

The background of the cover features a dark, moody photograph of a pair of hands holding a document or map. The image is partially obscured by a large, diagonal white shape that cuts across the lower half of the cover. The text is overlaid on the dark upper portion.

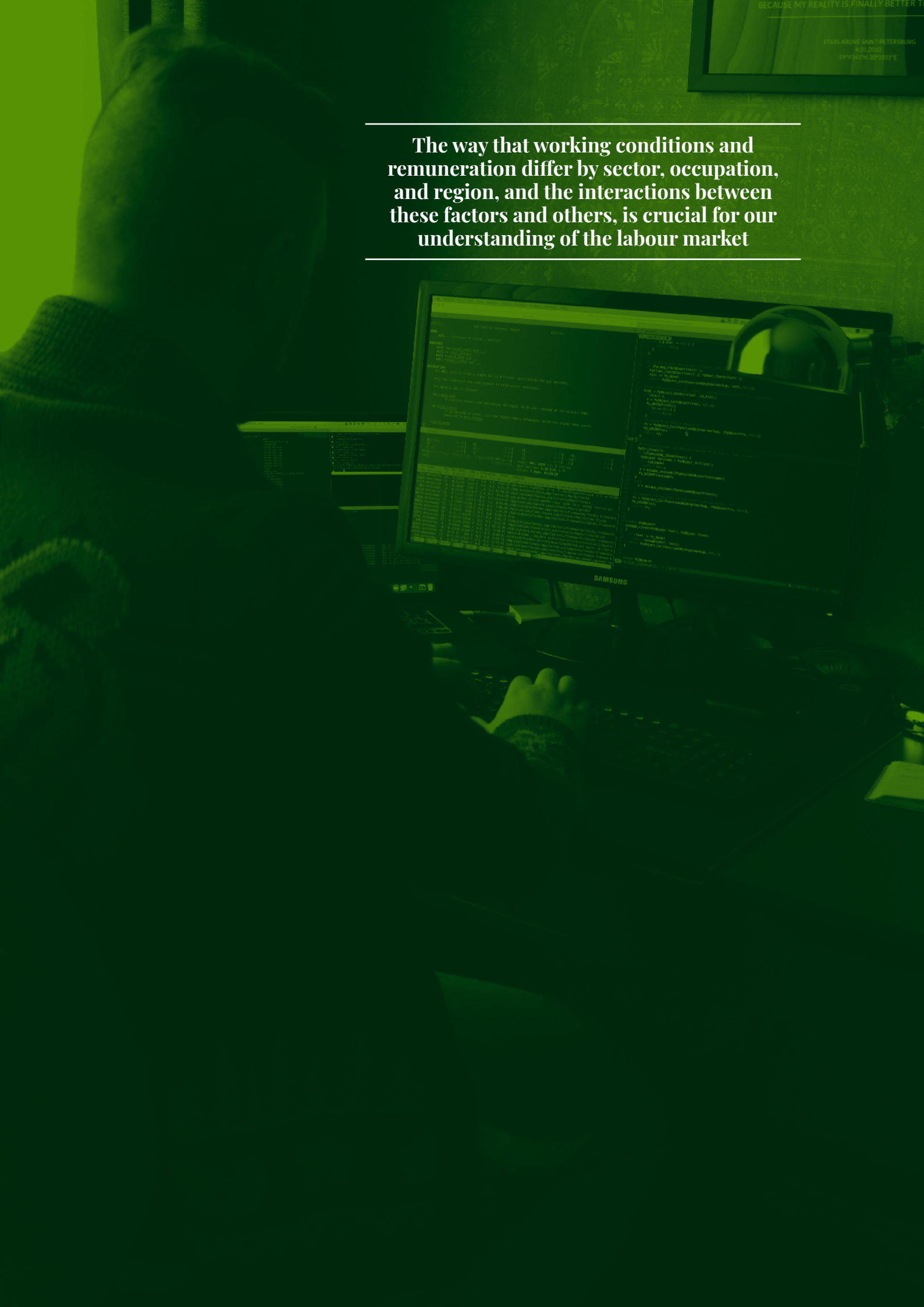
Mapping the Labour Market in Ireland

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The way that working conditions and remuneration differ by sector, occupation, and region, and the interactions between these factors and others, is crucial for our understanding of the labour market



Introduction

Our understanding of the labour market is based on a collection of surveys and data sources, supported by our own subjective experiences and the anecdotes of employers and employees alike. The way that working conditions and remuneration differ by sector, occupation, and region, and the interactions between these factors and others, is crucial for our understanding of the labour market, and how we identify and deal with issues for both workers and firms.

To pick an example, the disparity between working conditions for a sector such as ICT when compared with the hospitality sector is well known, but headline indicators such as wages or the incidence of part-time or temporary contracts can mask significant differences within sectors and their causes. Similarly, picking a single occupational group such as administrators and describing their collective working conditions could fail to highlight the differences between public and private sector workers, whereas highlighting differences within that occupational group in terms of precarity, pension entitlements, or employee wellbeing might be more revealing.

The causes of these disparities are complex and may differ greatly even within sectors, strengthening the need for high-quality, objective data sources to inform stakeholders. When poor working conditions are the result of a power imbalance between workers and firms, this can be addressed through union representation or collective action. Conversely, where there is an obvious market failure, and there is an inability to provide better conditions and maintain a functioning business model with both workers and firms unhappy with the status quo, understanding the causes can give policymakers the information and impetus they need to intervene effectively and deliver a better outcome for all parties.

A prime example of the latter case would be the employment regulation order (ERO) agreed for the Early Learning and Childcare Sector in 2022, where both poor working conditions for workers and a difficult business environment for firms was identified; the state intervened in the form of increased subsidies, ensuring higher wages for workers while increasing viability for firms operating in the sector. However, deciding which approach is the most appropriate involves having access to information on the sectoral, occupational, and regional dimensions of employment as mentioned above.

An important place to begin developing this understanding is publicly available data sources, in order to identify what we know, and how much we don't know and should endeavour to find out. While any sector would be interesting, the basis for this report will be a deep dive into the broad Industry sector as it is defined in the Labour Force Survey, specifically NACE codes B, C, D, and E. Comprising 1 in 8 jobs in Q4 2022, or 323,000 employees, its heterogeneity in terms of the working conditions of those employed, as well as the type of work done and the regional agglomeration of certain types of industry, make it a useful case study for the wealth of information that can be hidden by a catch-all sectoral label, as well as revealing the limitations of what we can discover and the challenges and opportunities going forward. Firstly, we will give an overview of the picture for all NACE sectors, before focusing specifically on Industry.

