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Job Switching Wage Premium

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Non-Technical Summary

Job switching – the movement of workers between employments – is an important driver of wage growth. This research explores the dynamics of job switching in Ireland and its impact on wages using data from the CSO Labour Force Survey (LFS) enhanced with gross pay information from Revenue PAYE Modernisation (PMOD). This study examines patterns in job-switching rates, the demographic factors influencing this behaviour and the associated wage premiums. The job-switching rate in Ireland is pro-cyclical, increasing during periods of economic growth and slowing in times of downturn. The rate peaked at 3.8 per cent in 2022 during a period of elevated labour demand but has since eased in line with moderating macroeconomic conditions. Demographic factors play a crucial role in job-to-job flows as younger workers, particularly those aged under 25 years and employees in lower-paying, consumer-facing sectors exhibiting higher switching rates. The rise in hybrid and remote working practices also influences switching behaviour, though it is too early to estimate a potential structural impact on labour market mobility or wage growth in Ireland.

When comparing wage growth for switchers relative to their previous earnings, switchers earned an average of 7.5 per cent more in the quarter directly follow a job-to-job flow between 2019 and 2023 compared to a 1.6 per cent increase for stayers. The raw premium (difference in wage growth between the two groups) has declined from 7.4 per cent in 2021 to 2.1 per cent in 2023. Analysis of raw wage premiums may be skewed to some degree as switching tends to be more prominent at the lower-end of the earnings distribution with wage growth appearing relatively high compared to lower growth for older workers on higher-earning levels. In order to confirm whether the job-switcher wage premium is solely derived from the act of switching job and is not due to particular characteristics of workers who switch, it is imperative to control for various demographic factors such as age and sector.

Estimating a controlled wage premium that accounts for composition issues such as age, education and gender produces results between 2.3 per cent and 2.4 per cent when using a combination of fixed effects and average treatment effects. While the raw premium estimates a wage growth at an individual or cohort level relative to previous earnings, the controlled premium estimates a wage premium for switchers relative to similar workers who stayed in their current role. The negative relationship with unemployment supports wage growth being pro-cyclical, declining as the unemployment rate rises which aligns with the wide array of literature on the Wage Phillips curve. The results suggest that the job switching wage premium for Ireland lays between figures estimated for France and the US, though is closer aligned with the former given greater similarities in the structure of the labour market. This study underscores the importance of job switching as a driver of labour market flexibility and wage growth. By combining administrative and survey data, this research provides a robust framework for understanding labour mobility and highlights the ongoing need to monitor job-switching patterns and their economic effects, particularly in periods of economic adjustment.

Job Switching Wage Premium

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Abstract

This paper explores the wage premium associated with job switching in Ireland by utilising newly available gross pay data from the Labour Force Survey (LFS) linked to administrative data on individual earnings. Job switching, or moving directly from one job to another, is often driven by the potential for wage increases and improved job matches. While job switching behaviour tends to vary with business cycles, this analysis finds that job switchers in Ireland experience a wage premium. By controlling for demographic factors such as age, education and sector, the estimated wage premium for job switchers lies between 2.3 per cent and 2.4 per cent in the quarter immediately following a job change.

JEL classification: J31, J62, C23

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1. Introduction

Job switching, the process whereby a worker moves from their previous job directly to a new job, can typically result in an increase in wages and is often considered as the primary motivating factor behind a move (Faberman and Justiniano, 2015; Topel and Ward, 1992). The job-switching rate refers to the total number of persons moving from job-to-job as a share of total employment. This indicator is a key gauge of labour market tightness as it reflects the level of mobility in the economy allowing workers to match to roles that best suit their respective skills. Greater job matching can have positive effects on aggregate productivity growth as workers move to higher productivity firms, which are likely to offer higher paying positions (Carlsson et al, 2016).

A change in the job-switching rate can have both direct and indirect effects on aggregate wage growth. Firstly, workers can experience an increase in wage levels by switching job i.e. the “direct effect”. This increase may be higher during periods of low unemployment and elevated labour demand as firms seek additional workers to increase output. Secondly, an “indirect effect” may occur whereby employers raise average wages to retain workers amid increased market competition. Incumbent workers may request additional income as their relative bargaining power has increased at this point in the business cycle. Granting this wage increase may outweigh the financial and time costs to the firm associated with turnover, such as hiring and training new employees.

There is a wide array of international literature on job-switching or job-to-job flows with particular focus on how this activity is influenced by macroeconomic fluctuations (Hall, 2005; Shimer, 2005) and how job-switching can lead to increased worker wages and firm productivity (Kilponen and Vanhala 2009; Haltiwanger et al, 2017). Many papers suggest the job-switching rate is pro-cyclical, and as such, aggregate wage growth may also be pro-cyclical (Farber, 1999; Hall, 2005; Faberman and Justiniano, 2015). The consideration being that as individuals typically switch to move into higher-paying jobs, aggregate wages should rise at a faster pace as the job-switching rate increases. Conversely, wage growth should decline during economic contractions as the job-switching rate decreases. Moreover, it is important to note that not all workers experience job changes as a result of a voluntary decision. Involuntary switching, for example following a contract termination, can result in negative wage growth relative to voluntary movers or stayers, particularly if there is an extended period of unemployment between jobs (Perez and Sanz 2005).

The job-switching rate peaks at times of relatively low unemployment when the economy is operating at or close to capacity, labour demand is elevated as firms seek to increase output and job mobility is comparably easier. A tighter labour market suggests that firms may be more willing to offer higher wages to attract new workers as they compete with other firms. This can provide an incentive for workers to leave their current position. Elevated labour demand on the firm side can increase worker wage bargaining power and help them attain a greater wage increase than was available with their previous employer. The job-switching rate tends to fall during economic downturns as firms reduce labour demand, mobility becomes more difficult and workers may place greater value on job secu-

rity due to heightened economic uncertainty. At this point, there are more potential hires outside of employment competing for a relatively smaller pool of vacancies, which reduces the wage bargaining power of incumbent workers (Aaronson and Jordan, 2014; Hahn et al, 2021).

It is important to note that some sectors have structurally higher job-switching rates than others which are unrelated to the business cycle. For example, sectors with low barriers to entry such as hospitality often have higher switching rates than those that require specialised skills or lengthy training. Higher compensation and benefits play a role in retaining workers for longer. In sectors such as ICT, job switching may be higher relative to others as advancements in technology may drive the demand for workers with the required skills to increase innovation. In certain sectors, higher level of firm-specific human capital can correlate with lower switching activity as employers may invest more in order to retain specialised staff in a sector where skills are less broadly transferable (Jovanovic, 1979).

Human capital accumulation significantly shapes job-switching rates across sectors, reflecting the interplay between skills specificity, labour market fluidity and sectoral dynamics. Wasmer (2006) highlights the nature of human capital—general or specific—dictates workers' mobility, with sectors emphasizing general skills fostering higher job switching rates due to the transferability of expertise. Conversely, sectors reliant on firm-specific skills, such as manufacturing, see reduced mobility as workers face higher switching costs. Engbom (2022) extends this analysis by demonstrating that fluid labour markets incentivize investment in general skills, which accelerates job-to-job mobility and enhances productivity in sectors with adaptable skill demands. In contrast, more rigid markets, such as those described by Schonberg (2006) on firm-specific training, reward long-term relationships and discourage frequent switching, particularly in industries where sectoral productivity relies on cumulative firm-specific human capital.¹ Together, these insights underscore how the balance between general and specific skills, shaped by sectoral requirements and labour market conditions, drives variability in job switching rates across industries.

Moscarini and Postel-Vonay (2016) suggest that job-to-job flows in the US are a strong predictor of future wage growth and inflation. Lydon and Staunton (2018) identify that lagged job-switching is positively correlated with wage growth in Ireland as firm-worker salary negotiations may only occur annually.² Berson et al (2018) find that job switching in France and Italy results in a 3 per cent increase in nominal wage levels. Job-to-job flows

¹The differences in job switching and wage growth can differ across country with switching plays a greater role in US wage growth relative to Germany as high demand for transferable skills is prioritised, making transitions smoother and often rewarding. In Germany, wage progression is more closely tied to firm-specific human capital due to its stronger emphasis on apprenticeship programs and long-term employment relationships.

²Workers who change jobs generally experience a faster wage increase relative to job stayers, particularly as sectoral or firm-level wage negotiations can lag economic developments or may happen sporadically through the year or at a multi-year period. For incumbent workers, collective wage negotiations may be influenced by the coverage of the scheme (share of employees), level of application (national, sector or firm specific) and the frequency of adjustment.

are less cyclically sensitive compared to the US as wage setting is far more centralised in the euro area and there is relatively greater job security. Lozej and Lydon (2018) use household survey data for Ireland to find that switching job in a tight labour market tends to increase an individual's wage in excess of 10 per cent.

The purpose of this analysis is divided into two parts. Firstly, to identify and document changes in the job-switching rate in Ireland recent years and whether demographic factors such as age, education or sector of employment are likely to contribute to job switching activity. Secondly, to estimate a controlled wage premium for job switchers compared to workers who choose to remain in their current role. Microdata from the Labour Force Survey (LFS) are available in quarterly panel data format from 1998 to 2023. Recent additions to LFS microdata include gross pay data linked to Revenue PAYE Modernisation (PMOD) with availability from Q1 2019 onwards together with information on the number of weeks worked in the reference quarter.³ Analysis of this gross pay data, alongside a number of controls, enables the examination of a job-switcher wage premium as the job-switching rate peaked in 2022 and subsequently began to moderate in line with domestic economic developments.

