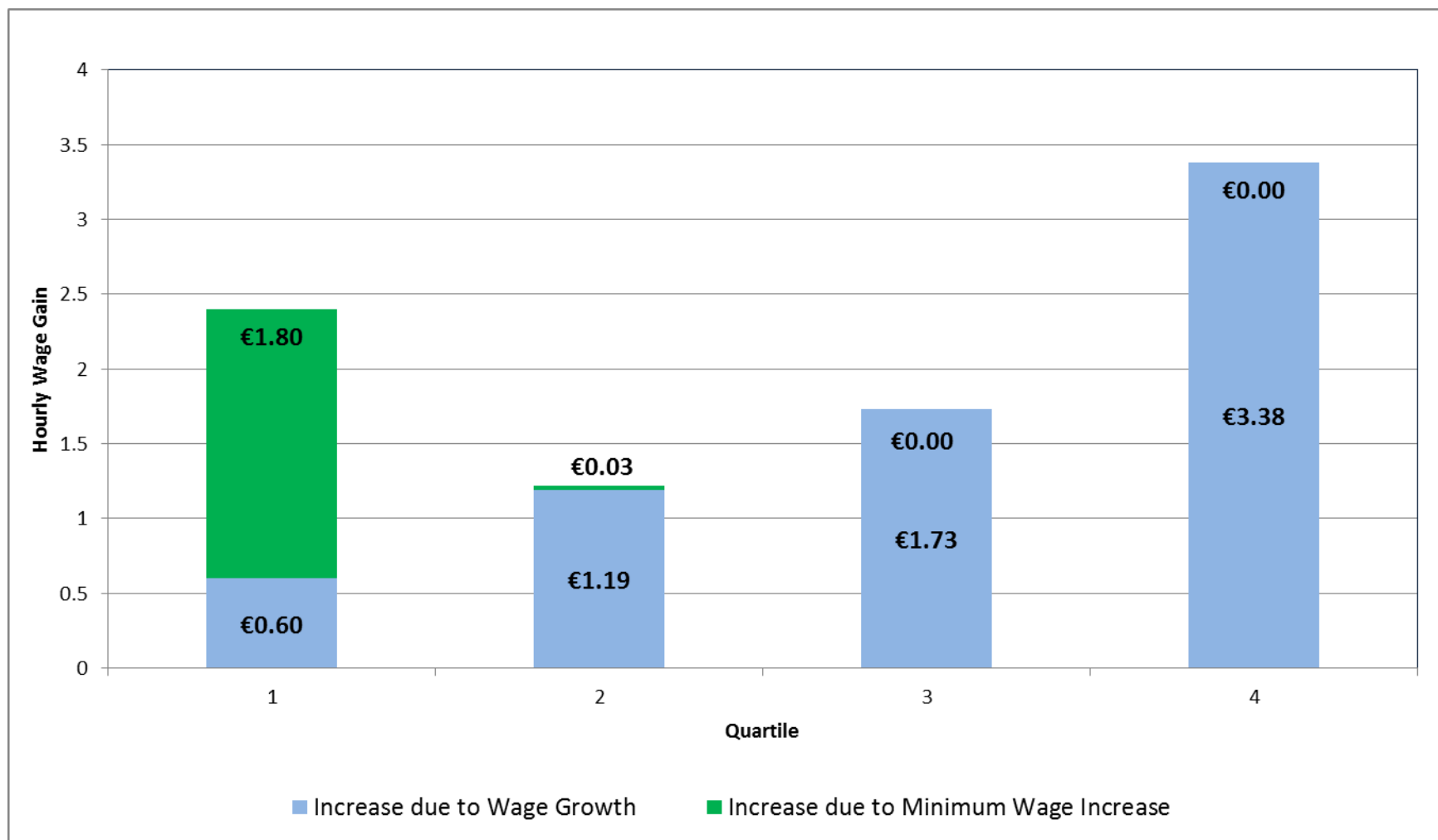
Chart 4: Distribution of Wage Changes across the Quartiles, 2016-2020



Effect on the Wage Distribution



Effect on the Wage Distribution



7. Conclusion

- Low Pay is back on the agenda
- Merit in linking low pay to earnings distribution
 - A relative benchmark...better than arbitrary nominal targets
- Paper models an increase in the Minimum Wage to the Low Pay Threshold in 2020
 - It is modelled as a once off increase. In reality it would be implemented incrementally over a couple of years
- An increase in the Minimum Wage by 36.6% to €12.50:
 - 31% of employees benefitting in total with 24% benefitting directly while 7% benefit indirectly
 - ↓ wage inequality by ↑ wages of the bottom third of the wage distribution closer to the median
 - A likely increase in the wage bill of between 1.19% -1.60%
 - Likely employment and wider economic effects

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