Looking first at results from the Labour Force Survey (LFS) for Q4 2022, Table 1 shows a breakdown of each of the NUTS3 regions (8 geographical regions that make up Ireland), and the share of the labour force in each sector in each region, categorised using NACE Rev.2 codes². The share of the labour force working in any sector is visible, while the column labelled State furthest to the right shows the national share of each NACE sector. If any region has a high share of any particular sector (defined here as 10% greater than the national figure), then it is highlighted in red.

To pick out a few examples, the share of the labour force working in Information and Communication (J) is 6.39% nationally, ranging from 10.7% in Dublin to as low as 4% in the Mid-West, or unreported in the Border region³. Sticking with Dublin, it has above average shares of its labour force in Financial, insurance and real estate activities (K, L), Information and communication (J), and Professional, scientific and technical activities (M), all sectors typically associated with high-paying, export-oriented, productive work. Other regions have greater shares of employment classed under Accommodation and food service activities (I), Agriculture, forestry and fishing (A), or Human health and social work activities (Q), which are typically associated with longer working hours, lower remuneration, and generally poorer working conditions.



² Certain codes are aggregated to ensure sample sizes are large enough for any one quarter of the Labour Force Survey – see Industry (B to E) or Other NACE activities (R to U).

³ Again presumably due to a low number of responses in the LFS.

Table 1 – Share of labour force by NACE sector, Q4 2022

	Border	West	Mid-West	South-East	South-West	Dublin	Mid-East	Midlands	State
Agriculture, forestry and fishing (A)	8.00%	5.39%	7.17%	7.68%	4.99%	N/A	3.07%	4.41%	3.92%
Industry (B to E)	13.86%	15.98%	15.96%	13.30%	16.00%	8.09%	12.84%	12.56%	12.55%
Construction (F)	6.76%	6.97%	5.54%	7.26%	6.40%	5.22%	7.30%	7.82%	6.34%
Wholesale and retail trade, repair of motor vehicles and motorcycles (G)	11.62%	14.69%	12.25%	11.01%	13.64%	11.45%	12.42%	14.43%	12.44%
Transportation and storage (H)	3.73%	3.82%	4.00%	4.92%	3.01%	5.07%	4.76%	5.01%	4.39%
Accommodation and food service activities (I)	7.50%	7.14%	6.71%	6.51%	8.00%	5.74%	6.83%	5.14%	6.62%
Information and communication (J)	N/A	4.15%	4.04%	3.79%	5.29%	10.73%	5.25%	7.21%	6.39%
Financial, insurance and real estate activities (K, L)	3.38%	2.86%	2.96%	3.79%	3.01%	8.82%	5.28%	N/A	5.15%
Professional, scientific and technical activities (M)	5.12%	5.23%	5.46%	4.92%	5.88%	9.00%	6.37%	5.48%	6.63%
Administrative and support service activities (N)	3.73%	3.03%	4.42%	3.42%	3.63%	5.34%	4.76%	N/A	4.27%
Public administration and defence, compulsory social security (O)	6.61%	4.44%	4.04%	6.23%	4.12%	5.54%	5.48%	7.55%	5.34%
Education (P)	7.65%	6.60%	8.33%	9.88%	8.19%	7.56%	8.32%	7.82%	7.96%
Human health and social work activities (Q)	14.90%	15.10%	14.46%	13.30%	13.02%	12.30%	11.75%	12.29%	13.07%
Other NACE activities (R to U)	5.37%	3.94%	4.13%	3.79%	4.15%	4.67%	5.46%	4.68%	4.57%
Not stated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.36%

Source: Labour Force Survey, CSO

Another way to examine this is to look at the share of any NACE activity that is located in a particular region, which allows us to examine agglomeration or demand for particular skills, as well as how particular regions may be negatively affected if an idiosyncratic shock occurs in some sector (think recent job cuts in the tech sector, for example). Table 2 below shows the proportion of any sector in each of the eight regions (summing horizontally will give circa 100%), with the final column, titled “All NACE economic sectors”, showing each region’s share of the labour force. As in Table 1, if a region has a high share of its labour force in any particular NACE activity (defined as 10% greater than the figure for All NACE economic sectors), then it is also highlighted in red.

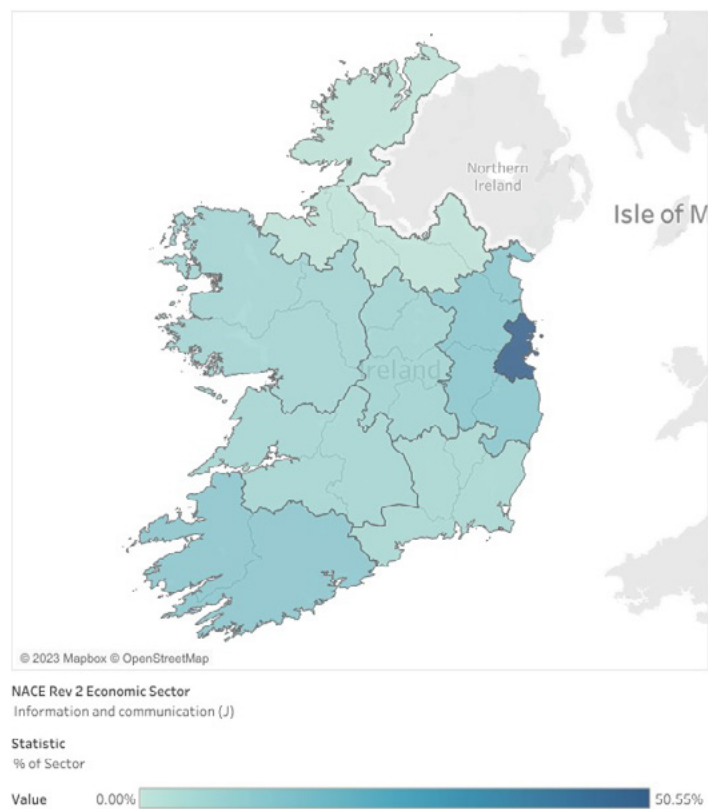
Table 2 – Share of NACE sector in each region, Q4 2022

