The gender pay gap in Revenue

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Abstract

This paper analyses gender and pay in Revenue, one of the largest public sector employers in the state, and identifies a mean gender pay gap of 16 per cent. Once the civil service grade, working patterns, the type of pay scale, the point on pay scale, and the level of non-basic pay are considered, the gender pay gap is eliminated. When decomposed using the Blinder-Oaxaca method, approximately three-quarters of the gender pay gap is due to grade differences, while approximately one-quarter is due to working patterns. None of the gap is explained by men earning a higher return for the same observed characteristics as women. In other words, unequal pay caused by direct gender discrimination does not play any role in the observed pay gap. Given that gender imbalance across grades is the dominant explanation for the pay gap, and may itself reflect indirect gender discrimination, the paper concludes with policy recommendations to support the advancement of female employees to higher grades and to monitor the equality outcomes from flexible work practices in the post-pandemic labour market.

Keywords: Revenue, pay gap, gender, public sector

Introduction

The gender pay gap can be calculated as the difference between the average annualised gross earnings of men and women expressed as a percentage of the average annualised gross earnings of men. The

gender pay gap is distinct from the concept of unequal pay, with the latter specifically arising due to direct gender discrimination.

Over the last number of years, the gender pay gap has become a focal point for public policy. On International Women's Day 2018, the previous government announced the Gender Pay Gap Information Bill. As of mid 2020, the Bill had reached Third Stage (Committee Stage) in Dáil Éireann. A strengthened version of the Bill (including stronger enforcement mechanisms) is due to enter Fourth Stage (Report Stage) during the lifetime of the current government.¹ When enacted, the Bill will provide that employers with a certain number of employees must publish information on the gender pay gap in their organisation. In tandem with this, Action 8 of the 2014 *Civil Service Renewal Plan* committed to improving gender balance at each grade level, and the *Civil Service Renewal 2030 Strategy* commits to achieving gender balance across leadership levels.

This paper analyses administrative data for employees in Revenue to assess differences in pay by gender and the contributory factors underlying pay gaps, ahead of the enactment of the Gender Pay Gap Information Bill. Its contribution is twofold. First, it documents the extent of the gender pay gap in one of the largest employers in the public sector, using a detailed population data set which accounts for the specifics of public sector pay structures. The findings are consistent with research conducted on the public sector of other countries and also echo the results of previous, more qualitative studies of the Irish civil service. Second, the paper sheds light on the need for further public sector reform to combat grade stagnation for women. This phenomenon may arise due to the burden of reconciling work and caring responsibilities, a balancing act achieving more prominence due to Covid-19.

The next section provides a literature review on the gender pay gap, followed by a comparison of Revenue's mean gender pay gap of 16 per cent to other public sectors internationally. After the data sources used in this analysis are described, a gender-based profile of Revenue is provided, which helps to motivate the subsequent pay results. Pay levels are then reviewed in detail and the mean gender pay gap is estimated. Following on from this, the gender pay gap is then modelled and decomposed in order to allow for better interpretation of its causes. Given their importance to the explanation, the issue of

¹ The General Scheme of the Bill is available at:
<http://www.justice.ie/en/JELR/Pages/PR18000210>

grade imbalances are examined in further detail. Policy recommendations arising from the results are then presented before the paper concludes.

Literature review

Up until relatively recently, most of the research on the gender pay gap focused on analysing the mean pay gap between men and women. Mean pay gaps remain the most common summary statistics on the topic. In general, the mean gender pay gap is smaller in the public sector compared to the private sector in most EU countries (Eurostat, 2020). Gregory & Borland (1999) have argued that this is not surprising due to the collective way in which public sector wages are typically set, as compared to the market structure of the private sector. It has been shown that public sector work attracts more risk-averse workers (Bellante & Link, 1981). For this worker cohort, the public sector offers desirable benefits for women such as maternity leave, job flexibility and job security. In addition to this, anti-discrimination legislation is more likely to be actively enforced than in the private sector (Gregory & Borland, 1999).