This paper is outlined as followed. Section 1 provides background on the demographic factors linked to job switching and the relative wage premiums. Sections 2 outlines the methodology used to identify job switchers in Ireland and developments in job switching activity in recent years. Section 3 presents logit analysis to assess the demographic factors that influence switching activity. Section 4 outlines average wage levels for switchers and stayers using raw data. Section 5 quantifies a controlled job switching wage premium using both fixed effects and average treatment effects methodologies and Section 6 concludes.

2. Background

While the motivations for job-switching are clearly outlined, it is important to consider which groups are more likely to switch job. Younger persons and those with higher educational attainment may be more likely to switch to pursue better opportunities and have greater access to varied opportunities that increase their marketability. Lydon and Staunton (2018) suggest that workers with stronger bargaining power would be more likely to exhibit higher switching rates. Using education as a proxy given the education-wage premium, they find workers with tertiary-level education are more likely to switch job than workers with comparatively lower educational attainment. Haltiwanger et al (2018) outline that younger workers in the US are more likely to switch jobs as they begin at the bottom-end of the job ladder and seek to maximise lifetime earnings. Economic factors such as income level and job stability may play a role as workers search for improved fi-

³PAYE Modernisation has been operational for all employers in the state since 1 January 2019. Under the new system, employers are required to report their employees' pay and deductions in real-time to Revenue each time they operate payroll. Information is provided to Revenue at individual payslip level. See Annex for detailed analysis of Revenue PMOD data.

nancial security. Workers at the lower-end of wage distribution or on part-time hours have a relatively greater incentive to switch jobs for better remuneration, conditions or for roles that are a better match to their skills or qualifications.

Ball et al (2024) find similar results for New Zealand in that job switchers' wages are primarily linked to the job-switching rate with the lower wage percentiles experiencing the largest increase following a job change. Additional factors such as length of tenure, geographical region and size of firm can also play a role in the likelihood of job switching. Hyatt (2015) finds that older workers and those that are in their current role for a greater number of years are less likely to switch due to a range of factors.

In determining the raw wage premium for job switchers, the UK Office for National Statistics (ONS) intermittently assess the composition and wage growth of job switchers and stayers in the UK.⁴ Average hourly earnings growth in 2021 was 6.5 per cent higher over the year for employees who had changed jobs compared with 2.1 per cent those who stayed in their job. Hourly earnings in level terms, however, are consistently higher for employees who have stayed in their job for longer than a year. In April 2021, average hourly earnings were 17 per cent higher for stayers potentially reflecting a mix of age, skill-level and experience.

The Atlanta Fed's Wage Growth Tracker collates time series data of wage growth by job switchers and job stayers. Since 2010, the twelve-month rolling average of job switchers has been higher than stayers. Average growth in 2023 was 7.1 per cent for switchers and 5.5 per cent for stayers with respect to aggregate level wage growth of 6 per cent. The wage premium (switcher wage growth minus stayer wage growth) reached a peak of 2.2 per cent in late-2022 though has slowed to 0.7 per cent as labour demand has moderated to reflect easing macroeconomic trends.

It should be highlighted that there is a difference between the raw wage premium, as referred to in UK and US analysis, and a controlled wage premium which is adjusted for covariates. The raw wage premium is likely to be a higher figure as it computes the difference of a worker's individual wage in time t compared to their wage in time $t-1$, which does not account for composition effects. For example, switchers tend to be younger and at a point in their respective careers where job mobility is more frequent in order to maximise lifetime earnings with each move likely to generate greater relative wage increases than an older worker. In contrast, older or more experienced workers may have a higher initial wage level, but see slower wage growth over time as they are more likely to stay have already reached more senior positions thereby having less incentive to switch. The controlled wage premium uses a fixed-effect regression approach that accounts for demographic factors such as age, education or sector to isolate the effects of job switching on wages independent of these other variables. This wage premium compares what

⁴The Annual Survey of Hours and Earnings (ASHE) data are collected in April of each year, with the latest data available covering April 2021. In this analysis, job stayers are characterised as employees who stay in their job over two consecutive years, whereas those who have changed jobs from one year to the next are referred to as job changers. Caveats are outlined in the publication outlining the impact of COVID related income support schemes on data analysis.

a switcher earns relative to other similar individuals who did not switch. There are many reasons why both approaches are of interest to this analysis. A raw wage premium is provides a snapshot of labour market dynamics and switching behaviour to gauge the general economic benefits of job switching across the workforce. The controlled wage premium adds further depth to the analysis by mitigating biases from both observed and unobserved factors.

3. Job Switching Developments in Ireland

Within the LFS, a person aged over 15 years must be classified as either in employment (E), in unemployment (N) or outside of the labour force (N). Persons captured within the survey can transition between these states on a quarterly basis though labour market transition rates typically show that vast majority of people who were in employment in time t remain employed in $t+1$. Understanding how these rates fluctuate is important to analysing job-switching developments.

Table 1 shows the average quarterly transition rate for each of these three states from 1998 to 2023. On average, 96.1 per cent of persons employed in Q1 would remain in employment in Q2. The stock of employment (E) is added to by a further 18.2 per cent of the previous stock of unemployed persons ($t-1$) along with 5.1 per cent of the stock of those outside of the labour force ($t-1$).

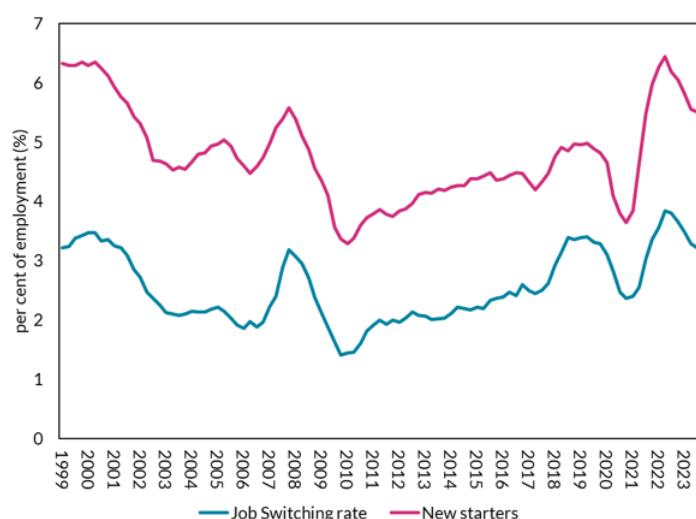
Table 1: Average Quarterly Labour Market Transitions (1998–2023)

	ILO Status in time t		
ILO Status in time $t - 1$	Employed (E)	Unemployed (U)	Inactive (N)
Employed (E)	96.1	1.3	2.6
Unemployed (U)	18.2	61.0	20.7
Inactive (N)	5.1	3.0	91.9

Source: Eurostat

Workers can enter into employment either from a previous employment (E to E), unemployment (U to E), or from outside the labour market (N to E). Combined, these entries to employment are designated as new hires. The number of new hires as a proportion of total employment is an indicator of the level of churn or mobility in the overall labour market. Job switchers are a subset of new hires that exclusively move from E to E (Figure 1). On average, 68 per cent of all new hires in Ireland are job-to-job flows. In order to be consistent with previous analysis for Ireland, we use the same methodological classifications as Lydon and Staunton (2018) whereby job switching is identified as a job-to-job flow (E to E) in which the worker has been in a new role for a period of three months or less.

There are a number of caveats identified in Lydon and Staunton (2018) that apply to current work when using international standardised data from the LFS. Firstly, the design of the dataset does not permit the identification of whether workers voluntarily ceased employment prior to moving to a new job, or whether their employment ended involuntarily

Figure 1: New hires and job-switching rates

Source: CSO; LFS

Note: Data are calculated on a four-quarter moving average

and they quickly found a new job in the subsequent quarter. The inability to assess voluntary or involuntary job transitions could produce upward bias in estimates. Secondly, due to the lack of a firm-level ID variable, we are unable to assess if the event of job switching is inter-firm or between firm. ONS analysis for the UK estimates that 75 per cent of job switching occurs between firms, while the remaining 25 per cent of switchers move within their existing firm. Within the LFS, an employee may accept a promotion within their firm between Q1 and Q2 and this would, in theory, register as a job-switching event as they has begun working in the new role within the latter three-month period. Such an event would likely be accompanied by an increase in employee remuneration.