	Border	West	Mid-West	South-East	South-West	Dublin	Mid-East	Midlands
Agriculture, forestry and fishing (A)	15.97%	12.90%	17.06%	16.27%	18.25%	N/A	11.71%	6.55%
Industry (B to E)	8.64%	11.92%	11.86%	8.79%	18.27%	19.41%	15.29%	5.82%
Construction (F)	8.33%	10.29%	8.15%	9.50%	14.46%	24.82%	17.22%	7.17%
Wholesale and retail trade, repair of motor vehicles and motorcycles (G)	7.31%	11.05%	9.18%	7.34%	15.70%	27.72%	14.92%	6.74%
Transportation and storage (H)	6.63%	8.13%	8.49%	9.28%	9.81%	34.75%	16.18%	6.63%
Accommodation and food service activities (I)	8.86%	10.09%	9.45%	8.16%	17.31%	26.12%	15.43%	4.52%
Information and communication (J)	N/A	6.08%	5.89%	4.92%	11.85%	50.55%	12.27%	6.56%
Financial, insurance and real estate activities (K, L)	5.12%	5.20%	5.35%	6.10%	8.36%	51.54%	15.30%	N/A
Professional, scientific and technical activities (M)	6.03%	7.38%	7.67%	6.15%	12.71%	40.89%	14.35%	4.80%
Administrative and support service activities (N)	6.82%	6.64%	9.64%	6.64%	12.18%	37.64%	16.64%	N/A
Public administration and defence, compulsory social security (O)	9.67%	7.78%	7.05%	9.67%	11.05%	31.27%	15.35%	8.22%
Education (P)	7.52%	7.76%	9.76%	10.30%	14.74%	28.60%	15.62%	5.71%
Human health and social work activities (Q)	8.92%	10.82%	10.31%	8.44%	14.26%	28.35%	13.43%	5.47%
Other NACE activities (R to U)	9.18%	8.07%	8.41%	6.88%	13.00%	30.76%	17.84%	5.95%
Not stated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All NACE economic sectors	7.82%	9.36%	9.32%	8.29%	14.33%	30.12%	14.95%	5.81%

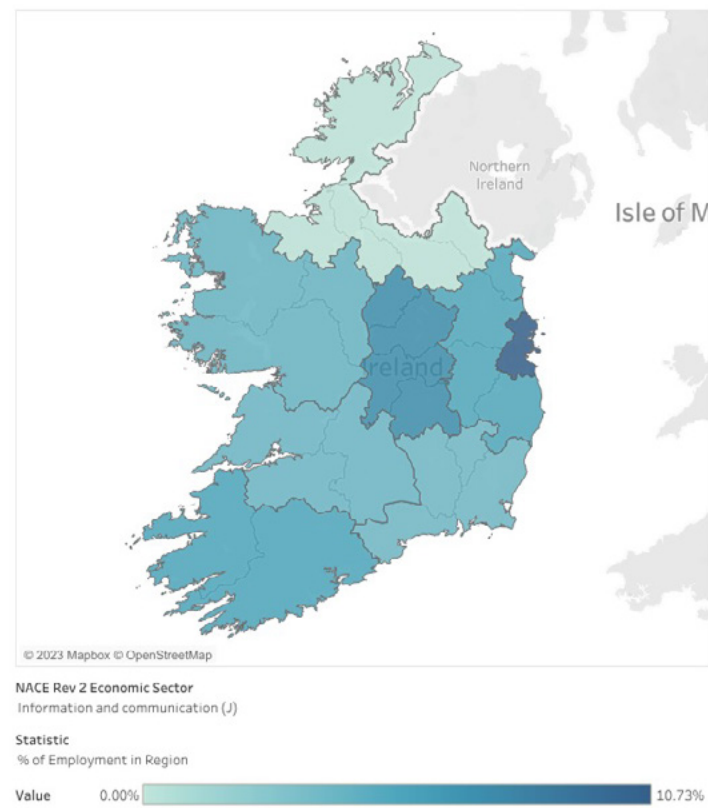
Source: Labour Force Survey, CSO

To follow on from the example above, Dublin has roughly 30% of the national labour force, yet over 50% of all employment in both Financial, insurance and real estate activities (K, L) and Information and communication (J). Focusing on the latter, we can also view this information in map form to get a better idea of how stark the difference is between Dublin and the other regions.

