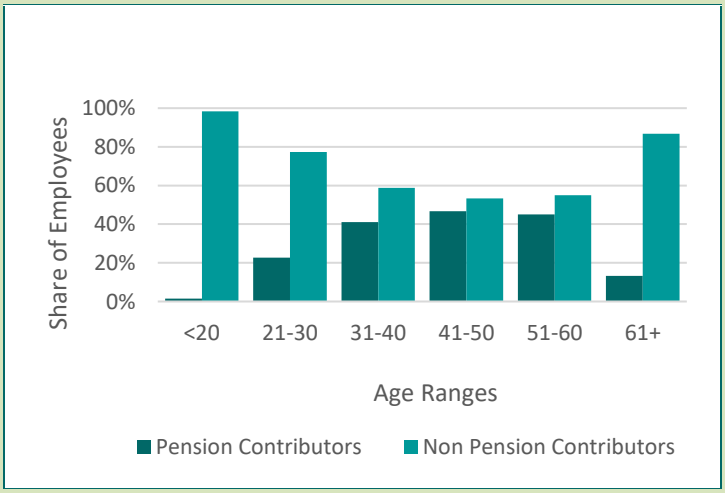
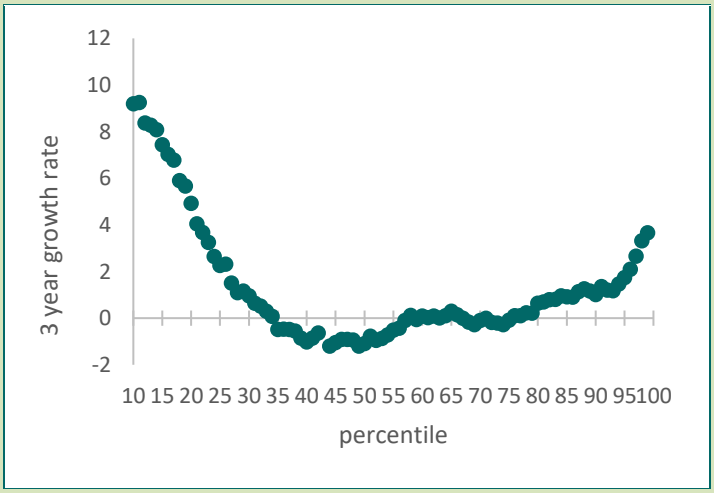
PAYE Real-time Data: Insights on Taxpayers in 2022

30.73bn	**€8.1bn**	**3.2 million**	**187,900**
Net Income Tax Receipts	**Increase in IT receipts from 2020 to 2022 Compared with €7.8bn from 2012 to 2019**	**Employees (Including those in receipt of occupational pensions)**	**Employers**
€37,360	**74%**	**1.03 million**	**60,700**
Average mean income for all employees	**of employees are Irish nationals** 3% Polish 2% British 2% Romanian	**employees made pension contributions**	**employments in top 20 technology multinational groups**

Pension Contributors by Age Range



Real gross pay growth, 2019 to 2022



Revenue
Cáin agus Custaim na hÉireann
Irish Tax and Customs

Michael Collins, Gavin Murphy, Philip O'Rourke, and Brian Sweeney
Strategy, Evaluation & Reporting Branch
Revenue Statistics **Revenue Research** ✉ **statistics@revenue.ie**

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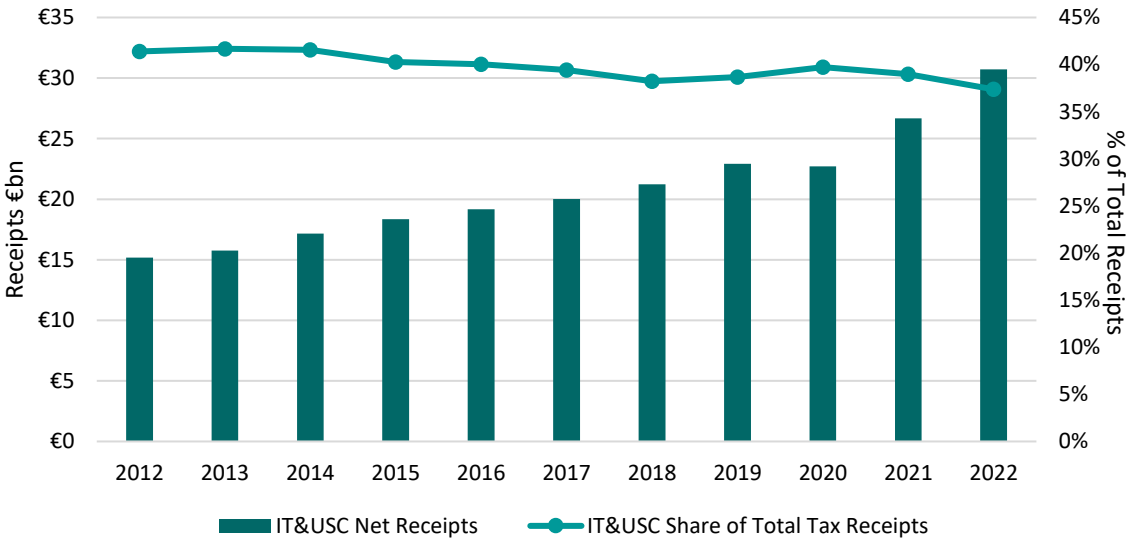
1 Introduction

Revenue's gross receipts of Income Tax ("IT"), including Universal Social Charge ("USC"), in 2022 were €33.6 billion. With repayments of €2.8 billion, the net transfer to the Exchequer in the year was €30.7 billion.

IT (including USC) is the largest taxhead in receipts terms, making up 37 per cent of the overall net tax receipts in 2022.[1] IT and USC receipts increased continuously over the period 2012 to 2019, by almost €7.8 billion in total over the period. While receipts fell slightly in 2020 compared to 2019, by 3%, receipts grew strongly in 2021, by €4.1 billion or 18 per cent year-on-year, and 2022 saw a further significant annual increase of €4.0 billion or 15 per cent. The average annual growth in receipts in the period 2020 to 2022 is greater than the average annual growth in receipts in the period 2012 to 2019.

Figure 1: Income Tax Receipts



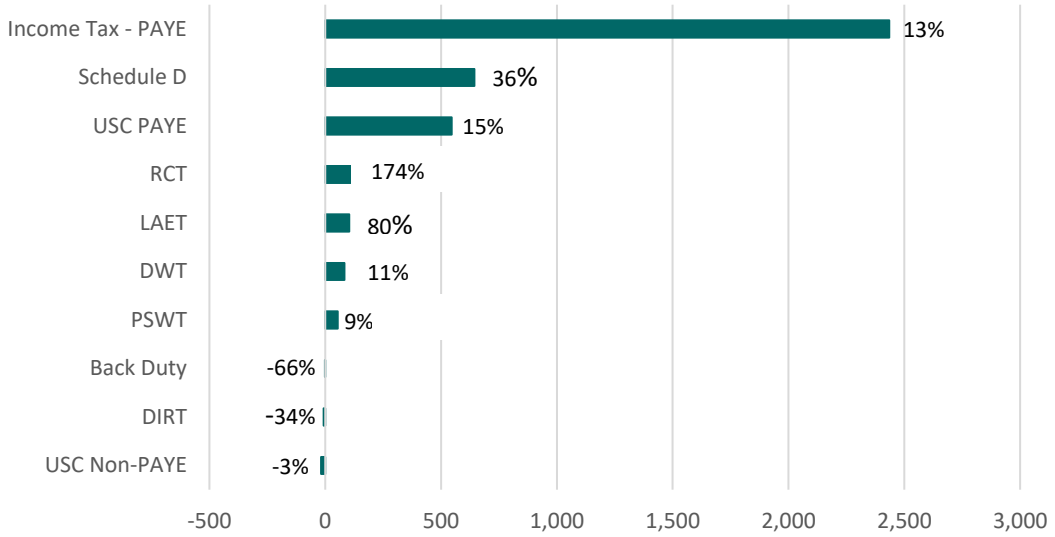
Source: Revenue analysis.

A large majority of IT net receipts in 2022 were made up of PAYE IT including PAYE USC (83 per cent). Schedule D self-assessed IT (including USC) made up 10 per cent of receipts. Aside from this, Professional Services Withholding Tax (3 per cent) and Dividend Withholding Tax (3 per cent) are relatively large contributors, with the balance being made up by RCT, LAET (Life Assurance Exit Tax), and DIRT.

As noted above, IT net receipts increased by almost €4 billion in 2022 compared to 2021. As Figure 2 illustrates, there has been growth in nearly all Income Tax subheads during this time. However, PAYE IT and PAYE USC combined account for €3.0 billion or 75 per cent of this net year-on-year increase.

[1] This does not include Pay Related Social Insurance ("PRSI") either here or in any of the analysis presented in this report.

Figure 2: Change in Income Tax Receipts by Subhead, 2022 vs 2021, € million



Source: Revenue analysis.

Table 1: Revenue Net Receipts

Duties Taxes & Levies	2021 Net Receipts € m	2022 Net Receipts € m	2022 Net Receipts +/- 2021	2022 share of Total Income Tax Receipts %
PAYE Income Tax	18,737	21,172	2,435	69
PAYE USC	3,742	4,288	546	14
Self-Assessed Income Tax	1,949	2,612	663	8
Self-Assessed USC	625	607	-18	2
Life Assurance Exit Tax	129	233	104	1
Deposit Interest Retention Tax	20	14	-6	0
Professional Services Withholding Tax	902	982	80	3
Dividend Withholding Tax	582	648	66	2
Back Duty/RCT	64	174	110	1
Total Income Tax and USC	**26,750**	**30,730**	**3,980**	**100**

Source: Revenue analysis

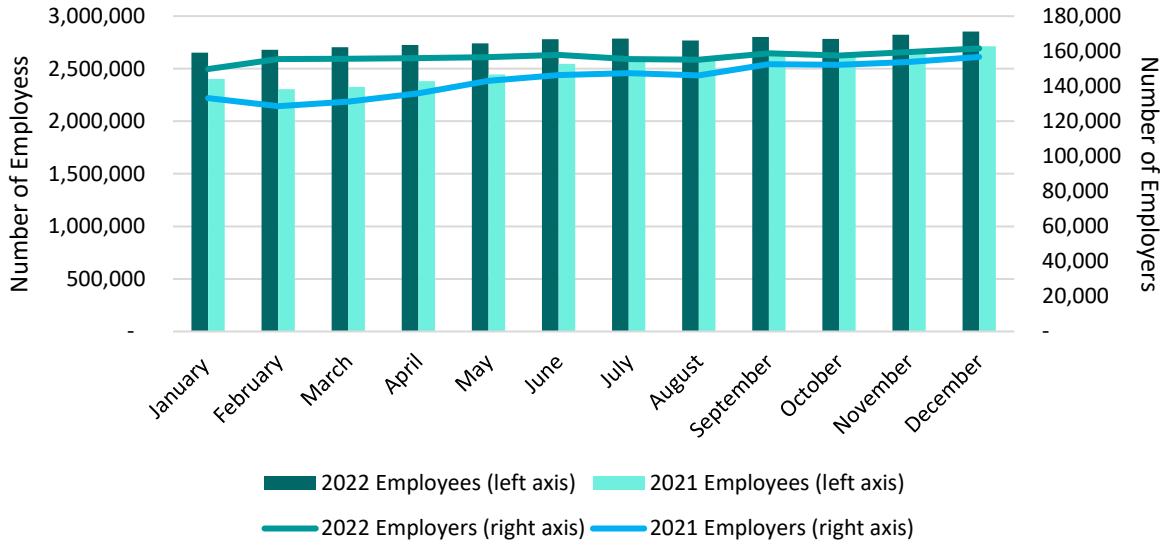
2 PAYE Overview

This and the following sections provide a statistical overview of the primary component of receipts, PAYE taxpayers, using real-time payroll data from Revenue's PAYE system.