In recent years the literature has begun to differentiate more fully with respect to lower- and higher-pay workers, given the gap is not constant across the pay distribution (Barón & Cobb-Clark, 2010). This development is particularly important in a civil service setting, given its grade-based structure, which is systematically linked to pay progression. Within the French public administration, for example, Vignes & Yeung (2019) find the gender pay gap increases with seniority. They estimate a gap of 34 per cent for the highest grade, while the gap reduces to 9 per cent for men and women working in lower grades. There is substantial evidence of the gender pay gap widening at the higher end of the pay distribution in the public sector of other countries too, indicating a 'glass ceiling' effect. The presence of glass ceilings is a metaphor used to illustrate the artificial barriers that make it difficult for women to progress to higher roles, as well as encompassing the larger pay gaps at the higher end of the pay distribution. Wahlberg (2010) provides evidence of a glass ceiling effect within the public sector for Sweden. Similarly, Castagnetti & Giorgetti (2019) find a glass ceiling effect present in the Italian public sector, which becomes more pronounced once unobserved individual heterogeneity is considered.

The 'sticky floor' metaphor, on the other hand, highlights the difficulties women face at the lower levels of the occupational ladder, which in turn leads to a lack of women in higher positions (Christofides et al., 2013). The present study confirms this occupational pattern, as Figure 2 demonstrates later. Past studies of the Irish civil service and public sector more broadly have also shown that women generally tend to be involved with operational functions, which are not as visible to senior management in their organisation and can limit their chances of career progression (Humphreys et al., 1999; Russell et al., 2017).

Women may face certain barriers or obstacles preventing them from progressing in their career and in turn causing the glass ceiling or sticky floor effect. In particular, child-rearing and caring commitments, more often undertaken by women than men, may impact women's future wages or career trajectory. Using Irish time-use surveys, Russell et al. (2019) found a sizeable gender gap in terms of unpaid care work and, as highlighted by Russell et al. (2017), various studies have shown that breaks in employment for women are associated with negative effects on career and wage progression in subsequent years. Albrecht et al. (1999) suggest this is due to employers using leave-taking behaviour as a signal of future career commitment, as well as depreciation in human capital. Weeden (2005) also suggests that those who avail of flexible work (as opposed to part-time work) are signalling a lack of commitment, which can affect employers' decisions regarding training and development. In recent behavioural research conducted during the Covid-19 pandemic, Nicks et al. (2021) found that women reduced their stated preference for flexible working by more than men, in response to the perceived expectations of their employer, suggesting that women themselves internalise the gender barrier around career commitment and on-the-job visibility.

It has also been shown that women who return to work after maternity leave can face lower wages compared to their female counterparts within the same organisation (Beblo et al., 2009). It has been identified in older studies of the Irish civil service that women felt that taking even the minimum level of maternity leave could hinder their chances of promotion, and there was a perception amongst survey respondents that it would not be possible to reach the grade level of assistant principal (AP) without returning to full-time work (Humphreys et al., 1999). As women are more likely to avail of shorter working hours than men in general, this also leaves a large gender gap in terms of increasing human capital in the form of on-site

training, development and overall chances of promotion (Tandrayen-Ragoobur & Pydayya, 2015). There is relatively little in the literature on the likelihood of women applying for promotions, as often it is only the promotion rate that is observed, but a recent study of the French academic labour market documented how women have a substantially lower propensity to apply for promotion, and this explains at least half of the gender promotion gap in that context (Bosquet et al., 2019).

Methodologically, the most common method of analysing gender pay disparities is a human capital model, whereby wage differentials are explained by observable and unobservable characteristics of human capital (Becker, 1985; Mincer, 1974). What cannot be explained by observable factors, such as age, experience, tenure and education level, is generally referred to as the ‘unexplained part of the gender pay gap’ and is attributed to discrimination (Blinder, 1973; Oaxaca, 1973). Another common technique is the Oaxaca-Blinder decomposition, which separates pay differences into two different categories: differences arising from differences in observable characteristics and differences arising from differential treatment (Blinder, 1973; Oaxaca, 1973). However, the decomposition cannot capture all the gender segregation effects between men and women, as some observable characteristics, such as grade, may themselves reflect indirect forms of gender discrimination if women’s caring and domestic responsibilities are a barrier to career progression.

Overall, the emerging theme from the literature is that gender pay disparities in the public sector can arise due to barriers to career progression, such as women availing of flexible or part-time work owing to caring commitments. This can have knock-on effects in terms of employer perception, and even the perception of women themselves when considering their own career progression. There is also a tendency for women to be in more operational roles, which may lower exposure for promotion opportunities. There are well-established methods in the literature to model and decompose gender pay gaps, but the foregoing issues may mean that any indirect gender discrimination, such as that arising from how women reconcile the joint burden of work and care responsibilities, cannot be fully examined by these methods.