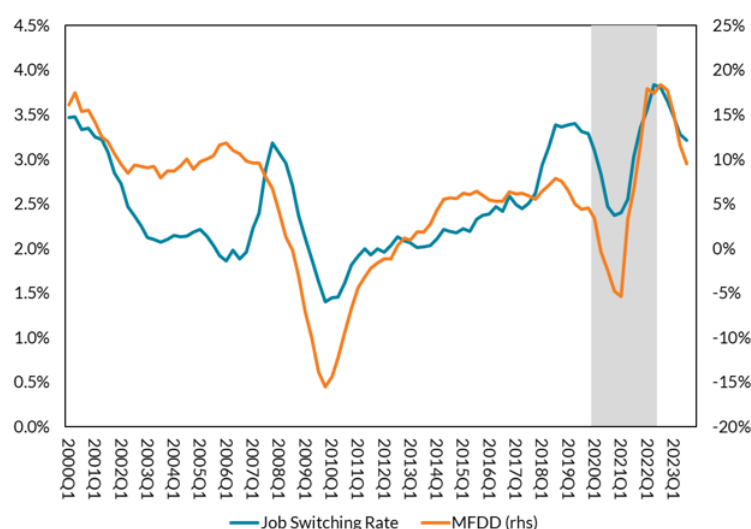
Thirdly, without matched employee-firm data, it is difficult to separate wage effects arising from individual worker characteristics from those driven by firm-specific factors such as productivity, wage-setting policies or industry-specific dynamics. This limitation may result in an over- or underestimation of wage premiums associated with job switching as any improvements in match quality or firm heterogeneity cannot be directly observed or controlled for.

Fourthly, the sample design of the LFS means that respondents are present for a maximum of five quarters with one-fifth of respondents replaced each quarter. As such, job-switching analysis is limited to quarterly changes in order to avail of a maximum of 80 per cent of the sample in each respective quarter. Finally, in order to comply with national statistics guidelines on microdata usage and respondents anonymity, in some places we aggregate categorical responses to adhere to these guidelines. For instance, employment stock is available at a NACE 2-digit level breakdown, though the flow of workers between certain sectors can be small enough to warrant combining several sectors.

The job-switching rate in Ireland broadly moves in line with economic developments measured by annual growth in Modified Domestic Demand (Figure 2). The job-switching rate

increased to 3.4 per cent in 2019 as the ILO unemployment rate moved below 5 per cent following years of gradual economic improvement in the aftermath of the global financial crisis (Figure 3). The onset of the COVID-19 pandemic resulted in a number of issues for LFS data, as the methodology was not designed to reflect these abrupt changes to the labour force status of persons availing of income support schemes such as the Pandemic Unemployment Payment.⁵ Given the high level of economic uncertainty during this period, the job-switching rate fell in 2020 and 2021 as the COVID-adjusted unemployment rate reached above 20 per cent.⁶ The post-pandemic recovery saw a large number of persons flow into the labour force from both domestic sources and net inward migration with a rapid employment expansion primarily driven by public and non-consumer facing sectors that were relatively less impacted by the pandemic and the related business restrictions (Boyd et al, 2022). Labour demand in the form of the job vacancy rate reached a series high with this improved labour mobility enabling the job-switching rate to peak at 3.8 per cent in Q2 2022 (Figure 4). The switching rate has subsequently slowed in line with trends in domestic economic growth and labour demand through to late 2023 though it remains above its long-run average.

Figure 2: Job-switching rate and annual modified domestic demand growth

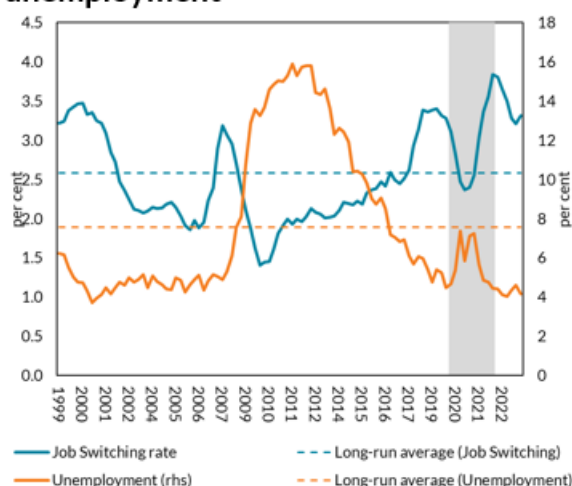


Source: CSO; LFS

Note: Data are calculated on a four-quarter moving average. Grey shaded area denotes the ten quarters in which pandemic-related restrictions and income-supports were in place

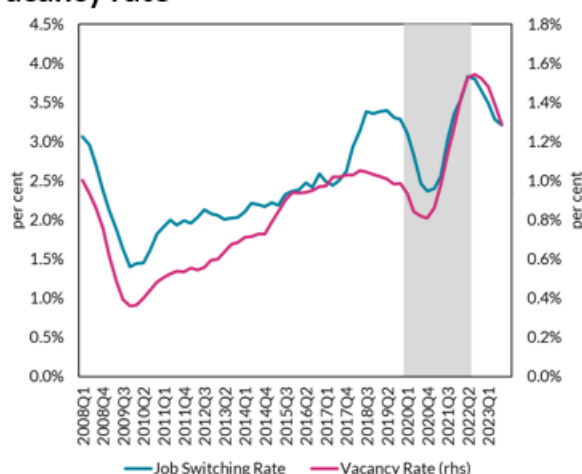
⁵See Byrne and Keenan (2020) for further details

⁶See [CSO Technical Note](#) for further details

Figure 3: Job-switching rate and unemployment

Source: CSO; LFS and EHECS

Note: Data are calculated on a four-quarter moving average. Grey shaded area denotes the ten quarters in which pandemic-related restrictions and income-supports were in place

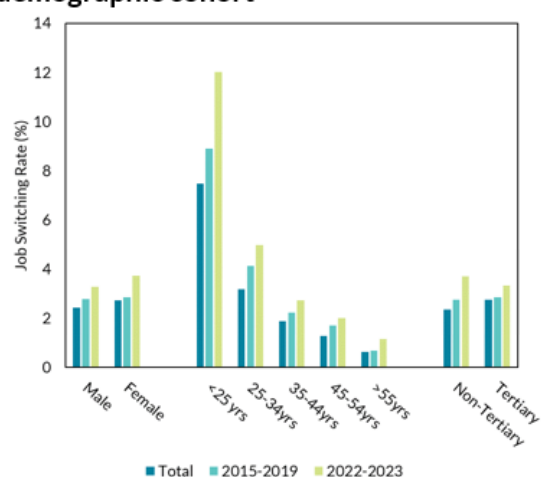
Figure 4: Job-switching rate and job vacancy rate

3.1 Job switching developments by demographic

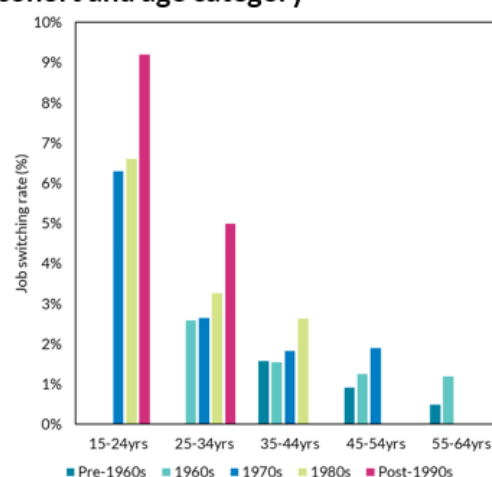
Observing the job-switching rate across various demographic cohorts and time periods, females have a slightly higher switching rate than males over the course of the LFS. These figures are higher in both the pre-pandemic period (2015-19) and the post-pandemic period (2022-23) when unemployment was close to or below 5 per cent to denote an economy approaching full employment (Figure 5). Persons aged under 25 years exhibit a far greater tendency to switch jobs than other age groups (averaging 7.5 per cent over the entire sample), with the rate decreasing for each subsequent age category. These results are similar to those found in the above-mentioned US and New Zealand analysis in which younger workers switch job more frequently to rise up the job ladder and find jobs more suitable to their skills or education.

Calculating the job-switching rate by age group can potentially mask demographic changes over time as this breakdown may solely reflect that younger workers switch more frequently in order to maximise their lifetime earnings potential. Estimating the rate based on birth cohort i.e. persons born within specific decades, allows us to track the job-switching activity of a fixed group over time rather than see them transition between categories with ageing. Using data from 1998 onwards, persons aged 15-24 years continuously exhibit the highest job switching rate though this appears to have increased for each respective birth cohort. Those born post-1990 average a job-switching rate of 9.2 per cent compared to 6.6 per cent for those born in the 1980s (Figure 6). This increase in rate for each birth cohort may reflect changes in societal norms, worker preference or diversity of employment by economic sector.