Information and Communication, % of sector in each region

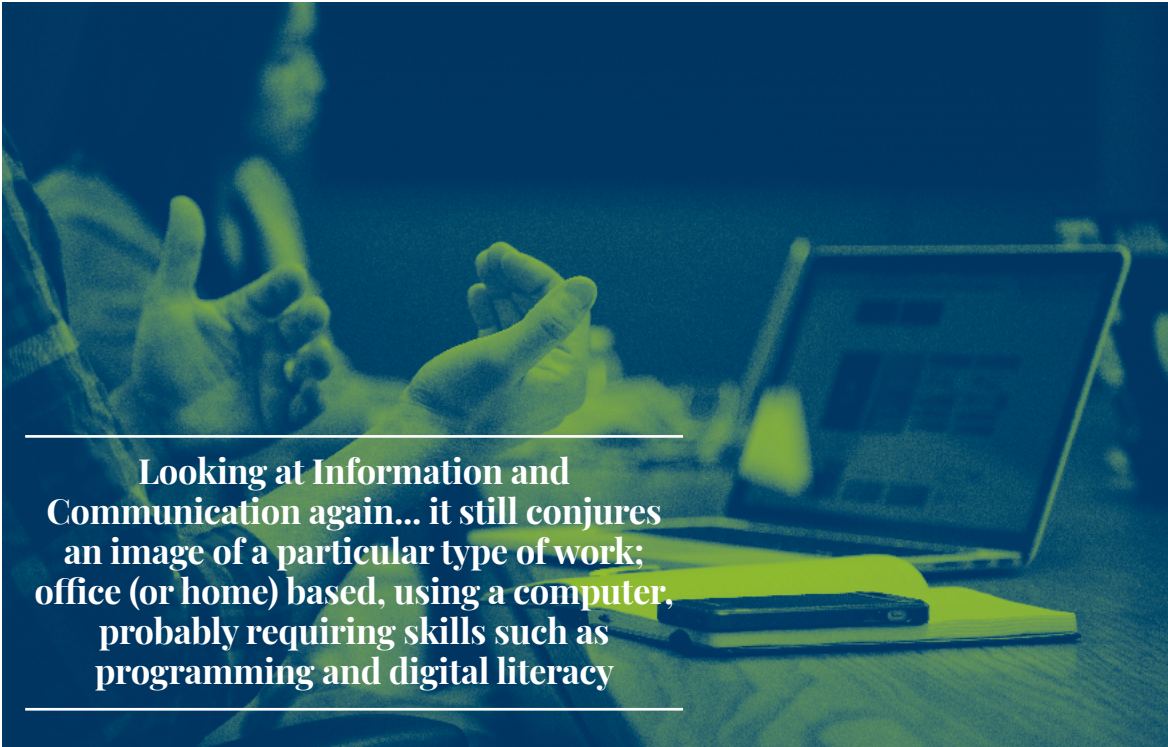


Information and Communication, % of employment in each region



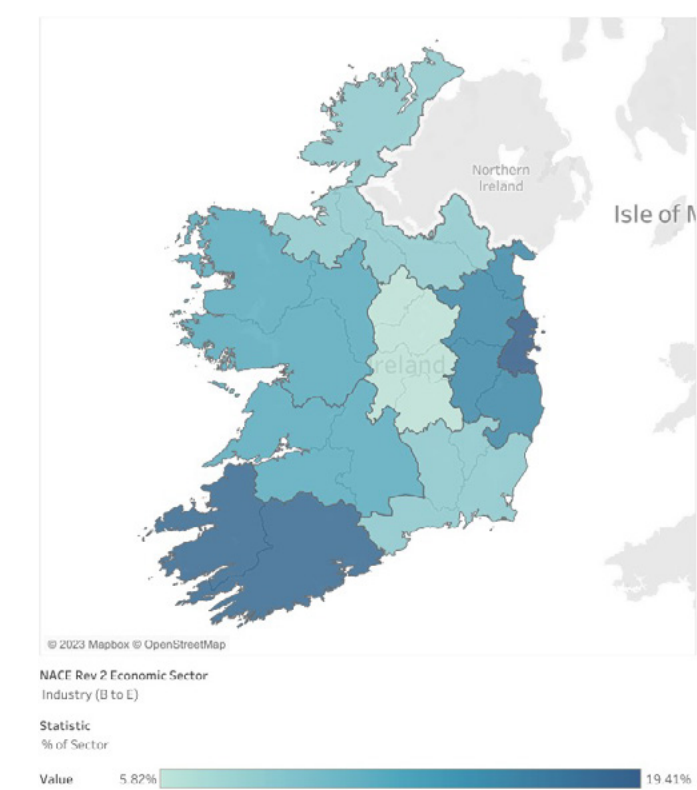
While it is difficult to dig down into any particular sector to examine working conditions, using a combination of the Labour Force Survey, the Earnings, Hours and Employment Costs Survey (EHECS), and Census data can be revealing, or at least it can reveal the extent of what we do not know and should be endeavouring to find out. Looking at a broad sector can mask differences within that sector in terms of the quality of work, or how the quality of that work differs by region; a concentration of larger employers or tighter labour markets in particular areas might lead to higher wages and better working conditions compared with employees in the same sector in other parts of the country. Looking at Information and Communication again, while attempting to create a coherent picture of the differences within that sector seems challenging, it still conjures an image of a particular type of work; office (or home) based, using a computer, probably requiring skills such as programming and digital literacy, highly paid and not physically demanding work. Instead, compare this with the broad grouping of Industry (B to E), which is an aggregation of Mining and quarrying (B), Manufacturing (C), Electricity, gas, steam and air conditioning supply (D), and Water supply, sewerage, waste management and remediation activities (E). Making up 12.5% of national employment, and more than 15% of all employment in certain regions (West, Mid-West, and South-West), its importance as a provider of employment and its inherent heterogeneity makes it an interesting candidate for a case study for the limitations of what we can identify from available data sources.

Reproducing the maps on page 7 for the Industry sector, we can see that Dublin is the region with the largest share of total employees, with 19.4% or 62,700 employees. However, Industry only comprises about 8.1% of total employment in Dublin; compare this with the West, Mid-West, and South-West, where the Industry share of total employment is 15.98%, 15.96%, and 16%, respectively.

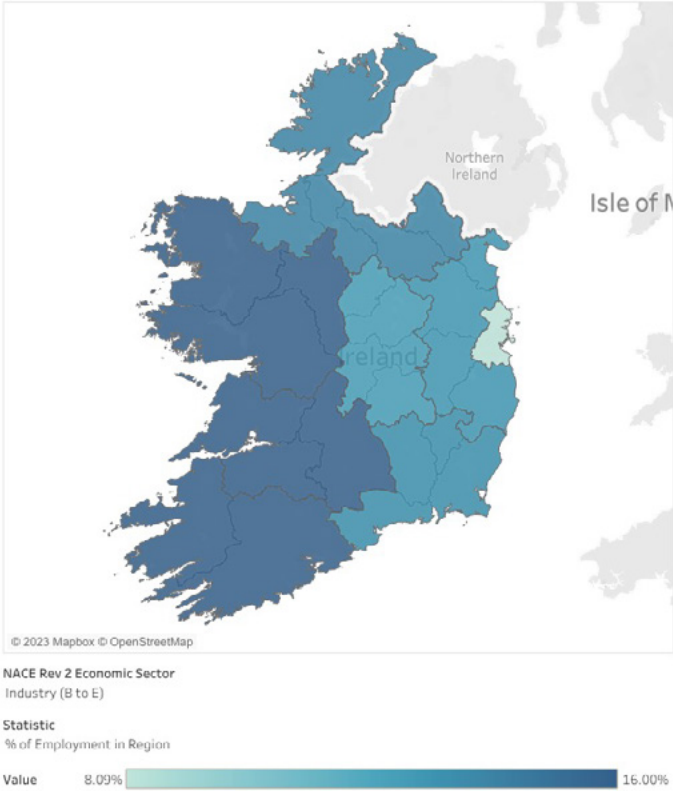


Looking at Information and Communication again... it still conjures an image of a particular type of work; office (or home) based, using a computer, probably requiring skills such as programming and digital literacy

Industry, % of sector in each region



Industry, % of employment in each region



Source: Labour Force Survey, CSO, created with Tableau

Below in Table 3, there are some characteristics of workers in Industry, as well as All NACE economic sectors as a comparison. Nothing particularly glaring stands out; Industry has a higher proportion of male employees; those working in these NACE sectors are less likely to be self-employed than the general population; and they are more likely to have full-time, permanent contracts, working above the average number of weekly hours.

Table 3 – Characteristics of Industry (B to E) vs. All NACE economic sectors, Q4 2022

	All NACE economic sectors	Industry (B to E)
% male	53.22%	70.73%
% female	46.65%	29.89%
Employee (including schemes)	86.22%	93.90%
Self-employed with paid employees	4.00%	2.35%
Self-employed with no paid employees	8.89%	3.16%
All self-employed	12.89%	5.51%
% persons who are FT	78.47%	93.25%
% persons who are PT	21.53%	6.75%
% employees who are permanent	91.00%	94.50%
% employees who are temporary	7.87%	4.91%
Average weekly hours worked	35.8	39.3

Source, Labour Force Survey, CSO

Tables 4 and 5 use data from the Earnings, Hours and Employment Costs Survey (EHECS) to look at hourly earnings and overall labour costs by NACE sector. This detailed breakdown of labour costs in Table 4 is only available annually and is from 2021, and hence is not directly comparable to Table 5. Table 4 shows that Industry is roughly the same as the average for all NACE economic sectors, although a higher value for other labour costs⁴ leads to a slightly higher figure for total average labour costs.