International comparisons of public sector pay gaps

Table 1 compares Revenue’s gender pay gap, which is discussed in greater detail in subsequent sections of this paper, to public sector pay

gaps elsewhere. There are limited data available in terms of gender pay gaps for other tax authorities. However, most OECD and EU countries produce statistics regarding their public sector overall.

Eurostat publishes gender pay gap statistics on an hourly rather than an annual basis. However, data compiled in this way reduce the visibility of gendered working patterns. Typically, organisations will appear to have a lower gender pay gap in hourly statistics than annual statistics as the former do not account for the fact that men generally work more hours than women. On an hourly basis, the highest gender pay gap from available data is found in the Czech Republic (19.3 per cent) and the lowest in Cyprus (−6.7 per cent).

It is most appropriate to compare Revenue against countries that compile the data on an annual or monthly basis, as this allows for the inclusion of pay effects arising from different working patterns by gender. Revenue ranks mid table on this basis.

Table 1: Gender pay gaps in the public sector

<i>Organisation/country</i>	<i>Year</i>	<i>Pay frequency</i>	<i>Gender pay gap (%)</i>
<i>Irish public sector</i>			
Revenue	2019	Annual	16
An Post	2019	Hourly	3.7
Central Bank of Ireland	2019	Annual	2.4
<i>Foreign tax authorities</i>			
New Zealand Inland Revenue	2019	Annual	18.4
UK HMRC	2019	Hourly	7.2
<i>Foreign public sectors</i>			
UK*	2018	Hourly	21.2
Czech Republic	2018	Hourly	19.3
Finland*	2018	Hourly	18.2
Switzerland	2016	Monthly	16.7
Bulgaria	2018	Hourly	15.3
Slovakia	2018	Hourly	14.8
Lithuania	2018	Hourly	14.1
Hungary	2018	Hourly	14.1
Japan	2007	Annual	14.0
Latvia*	2018	Hourly	13.4
Portugal	2018	Hourly	13.3
Spain*	2018	Hourly	13.1

Table 1: Gender pay gaps in the public sector (Contd.)

<i>Organisation/country</i>	<i>Year</i>	<i>Pay frequency</i>	<i>Gender pay gap (%)</i>
Germany*	2018	Hourly	12.8
United States ¹	2015	Annual	12.4
Netherlands	2018	Hourly	12.2
Denmark	2018	Hourly	11.9
Slovenia	2018	Hourly	11.9
Estonia	2011	Monthly	10.2
Iceland	2018	Hourly	9.9
Sweden	2018	Hourly	9.4
Canada	2017	Hourly	8.8
Croatia	2018	Hourly	8.2
France ²	2012–16	Hourly	8.1
Norway	2018	Hourly	8.0
Australia	2018	Annual	7.8
Italy	2012	Hourly	6.6
Poland	2018	Hourly	3.8
Romania	2018	Hourly	0.9
Belgium*	2018	Hourly	–0.3
Cyprus	2018	Hourly	–6.7

Source: Authors' analysis of published reports. Eurostat publish statistics on an hourly rather than annual basis. A Eurostat estimate of the Irish public sector as a whole is not available.

* Provisional data.

¹ Covers white collar federal employees.

² Refers to the unexplained pay gap rather than the raw pay gap.

Data

Sources

Data for this analysis were accessed from Revenue's Performance Measurement & Reporting System (PMRS). PMRS reports information from a variety of different data sources on salary, gender, age, grade, full-time equivalent (FTE) status and Revenue division for each employee.² All personal data used were anonymous and accessed securely through Revenue systems.

Salary data and the point on pay scale came from Corepay, a centralised payroll system used by a large range of public service

² FTE status reflects the proportionate full-time working hours of staff who are on atypical working arrangements.

bodies. Throughout the paper, salary refers to total remuneration for 2019 (i.e. basic pay and non-basic pay) and the pay scale point is for a point in time (31 December 2019).

Other data, such as the grade, date to grade, FTE status and gender, are taken from the Human Resources Management System (HRMS), a civil-service-wide system which records employee information. FTE refers to the individual's average status in 2019 while all other HRMS data are for a point in time (31 December 2019).

Limitations

The salary data refer to all Revenue employees who were on the payroll on 31 December 2019 and reflect their cumulative remuneration for all payroll periods in 2019. Any employee who left Revenue during the year, including retirement, is not included in the analysis.