Switching activity by sector can vary over time though the highest rates are evident in Accommodation and food services, ICT, administrative services and retail (Figure 7). There

Figure 5: Job-switching rate by various demographic cohort

Source: CSO; LFS

Figure 6: Job-switching rate by birth cohort and age category

Source: CSO; LFS

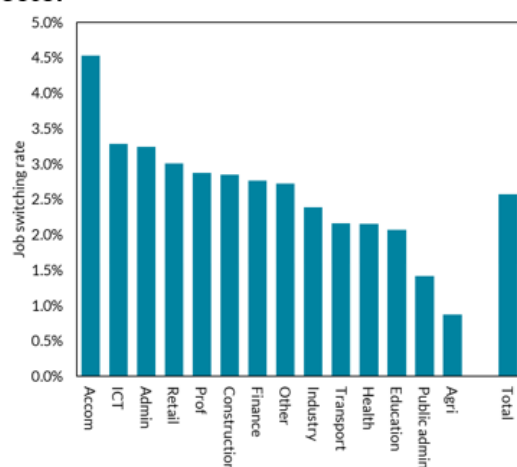
Note: Data refers to whole LFS (1998-2023)

are cyclical and structural elements to job switching that may affect rates at the sectoral level. For example, during an economic boom the increased demand for housing and infrastructure may see increased switching in the construction sector as workers avail of better pay, benefits, or opportunities. Conversely, in a downturn projects can be cancelled or delayed leading to fewer opportunities and lower switching amidst heightened insecurity. The higher switching rate in the ICT sector may be structural in nature with elevated switching brought about by rapid innovation creating frequent shifts in demand encouraging workers to move for higher pay. This may be accelerated due to the presence of several large MNE firms operating in Ireland with a higher wage offering providing incentives to switch. The interplay of these factors could be seen in the more consumer-facing or contact-intensive NACE sectors, in which, employment is more likely to be lower-paying, part-time hour roles occupied by younger workers and offer relatively less job security or career progression opportunities thereby providing a greater incentive to change job if possible (structural factor).⁷ During economic downturns, workers may hold on to jobs despite dissatisfaction due to fewer alternative options (cyclical factor). At the other end of the distribution, Agriculture and public-dominated sectors such as Health and Education exhibit the lowest job switching rates. These roles may provide greater job security or work benefits to encourage the worker to remain in employment or, in the case of agriculture, be tied to a family home or business. Sectors with higher barriers to entry e.g. Health may exhibit lower job switching rates given the level of training required to qualify for a job as well as workers developing firm-specific human capital which is of benefit to pro-

⁷Additional factors can play a role in higher sectoral switching rates such as firing rates or seasonal employment. A caveat of this analysis is the limitation of LFS data in assessing whether a person switches jobs for increased remuneration (voluntary reasons) or their previous employment contract had been terminated (involuntary reasons). Additionally, the quarterly nature of LFS data means that an employee may have experienced a brief period of unemployment between two jobs that may not be observed in the survey data if specific reference week does not align with this unemployment period.

ductivity but makes changing job an expensive and timely undertaking.

Figure 7: Job-switching rate by NACE sector



Source: CSO; LFS

Figure 8: Job-switching activity by origin and destination sector



Source: CSO; LFS

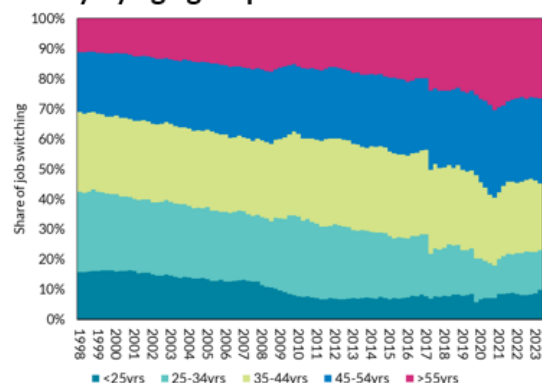
While Figure 7 shows the share of job switchers within a given NACE sector, it does not reflect which sector these workers were previously employed. In order to comply with micro data disclosure rules, we aggregate the NACE sectors to more broad categories.⁸ Within the public sector, almost 80 per cent of job switchers were previously employed in a public sector role with a further 7 per cent coming from consumer-facing services sectors. Within-sector switching is relatively high across the sectors, moderating to 68 per cent and 64 per cent for Construction and Industry, respectively. Transitioning to a new sector (e.g. Industry to Public) may see a worker moving within a certain occupational role such as Human Resource Officer where there are notably less barriers to entry. Persons moving a different role such as Builder (Construction) to Teacher (Public) would likely require a period of education or training that would see the worker move out of the labour force (N) and not be captured in job-to-job flows (E to E).

A time series breakdown of the job switching activity by various demographics shows that while younger workers are more likely to switch jobs than older workers, they comprise a relatively smaller share of total stock of job switchers (Figure 9). There are a number of reasons contributing to this trend such as the increasingly larger population share of older age categories in the labour force. Younger persons have a higher tendency to leave the employment for education, travel etc. and as such appear outside the scope of job-to-job flows. Older workers account for a steadily increasing share over time, which may be reflective of changes in attitude towards tenure with a single job or firm or perhaps a more diverse sectoral employment mix for persons aged over 55 years in the 2020s than in the 1990s. The increasing educational attainment level of the workforce is also evident as workers with tertiary-level educational attainment account for more than 50 per cent of

⁸Services: consumer-facing includes Accom, Retail, Admin, Transport and Other services. Services: non-consumer-facing includes ICT, Finance and Professional services. Public includes Education, Health and Public Admin.

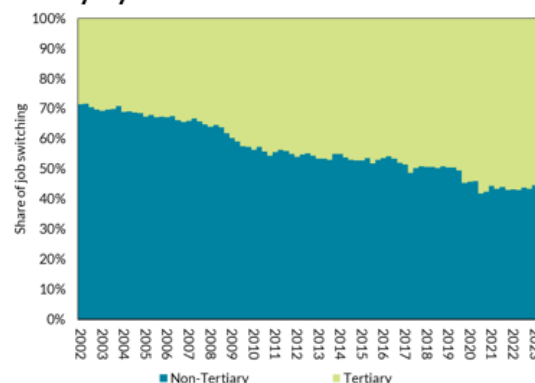
all switching activity from the mid-2010s onwards (Figure 10).

Figure 9: Share of total job switching activity by age group



Source: CSO; LFS

Figure 10: Share of total job switching activity by educational attainment



Source: CSO; LFS

4. Factors determining job switching activity

In order to assess which factors might influence job switching behaviour more formally, we use a logit regression including a wide range of demographic and employment variables (See Table 2).⁹ The split for post-2019 is to highlight the inclusion of Revenue administrative data in the LFS for the various wage quintiles.

As expected from the wider literature on the pro-cyclicality of mobility, the job-switching rate has a negative relationship with unemployment. Over the entire sample (1998-2023), the coefficient suggests that a 1 percentage point increase in unemployment results in a 0.85 per cent decline in the job-switching rate. This finding is consistent with the view that higher unemployment discourages mobility due to fewer opportunities and greater economic uncertainty.

Males, relative to females, are more likely to switch jobs; however, the strength and significance of the coefficient has diminished in the post-2019 period. The extent of female employment growth throughout the pandemic recovery period may be an influencing factor on this result. Persons aged 15-24 years old are 1.3 per cent more likely to switch jobs relative to a 35-44 year old. The strength of the coefficient decreases with each age category before turning negative for those older than the reference group. These results are similar to those for the US that show younger workers switch more often as they seek to climb the job ladder. The rate is lower for older workers as they have had a greater amount of time to conduct their own search-matching process.

Estimating job-switching activity by age group can potentially mask demographic changes over time as this breakdown may solely reflect that younger workers switch more frequently in order to maximise their lifetime earnings potential. Using birth cohorts for each

⁹See Annex for further detail on PMOD data and assessment relative to other available wage data.

decade we see that persons born in the post-1990 period are 2.5 per cent more likely to switch relative to those born in the 1970s. Workers in consumer-facing services such as retail and hospitality are more likely to switch job relative to a person employed in the public-related sectors (education, health and public admin). This is also the case for the construction sector.

LFS data on duration of employment suggests that the longer an employee stays in their current role, they less likely they are to switch job. Similar to age, the coefficient is strongest for the lowest category (less than 18 months in role) and turns negative when compared to reference category (5-8 years). This relatively high coefficient on the lowest duration category may be influenced by age and part-time employment activity, some of which can be seasonal in nature. Persons in their job for greater than 8 years are 0.5 per cent less likely to switch compared to a worker who has completed 5-8 years.

The inclusion of Revenue data for gross pay from 2019 allows for the construction of income quintiles for each available quarter. Employees in the lower-earning quintiles exhibit a greater likelihood of switching job relative to the highest-earning category. The results compare closely with US trends outlined by Amburgey and Birinci (2021) whereby lower-earning quintiles have a consistently higher job-switching rate and are subject to the largest reductions in job mobility following an economic shock. Those in the highest-earning quintile may be less inclined to switch jobs due to security of income or a relatively smaller pool of suitable jobs matched to their skills. The variation in quintiles may be closely correlated with age and length of time in current role.

A number of additional variables are included on nationality, region, contract type and location of work. Employees with Irish citizenship exhibit a positive coefficient relative to non-Irish employees though this is not significant in either period. Dublin-based employees previously were 0.1 per cent more likely to switch in the pre-2019 period relative to residents of other regions possibly as a higher number of employment options exist in a larger urban area, though there is no statistical significance in the most recent period. The lack of significance post-2019 may be related to the expansion of remote working following the onset of the pandemic. LFS data show that approximately 35 per cent of persons work from home either usually or some of the time, up from 13 per cent before the pandemic.¹⁰ While the sectoral mix of remote working is likely different in the most recent period, persons moving from a non-remote job to one which offers either fully-remote or hybrid conditions display a very high coefficient relative to those moving between two non-remote working jobs. The comparatively stronger coefficient on remote working practice may reflect employee-firm matches or point to workers favouring moves to higher productivity firms that are outside the scope of the data.¹¹ As remote working practices

¹⁰This pre-pandemic figure is inclusive of agricultural and hospitality workers which may operate a business from their usual place of residence. Data for 2023 show that 82 per cent of ICT workers operate on a remote or hybrid basis, followed by 76 per cent of financial sector workers.