Table 4 – Earnings and labour costs for Industry (B to E) vs. All NACE economic sectors, 2021

	All NACE economic sectors	Industry (B to E)
Average earnings per regular hour (€)	24.44	23.34
Average earnings per overtime hour (€)	27.16	28.48
Average total earnings per hour (€)	24.50	23.55
Average irregular earnings per hour worked (€)	1.59	1.80
Average other labour costs per hour worked (€)	2.87	4.70
Average labour costs per hour (€)	28.96	30.05

Source: Earnings, Hours and Employment Costs Survey, CSO

Table 5 shows a more limited breakdown of hourly earnings from Q4 2022, disaggregated by firm size. The trends highlighted above are mirrored below, with higher other labour costs presumably due to higher basic hourly earnings without necessarily any more generous increases in benefits in kind (i.e., higher wages mean higher

⁴ A combination of statutory and non-statutory social contributions, benefits in kind, and other expenses (study grants, etc.)

statutory and non-statutory social contributions), although we can presume that certain industries may be subject to more generous pension entitlements than those enjoyed by the general labour force.

Table 5 - Earnings and labour costs by firm size for Industry (B to E) vs. All NACE economic sectors, Q4 2022

	All NACE economic sectors			Industry (B to E)		
	Under 50	50 - 250	Greater than 250	Under 50	50 - 250	Greater than 250
Average Hourly Earnings (€)	22.78	25.20	31.32	22.26	23.14	30.00
Average Hourly Earnings excluding Irregular Earnings (€)	21.79	23.83	28.78	21.37	22.05	27.90
Average Hourly Irregular Earnings (€)	0.99	1.37	2.55	0.89	1.09	2.10
Average Hourly Other Labour Costs (€)	3.16	4.17	5.43	3.06	3.92	7.82
Average Hourly Total Labour Costs (€)	25.94	29.36	36.75	25.32	27.06	37.82

Source: Earnings, Hours and Employment Costs Survey, CSO

The above figures do little to highlight the heterogeneity within these NACE sectors. However, we can look at simpler hourly wage data disaggregated by 2-digit NACE activity, which provides a greater level of detail than the previous classifications. Looking again at EHECS data from Q4 2022, we can see average weekly paid hours, average hourly earnings, and average weekly earnings in Table 6 overleaf, disaggregated by 2-digit NACE code. Petroleum and chemical products (19, 20) and Basic pharmaceutical products and preparations (21) have the highest weekly salaries, while Textiles, wearing apparel and leather products (13 to 15) have the lowest.

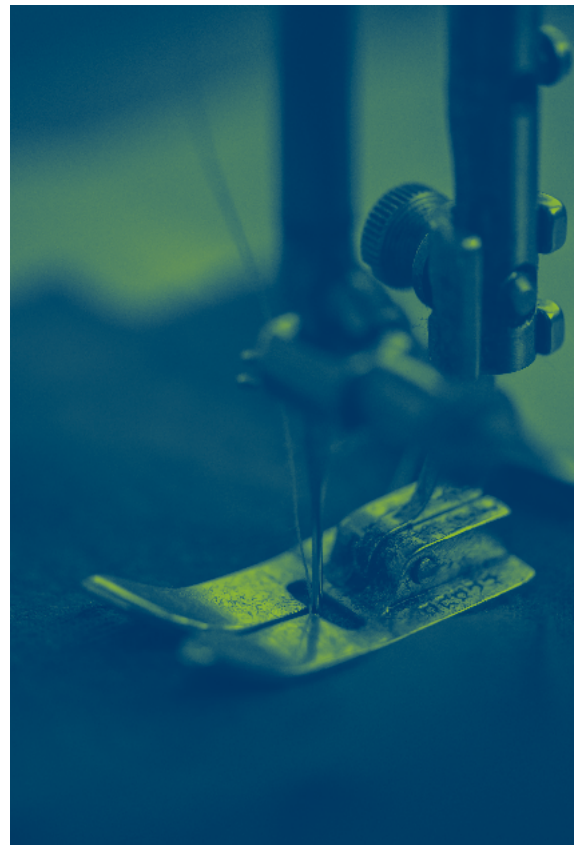


Table 6 – Average hourly and weekly earnings, and hours worked, by 2-digit NACE sector, Q4 2022

	Earnings Per Week (€)	Average Hourly Earnings (€)	Average Weekly Paid Hours
Mining and quarrying (05 to 09)	1193.19	30.28	39.4
Food products, beverages and tobacco (10 to 12)	769.66	20.69	37.2
Textiles, wearing apparel and leather products (13 to 15)	613.1	18.12	33.8
Wood and paper products (16,17)	771.43	21.46	36
Printing and reproduction of recorded media (18)	751.44	21.56	34.9
Petroleum and chemical products (19, 20)	1355.3	34.44	39.4
Basic pharmaceutical products and preparations (21)	1356.23	33.92	40
Rubber and plastic products (22)	785.5	19.62	40
Other non-metallic mineral products (23)	863.47	21.83	39.5
Basic metals and fabricated metal products (24, 25)	848.69	21.53	39.4
Computer, electronic and optical products (26)	1276.29	31.37	40.7
Electrical equipment (27)	806.44	21.64	37.3
Machinery and equipment n.e.c. (28)	856.85	22.32	38.4
Transport equipment (29,30)	732.57	21.4	34.2
Furniture, and other manufacturing, repair and installation of machinery and equipment (31 to 33)	941.92	24.78	38
Electricity, gas, steam, air conditioning supply, water supply; sewerage, waste management and remediation activities (35-39)	1174.2	31.41	37.4

Source: Earnings, Hours and Employment Costs Survey, CSO

Unfortunately, EHECS data cannot give us information about how many individuals there are working in each subsector, their characteristics or working conditions, or their geographical distribution. However, more granular information about these 2-digit NACE sectors is available using Census data, with the caveat that the most recent release dates back to 2016 (data from the 2022 Census is due to be released periodically throughout 2023). While this data is not recent, it can give us an idea of the regional split of the different subsectors, as well as the level of educational attainment and occupational classifications of those employed in each sector.