2.1 Employees and Employer Size

As shown in Figure 3, the number of people in active employment in 2022 was higher than 2021 for every month of the year; on average there were 240,000 additional employees in each month of 2022 compared to 2021.[2] This trend is also observed for employers, with an additional 12,700 employers per month on average compared to 2021. However, it is worth noting that both the number of employees and employers in the second half of 2021 is much closer to the numbers seen for the same months in 2022, and the large difference between the first six months of 2022 and the same period in 2021 reflects the impact of Covid-19 restrictions on the economy in the first half of 2021.

Figure 3: Number of Employees and Employers 2022 and 2021



Source: Revenue analysis.

Table 2 and Table 3 below provide breakdowns of the number of employers and employments based on the size of the employer.[3] Two measures of size are used – the Revenue Division of the employer and the number of people employed in the enterprise.

As can be seen in Table 2, the number of employments and employers broken down by the size of the employer, as measured by number of employees, grew significantly between 2021 and 2022 with a 4 per cent increase in employers and 10 percent increase in employments respectively.

[2] Throughout this paper, active employment is defined as appearing at least once on payroll records with non-zero gross income. As such, it includes both those in paid employment and those in receipt of occupational pensions.
[3] An employee can have more than one employer, so the level of employments always exceeds the level of employees.

Table 2: Number of Employers and Employments by Range of Employees

Employee Range	Number of Employers 2021	Number of Employers 2022	Growth in Number of Employers	Number of Employments 2021	Number of Employments 2022	Growth in Number of Employments
1-9	139,000	143,800	3.5%	407,700	421,300	3.3%
10-49	32,300	34,300	6.2%	658,900	708,100	7.5%
50-249	7,200	8,000	11.1%	706,600	786,200	11.3%
250+	1,600	1,800	12.5%	2,149,900	2,392,500	11.3%
Total	**180,100**	**187,900**	**4.3%**	**3,923,100**	**4,308,200**	**9.8%**

Source: Revenue analysis.

As shown in Table 3, the numbers of employers and employments by employers in Business Division (generally smaller businesses) grew significantly year-on-year, up by 8 per cent and 31 per cent respectively. Medium Enterprises Division cases saw a small drop in employer numbers (down by less than 1 per cent) whereas the employment numbers grew over the period (6 per cent), while for Large Corporates the number of employers was static while employments grew by 9 per cent.

Table 3: Number of Employers and Employments by Revenue Division[4]

Revenue Division	Number of Employers 2021	Number of Employers 2022	Growth in Number of Employers	Number of Employments 2021	Number of Employments 2022	Growth in Number of Employments
Business	155,500	167,400	7.7%	1,102,300	1,449,400	31.5%
Medium Enterprises	12,900	12,800	-0.8%	1,794,400	1,910,600	6.5%
Personal	10,500	10,300	-1.9%	171,800	178,500	3.9%
Large Corporates	3,400	3,400	0.0%	905,700	988,800	9.2%
High Wealth Individuals	240	280	16.7%	2,700	3,200	18.5%
Total	**180,100**	**187,900**	**4.3%**	**3,923,100**	**4,308,200**	**9.8%**

Source: Revenue analysis.

Note: taxpayers in the Business Division are typically micro and small SMEs; taxpayers in the Medium Enterprises Division are typically medium-sized SMEs and includes Civil and Public Service bodies; taxpayers in the Personal Division have only PAYE income or are trusts, charities etc.; taxpayers in the Large Corporates Division are the State's largest businesses; taxpayers in the Large Cases–High Wealth Individuals Division are the State's wealthiest individuals.

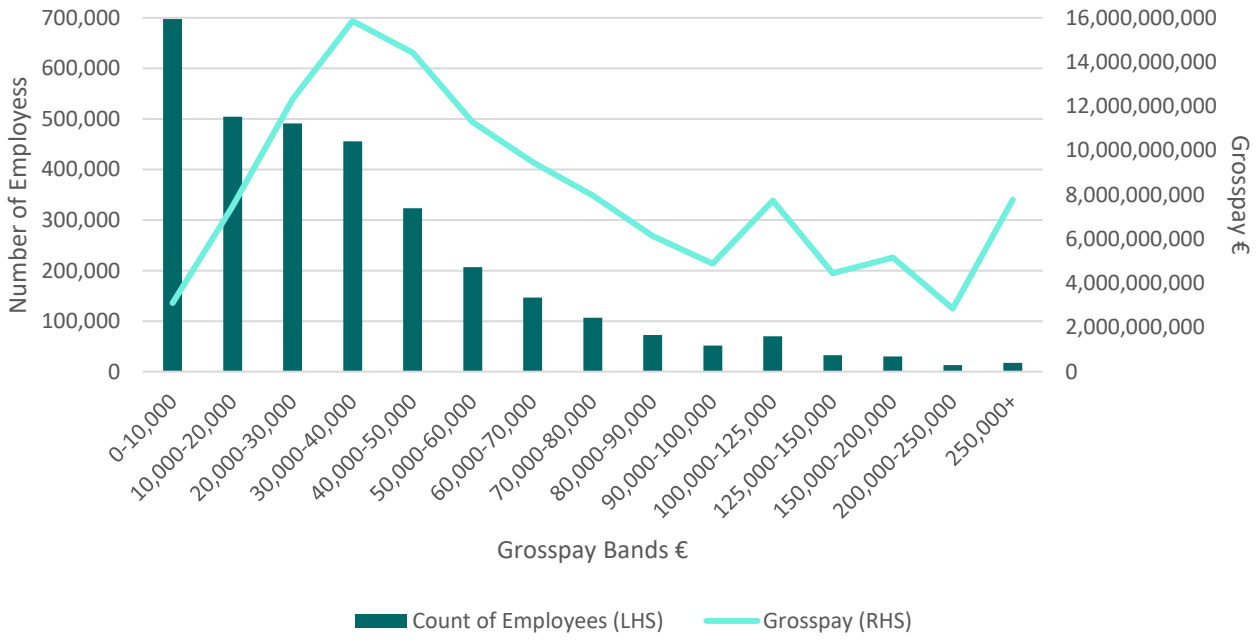
Overall, the data show that there was a substantial annual increase in the number of employments and employers, which is a partial (but not a leading) driver of the growth in PAYE receipts in the period (see Section 5 on Employment Churn for further analysis).

[4] The sum of each Division does not sum to the total as it is possible for some employers to appear in more than one Division in a year, and employees can have multiple employments in a year, either simultaneously or consecutively. All data refers to annual totals and not a point in time in-year.

2.2 Gross Pay

Figure 4 presents the distribution of employees and annual gross pay (throughout this section gross pay refers to the gross income reported through payroll systems). As can be seen, there is a large concentration of employees at the lower end of the distribution particularly between the 0-€30,000 range which makes up over half of the number of employees. However, this cohort makes up roughly 19 per cent of the total gross pay for the year. On the other end of the distribution, those who earned over €100,000 made up roughly 5 per cent of employees but 23 per cent of the total gross pay. It should be noted that the number of hours worked is not available in the payroll submissions to Revenue but it is likely that the data include many employees who worked part-time hours and/or on a temporary basis. The number of insurable weeks (the number of weeks for which Pay Related Social Insurance, PRSI, is liable) is recorded on payslips, and it shows that those in the €0 to €10,000 range of gross pay have a total mean number of 28 insurable weeks, compared to 46 insurable weeks for those in the €10,000 to €20,000 range of gross pay, and 52+ weeks in the remaining ranges. [5]

Figure 4: Distribution of Employees and Annual Gross Pay



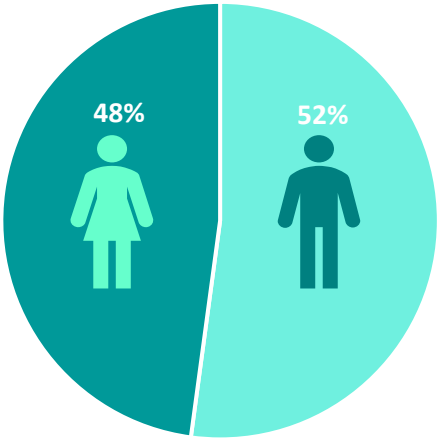
Source: Revenue analysis.

[5] Employees with multiple employments can have greater than 52 insurable weeks in the year, as the number of insurable weeks would be recorded simultaneously by each employer where the employments are held simultaneously.

2.3 Sex Breakdown

In 2022, there was a slight majority of males in the overall total number of employees recorded on payroll data, as shown in Figure 5.

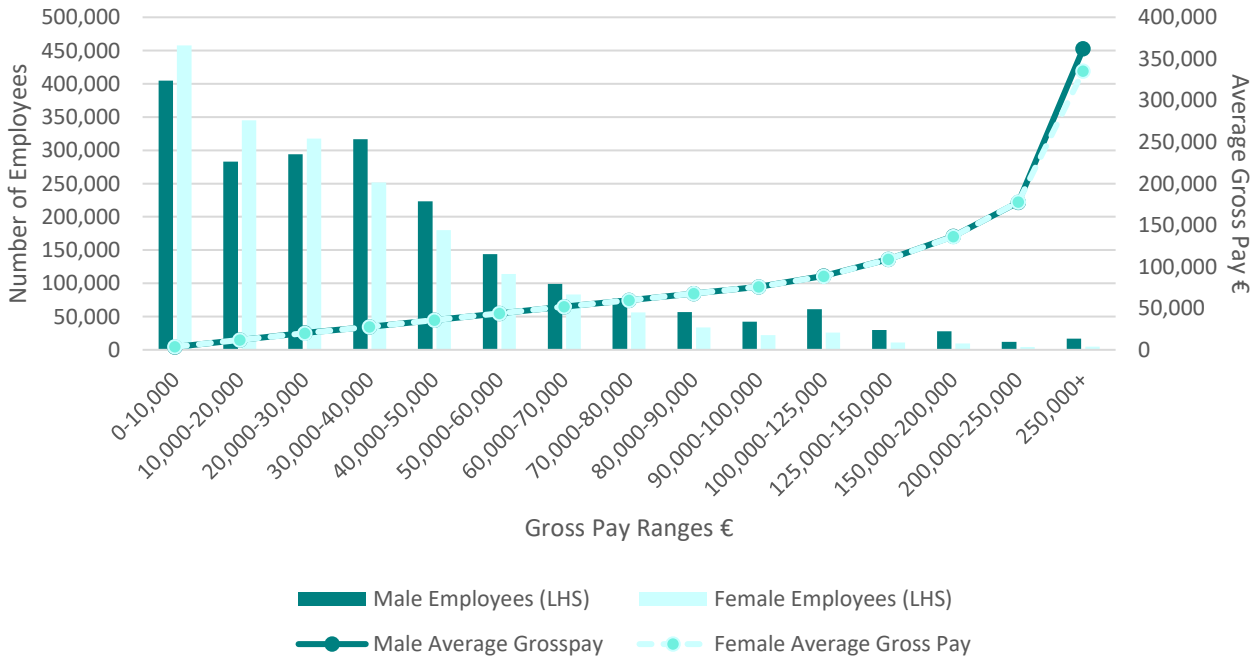
Figure 5: Distribution of Employee Sex



Source: Revenue analysis.