¹¹Analysis by Barrero et al (2021) suggests that remote working has spurred job switching by enabling workers to pursue higher-paying or more suitable roles beyond their local labour market thereby fostering greater mobility.

Table 2: Logit regression of factors influencing job-switching activity

Variable	Comparison variable	Model 1: Pre-2019	Model 2 2019-2023	Model 3: Total
Unemployment		-0.0076***	-0.00121***	-0.0085***
Male	(Relative to Female)	0.0018***	0.0006	0.0014***
15-24 yrs	(Relative to 35-44 yrs)	0.0073***	0.0148***	0.0098***
25-34 yrs		0.0027***	0.0041***	0.0034***
45-54 yrs		-0.0018***	-0.0054***	-0.0021***
Born pre-1960s	(Relative to born 1980s)	-0.0053***	-0.0139***	-0.0071***
Born 1960s		-0.0007	-0.0009	-0.0004
Born 1980s		0.0009	0.0031	0.0008
Born post-1990		0.0031***	0.0000	0.0025***
Tertiary education	(Relative to non-tertiary)	0.0047***	0.0056***	0.0046***
Consumer-facing services	(Relative to Public)	0.0048***	0.0074***	0.0058***
Non-consumer facing services		0.0028***	0.0023	0.0031***
Construction		0.0061***	0.0101***	0.0064***
<1.5 yrs in role	(Relative to 5 - 8 yrs in role)	0.0146***	0.0137***	0.0155***
1.5 - 3 yrs in role		0.0073***	0.0067***	0.0078***
3 - 5 yrs		0.0033***	0.0037***	0.0037***
> 8 yrs in role		-0.0041***	-0.0083***	-0.0051***
Wage Quintile 1	(Relative to Wage Quintile 5)	NA	0.0091***	NA
Wage Quintile 2		NA	0.0098***	NA
Wage Quintile 3		NA	0.0043***	NA
Irish	(Relative to non-Irish)	0.0001	0.0018	0.0005
Dublin-based	(Relative to non-Dublin)	0.0011***	0.0019	0.0014***
Full-time	(Relative to Part-time)	-0.0041***	-0.0047***	-0.0050***
Fixed to remote/hybrid	(Relative to Fixed-Fixed)	0.0163***	0.0235***	0.0162***
High-skilled occupation	(Relative to Medium-skilled)	-0.0017***	-0.0046***	-0.0023***
Low-skilled occupation		0.0005	0.0009	0.0003
No. of observations		574,981	52,898	670,617
Pseudo R-squared		0.081	0.088	0.085
Unconditional mean		0.0081	0.0097	0.0086

Note: Data are presented as marginal effects relative to base comparison. Skill level of occupation relates to standard ISCO occupational code classifications. High-skill occupations include Manager, Professional and Technical roles. Medium-skill includes Admin Skilled Trades Caring and Leisure, Sales and Customer services and Process, Plant and Machine operatives. Low-skill refers to Elementary occupations.

ROC curves for models are shown in the Annex

and legislation are yet to be finalised across a number of firms and sectors in Ireland, it will be important to assess whether job-switching behaviour increases when workers are presented with more flexible options relative to their current job or trade-off wage growth for increased flexibility (Bloom et al, 2015; Brinatti et al, 2021).

A negative coefficient for full-time workers implies that they are less likely to switch job relative to a part-time workers. For occupation, workers in highly-skilled occupations according to ISCO classification are less likely to switch job relative a worker in a medium-skill occupation. These results are understandable as both full-time and high-skill jobs are likely to be higher paid and may align with the coefficient results in the wage quintile categories.

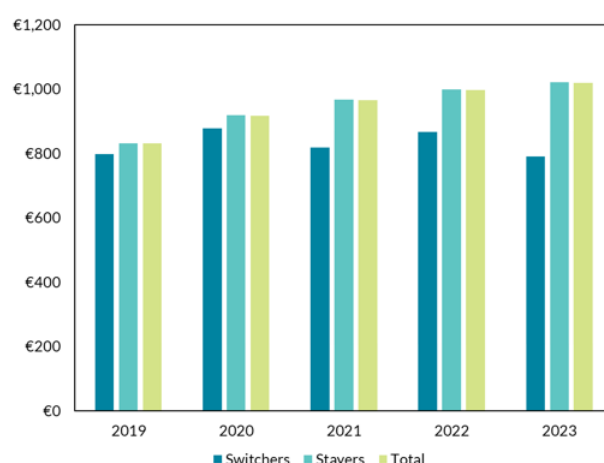
5. Is there a wage premium for switchers?

In order to estimate the wage premium of a job switchers compared to stayers it is useful to first evaluate the descriptive statistics across a number of categories. Controls are applied to the gross pay data to ensure that employees are not absent from work in the given reference week and that they have worked a minimum of 12 weeks in the quarter.¹² Using these controls allows for the comparison of similar groups between quarters as well as limiting the effect of pandemic support schemes on wage levels in 2020 and 2021.

Based on analysis of the raw data, job stayers typically have a higher level of average weekly wages through the sample period than switchers. In 2023, stayers earned €1,021 per week, a 29 per cent difference compared to weekly wages of €790 for job switchers though the variation can differ notably between years (Figure 11). On average, stayers earned 15.2 per cent more than switchers between 2019 and 2023. These results are similar to ONS analysis which shows that there a 17 per cent difference between stayers and switchers. The higher base level of wages is likely reflective of age, skills, experience and tenure. The relative lower average wage for switchers likely reflects the greater turnover levels amongst younger workers and economic sectors associated with lower average wages. Supplementary analysis shows that there is a strong and positive correlation between gross pay and duration of employment, which is associated with age.

Next, we turn to analysis of changes in earnings for switchers relative to stayers. In the quarter directly following a job-to-job transition, switchers earn on average 7.5 per cent more (€58) than their previous weekly wage (Figure 12). This relative gain slowed to 4 per cent in 2023, which coincides with a slowdown in labour market growth and a moderation in labour demand. By contrast, job stayers between 2019 and 2021 earned 1.2 per cent more (€11) quarter-on-quarter. Over the course of the year, this would amount to under 5 per cent nominal wage growth, broadly in line with aggregate level wage outturn. Wage growth for stayers increased to 2.7 per cent in 2022 that could be reflective of two underlying factors. Firstly, stayers could have benefitted from higher wage bargaining power as

¹²Calendar data indicates that employees can work a maximum of 15 weeks in a quarter depending on the specific year.

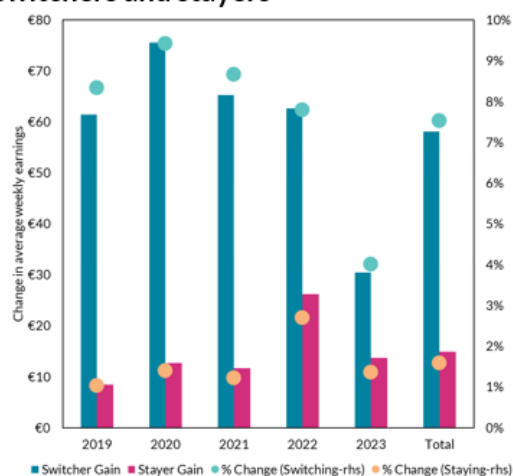
Figure 11: Average weekly gross wages of job switchers and stayers

Source: CSO; LFS

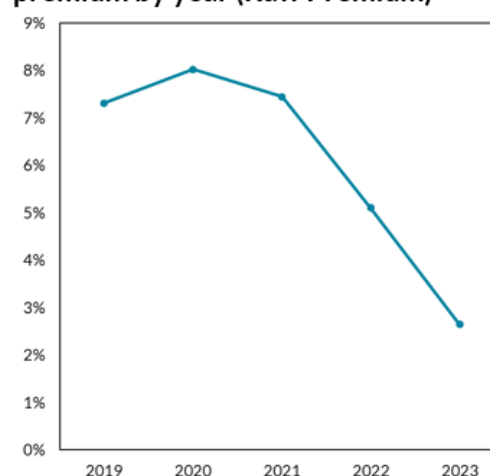
Note: LFS respondents are included only if they are not absent from work in the reference week and have worked a minimum of 12 weeks in the reference quarter to ensure comparability of wage levels over time.

this increase coincides with the job-switching rate recording a record high. Secondly, firms may have increased worker wages in order to offset increases in the cost of living associated with rising inflation due to energy cost shocks among other factors.

Overall, the average wage premium (job-switcher wage growth minus job-stayer wage growth) is estimated at 5.9 per cent between 2019 and 2023. During this period, switchers received an average 7.5 per cent increase in a quarter following a job change while incumbent workers earned 1.6 per cent more per quarter by staying in their role, though the premium has been declining over time (Figure 13). It is important to note that this is a raw premium that can be affected by composition issues. The estimation of a controlled premium that is adjusted for covariates is outlined in *Section 5*.