Table 7 – Share of 2-digit NACE sector in each region, 2016

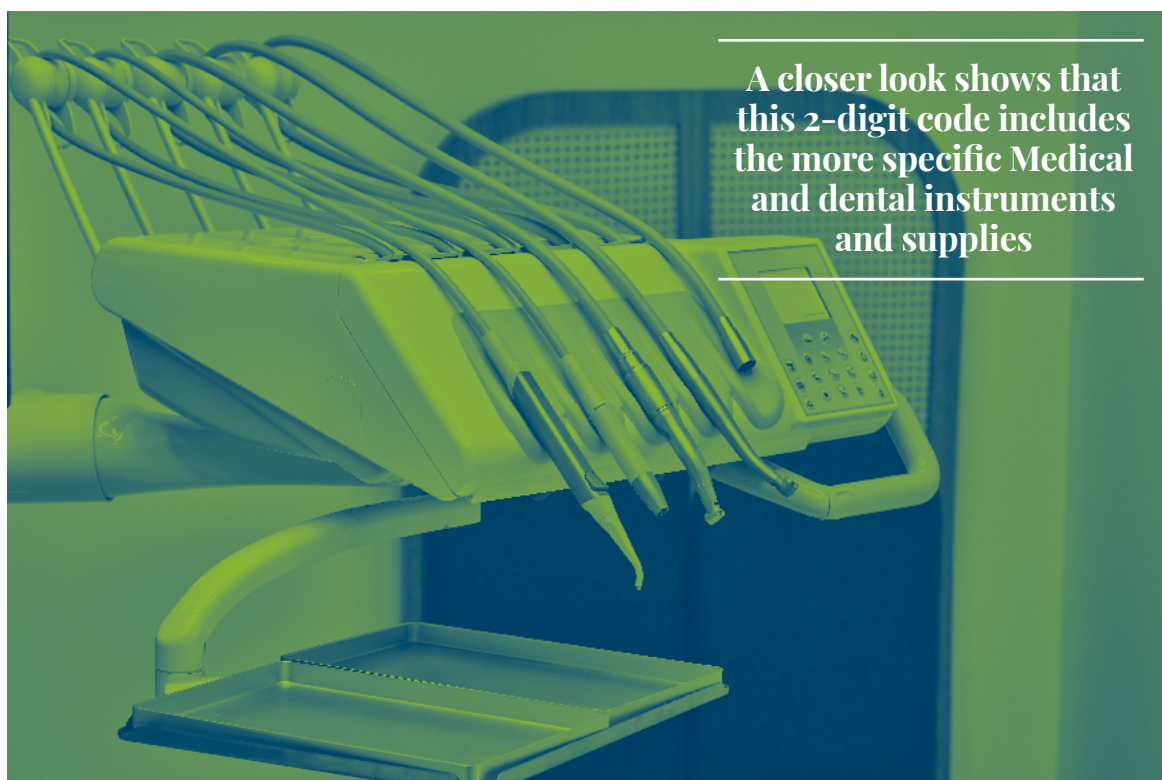
	Border	West	Mid-West	South-East	South-West	Dublin	Mid-East	Midlands	State
Mining and quarrying (05 to 09)	497 (9.8%)	818 (16.2%)	517 (10.2%)	443 (8.8%)	345 (6.8%)	277 (5.5%)	1252 (24.8%)	906 (17.9%)	5055 (100.0%)
Food products, beverages and tobacco (10 to 12)	5026 (12.8%)	2947 (7.5%)	4569 (11.7%)	5122 (13.1%)	7168 (18.3%)	5752 (14.7%)	5313 (13.6%)	3252 (8.3%)	39149 (100.0%)
Textiles, wearing apparel and leather products (13 to 15)	691 (15.5%)	359 (8.0%)	341 (7.6%)	324 (7.3%)	626 (14.0%)	1162 (26.0%)	737 (16.5%)	223 (5.0%)	4463 (100.0%)
Wood and paper products (16, 17)	513 (9.5%)	566 (10.5%)	545 (10.1%)	633 (11.8%)	800 (14.9%)	803 (14.9%)	1022 (19.0%)	502 (9.3%)	5384 (100.0%)
Printing and reproduction of recorded media (18)	250 (3.8%)	549 (8.3%)	351 (5.3%)	312 (4.7%)	739 (11.1%)	2828 (42.7%)	1341 (20.2%)	260 (3.9%)	6630 (100.0%)
Petroleum and chemical products (19, 20)	228 (4.8%)	293 (6.2%)	568 (12.0%)	429 (9.1%)	888 (18.8%)	1006 (21.3%)	869 (18.4%)	444 (9.4%)	4725 (100.0%)
Basic pharmaceutical products and preparations (21)	1224 (3.9%)	3035 (9.6%)	2399 (7.6%)	3559 (11.2%)	8355 (26.4%)	7573 (23.9%)	4221 (13.3%)	1330 (4.2%)	31696 (100.0%)
Rubber and plastic products (22)	1053 (18.1%)	460 (7.9%)	533 (9.2%)	347 (6.0%)	1538 (26.4%)	463 (7.9%)	834 (14.3%)	597 (10.2%)	5825 (100.0%)
Other non-metallic mineral products (23)	930 (12.4%)	586 (7.8%)	1390 (18.6%)	854 (11.4%)	672 (9.0%)	845 (11.3%)	1215 (16.2%)	998 (13.3%)	7490 (100.0%)
Basic metals and fabricated metal products (24, 25)	1579 (10.2%)	1399 (9.0%)	2468 (15.9%)	1976 (12.7%)	2453 (15.8%)	2192 (14.1%)	2257 (14.5%)	1216 (7.8%)	15540 (100.0%)
Computer, electronic and optical products (26)	550 (2.5%)	1523 (6.9%)	3950 (17.8%)	719 (3.2%)	5333 (24.1%)	5013 (22.6%)	3919 (17.7%)	1142 (5.2%)	22149 (100.0%)
Electrical equipment (27)	567 (17.1%)	284 (8.5%)	236 (7.1%)	204 (6.1%)	765 (23.0%)	491 (14.8%)	689 (20.7%)	89 (2.7%)	3325 (100.0%)
Machinery and equipment n.e.c. (28)	795 (8.9%)	1148 (12.8%)	776 (8.7%)	1603 (17.9%)	1892 (21.1%)	981 (11.0%)	1211 (13.5%)	543 (6.1%)	8949 (100.0%)
Transport equipment (29,30)	400 (9.4%)	868 (20.4%)	670 (15.8%)	292 (6.9%)	935 (22.0%)	318 (7.5%)	363 (8.5%)	404 (9.5%)	4250 (100.0%)
Furniture, and other manufacturing, repair and installation of machinery and equipment (31 to 33)	2881 (6.9%)	11142 (26.7%)	7358 (17.6%)	3996 (9.6%)	6628 (15.9%)	3890 (9.3%)	3633 (8.7%)	2212 (5.3%)	41740 (100.0%)
Electricity, gas, steam, air conditioning supply, water supply; sewerage, waste management and remediation activities (35-39)	1667 (7.2%)	1999 (8.6%)	2179 (9.4%)	1482 (6.4%)	3825 (16.5%)	6795 (29.3%)	3672 (15.8%)	1559 (6.7%)	23178 (100.0%)
Total Industry	18851 (8.2%)	27976 (12.2%)	28850 (12.6%)	22295 (9.7%)	42962 (18.7%)	40389 (17.6%)	32548 (14.2%)	15677 (6.8%)	229548 (100.0%)

Source: Census 2016, CSO

Table 7 shows each 2-digit NACE code broken down by NUTS3 region. While this data differs from the LFS in that it covers the entire population rather than a representative sample, and it relates to 2016 rather than 2022, the percentage shares for each region in the “Total Industry” row roughly correspond to the shares of employment in Industry (B to E) shown in Table 2.