Figure 6 presents the distribution of employees and annual gross pay by sex. As can be seen, females make up the majority in the first three gross pay ranges and in all other ranges male employees make up the majority. In terms of the mean gross pay, this was similar for male and female employees within each income range except for the €250,000+ range where the mean gross pay of males is slightly greater.

Figure 6: Distribution of Employees and Annual Gross Pay by Sex

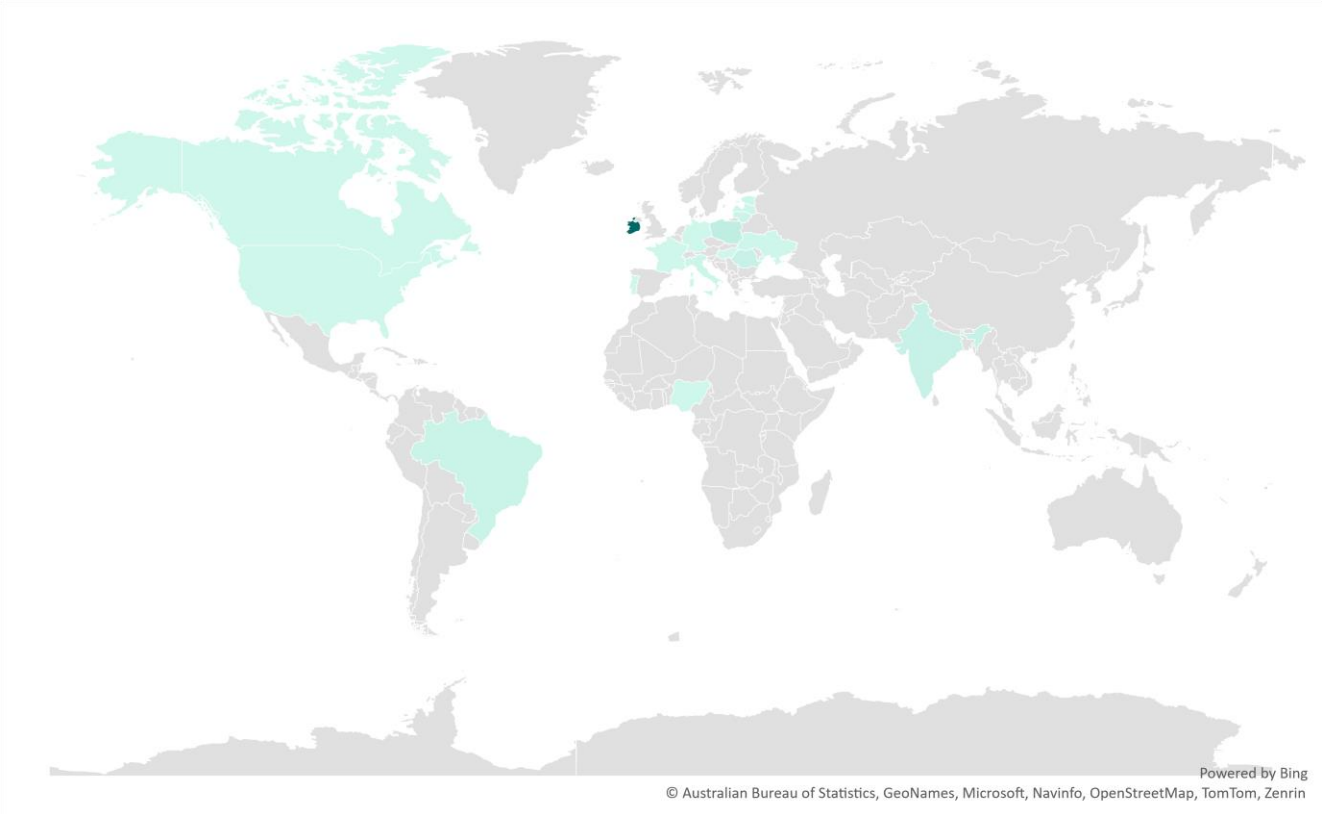


Source: Revenue analysis.

2.4 Employee Nationality

Figure 7 presents the top 20 nationalities of employees. Irish nationals made up the largest proportion of employees at 74 per cent of the share. The next most common nationalities were Polish which made up 3 per cent, British which made up 2 per cent and Romanian which also made up 2 per cent.

Figure 7: Employee Nationality



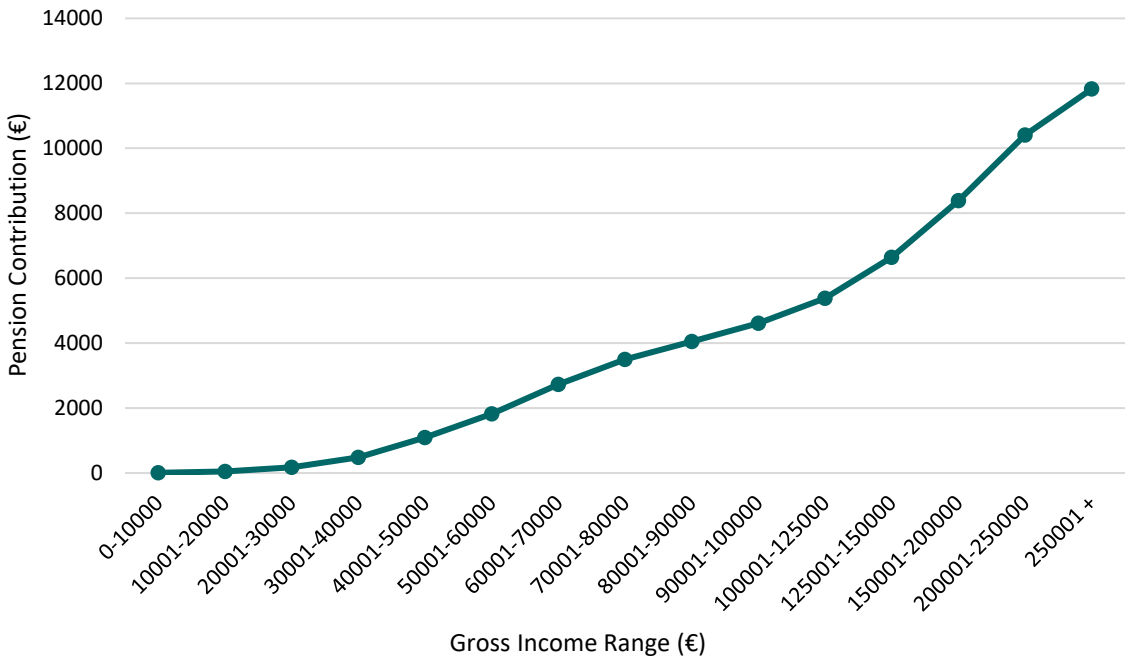
Source: Revenue analysis

3 Pensions

3.1 Pension Contributors

Pensions contributions by employees and employers (through employments) total €3.6 billion and €2.6 billion respectively in 2022. These include contributions to Occupational Pensions/Retirement Benefit Schemes (RBS), Additional Voluntary Contributions (AVC), Personal Retirement Savings Accounts (PRSA) and Retirement Annuity Contracts (RAC). Just under 1.03 million employees made pension contributions at some point in 2022. This represented around 32 per cent of all employees in the year. Figure 8 plots the average pension contribution amount by income range, for all employees in 2022. This is based on cumulative pension contributions and cumulative income for the year. Those on greater incomes are paying, on average, a greater amount of pension contributions.

Figure 8: Average Pension Contribution – All Employees

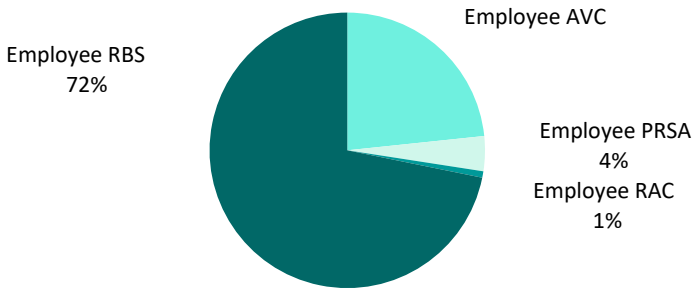


Source: Revenue analysis.

As shown in Figure 9 of those taxpayers who make pension contributions, the vast majority of the contributions (72 per cent by value of total pension contributions) are paid to an RBS (Occupational Pension), with a further 23 per cent made by way of additional voluntary contributions, this is in comparison to 18 per cent in 2019.[6]

[6] Revenue previously published analysis on pension contributions in 2019. It is available at: https://revenue.ie/en/corporate/documents/research/pmod-statistics-paper.pdf

Figure 9: Employee Pension Contribution Types



Source: Revenue analysis.

The number of individuals, total Gross Pay and total employee pension contributions of those who made a pension contribution at some point in 2022 is shown in Table 4. Compared to 2019, the number of individuals making a pension contribution has increased by over 154,000, or 18 per cent, the total amount of Pension Contributions has increased by just over €1 billion, or 40 per cent, with the total of gross pay of pension contributors increasing by approximately €15 billion, or 29 per cent.