Figure 12: Q-on-Q change in wages for job switchers and stayers

Source: CSO; LFS and EHECS

Figure 13: Average job switching wage premium by year (Raw Premium)

Source: CSO; LFS

Note: This is the raw wage premium unadjusted for composition

There is considerable heterogeneity in wage growth for switchers and stayers across economic sectors (Figure 14). The highest wage gains from switching are evident in the non-consumer facing (11.4 per cent), construction (9 per cent) and industrial (8.8 per cent) sectors. Within construction, the long-term scarcity of labour coupled with the demand for skills across the sector may suggest that workers have comparatively greater wage bargaining power (Conefrey and McIndoe-Calder, 2018). Workers in the non-consumer facing and industrial sectors may benefit from larger firms or MNE employers competing for workers in specific roles related to export-orientated activities that have greater capacity to pay higher wages. Workers who switch within the consumer-facing sector had a lower relative gain (1.1 per cent) compared to stayers (1.8 per cent) despite exhibiting a higher tendency to change.¹³ These results correspond to trends in UK analysis for workers in the hospitality sector.

A breakdown by demographic cohort suggests there is a positive switching premium across gender, age and education among other factors. Males who switch jobs earn €62 more per week on average relative to their previous wages and the value for females is a €53 increase in average weekly wages (Figure 15). Analysis by age shows that younger workers experience the largest changes for both switchers and stayers, which aligns with general economic theory of earnings reflecting career progression. In level terms, the largest positive increase for switchers is observed for persons 25-34 years and 35-44 years. A possible explanation is that workers in these age groups are at a point in their career where they could potentially maximise their returns to education or skill set in order to enhance their lifetime earnings. An education premium is expected to exist as switchers with tertiary-level education earn €70 more per week compared to non-tertiary switchers (€40) with the base level of wages also being relatively higher.

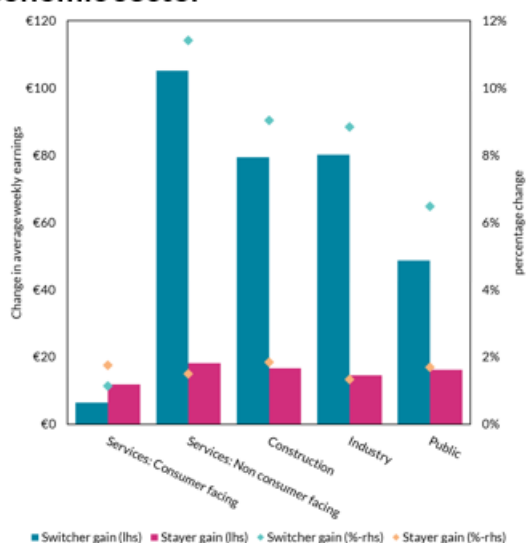
6. Modelling the Wage Premium

Estimating the wage premium for job switchers can be complex due to several unseen factors that influence individual outcomes. Individual attributes such as talent motivation and work ethic may play a significant role in determining wage growth or the likelihood of an individual switching job but are often difficult to incorporate into an economic model. Personal networks or career aspirations can also affect switching behaviour and subsequent wage changes.

Furthermore, firm characteristics, which are outside the scope of LFS data, can play a major role in job switching activity as Haltiwanger et al (2017) observed that switching tends to flow toward higher-productivity firms as they can offer more competitive wages. This dynamic contributes to labour reallocation that improves overall economic efficiency as workers move toward firms that can make better use of their skills. Not all job mobility is

¹³Given the greater variation of working practices in the consumer-facing sectors relative to more traditional hours in other sectors, a move from weekend hours in their previous job to weekday hours in their current job may be a greater incentive to switch job than increased pay.

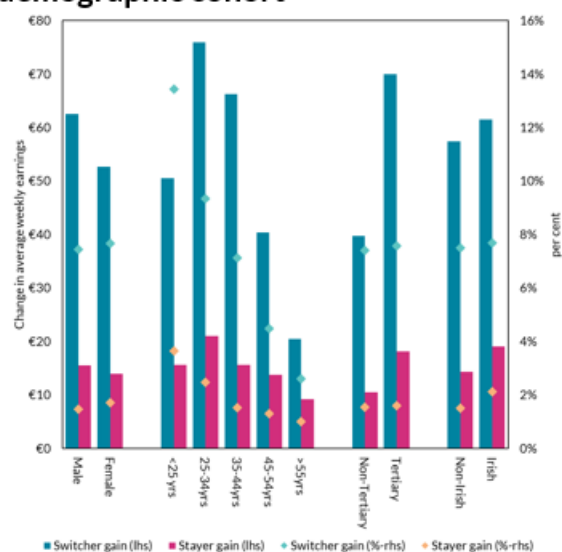
Figure 14: Q-on-Q change in wages for job switchers and stayers by broad economic sector



Source: CSO; LFS

Note: LFS respondents are included only if they are not absent from work in the reference week and have worked a minimum of 12 weeks in the reference quarter to ensure comparability of wage levels over time.

Figure 15: Q-on-Q change in wages for job switchers and stayers by demographic cohort



equally beneficial as workers who switch generally experience higher wage growth if they move to more productive firms or better-matched positions. In the absence data relating to these factors, analysis of wage premiums may be skewed to some degree. In this attempt to estimate the job-switcher wage premium, we apply two methods to capture both between-person and within-person effects, however, we cannot account for unknown worker characteristics completely.

Fixed effects analysis

In order to confirm whether the job-switcher wage premium calculated in the previous section solely derives from the act of switching job and is not due to particular characteristics of workers who switch, we need to control for various factors such as age and sector. These characteristics play an important role in the potential wage change experienced by a worker following a move. We use a fixed effects panel regression to assess the quarterly change in log weekly wages controlling for a range of factors. This model quantifies the controlled wage premium for each fixed characteristic. The model specifications are:

$$lweekly_t = \alpha_i + \beta X_{it} + u_i + e_{it} \quad (1)$$

Whereby $lweekly$ is the log of gross weekly wages, α is the intercept term, X_{it} is a vector of independent variables such as unemployment, gender, age, age-squared, education, firm size and occupational skill level. A job-switching flag is included to assess the relative change in wages of a switcher relative to a stayer. An additional flag is included for new hires from non-employment (U / N to E) to assess their wages relative to incumbent

Table 3: Fixed effects regression on log weekly wages (2019-2023)

Variable	Coefficient
Job switcher (E to E)	0.024***
Unattached worker (U/N to E)	-0.021***
Unemployment	-0.061***
Male	0.063***
Age	0.072***
Age-squared	-0.001***
Educational attainment	0.013***
Firm size	0.029***
Medium-skill occupation	0.029
High-skill occupation	0.046***
Time dummies	
2020	-0.009***
2021	-0.007
2022	0.034***
2023	0.065***
No. of observations	86,491
Pseudo R-squared	0.2047
F-statistic	47.31***

Note: Firm size categories are <50, 50-250, and >250 employees.
For this table, *** denotes statistical significance at $p < 0.001$, with ** indicating $p < 0.01$ and * indicating $p < 0.05$

workers. Time fixed effects in the form of year dummy variables are also added. The purpose of the FE analysis is to isolate how much of the change in workers' earnings can be attributed to the impact of a worker switching job, after controlling for other determinants of workers' earnings.

The results indicate that job switchers, after controlling for all other characteristics, receive a 2.4 per cent wage premium in a quarter following a job-to-job flow compared to job stayers (Table 3).¹⁴ In contrast, new hires from non-employment receive a wage 2.1 per cent below that of average incumbent workers. This lower wage result may indicate that periods outside of employment can decrease worker bargaining power and may align to a wide body of literature on scarring effects depending on how long this worker has been in non-employment.

The negative coefficient for unemployment suggests that wage growth is pro-cyclical, declining as the unemployment rate rises which aligns with the wide array of literature

¹⁴While we cannot separate job switchers by whether the person opts to quit their previous role or otherwise, additional model specifications used contract status to proxy for permanency of employment. Persons with contracts of unlimited duration exhibited a similar wage premium when switching job. As less than 8 per cent of employment are on temporary contracts, the sample sizes for this cohort would be too low for a meaningful analysis.

on the Wage Phillips curve. The result indicate that a 1 percentage point increase in unemployment implies a 6.1 per cent decline in wage growth. These findings are similar to previous Central Bank analysis such as Lydon and Staunton (2018) and Boyd et al (2023). The pro-cyclicality of wages corresponds to analysis by Lydon and Lozej (2018) which outlines relatively greater wage growth for prospective new hires during periods of economic growth as the dynamic nature of wage setting is more immediately influenced by labour market conditions.

Other results indicate that males earn 6.3 per cent more than females when controlling for gender (gender wage gap). Each additional year of age has a positive effect on weekly wages, though the negative coefficient for the age-squared variable shows that there is a decreasing return after the age of 56 years. This tapering off is consistent with the life-time earnings profile. Both educational attainment and increasing firm size have a positive effect on weekly wages as larger employers or more knowledge-intensive activities may have the capacity to increase wages given firm profits or productivity levels. Similarly, persons in highly-skilled occupations have a positive wage premium relative to low-skilled occupations.

Average treatment effects analysis

To robustly assess this job-switching wage premium, an additional approach is applied using average treatment effects (ATE). Wage analysis papers such as Albanese and Gallo (2020) and Forth et al (2024) use a similar approach when estimating employment impact of policy changes.

The ATE methodology refers to the average causal effect of a binary treatment on an outcome variable. In this case, we use it to assess the wage premium for job switchers because it allows us to estimate the causal effect of switching jobs (treatment) on wages (outcome). By incorporating additional covariates such as age and education, ATE helps control for factors that could influence both job-switching and wage outcomes and reduce omitted variable bias. It is expressed as:

$$ATE = E[Y(1)] - E[Y(0)] \quad (2)$$

Where $Y(1)$ demotes the potential outcome if treated (job-switcher) and $Y(0)$ denotes potential outcome if untreated (job-stayer).