Employees who are on sick leave still appear on payroll data, but it is not possible to determine if their pay levels refer to, for example, half pay. It is also not possible from the data to determine whether an employee is availing of temporary unpaid leave such as the Shorter Working Year or Carer's Leave. No indicators are recorded for those who are on secondment or who are being paid by an external organisation. However, as only a very small proportion of staff are affected by these issues, it is not expected to affect the analysis in any significant way.

Profile of the organisation

Grade

As of 31 December 2019, approximately 6,900 people worked for Revenue, of which 62 per cent were women (4,300).

The distribution of Revenue's employees across the most common civil service grades is outlined in Table 2. Women are more likely than men to work at lower grades. Just over 70 per cent of all Revenue employees are either clerical officers (COs) or executive officers (EOs). A total of 77 per cent of all female employees work in these grades compared to 67 per cent of all male employees. Senior management (AP and above) account for 9 per cent of the workforce. In total, 7 per cent of all women are senior managers compared to 12 per cent of all men.

Table 2: Grade distribution by gender

<i>Grade</i>	<i>Share of female employees (%)</i>	<i>Share of male employees (%)</i>	<i>Share of total employees (%)</i>
Assistant secretary/Board	0.1	0.5	0.3
PO-Higher	0.6	1.6	1.0
PO-Standard	0.6	0.5	0.6
AP-Higher	1.6	3.4	2.3
AP-Standard	4.3	5.9	4.9
HEO-Higher	2.8	4.6	3.5
HEO-Standard	9.0	13.3	10.6
AO-Higher	0.7	0.8	0.8
AO-Standard	2.0	2.8	2.3
EO-Higher	6.7	5.9	6.4
EO-Standard	29.3	25.9	28.0
CO-Higher	4.2	1.6	3.2
CO-Standard	37.1	28.6	33.9
Other	0.9	4.6	2.2
Total	100.0	100.0	100.0

Source: Revenue analysis.

When looking at the gender share for each grade in Figure 1 (as opposed to the grade share for each gender in Table 2), women are over-represented at lower grade levels and under-represented at higher grade levels. The exception at senior grades is principal officer (PO) (Standard), where women are slightly over-represented at 67 per cent of this grade.³ The smallest female share is 28 per cent and occurs at assistant secretary/board level.

It is possible to compare Revenue to the civil service overall, but it must be borne in mind that the civil service data are for 2016 while Revenue data are for 2019.⁴ For the most part, Figure 2 shows that Revenue follows a similar trend to the civil service overall in terms of grade breakdown by gender. Revenue is slightly underrepresented in

³ Government departments and offices have discretion to assign a proportion of certain grades to a Higher salary scale (as distinct from the Standard salary scale). In Revenue, employees apply for this and it is awarded by senior management in each division on a competitive, merit and experience basis. Grades above AP level are entirely merit based while grades below this take the individual's experience into account. At an organisation-wide level, there is gender parity in this assignment: 14 per cent of men and 14 per cent of women are on the Higher scale.

⁴ The Economic and Social Research Institute (ESRI) recently completed a study of gender in the Irish civil service. Discussion in this section is based on Figure 1 in the ESRI report (Russell et al., 2017).

Figure 1: Gender distribution by grade

Source: Revenue analysis.

terms of female employees at the secretary level, compared to the civil service as a whole. However, Revenue has a share of female POs that is 9 percentage points higher than the overall civil service average. In terms of non-managerial grades, Revenue has a higher proportion of female administrative officers (AOs) and COs but a lower share of female higher executive officers (HEOs) and COs than the civil service average.

Figure 2: Gender distribution by grade – civil service comparison

Source: Revenue analysis.

Source: Authors’ analysis of Russell et al. (2017).

Part-time status

Around one fifth of Revenue staff avail of part-time arrangements, with the remainder working full-time. But as Table 3 shows, there are significant differences between men and women: 5 per cent of men work part-time but the proportion for women is five times as high, at 26 per cent. This gender breakdown of working patterns is in line with the civil service as a whole.⁵

Table 3: Full/part-time status by gender

<i>FTE status</i>	<i>Female (%)</i>	<i>Male (%)</i>	<i>Total (%)</i>
FTE less than 0.5	0.4	0.1	0.3
FTE between 0.5 and 0.75	12.4	1.0	8.1
FTE between 0.75 and 1	13.5	4.1	9.9
FTE=1	73.7	94.8	81.7
Total	100.0	100.0	100.0

Source: Revenue analysis.