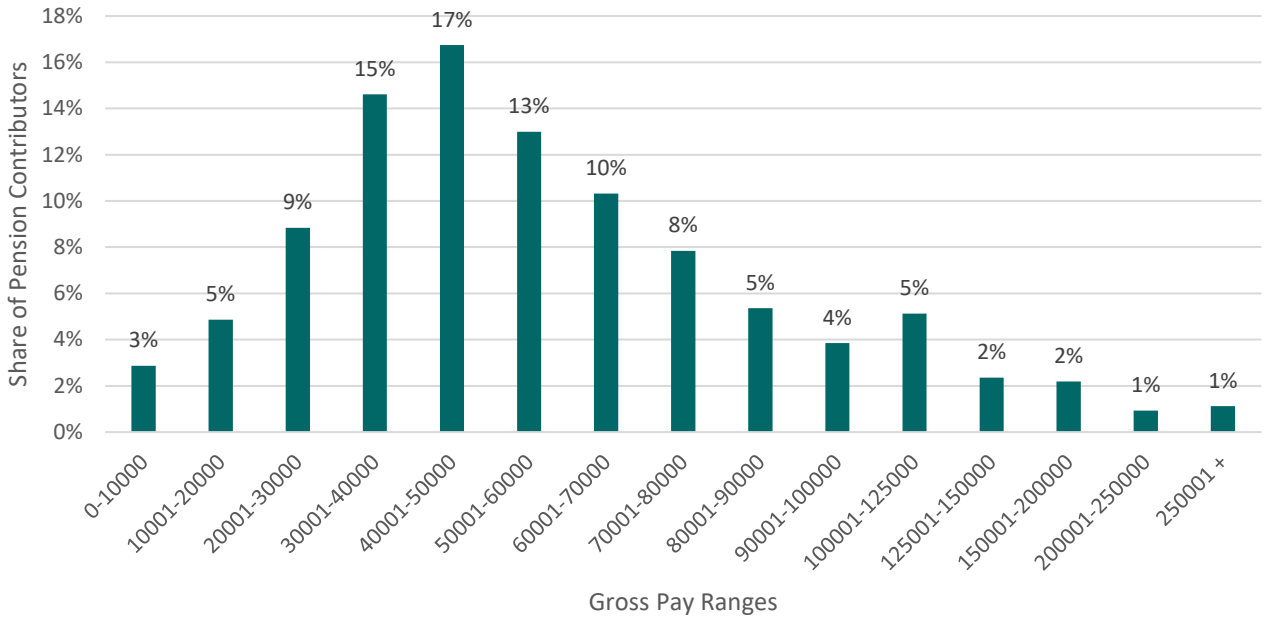
Table 4: Breakdown of Pension Contributors

Range of Gross Pay €	Number of Individuals	Gross Pay €m	Pension Contributions €m
0-5,000	13,000	34	1
5,001-10,000	16,600	127	4
10,001-15,000	21,900	277	9
15,000-20,000	28,000	494	17
20,001-25,000	36,400	823	30
25,001-30,000	54,500	1,506	56
30,001-35,000	70,000	2,281	92
35,001-40,000	80,300	3,014	128
40,001-45,000	90,700	3,855	171
45,001-50,000	81,600	3,872	184
50,001-60,000	133,900	7,330	379
60,001-70,000	106,300	6,892	402
70,001-80,000	80,700	6,027	376
80,001-90,000	55,300	4,684	296
90,001-100,000	39,600	3,751	239
100,001-125,000	52,700	5,840	379
125,001-150,000	24,300	3,304	219
150,001-200,000	22,600	3,857	255
200,001-250,000	9,500	2,118	135
250,001 – 300,000	4,600	1,238	73
>300,000	7,000	3,534	136
Total	**1,029,500**	**64,859**	**3,581**

Source: Revenue analysis.

Figure 10 shows the breakdown of pension contributions by gross pay ranges. Employees earning in the €30,000 to €60,000 range make up approximately 45% of all pension contributors.

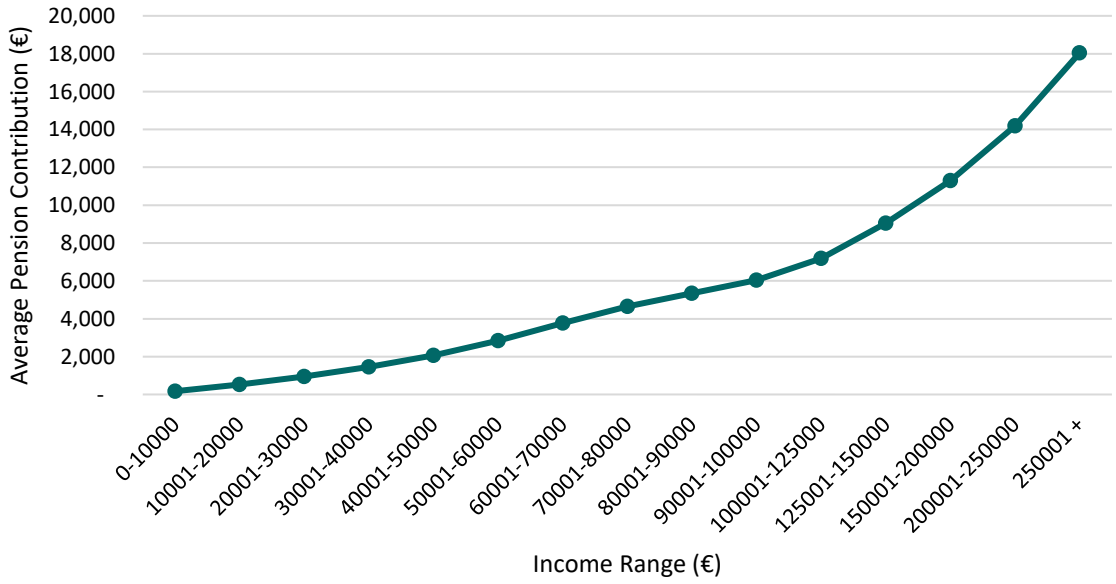
Figure 10: Distribution of Pension Contributors by Gross Pay



Source: Revenue analysis.

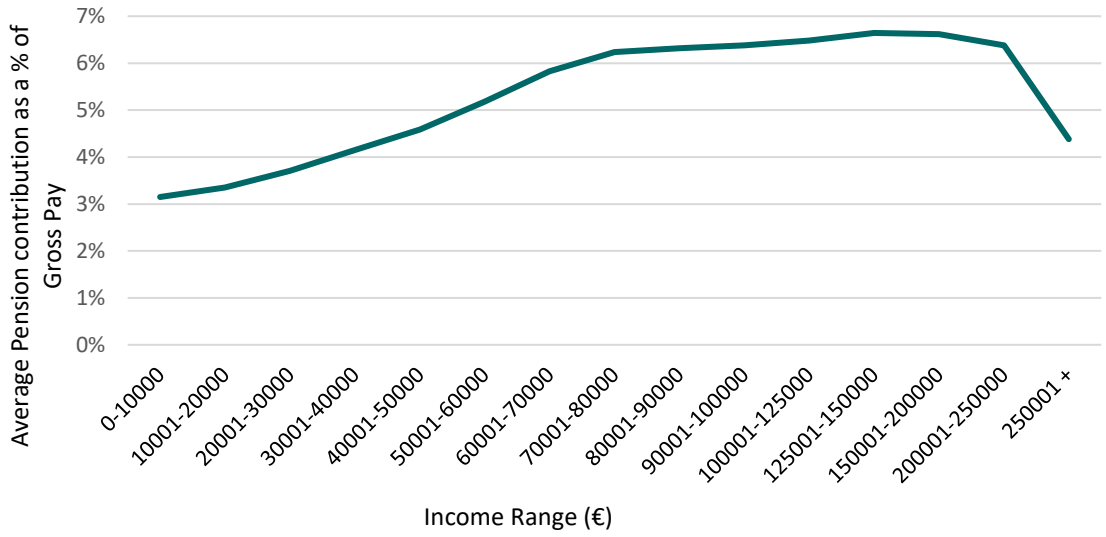
Figure 11 shows the average pension contribution by income range for those employees who are making a pension contribution. Those with higher incomes make greater contributions to their pension. Figure 12 shows that the average share of income set aside as pension contribution across the income ranges varies between 3 and almost 7 per cent.

Figure 11: Average Pension Contribution – Pension Contributors



Source: Revenue analysis.

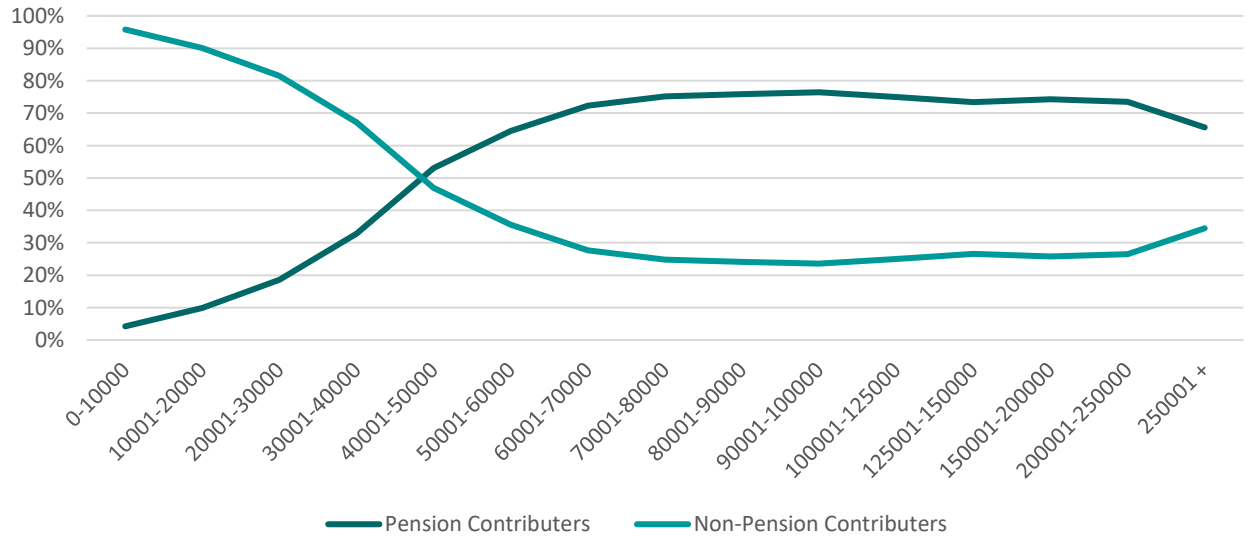
Figure 12: Average Pension Contribution as a share of Gross pay - Pension Contributors



Source: Revenue analysis.

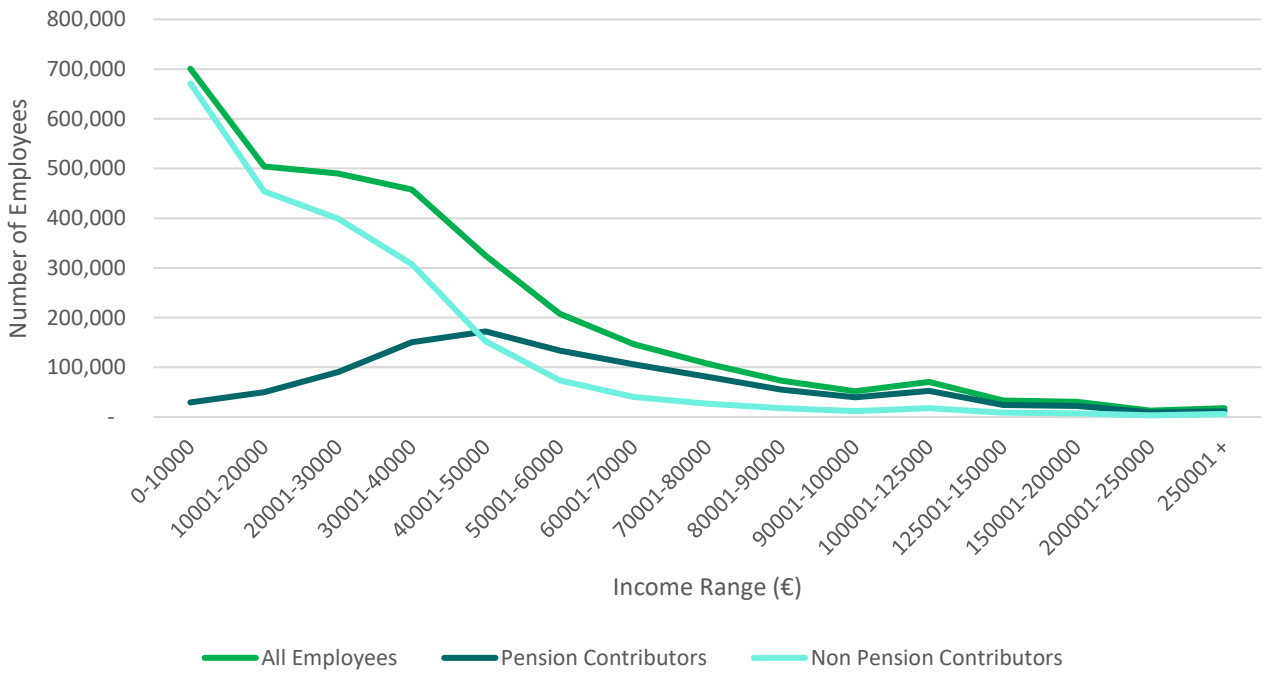
Figure 13 and Figure 14 show, broken down by income range, the split of employees into pension contributors or non-pension contributors. Most employees on lower incomes do not make contributions to their pension. The gross income point above which most employees are making pension contributions is in the €40,000 to €45,000 range.