The ATE model controls for covariates by adjusting for differences between people who switch jobs and those who choose to stay in their current job. This method looks at individual characteristics such as age and education as well as unemployment at the aggregate level and ensures that similar people are compared to find the true effect of job switching on wages (i.e. the overall wage effect of the population). The fixed effects approach, by comparison, focuses on changes within the same individual over time. While ATE compares different people, the fixed effects approach compares each person to themselves in the previous quarter while controlling for factors that stay the same about them. By analysing both measures, we can gain a fuller picture of the wage premium associated

with job switching. A potential limitation of the analysis is upward bias in the estimated wage premium, as job switchers typically positively selected. This positive selection, along with unobserved factors such as anticipation effects or favourable market conditions, may inflate the causal effect of job switching on wages. While fixed effects and ATE methods control for many confounders, additional approaches such as Difference-in-Difference (DiD) or Instrumental Variable estimates could further mitigate bias and improve robustness.

In this application, we model the outcome which is the quarterly change in log wages as a function of the treatment, a binary variable for whether the worker has changed job or not and a number of controlling covariates used in the model. While the change in log wages could be estimated by simply taking the difference between the mean wage for the switchers and stayers; however, there are a number of covariates related to the potential outcome and the treatment that could distort the result. For instance, as switchers are more likely to be younger workers on relatively lower wages, comparing mean wage levels would likely show a negative result as stayers have comparably higher wage levels that reflect age and experience. The ATE model uses linear regression to predict potential outcomes controlling for a list of covariates including age group, gender, education, sector of employment and log wages in the previous quarter.

The results indicate that on average, workers who switch jobs experience a 2.3 per cent increase in weekly wages compared to similar workers who does not switch job, conditional on control variables. The 95 per cent confidence interval places this result between a 0 per cent and 4.8 change in weekly wages. This result is broadly similar to the 2.4 per cent premium reported in the fixed-effects regression.¹⁵

These figures are mostly consistent with findings for other European countries, for example, Berson et al (2018) estimate job switchers in France and Italy earned on average 1.8 per cent more relative to those that opted to remain in their current positions using a combination of fixed effects and DiD analysis. The premium in Ireland is notably lower than the 6.3 per cent estimated for the U.S by Fallick et al (2021) when using worker and firm fixed effects. The main differences between European and US job switching premiums may be due to structural differences such as relatively lower rates of job mobility in Europe and the lack of a centralised wage setting or collective bargaining system in the US that could create greater opportunities for wage increases when switching. Ireland is closer aligned with France in these respects, which may explain why these wage premiums are closer in size.

Table 4: Average Treatment Effects for Job-Switcher (2019-2023)

	Coefficient	Robust Std Error	P-Value	95% CI
Wage growth	0.023	0.013	1.83**	-0.002 0.048

Note: This methodology used a linear regression adjustment. Independent variables used were gender, age category, educational attainment and broad sector of employment. The number of observations is equal to 60,797

¹⁵Additional tests were performed on the quarterly change in log wage levels with comparable results across both methodologies.

7. Conclusion

This paper provides a comprehensive analysis of job-switching trends in Ireland, with a focus on the associated wage premiums for job switchers compared to those who remain in their current roles. Younger workers, those in lower-paying sectors, and individuals with shorter job tenures are more likely to switch jobs, often seeking to maximize lifetime earnings potential or find better job matches. While these trends mirror those expressed by Haltiwanger et al (2018), this paper provides country-specific evidence to the theoretical framework within the context of Ireland. Moreover, we build upon the work of Lydon and Staunton (2018) who used education as a proxy for bargaining power, by quantifying the wage premium this demographic achieves.

Our findings, based on granular gross pay data from the Labour Force Survey linked to Revenue PMOD data, reveal a clear but diminishing wage premium for job switchers. While switchers experienced a 7.4 per cent raw wage premium in 2021, this figure has declined to 2.7 per cent in 2023, reflecting moderating labour demand as the economic cycle evolves. As the job-switching rate begins to slow, we see further evidence that the job switching rate, and associated wage premium, is pro-cyclical in Ireland as well as in the EU and US. As more data points become available in the LFS it is important to track the cyclicalities of wages with respect to the business cycle as developments since 2019 show only a narrow view.

A number of factors such as the age, educational attainment and sector of employment of the worker are likely to affect this premium meaning it is important to control for these covariates. Both fixed effects and average treatment effects approaches are conditional on a binary outcome in which job switching occurs shows that this controlled premium equates to between a 2.3 and 2.4 per cent quarterly increase in wages compared to similar workers who opt to remain in the same job.

While the controlled premium may appear relatively small, it is important to clarify that this is a comparison between switchers and non-switchers. The individual gain to the worker may be much larger as suggested by the raw wage premium. This may see results in line with the 10 per cent premium estimated by Lydon and Lozej (2018) in which external labour market conditions such as tight labour markets influence wages offered to new hires. Results from the fixed effects analysis point to a negative relationship between unemployment and wage growth, while logit analysis observes the pro-cyclicalities of job switching activity to support the findings for previous Central Bank of Ireland research. The observed slowdown in the raw premium alongside a slowing mobility rate provides an insight into the heightened sensitivity of wage setting for new hires. Comparatively, workers joining from periods of unemployment appear to experience a negative controlled premium relative to incumbent workers that aligns with US analysis on greater earnings losses being concentrated among job separators who spend a substantial period in non-employment.

The implications of these findings are significant for both workers and policymakers. Job

switching appears to be an important mechanism for wage growth, particularly in tight labour markets, but the declining premium suggests that the opportunity for wage gains through switching may be waning as labour market conditions soften. Policymakers may need to consider the factors influencing labour mobility and wage dynamics, especially in light of evolving employment patterns such as remote and hybrid work.

Further research could explore the impact of these changing work arrangements on job-switching behaviour and wage premiums. Additionally, expanding the analysis to examine wage growth on an hourly basis and assessing the role of firm-level factors in job-switching trends would provide a more detailed understanding of labour market dynamics in Ireland. As the availability of high-quality wage data improves, future studies can offer deeper insights into wage inequality, gender wage gaps, and the long-term career progression of workers.

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Annex

Gross Pay (PMOD Data)

LFS data has been expanded in recent months to include a gross pay variable linked to PMOD Revenue data. This variable is available in the LFS from Q1 2019 onwards and refers to the gross pay received by the employee in the relevant quarter. Wage figures for self-employed persons are not included in the dataset as it refers to PAYE employments only. Similarly, we exclude the Agri sector from this analysis given the relatively high share of self-employment in the sector. These gross pay data are provided in nominal terms and are non-seasonally adjusted. LFS data matching to Revenue statistics has been steadily improving over time. As of late 2023, wage information was available for up to 70 per cent of employees in the LFS

Related variables on the number of weeks worked in the reference quarter and pay frequency are provided using the Revenue matching processes. These variables can be used in conjunction with other LFS variables such as absence from work to create controls to ensure that similar groups are compared on a quarterly basis. For instance, weeks worked ensures that we can compare wages for persons working a similar number of weeks across two quarters as not to inflate wage growth from increased activity in the latter period. Similarly, while PUP recipients may have been classified as in employment in ILO terms during the pandemic, the vast majority are marked as absent from work (See Keenan and Byrne, 2020). Applying controls using this variable allows us to more accurately measure job switching activity and wage growth for persons without breaks in service for 2020 and 2021.¹⁶

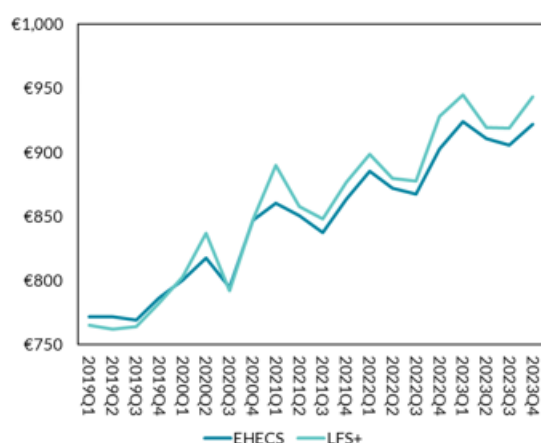
Before using LFS gross pay data, it is imperative to crosscheck the data with other widely used data on wages in Ireland. Quarterly gross pay can be rebased into weekly terms by using the number of weeks worked in the relevant quarter. The weekly LFS wage data is plotted against average weekly wages from CSO EHECS data from Q1 2019 to show that levels exhibit similar trends (Figure A1).¹⁷ There is a similar close match for weekly wages at NACE sector level in 2023 (Figure A2).¹⁸

Compensation per Employee (CPE) within the National Accounts is the central wage series referred to in Quarterly Bulletin analyses. Compensation of Employees (COE) is the sum of total labour costs paid in the country and is essentially the total cost to the employer of employing labour, rather than what the employee directly receives. While it is mostly the wages received by the employee from their employer, it also contains non-wage costs such as employer's PRSI and benefit in kind. These non-wage costs typically constitute 15 per cent of these total labour costs. Adjusting the series to remove this non-wage component and dividing by the total number of employees provides a relatively close comparison of gross earning level that are exhibited in the LFS data (Figure A3). Some minor differences exist between both datasets to provide context of why levels do not exactly match. Firstly, CPE includes wages from all employments, such as primary and secondary jobs, while LFS includes wages from primary employments only. Secondly, National Accounts are