Table 4 summarises gendered working patterns by grade. Generally, the proportion of employees working part-time decreases with increased grade level. There is a noticeable drop-off in the proportion

Table 4: Full/part-time status by gender and grade

<i>Grade</i>	<i>Female (%)</i>		<i>Male (%)</i>		<i>Total (%)</i>	
	<i>PT</i>	<i>FT</i>	<i>PT</i>	<i>FT</i>	<i>PT</i>	<i>FT</i>
Assistant secretary/Board	0.0	100.0	0.0	100.0	0.0	100.0
PO-Higher	0.0	100.0	0.0	100.0	0.0	100.0
PO-Standard	3.6	96.4	0.0	100.0	2.4	97.6
AP-Higher	19.1	80.9	3.4	96.6	10.2	89.8
AP-Standard	15.5	84.5	1.9	98.1	9.4	90.6
HEO-Higher	29.3	70.7	4.2	95.8	16.9	83.1
HEO-Standard	16.4	83.6	5.2	94.8	11.1	88.9
AO-Higher	22.6	77.4	0.0	100.0	13.2	86.8
AO-Standard	5.7	94.3	0.0	100.0	3.1	96.9
EO-Higher	39.4	60.6	7.2	92.8	28.3	71.7
EO-Standard	27.2	72.8	5.2	94.8	19.5	80.5
CO-Higher	51.6	48.4	9.5	90.5	43.7	56.3
CO-Standard	26.7	73.3	7.0	93.0	20.4	79.6
Other	5.4	94.6	3.4	96.6	3.8	96.2

Source: Revenue analysis.

⁵ See Table A1.4 in Russell et al. (2017).

of employees working part-time from the PO level upward. Almost half of employees at the CO (Higher) grade avail of part-time working hours, and this figure is driven by women. For grades below PO level, men and women are both more likely to work part-time if they are on the Higher salary scale. In all grades at least 90 per cent of men work full-time. At no grade is there a larger proportion of women working full-time than men.

Tenure

The bulk of employees have worked in Revenue for at least twenty years (Figure 3). Tenure proportions are reasonably similar for female and male employees. Approximately 30 per cent of all employees have worked in Revenue for thirty years or more. Just under a tenth have been in Revenue for one year or less. This pattern of a large proportion of Revenue employees with either extremely long or short service is replicated in the civil service as a whole.⁶

Figure 3: Tenure by gender

Source: Revenue analysis.

Age

The age distribution of Revenue's employees is skewed towards older age categories: over half of all employees are aged forty-five or older

⁶ See Table A1.3 in Russell et al. (2017).

(Table 5). There is no substantial gender difference in age categories, although there is a slightly higher proportion of men under thirty-five than women.

Table 5: Revenue age profile

<i>Age category</i>	<i>Female (%)</i>	<i>Male (%)</i>	<i>Total (%)</i>
<25	1.3	2.6	1.8
25–34	11.8	15.0	13.0
35–44	27.6	26.1	27.0
45–54	26.9	24.9	26.2
55–64	31.6	30.2	31.1
65+	0.8	1.1	0.9
Total	100.0	100.0	100.0

Source: Revenue analysis.

The grades with the lowest and highest average ages are found at the non-managerial levels (Table 6). The AO (Standard) grade has the lowest average age, which is unsurprising given that this is generally a graduate role within the civil service. This is also likely a contributor to the high share of AOs working full-time relative to other grades. At the other end of the scale, HEO (Higher) and CO (Higher) have the highest average ages, with both being over fifty-five. Just under

Table 6: Average age by gender and grade

<i>Grade</i>	<i>Female</i>	<i>Male</i>	<i>Total</i>
Assistant secretary/Board	53	58	57
PO-Higher	49	56	53
PO-Standard	46	50	47
AP-Higher	51	57	54
AP-Standard	42	46	44
HEO-Higher	55	56	55
HEO-Standard	48	48	48
AO-Higher	41	41	41
AO-Standard	38	36	37
EO-Higher	53	54	53
EO-Standard	48	45	47
CO-Higher	55	54	55
CO-Standard	45	41	43
Other	47	52	51
Total	47	46	47

Source: Revenue analysis.

80 per cent of HEOs and COs at the Higher scale have thirty or more years of tenure, which naturally leads to a higher average age for these grades.