Figure 13: Split of Pension Contributor Status by Income Range



Source: Revenue analysis.

Figure 14: Number of Employees by Income Range and Pension Contributor Status

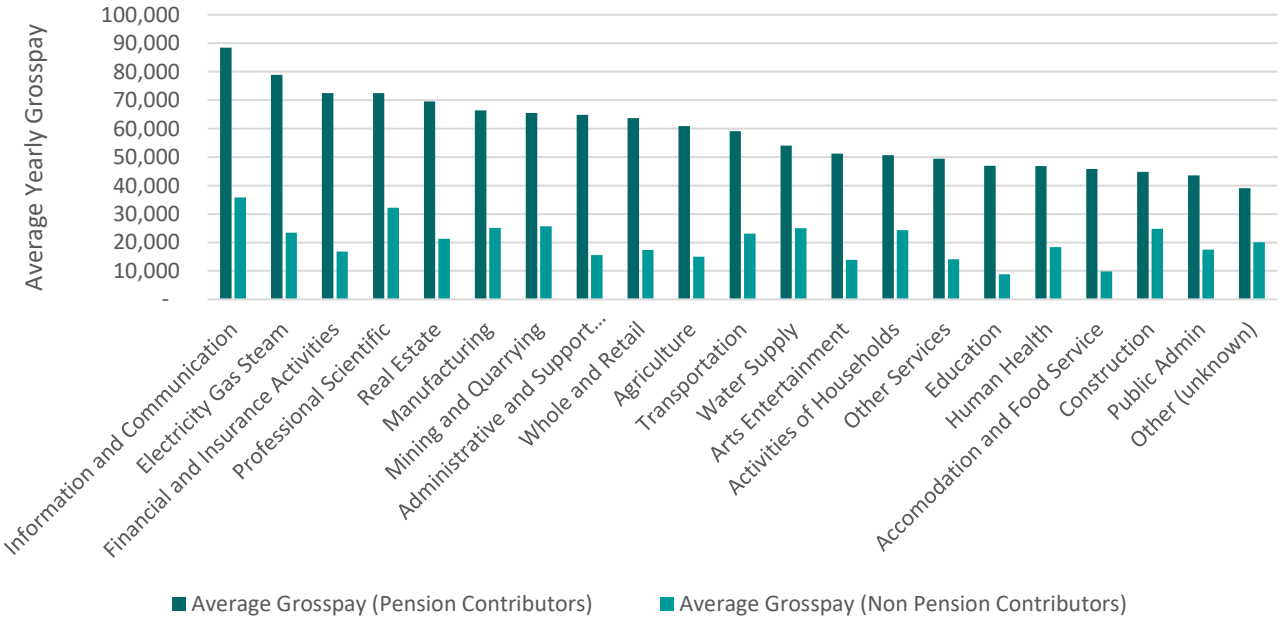


Source: Revenue analysis.

Figure 15 presents the distribution of pension contributors and non-pension contributors broken down by NACE sector and average annual gross pay. As can be seen, throughout all sectors the average gross pay of pension contributors is significantly higher than that of non-pension contributors, with the largest differences seen in the Information and Communication, Electricity Gas and Steam and Financial and Insurance Activities sectors.

Figure 15: Distribution by Sector of Average Gross Pay,

Contributors vs. Non-Contributors

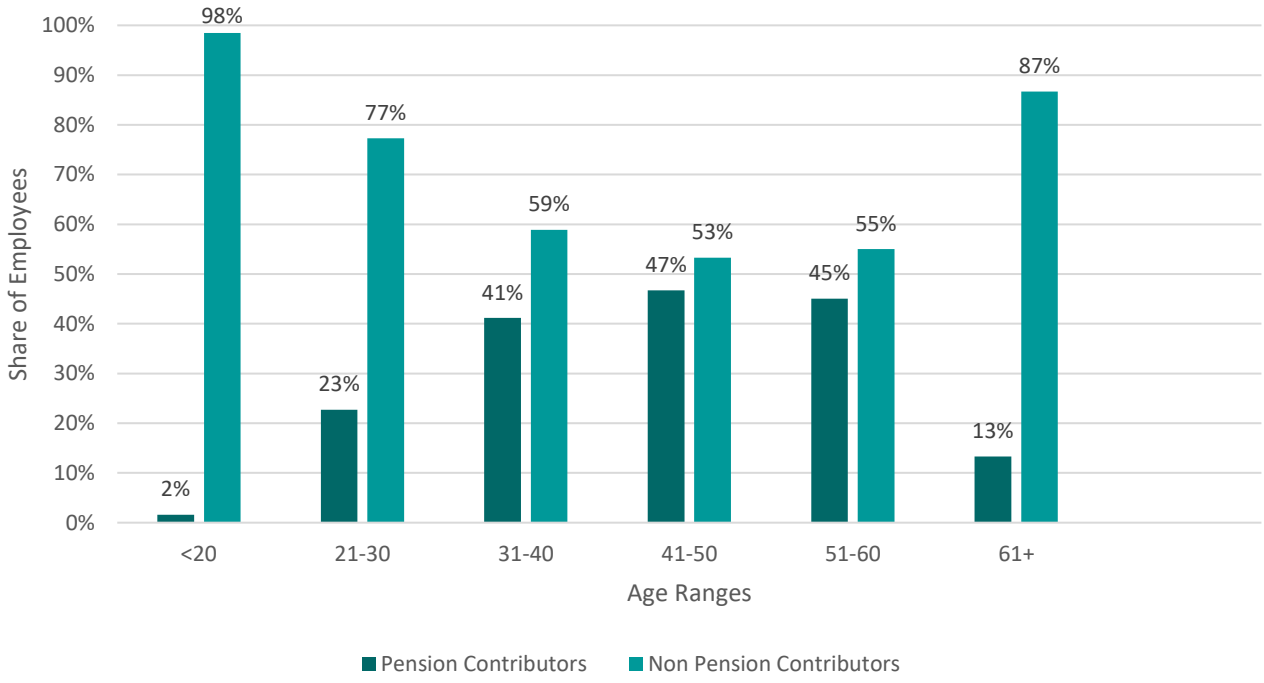


Source: Revenue analysis.

3.2 Employees with no Pension Contributions

Looking at those individuals who do not have a pension contribution deduction in 2022, Figure 16 shows that those without a contribution are, in general, younger in age than all individuals in PAYE employment as a whole. It also shows a higher number of non-contributors in the older age brackets, but these can be accounted for by pension recipients, who would in general not be expected to be making pension contributions at that point.

Figure 16: Share of Employees by Age Range and Pension Contribution Status



Source: Revenue analysis.

Table 5 sets out the average gross pay, broken down by age, of those employees who do not make a pension contribution. In all age ranges the average gross pay is less than the average gross pay for all employees in 2022 which was €37,360[7].

Table 5: Average Gross Pay by Age of Non-Contributors

Age Range	Average Gross Pay €m
<20	5,900
21-30	19,100
31-40	30,300
41-50	35,400
51-60	35,900
61+	23,700

Source: Revenue analysis.

[7] The average income is a mean average based on all individuals who appeared at least once on a payslip in 2022, and therefore includes a range of scenarios including those working part-time, full-time, permanent, temporarily, seasonal workers etc.

3.3 Pension Recipients

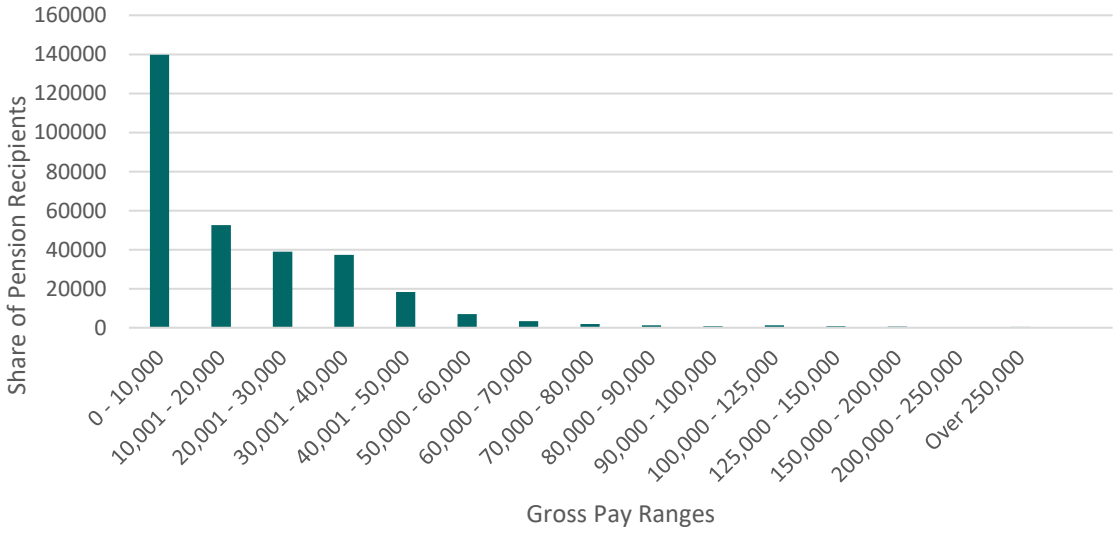
Those in receipt of a private pension income are included in their pension provider's payroll, and as such are included in the PAYE data submitted to Revenue. The income source, such as a pension income or employment income, is not indicated on the payslip, and thus it is not possible to identify precisely those in receipt of pension income. In order to quantify the incomes and deductions of those in receipt of pension incomes, it is necessary to make some approximations in order to try to identify this cohort of taxpayers as closely as practically possible.

As an individual can have multiple employers in a year, employees can have more than one PRSI class in a year (operated by the employer). This analysis focuses on employees who had a Class M classification throughout the year and who were aged 60 or over at the beginning of 2022.[8]

There were approximately 300,000 such employees in 2022, who were aged 60 at the beginning of the year or over (about 9 per cent of all PAYE taxpayers). It is reasonable to assume that this group of employees are in fact recipients of pensions.

The average income of this cohort is €1,600 per month or €19,200 per annum, 62 per cent of this cohort have an annual income of €20,000 or less, with 87 per cent on incomes of €40,000 or less. It is important to note that these figures exclude income from taxable pensions from the Department of Social Protection; such incomes are taxed by way of reducing the tax credits and bands available to this cohort.