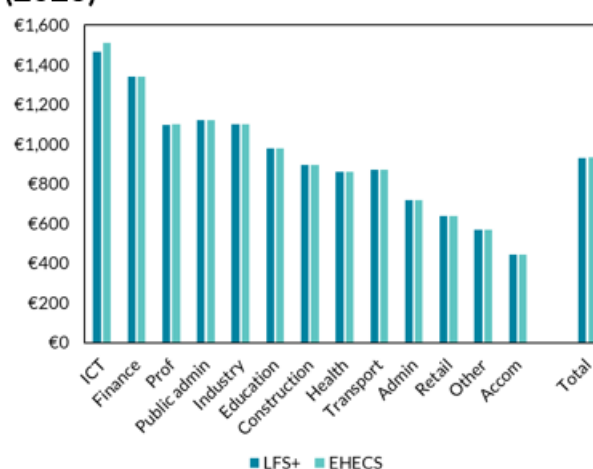
¹⁶Analysis of PUP effects on income growth are presented in Keane et al (2021) and Boyd et al (2023)

¹⁷The CSO Earnings, Hours and Employment Costs Survey (EHECS) is a firm-level survey of quarterly and annual earnings and labour costs statistics for employees across economic sectors in Ireland. EHECS data forms the basis of the Irish submission to the Eurostat Labour Cost Index.

¹⁸National accounts NACE sectors are also aggregated for certain sectors. For example, Retail, Accommodation and Transport are grouped together. Microdata analysis allowed for bottom-up construction to match National Accounts categories to compare average wage levels.

Figure A1: Average weekly gross wages in LFS and EHECS data

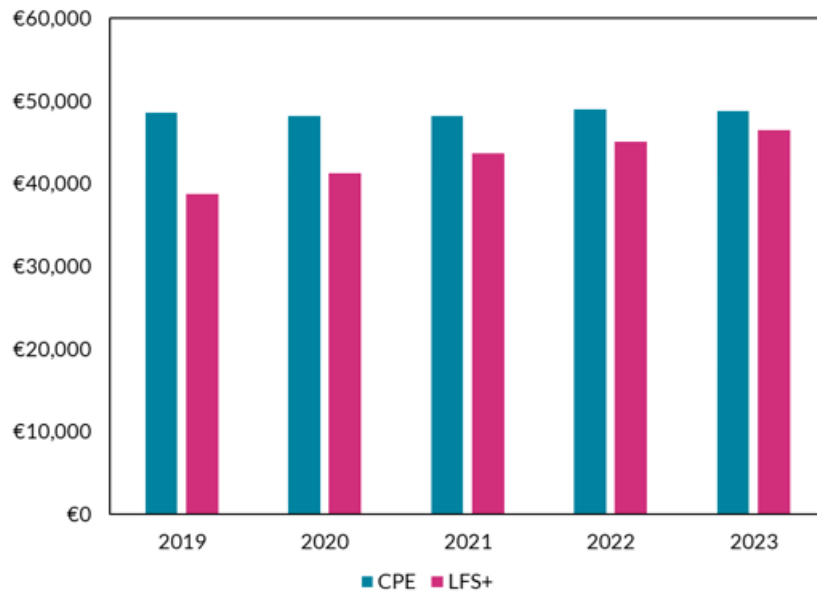
Source: CSO; LFS and EHECS

Figure A2: Average weekly gross wages in LFS and EHECS data by NACE sector (2023)

Source: CSO; LFS and EHECS

administration-based data for all persons while LFS is a representative household survey.¹⁹ As previously outlined, the cross-matching of datasets that can identify up to 70 per cent of all LFS employees and is steadily improving over time. Similar crosschecks are performed at NACE sector level for CPE to ensure close comparability of wages in 2023 with published National Accounts data.

¹⁹A recent change to the income definition in the National Accounts has seen COE revised upwards back to 2011 due to the inclusion of self-employed income from Form 11 submissions.

Figure A3: Average annual wages in LFS and National Accounts data

Source: CSO; LFS and National Accounts

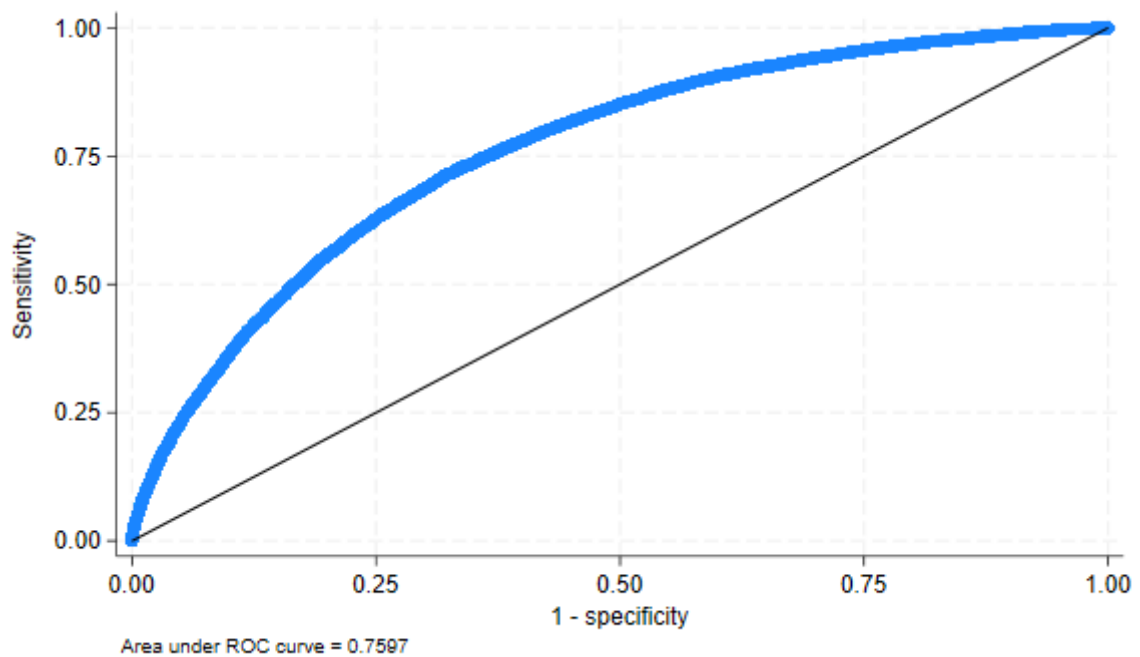
Figure A4: ROC curve for logit regression model 1 (Pre-2019)

Figure A5: ROC curve for logit regression model 2 (2019-2023)

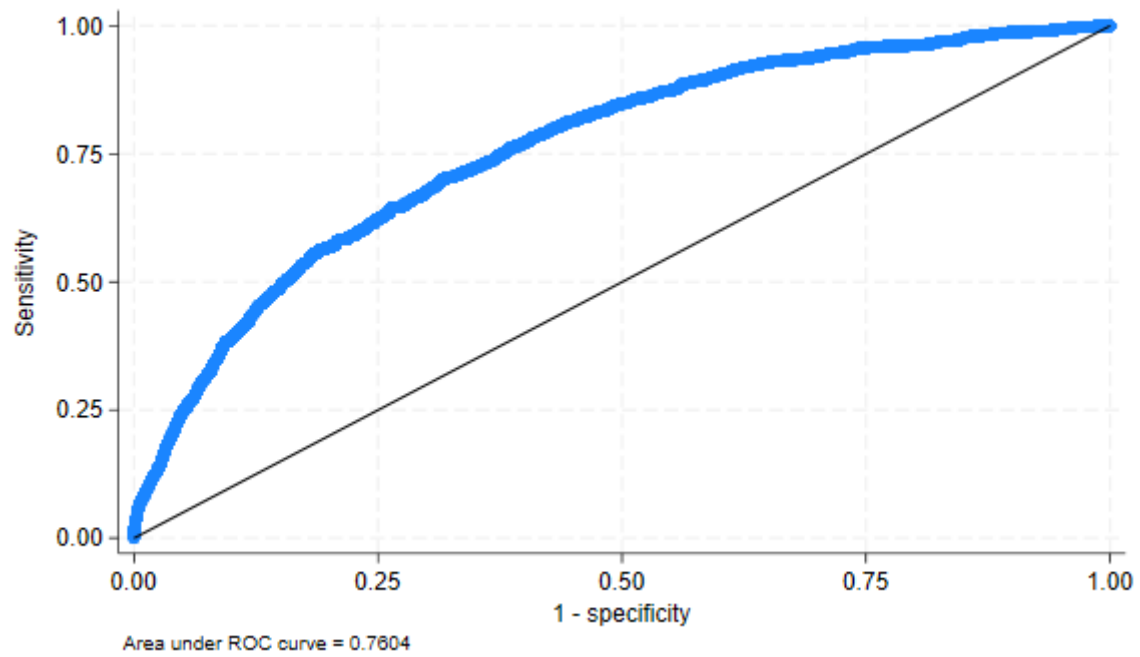


Figure A6: ROC curve for logit regression model 3 (Total sample)