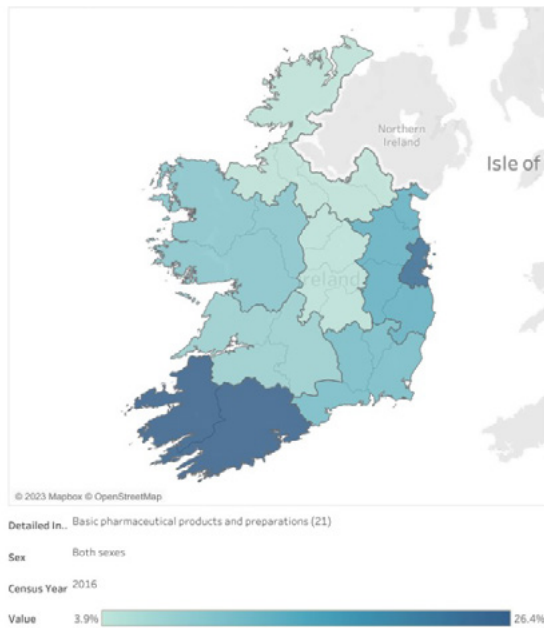
Looking at some of the more highly paid subsectors (19, 20, 21, 26), it is immediately clear these are predominantly concentrated in Dublin, Mid-East, and South-West. Looking specifically at the West region, which we previously identified as having a relatively high share of its employment dedicated to Industry, we can also see it has relatively low shares of most 2-digit subsectors, but quite a large figure for Furniture, and other manufacturing, repair and installation of machinery and equipment (31 to 33). A closer look shows that this 2-digit code includes the more specific Medical and dental instruments and supplies (325), of which the West has a 36% share (despite only having 12.2% of the labour force in Industry, and 9.3% of the national labour force in total). A visual representation of this agglomeration of particular niche industries is displayed below.

While this tells us little about the working conditions or differing remuneration by region, it gives us an idea of how diverse this sector is and how much can be masked by grouping such distinct types of employment under the broad heading of Industry.



A closer look shows that this 2-digit code includes the more specific Medical and dental instruments and supplies

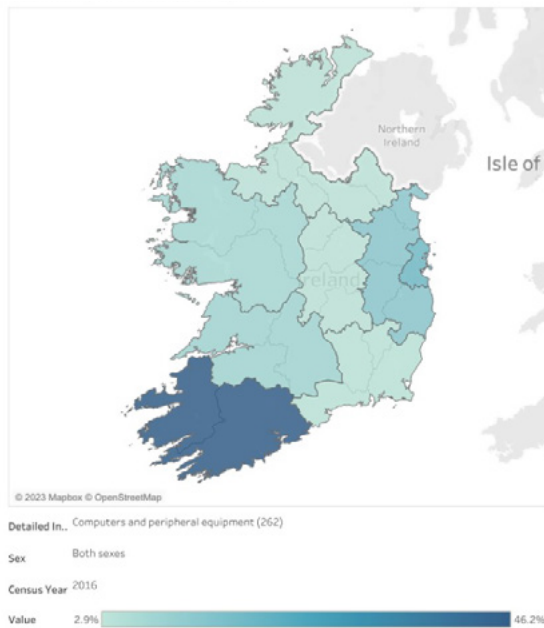
Regional shares of employment for particular subsectors



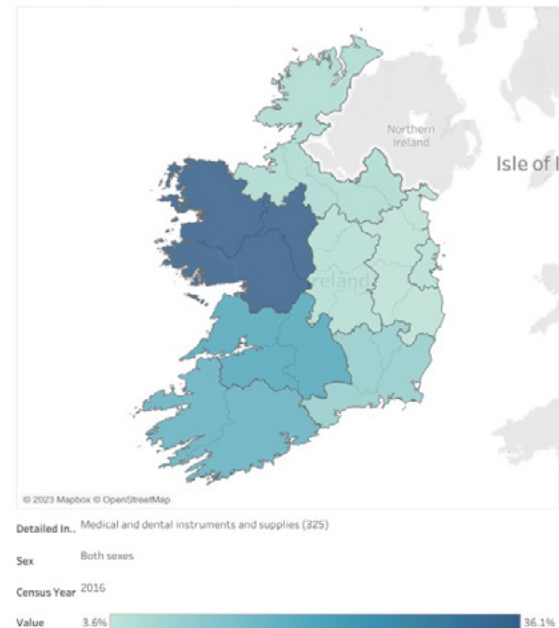
Basic pharmaceutical products and preparations (21)



Electronic components and boards (261)



Computers and peripheral equipment (262)



Medical and dental instruments and supplies (325)

Source: Census 2016, CSO, created using Tableau

Next, the 2-digit NACE codes are broken down by educational attainment. Looking at those highly paid subsectors again, we can see employees in these sectors are more likely to have third-level qualifications such as bachelor's degrees, postgraduate degrees, or PhDs (although Petroleum and chemical products is closer to the Industry average).

Conversely, other subsectors are more likely to have employees with lower or upper secondary education, or other types of apprenticeships, certificates, or vocational qualifications. While this is an interesting trend, it is difficult to draw anything conclusive from this such as how this affects employment outcomes or working conditions for those with different levels of educational attainment, but it does serve to further reinforce our argument regarding the heterogeneity in this sector.