Pay analysis

Gross salary

Unsurprisingly, the gendered pattern across different working patterns and grade levels shown in the previous section has an impact on the gross salary received. The average (mean) annual gross salary earned by a Revenue employee was €41,400 in 2019. The average for men was €45,900 and the average for women was €38,700 (Table 7). Taking the difference in salaries, and expressing as a percentage of the male salary, the mean gender pay gap is 16 per cent. In other words, women earn 84 per cent of male earnings, on average. In level terms, the gap is €7,200. In both level and proportional terms, the gender pay gap widens at higher points on the distribution: it is widest at the 90th percentile of incomes (19 per cent). This pattern is in line with studies of the public sector in other European countries (Castagnetti & Giorgetti, 2019; Vignes & Yeung, 2019; Wahlberg, 2010).

Table 7: Income distribution by gender

<i>Income cut-off points</i> €	<i>Female</i> (€)	<i>Male</i> (€)	<i>€ Difference</i>	<i>% Difference</i>
10th percentile	19,300	20,500	1,200	6
25th percentile	26,100	29,700	3,600	12
50th percentile (median)	37,900	44,500	6,600	15
Mean salary	38,700	45,900	7,200	16
75th percentile	48,800	58,100	9,300	16
90th percentile	58,900	72,300	13,400	19

Source: Revenue analysis.

Given the high incidence of female employees working part-time in Revenue, it is appropriate to compare the income distribution of full-time workers as a stand-alone cohort. As expected, the income distribution does not change much for men but rises for women (Table 8). The average annual gross salary for a female full-time employee was €40,800 while their male counterparts earned €46,400, a 12 per cent gap (€5,600 in level terms). This gap for full-time employees is suggestive of glass ceiling or sticky floor effects, as previously discussed. The gender pay gap also widens at higher points on the

income distribution for full-time employees, suggesting that working patterns are unlikely to be the main explanation for differences in male and female salaries overall.

Table 8: Income distribution by gender – full-time employees

<i>Income cut-off points €</i>	<i>Female (€)</i>	<i>Male (€)</i>	<i>€ Difference</i>	<i>% Difference</i>
10th percentile	19,300	20,700	1,400	7
25th percentile	27,100	30,100	3,000	10
50th percentile (median)	41,000	45,300	4,300	9
Mean salary	40,800	46,400	5,600	12
75th percentile	51,900	58,700	6,800	12
90th percentile	62,500	72,900	10,400	14

Source: Revenue analysis.

Another measure for comparing gaps is to rank all of Revenue's salaries from lowest to highest and divide them into four equal parts (or quartile). Comparing the proportion of each gender who fall into each quartile illustrates where employees lie on the income distribution. A total of 28 per cent of all women and 21 per cent of all men fall into the lowest income quartile (Table 9). In contrast to this, 19 per cent of all women and 35 per cent of all men fall into the highest income quartile.

Table 9: Gender share by income quartile

<i>Quartile</i>	<i>Female (%)</i>	<i>Male (%)</i>
1st quartile (lowest)	27.5	20.9
2nd quartile	27.7	20.5
3rd quartile	25.9	23.5
4th quartile (highest)	18.9	35.1

Source: Revenue analysis.

In all the most common civil service grades, average salaries for women are lower than for men (Table 10). The exception is the Other category (which in Revenue includes male-dominated services officers and female-dominated solicitors).

This salary difference by grade remains the case when only full-time employees are examined: for all the most common grades, a full-time man earns more than a full-time woman (Table 11). Reasons for the difference among full-time employees could be due, first, to the length

Table 10: Average salary by gender and grade

<i>Grade</i>	<i>Female (€)</i>	<i>Male (€)</i>	<i>Total (€)</i>
Assistant secretary/Board	121,000	157,500	147,300
PO-Higher	100,200	105,100	103,300
PO-Standard	85,400	93,000	88,000
AP-Higher	75,300	81,900	79,100
AP-Standard	62,400	69,500	65,700
HEO-Higher	55,700	63,500	59,500
HEO-Standard	51,300	56,500	53,700
AO-Higher	47,000	53,600	49,800
AO-Standard	35,400	38,600	36,800
EO-Higher	44,100	52,900	47,200
EO-Standard	39,400	41,900	40,300
CO-Higher	34,800	42,600	36,200
CO-Standard	26,800	27,000	26,800
Other	51,900	38,600	41,800

Source: Revenue analysis.

of time in grade, which is captured to a certain extent by the point on pay scale, and, second, to the extent of allowances and overtime by gender (in the civil service this is known as non-basic pay). Both of these explanations are discussed in the following sections.