Figure 17: Distribution of Pension Recipients by Gross Pay



Source: Revenue analysis.

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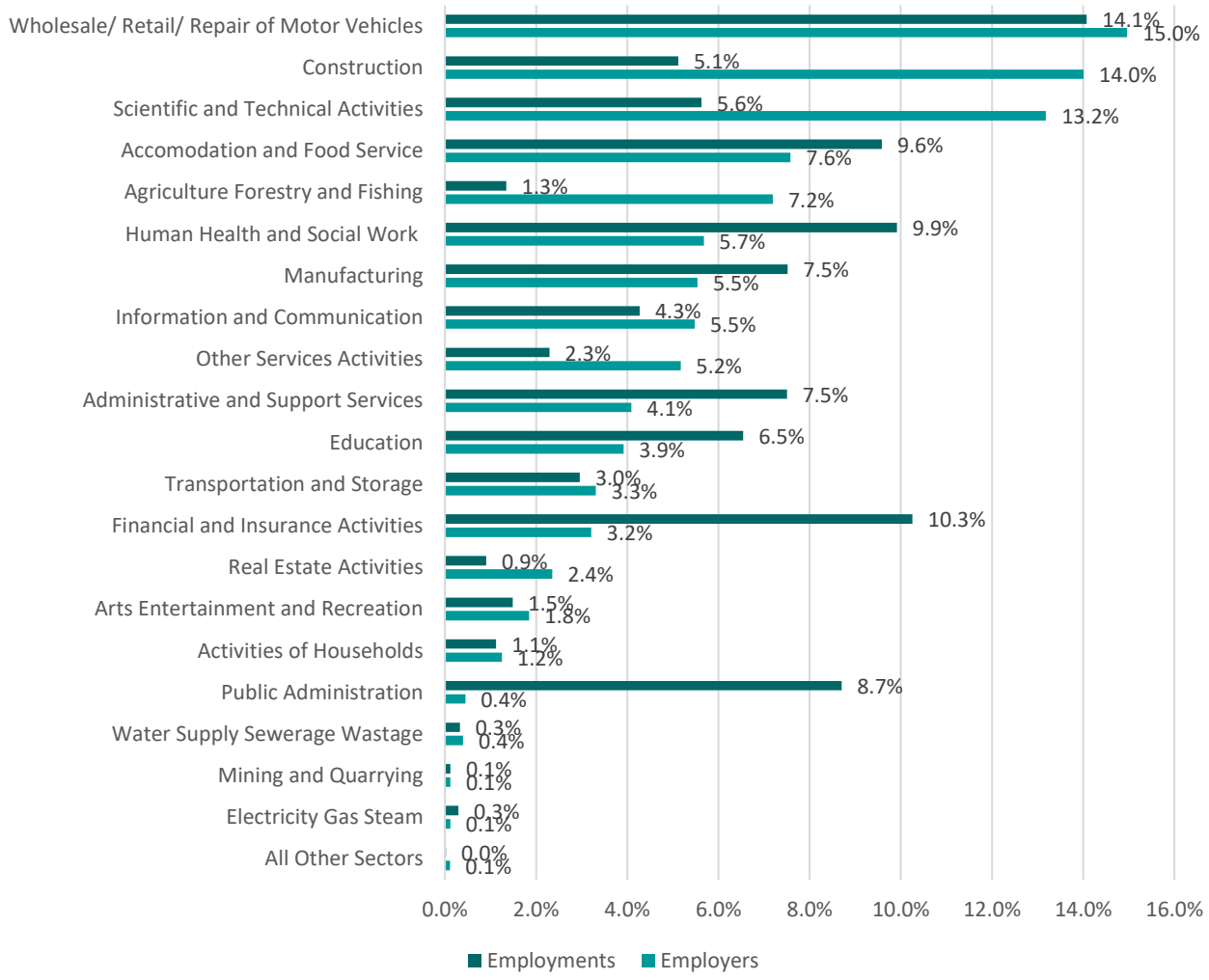
[8] Class M is assigned by the Department of Social Protection to people with no PRSI contribution liability such as employees under age 16 or people of pensionable age, currently 66 years, or over (including those previously liable for Class S). It also explicitly covers people in receipt of occupational pensions (on the Occupational Pension income only) or people within Class K with no contribution liability.

4 Sectoral Analysis

4.1 Overview of sectors

Figure 18 sets out the share of number of employers and employments by sector. The sector of the employees is based on the NACE code of their employer, i.e., the share of total employees in any given sector reflects the number of employees of the employers in that sector.

Figure 18: Sectoral Distribution of Employments and Employers



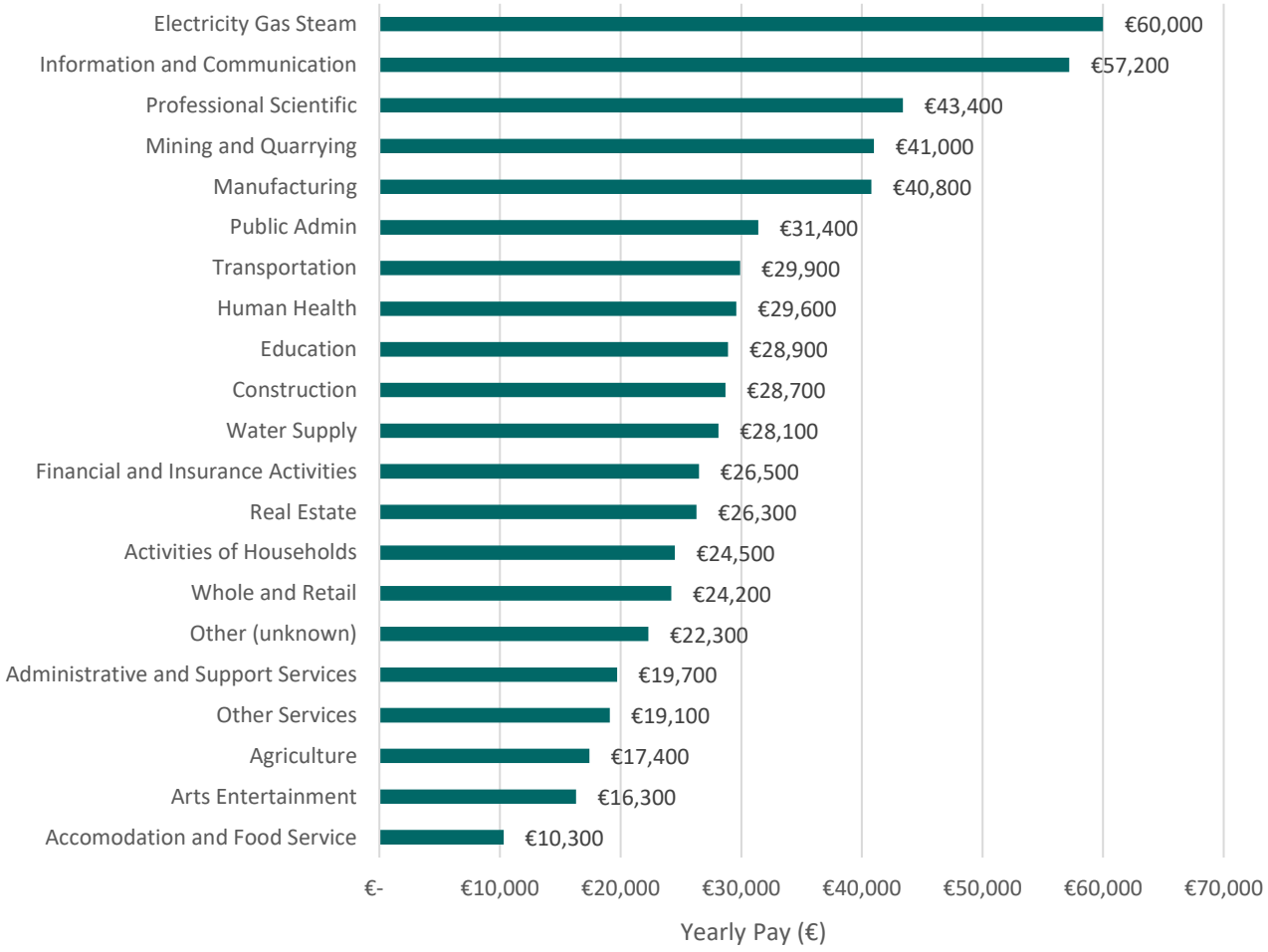
Source: Revenue analysis.

Figure 19 presents mean annual gross pay by sector for 2022. The mean annual gross pay for employees across all sectors in 2022 was €37,360[9]. By sector, the highest average pay is in *Electricity & Gas*, which in terms of numbers of employments is small. *Electricity & Gas, Information & Communication*, and *Professional Scientific* are the three highest average yearly pay sectors.

[9] The average income is a mean average based on all individuals who appeared at least once on a payslip in 2022, and therefore includes a range of scenarios including those working part-time, full-time, permanent, temporarily, seasonal workers etc.

Accommodation & Food Service and *Arts Entertainment & Recreation* are the sectors with the lowest average yearly gross pay, likely reflecting a higher share of part-time work in these sectors.

Figure 19: Average Yearly Gross Pay by Sector



Source: Revenue analysis.

4.2 Technology Sector in Focus

Technology is an important sector from both an economic and fiscal perspective. Although Table 6 shows that just 5.5% of all employments are held in *Information and Communication* (NACE Sector J), receipts from this sector make up 12% of total PAYE receipts.

This section reviews the Top 20 technology multinational (MNE) groups in Ireland.[10] In 2022 they account for approximately 60,700 employments. They are typically large employers; of these 20 MNEs, approximately 50 per cent have over 1,000 employees.

In 2022, 30 per cent of employees in the Top 20 technology MNEs had employment income over €100,000. Of this high-income cohort, 68% were male, compared to a 62% share for male employees in the sector as a whole. Table 6 provides a breakdown of pay and deductions of employees in the sector. This table shows that the effective rate of tax of these individuals, including PAYE Income Tax and PAYE USC only, is approximately 33%.[11]

Table 6: Pay and Tax of Top 20 Technology MNEs

Category	P25	Median	P75
Average Gross pay per Employment	€40,700	€69,500	€115,400
Average Income Tax paid per Employment	€6,800	€16,600	€33,000
Average USC paid per Employment	€1,200	€2,700	€6,200
Average Taxable Benefits per Employment	€1,300	€2,200	€3,900
Average Share Based Remunerations per Employment	€2,500	€6,000	€21,900

Source: Revenue analysis.

Table 7 shows the breakdown of employees in the Technology sector broken down by age-range. As can be seen, employees between the ages of 21-40 make up approximately 67 per cent of the cohort.

[10] The Top 20 were chosen based on their contribution to PAYE and corporation tax receipts. Given their size, they likely represent a very high share of the Technology sector's fiscal impact in Ireland. It is important to note that Technology sector MNEs will operate across various economic sectors in the NACE classification, but they are most common in *Information & Communication* and *Manufacturing.*

[11] The pay and deductions reported on payslips encompasses only the pay from employments and the credits and reliefs set out on the individual's Revenue Payroll Notification (RPN). Taxpayers file their annual income tax return and at that point other income sources are declared, and additional credits and reliefs can be claimed. The final effective rate for these taxpayers can only be determined at that point.