Table 8 – Level of educational attainment by 2-digit NACE sector, 2016

	Primary or below	Lower secondary	Upper secondary	Post-secondary non-tertiary	Third level	Not stated/ Economic status - other	Total
Mining and quarrying (05 to 09)	389 (7.8%)	1259 (25.4%)	995 (20.1%)	1120 (22.6%)	905 (18.2%)	291 (5.9%)	4959 (100.0%)
Food products, beverages and tobacco (10 to 12)	1765 (4.5%)	5240 (13.5%)	8632 (22.2%)	9058 (23.3%)	9752 (25.1%)	4353 (11.2%)	38800 (100.0%)
Textiles, wearing apparel and leather products (13 to 15)	373 (8.5%)	793 (18.1%)	1061 (24.2%)	891 (20.3%)	855 (19.5%)	408 (9.3%)	4381 (100.0%)
Wood and paper products (16,17)	273 (5.1%)	1014 (19.0%)	1309 (24.6%)	1392 (26.1%)	867 (16.3%)	471 (8.8%)	5326 (100.0%)
Printing and reproduction of recorded media (18)	230 (3.5%)	968 (14.8%)	1630 (24.8%)	1856 (28.3%)	1421 (21.7%)	455 (6.9%)	6560 (100.0%)
Petroleum and chemical products (19,20)	148 (3.2%)	571 (12.4%)	986 (21.4%)	1052 (22.8%)	1543 (33.5%)	305 (6.6%)	4605 (100.0%)
Basic pharmaceutical products and preparations (21)	285 (0.9%)	1599 (5.1%)	4214 (13.4%)	5567 (17.8%)	17698 (56.4%)	1997 (6.4%)	31360 (100.0%)
Rubber and plastic products (22)	278 (4.8%)	938 (16.3%)	1488 (25.8%)	1528 (26.5%)	1029 (17.8%)	511 (8.9%)	5772 (100.0%)
Other non-metallic mineral products (23)	430 (5.8%)	1533 (20.7%)	1668 (22.5%)	1720 (23.2%)	1473 (19.9%)	580 (7.8%)	7404 (100.0%)
Basic metals and fabricated metal products (24,25)	575 (3.7%)	2690 (17.5%)	3350 (21.8%)	5116 (33.3%)	2214 (14.4%)	1418 (9.2%)	15363 (100.0%)
Computer, electronic and optical products (26)	218 (1.0%)	950 (4.4%)	2529 (11.7%)	4064 (18.7%)	11827 (54.5%)	2103 (9.7%)	21691 (100.0%)
Electrical equipment (27)	83 (2.5%)	402 (12.3%)	681 (20.8%)	945 (28.8%)	861 (26.3%)	306 (9.3%)	3278 (100.0%)
Machinery and equipment n.e.c. (28)	197 (2.2%)	1163 (13.2%)	1663 (18.8%)	2847 (32.3%)	2231 (25.3%)	723 (8.2%)	8824 (100.0%)
Transport equipment (29,30)	116 (2.8%)	511 (12.5%)	937 (22.9%)	1104 (27.0%)	1094 (26.7%)	331 (8.1%)	4093 (100.0%)
Furniture, and other manufacturing, repair and installation of machinery and equipment (31 to 33)	819 (2.0%)	4234 (10.2%)	8594 (20.8%)	10518 (25.4%)	13682 (33.1%)	3486 (8.4%)	41333 (100.0%)
Electricity, gas, steam, air conditioning supply, water supply; sewerage, waste management and remediation activities (35-39)	813 (3.6%)	2817 (12.4%)	3730 (16.4%)	5980 (26.2%)	7795 (34.2%)	1659 (7.3%)	22794 (100.0%)
Total Industry	6992 (3.1%)	26682 (11.8%)	43467 (19.2%)	54758 (24.2%)	75247 (33.2%)	19397 (8.6%)	226543 (100.0%)

Source: Census 2016, CSO

Lastly, we have the top ten occupational groups within each of the broad NACE codes (B, C, D, and E). While this in itself doesn't give us a great amount of insight, it again helps to highlight the sheer variety that exists within each different grouping, and the difficulty in drawing any firm conclusions about working conditions by NACE code without more granular data. As an example, within Manufacturing there are 1681 employees whose occupational group is listed as "Programmers and software development professionals", who presumably have different working conditions and remuneration when compared with the 1208 employees listed as "Sales and retail assistants". However, without more granular data, it is difficult to assess the magnitude of this and understand the experiences of these individuals.

Table 9 – Top 10 Occupational Groups by broad NACE sector, 2016

Mining and quarrying (B)		Manufacturing (C)	
Quarry workers and related operatives	795	Chemical and related process operatives	16060
Large goods vehicle drivers	685	Food, drink and tobacco process operatives	11741
Mobile machine drivers and operatives n.e.c.	486	Production managers and directors in manufacturing	8780
Metal working production and maintenance fitters	309	Metal working production and maintenance fitters	6142
Fishing and other elementary agriculture occupations n.e.c.	274	Other administrative occupations n.e.c.	5194
Managers and proprietors in other services n.e.c.	240	Sales accounts and business development managers	4285
Other administrative occupations n.e.c.	164	Assemblers (vehicles and metal goods)	4251
Chartered and certified accountants	84	Welding trades	4055
Vehicle technicians, mechanics and electricians	77	Plant and machine operatives n.e.c.	3575
Physical scientists	72	Chartered and certified accountants	3360
Book-keepers, payroll managers and wages clerks	71	Elementary storage occupations	3300
Other/Not stated	71	Business sales executives	3263
Plant and machine operatives n.e.c.	68	Assemblers (electrical and electronic products)	3229
All occupational groups	5055	All occupational groups	201315
Electricity, gas, steam and air conditioning supply (D)		Water supply; sewerage, waste management and remediation activities (E)	
Electricians and electrical fitters	1172	Refuse and salvage occupations	1446
Other administrative occupations n.e.c.	713	Large goods vehicle drivers	1352
Electrical engineers	654	Waste disposal and environmental services managers	516
Energy plant operatives	533	Other administrative occupations n.e.c.	503
Electrical and electronics technicians	511	Water and sewerage plant operatives	457
IT operations technicians	487	Elementary construction occupations	221
Sales accounts and business development managers	401	Other/not stated	213
Plumbers and heating and ventilating engineers	395	Metal working production and maintenance fitters	202
Engineering professionals n.e.c.	363	Production managers and directors in manufacturing	201
Managers and proprietors in other services n.e.c.	337	Sales accounts and business development managers	197
Chartered and certified accountants	312	Book-keepers, payroll managers and wages clerks	196
Business sales executives	231	Van drivers	191
Skilled metal, electrical and electronic trades supervisors	227	Plant and machine operatives n.e.c.	184
All occupational groups	12919	All occupational groups	10259

Source: Census 2016, CSO

Conclusion

In conclusion, what we have is a variety of data sources that give us pieces of the puzzle but with gaps and outstanding questions. Both EHECS and Census data give us insightful granular information on subsectors and their remuneration, geography, and some of the characteristics of those employed; however, they cannot give us information on the working conditions of the employees. LFS data is able to give us more information on the prevalence of temporary or part-time work, principal economic status, rates of self-employment and home working, and so on, but does not provide the granularity necessary to isolate subsectors. Other surveys, such as the Working in Ireland survey conducted by University College Dublin, or the European Working Conditions Survey conducted by Eurofound, can supplement our knowledge on working conditions for different sectors, but are not able to provide us with the full picture. While the report above allows us to determine the limitations of each of these sources, it surely asks more questions than it answers.

With the limitations above in mind, the NERI intend to bring together these data sources, as well as conducting research using LFS microdata and other sources, in order to map the labour market in Ireland and create a resource for both policymakers and researchers, as well as the general public. This report is the first in several which will attempt to shine a light on the labour market in Ireland and highlight areas for further research or action.





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