Table 11: Average salary by gender and grade – full-time employees

<i>Grade</i>	<i>Female (€)</i>	<i>Male (€)</i>	<i>Total (€)</i>
Assistant secretary/Board	121,000	157,500	147,300
PO-Higher	100,200	105,100	103,300
PO-Standard	85,800	93,000	88,300
AP-Higher	78,800	82,200	80,900
AP-Standard	63,600	69,700	66,600
HEO-Higher	60,900	64,000	62,600
HEO-Standard	52,700	57,100	54,900
AO-Higher	49,400	53,600	51,500
AO-Standard	35,400	38,600	36,900
EO-Higher	49,000	54,000	51,200
EO-Standard	41,100	42,000	41,500
CO-Higher	41,000	43,800	41,800
CO-Standard	27,100	27,100	27,100
Other	52,100	39,000	42,100

Source: Revenue analysis.

Pay scale points

In the civil service, points on the pay scale are a unique aspect of gross salary differences.⁷ For example, a full-time female AO could earn less than a full-time male AO because she is at a lower point on the pay scale (in general, employees move up one pay scale point each year). As highlighted in Figure 4, women are more likely than men to be at the top point of their grade's pay scale in Revenue (typically points 12, 14 or 16, depending on the grade).

This effect is concentrated at the AO grade and below. For the most common grade in Revenue, CO (Standard), 26 per cent of females are at the top point of the pay scale compared to 13 per cent for their male counterparts. For senior grades, however, the pattern is reversed. For example, 23 per cent of female PO (Higher) employees are at the top of their scale compared to 53 per cent of their male counterparts.

Figure 4: Pay scale distribution by gender (all grades)

Source: Revenue analysis.

Note: The data in the figure cover all civil service grades. Points 12, 14 and 16 are the most common top point for most grades.

Given tenure patterns (time in Revenue as opposed to time in grade) are reasonably similar across genders, Figure 4 is suggestive of a pattern whereby women are less likely to seek promotion or to be promoted (a promotion would generally entail being paid at a lower point on a different pay scale).

⁷ Pay scales in this study are based on the following Department of Public Expenditure and Reform circular: <https://circulars.gov.ie/pdf/circular/per/2019/17.pdf>

In 2019 a total of 208 existing Revenue male staff were promoted, while 299 existing Revenue female staff were promoted.⁸ For males, this is a promotion rate for existing staff of 8.8 per cent, against 7.5 per cent for females.⁹ However, these statistics do not shed light on the likelihood of women seeking promotion.

For both genders, the likelihood of being at the top point of a pay scale is highest for those working part-time (Table 12). However, a gender disparity is notable within this cohort: for part-time employees who work a minimum of 75 per cent of the time, women are 14 percentage points more likely to be at the top of their pay scale than men.

Table 12: Top point of pay scale by FTE status

<i>FTE status</i>	<i>Female (%)</i>	<i>Male (%)</i>	<i>Total (%)</i>
FTE less than 0.5	33.3	33.3	33.3
FTE between 0.5 and 0.75	51.4	42.3	51.0
FTE between 0.75 and 1	38.4	24.5	36.2
FTE=1	21.6	23.8	22.6
Total	27.6	24.1	26.3

Source: Revenue analysis.

Non-basic pay

Non-basic pay includes allowances, overtime or premia payments and is distinct from the basic salaries outlined in government pay circulars. A total of 57 per cent of Revenue employees were in receipt of some form of non-basic pay in addition to their core salary in 2019, a share that is identical for both genders. However, men received more in non-basic pay than women on average (€3,100 on average, as opposed to €2,200).

There are both historical and structural reasons for the large share in Revenue; for example, due to non-core hours often worked by employees in customs roles in the ports and airports. In addition, preparations for Brexit, with significant numbers of additional trade facilitation staff hired, further increased this share upward in 2019.

⁸ Data here are for promotion of Revenue staff across all public sector competitions (internal, interdepartmental, open and Top Level Appointments Committee). The data do not refer to promotions of external candidates into Revenue.

⁹ The promotion rate for existing staff is defined as the number of promotions of existing staff divided by the 2019 staff headcount less employees who started in Revenue in 2019. As such, it includes Revenue staff who are promoted to other roles in the civil service but excludes other civil servants who are promoted into Revenue.

The grades most likely to be in receipt of non-basic pay in Revenue are the CO (Standard) and EO (Standard) grades, which is in line with the general grade distribution in Revenue (Table 13).