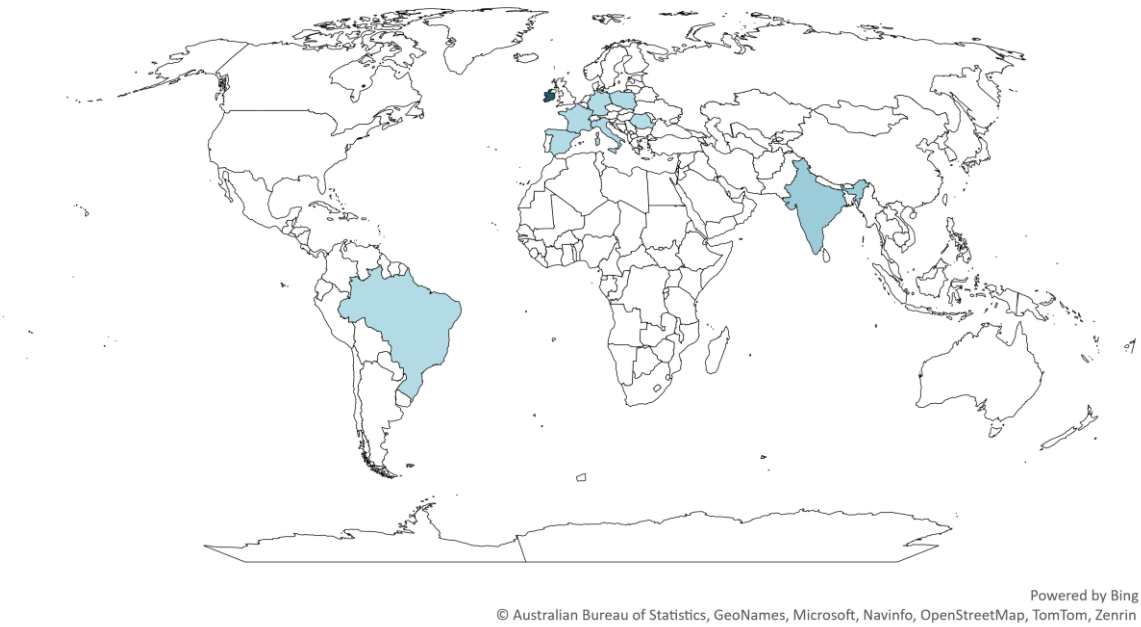
Table 7: Number of Employees by Age in Top 20 Technology MNEs

Age Range	Number of Employments
<20	100
21-30	14,700
31-40	24,900
41-50	13,800
51-60	5,000
61+	1,000
Total	**59,500**

Source: Revenue analysis.

Figure 20 presents the top 10 nationalities working in the Top 20 Technology MNEs. Irish employees make up approximately 43% of this cohort, with the next most common nationalities being Indian and Italian.

Figure 20: Nationality Breakdown of Top 20 Technology MNEs



Source: Revenue analysis.

5 Employment Churn

5.1 Overview of 2022

As noted in Table 2, there were 4.3 million unique employments in 2022. Underpinning that total is a large degree of employment churn. There were around 1.3 million new employments created in 2022 which more than offset approximately 0.9 million employments that ceased in 2021, as shown in Table 8. This contributed to a net gain of around 385,000 employments. Around 70 per cent of the 4.3 million employments in 2022 continued from 2021.

Total Income Tax (including USC) liabilities on continuing employments is €23.9 billion in 2022, which represents a €2.1 billion or 9.5 per cent increase on the liabilities for this cohort in 2021. The total Income Tax (including USC) liabilities on new employments is €2.6 billion compared to €2.1 billion lost on employments that ceased in 2021, resulting in a net tax gain of €0.5 billion from employment churn.

The Income Tax paid on average per new employment in 2022 is €330 less than the Income Tax paid on average per ceased employment in 2021, which suggests that employment net gains throughout the year were concentrated in lower paying or part-time positions. When compared to the overall net tax gain of €0.5 billion arising from employment churn, it also suggests that the aggregate tax gain from employment churn is driven primarily by a volume effect i.e., an increased number of employments rather than higher paid new employments generating higher tax liabilities.

Table 8: Employment Churn

	2022
Total number of unique employments ('000s)	4,308
Of which: continuing from 2021 ('000s)	3,034
Of which: new ('000s)	1,274
Number of ceased employments (ceased during 2021) ('000s)	889
Net additional employments in 2022 ('000s)	385
Proportion of continuing employments in 2022 (%)	70%
Proportion of new employments in 2022 (%)	30%
Proportion of employments ceased during 2021 (%)	23%
Total Income Tax liabilities in 2022 for continuing employments (€ bn)	23.9
Total Income Tax liabilities in 2021 for continuing employments (€ bn)	21.8
Total Income Tax liabilities by new employments in 2022 (€ bn)	2.6
Total Income Tax liabilities by ceased employments in 2021 (€ bn)	2.1
Net Income Tax effect from job churn (€ bn)	0.5
Average Income Tax per continuing employment (€)	7,860
Average Income Tax per new employment (€)	2,040
Average Income Tax per ceased employment (€)	2,370
Difference in average tax (€)	-330

Source: Revenue analysis.

Note: The tax liabilities in this Table refer to the liabilities recorded on payroll data, which can differ from the net receipts reviewed in Section 1, for example due to repayments. At all times Income Tax refers to Income Tax and USC.

5.2 Employment Churn by Sector

The two sectors with the largest share of continued employments in 2022 from 2021 are *Public Administration and Defence* (84 per cent), *Financial and Insurance Services* (83 per cent). The two sectors with the lowest shares are *Accommodation and Food Services* (49 per cent) and *Administration and Support Services* (53 per cent). *Accommodation and Food Services* sector experienced the largest net increase of 88,300 employments, reflected in the creation of 209,400 employments which more than offset the 121,000 that ceased.

Table 9: Employment Churn by NACE Sector

Sector	Number of employments in 2022	%	Continued from 2021	New in 2022	Ceased during 2021	Net gain(loss) from employment churn
Agriculture, Forestry and Fishing	58,800	1%	41,700	17,100	15,000	2,100
Mining and Quarrying	5,400	0%	4,500	990	1,100	-100
Manufacturing	323,900	8%	243,400	80,500	59,000	21,500
Construction	220,800	5%	150,800	70,000	52,400	17,600
Wholesale and Retail	606,300	14%	414,300	192,000	158,300	33,600
Transportation and Storage	127,400	3%	97,000	30,400	25,000	5,400
Accommodation and Food Services	412,400	10%	203,000	209,400	121,000	88,300
Information and Communication	184,000	4%	125,000	59,018	44,400	14,600
Financial and Insurance	441,900	10%	367,700	74,300	42,300	32,000
Real Estate	39,100	1%	24,400	14,700	8,900	5,800
Professional, Scientific, and Technical	242,500	6%	169,900	72,700	50,300	22,400
Administrative and Support Services	323,100	8%	171,600	151,500	111,000	40,500
Public Administration and Defence	374,800	9%	313,200	61,600	38,900	22,700
Education	281,800	7%	204,600	77,300	48,500	28,800
Health and Social Work	427,060	10%	333,100	94,000	69,700	24,300
All Other Activities	239,000	6%	170,000	69,000	43,400	25,600
Total	**4,308,200**		**3,034,000**	**1,274,200**	**889,100**	**385,000**

Source: Revenue analysis.

As shown in Table 10, there is significant variation in the average Income Tax liabilities per new employment across the sectors, ranging from €370 in the *Accommodation and Food* Sector to €6,780 in *Information and Communication* (this sector is discussed further in Section 4).

While the difference in average Income Tax liabilities between ceased and new employments in the population is driven by developments in a number of sectors, the difference is quite pronounced within the *Financial and Insurance* sector. This may to some extent be reflective of several potential factors including bonus payment activity (from previous year's performance), exercise of share options, and redundancies, for example, in retail banking branches.

Table 10: Income Tax by Employment Status and NACE Sector

Sector	Total Income Tax (continuing) (€m)	Total Income Tax (new) (€m)	Total Income Tax (ceased) (€m)	Net effect from churn (€m)	Average Income Tax (continuing) (€)	Average Income Tax (new) (€)	Average Income Tax (ceased) (€)	Average Income Tax Difference (new – ceased) (€)
Agriculture, Forestry and Fishing	139	14	11	3	3,330	810	750	60
Mining and Quarrying	44	3	4	-1	9,940	2,770	3,830	-1,060
Manufacturing	2,753	224	191	33	11,310	2,780	3,240	-460
Construction	1,088	136	104	32	7,220	1,940	1,980	-40
Wholesale and Retail	2,706	229	223	6	6,530	1,190	1,410	-220
Transportation and Storage	653	50	51	-1	6,730	1,650	2,050	-400
Accommodation and Food Services	362	78	47	31	1,780	370	390	-20
Information and Communication	2,716	400	316	84	21,740	6,780	7,120	-340
Financial and Insurance	2,824	400	352	48	7,680	5,380	8,330	-2,950
Real Estate	216	27	16	11	8,880	1,860	1,790	70
Professional, Scientific and Technical	2,449	355	257	98	14,420	4,890	5,110	-220
Administrative and Support Services	1,112	200	157	43	6,480	1,320	1,420	-100
Public Administration and Defence	2,135	103	83	20	6,820	1,680	2,140	-460
Education	1,576	93	61	32	7,700	1,200	1,260	-60
Health and Social Work	2,209	227	163	64	6,630	2,420	2,350	70
All Other Activities	873	67	65	2	5,140	980	1,500	-520
Total	**23,856**	**2,605**	**2,104**	**501**	**7,860**	**2,040**	**2,370**	**-330**

Source: Revenue analysis.

6 Employment Income Distribution

6.1 Introduction

The distribution of income before taxes and transfers is notably unequal in Ireland. This section of the report analyses recent growth in employment income to provide detail on this phenomenon over a period of significant expansion in the labour market that has recently coincided with a period of high inflation.[12]

Real gross employment income thresholds in 2019 and 2022 are presented in Table 11. Income is presented in real terms – that is deflated by the Consumer Price Index – in order to capture the purchasing power of income across time. It is important to note that the data are based on annual income levels and differences across the income distribution within a year may be a function of part-time or seasonal work patterns. However, a comparison of the income distribution across years is likely to feature reasonably similar work patterns. The median gross real income in 2022 is €16,720 compared to €16,910 in 2019. By contrast, the income threshold for the Top 1% is €167,680 in 2022 which is 3.7 per cent higher than in 2019.

Table 11: Real Gross Income Distribution Thresholds

Year	Bottom Decile	25th Percentile	Median	75th Percentile	Top Decile	Top 1%	Top 0.1%
2019	1,100	4,390	16,910	38,490	64,480	161,760	401,160
2022	1,200	4,480	16,720	38,460	65,130	167,680	436,300

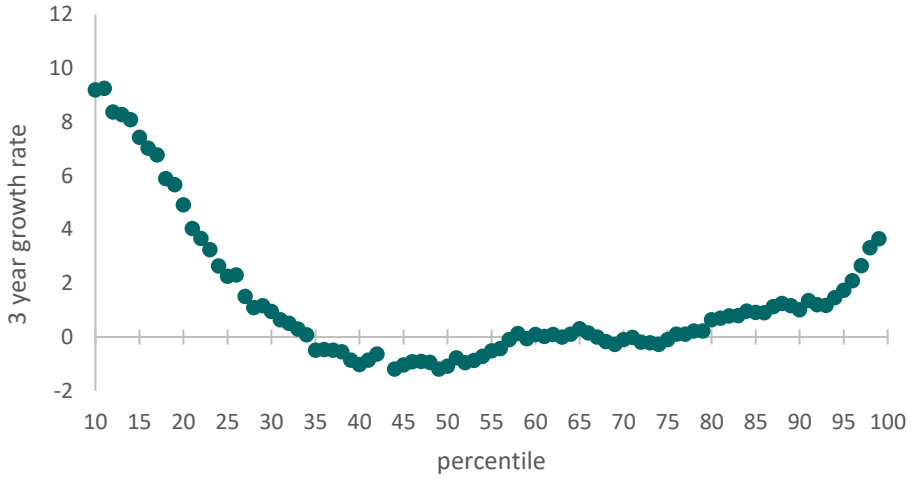
Source: Revenue analysis.
Notes: Annual employment incomes deflated by the CSO Consumer Price Index.

Growth in real gross incomes by percentile between 2019 and 2022 are also shown in Figure 21. Median incomes have decreased by 1 per cent over the period. However, for those below the 35th and above the 75th percentile gross earned incomes increased in real terms. In other words, the bottom and top of the income distribution experienced real income growth over the period while the middle experienced little or slightly negative real income growth.

Variation in income growth rates by percentile over time has been previously analysed by Kennedy et al (2018) in the context of broadly assessing the impact of the last recession on incomes during overlapping periods 2006 to 2009, 2009 to 2012 and 2012 to 2015.[13] Notwithstanding compositional differences in the samples, the type of 'U' shaped variation in income growth by percentile experienced over the COVID-19 period presented below does not mirror trends experienced during the periods analysed in Kennedy et al (2018).

[12] The analysis is based solely on employment income and does not cover self-assessed income sources (e.g. income from a trade or profession, rental income, dividend income). Employment income also includes income from occupational pensions, which are also recorded on payroll systems. See Section 3.3. for further analysis of pension income.
[13] This paper is available on the Revenue website at: https://revenue.ie/en/corporate/documents/research/income-dynamics-mobility-ireland.pdf

Figure 21: Real gross pay growth, 2019 to 2022



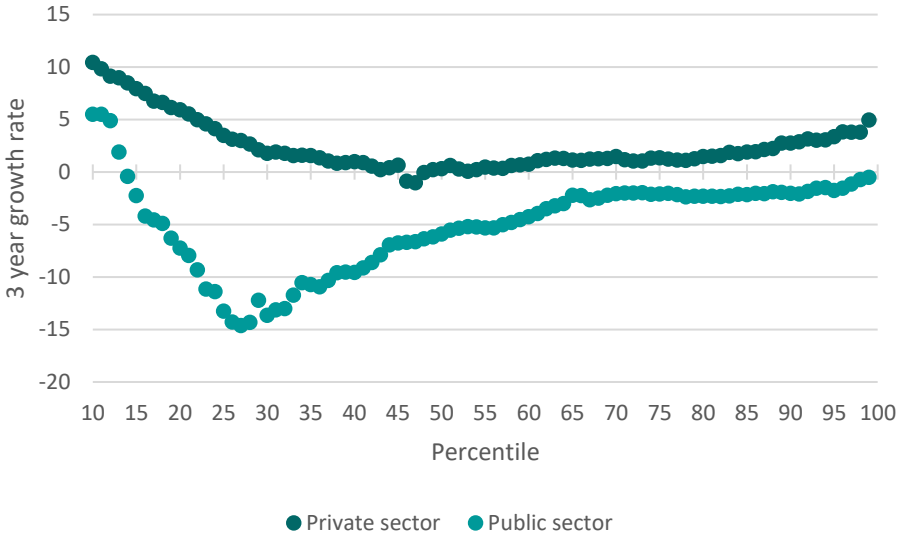
Source: Revenue analysis. Notes: Employment income deflated by the CSO Consumer Price Index before calculation of growth rates. Only incomes equal to or greater than the 10th percentile are included.

6.2 Public and private sector employments

Growth in real gross incomes by percentile for the private and public sector employments are presented in Figure 22.[14] Real income growth is less than 1 per cent between the 40th and 60th percentile and increasingly stronger at the tails of the distribution. By comparison, real income growth for public sector employments over the period is negative at each point above the 14th percentile. The difference in real incomes is most pronounced between the 25th and 30th percentiles where the thresholds in 2022 are more than 12 per cent lower than in 2019. It is important to note that Revenue does not have data on hours worked, and some of the differences in the growth of employment income across both public and private sector may relate to changes in patterns of part-time or seasonal work.

[14] Public and private sector employments are differentiated in the data using an administrative marker (as all Civil and Public Service Employers are based in Revenue's Medium Enterprises Division).

Figure 22: Real Gross Pay Growth, Public and Private sectors 2019 to 2022

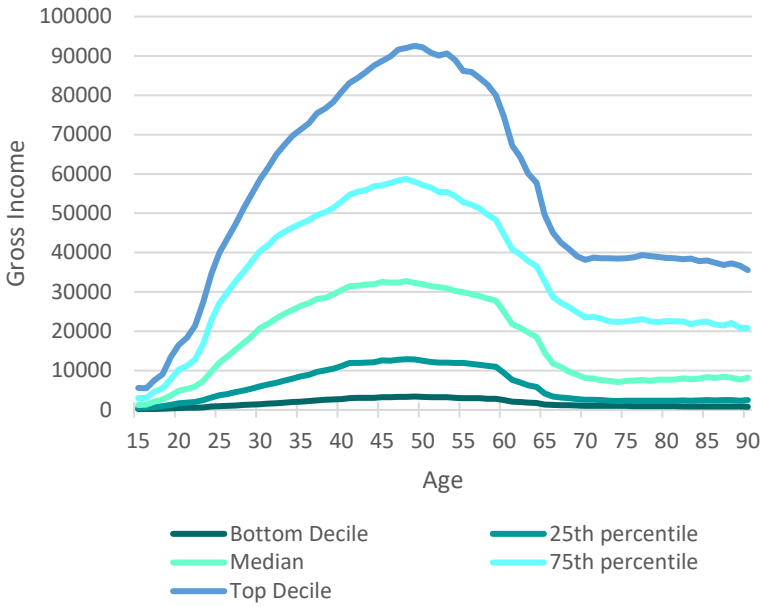


6.3 Income Distribution by Age

The distribution of employment earnings of PAYE employees aged 15 to 90 years at selected percentiles are shown in Figure 23. The figure provides interesting insight into the life cycle trends of incomes of those included in the payroll records. Younger employees tend to experience stronger income growth which is larger for higher percentiles. Gross income tends to peak between the ages of 45 and 50. A notable decrease in earnings is evident at each percentile between the ages of 65 and 66 when employees become eligible for the State pension and many private pensions. It is important to emphasise that the analysis relates to annual earnings, and we cannot distinguish between part-time and full-time employment and how such work patterns change across age cohorts.

Similar life cycle earning trends for the population of self-assessed and PAYE employees are reported by Kennedy et al. (2018) except for developments in gross incomes for those over 65 years. They find gross incomes increase at all percentiles at 66 years and are even sustained for a short number of years at lower percentiles. This reflects the composition of their sample and the greater likelihood of some taxpayers continuing to work while in receipt of a pension.

Figure 23: Income Distribution by age



Source: Revenue analysis.

6.4 Income and Tax Shares by Decile

Gross income share and tax shares (Income Tax and USC) by decile are presented in Table 12. The top decile of the analysed population earned 39.5 per cent of gross income in 2022, a small increase in its share compared to 2019. The stability in gross income shares from just prior to just after the COVID-19 pandemic suggests that, broadly speaking, the pandemic has not adversely affected the level of employment income inequality. In this regard, the Gini coefficient, a commonly used measure of income equality across the income distribution, has not worsened but remained stable at 56 per cent over the period. However, it must be noted that this analysis does not address underlying changes in the structural composition of employment income earners.

The top decile respectively contributes over 58 per cent of Income Tax and USC paid in 2022, highlighting the progressivity of the tax system. There are marginal changes in these shares compared to 2019.

Table 12: Share of Gross Income, Income Tax, and USC Contributions by decile

	Gross income		Income Tax		USC	
	2019	2022	2019	2022	2019	2022
Bottom Decile	0.2	0.2	0.2	0.1	0.2	0.1
Decile 2	0.7	0.7	0.4	0.4	0.4	0.4
Decile 3	1.6	1.6	0.7	0.7	0.7	0.6
Decile 4	3.0	2.9	1.1	1.1	1.1	1.1
Decile 5	4.9	4.8	1.9	1.9	1.9	1.9
Decile 6	7.5	7.3	3.4	3.5	3.6	3.7
Decile 7	10.5	10.3	5.8	6.0	6.5	6.4
Decile 8	13.9	13.7	9.5	9.7	10.6	10.3
Decile 9	19.0	18.9	18.0	18.4	17.6	17.2
Top Decile	38.9	39.5	59.0	58.3	57.3	58.3
Gini Coefficient	56.5 %	56.5 %				
Total Employments ('000)	3,908	4,308				

Source: Revenue analysis.

7 Conclusion

This report represents a continuation of Revenue's use of tax data in the interest of providing evidence to inform public debate and policy making. In this regard, the analysis of the payroll data is particularly relevant in the context of an Irish economy that has recovered very significantly following the COVID-19 pandemic and has now moved into a period where it is faced with tightening capacity constraints and higher inflation.

The report presents detailed information on PAYE taxpayers regarding sector of employment, with a particular focus on the ICT sector, as well as presenting other statistics on income levels and taxpayer demographics.

The report exploits the level of detail on PAYE real-time reporting systems to generate new insights on pension activity. Just over 1 million employees made pension contributions at some point in 2022. This represented around 32 per cent of all employees in the year. Compared to 2019, the last year of published statistics, the number of individuals making a pension contribution has increased by over 154,000 (18 per cent), while the total amount of pension contributions has increased by just over €1 billion (40 per cent).

The analysis of payroll data in this paper provides important insights into flows in and out of employment and their relevance for overall Income Tax receipts. Overall, the increase in PAYE Income Tax receipts in 2022 is primarily attributable to employments which continued from 2021 into 2022. Employment churn (i.e., flows in and out of employment) also contributed positively to tax, albeit on a smaller scale. The net tax gain from employment churn is primarily driven by a net increase in the number of employments. The Income Tax paid on average per new employment in 2022 is €330 less than the Income Tax paid on average per ceased employment in 2021, which suggests that employment net gains throughout the year were concentrated in lower paying or part-time positions.

The paper identifies that the distribution of gross employment income was highly unequal in 2022. However, it has not seen a deterioration over the COVID-19 pandemic period. The distribution of Income Tax is also highly unequal, reflecting the strong progressivity of the underlying tax system.

Michael Collins, Gavin Murphy and Brian Sweeney are members of the Irish Government Economic & Evaluation Service ("IGEES"). Any opinions expressed in this paper are the views of the authors and do not necessarily reflect the views of IGEES.