Table 13: Non-basic pay distribution by grade

<i>Grade</i>	<i>Female (%)</i>	<i>Male (%)</i>	<i>Total (%)</i>
Assistant secretary/Board	0.0	0.1	0.1
PO-Higher	0.4	0.4	0.4
PO-Standard	0.4	0.3	0.4
AP-Higher	0.7	1.3	0.9
AP-Standard	3.0	2.7	2.9
HEO-Higher	2.8	4.9	3.6
HEO-Standard	7.1	12.5	9.1
AO-Higher	0.6	0.7	0.6
AO-Standard	1.4	1.6	1.5
EO-Higher	7.3	7.4	7.3
EO-Standard	27.5	24.9	26.5
CO-Higher	6.9	2.6	5.3
CO-Standard	41.3	34.2	38.7
Other	0.6	6.4	2.8
All employees	100.0	100.0	100.0

Source: Revenue analysis.

Looking on a grade-by-grade basis, those employed at the CO (Higher) grade are most likely to be in receipt of non-basic pay (almost all employed at this grade receive non-basic pay). At least half of all EOs and HEOs are also in receipt of non-basic pay. Senior grades are least likely to receive this form of pay (Table 14).

Taking CO (Standard), the most common grade in Revenue, as an example illustrates how non-basic pay influences the gender pay gap. For a full-time employee, the average CO (Standard) gross salary is typically higher for men than women at most pay scale points (Figure 5). As differences in working patterns, grade and type of pay scale are accounted for in this example, non-basic pay is the remaining explanation for this particular gender pay gap.

Modelling the gender pay gap

The previous section documents differences in pay levels between men and women in Revenue. The mean gender pay gap in 2019 was found to be 16 per cent. The civil service grade, working patterns, the type of pay scale, the point on pay scale and the level of non-basic pay all

Table 14: Non-basic pay by grade and gender

Grade	Female (%)	Male (%)	Total (%)
Assistant secretary/Board	20.0	15.4	16.7
PO-Higher	42.3	14.0	24.6
PO-Standard	35.7	28.6	33.3
AP-Higher	26.5	21.3	23.6
AP-Standard	40.1	26.0	33.7
HEO-Higher	56.9	60.5	58.7
HEO-Standard	44.8	53.5	48.8
AO-Higher	45.2	45.5	45.3
AO-Standard	39.8	31.5	36.0
EO-Higher	61.6	71.2	64.9
EO-Standard	53.6	54.4	53.9
CO-Higher	93.4	92.9	93.3
CO-Standard	63.8	67.6	65.0
Other	43.2	79.0	70.5
All employees	57.2	56.6	57.0

Source: Revenue analysis.

Figure 5: Average gross salary by pay scale point – full-time CO (Standard)

Source: Revenue analysis.

Note: To ensure a like-for-like comparison, only full-time employees who worked a full year and who joined the civil service after 1995 are included in this figure (as separate pay scales operate for those employed before 1995 to reflect modified PRSI and pension arrangements). Some bars are missing if there are insufficient data for a gender and pay point combination.

contribute to the observed differences between men and women. A statistical (econometric) model can assess these various observed characteristics and determine their contribution to the gender pay gap. Two types of model are used in this paper: Ordinary Least Squares (OLS) and an Oaxaca-Blinder Decomposition.

OLS earnings regressions

A standard OLS earnings regression is employed with a male dummy variable included in the specification. This male dummy identifies the average gender pay gap, once other determinants of salary differences are controlled for.

Table 15: Modelling the gender pay gap

	<i>Dependent variable: Log of annual gross salary</i>			
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
Male (dummy variable)	0.147*** (0.014)	0.052*** (0.011)	0.026** (0.012)	0.004 (0.011)
Assistant secretary/Board		1.775*** (0.062)	1.760*** (0.064)	1.936*** (0.069)
PO-Higher		1.452*** (0.015)	1.433*** (0.015)	1.583*** (0.023)
PO-Standard		1.305*** (0.017)	1.279*** (0.018)	1.398*** (0.030)
AP-Higher		1.182*** (0.016)	1.171*** (0.015)	1.333*** (0.019)
AP-Standard		0.966*** (0.022)	0.954*** (0.022)	1.072*** (0.023)
HEO-Higher		0.890*** (0.018)	0.887*** (0.017)	0.889*** (0.017)
HEO-Standard		0.788*** (0.014)	0.774*** (0.014)	0.823*** (0.014)
AO-Higher		0.696*** (0.043)	0.680*** (0.042)	0.756*** (0.044)
AO-Standard		0.345*** (0.041)	0.323*** (0.041)	0.434*** (0.039)
EO-Higher		0.651*** (0.017)	0.657*** (0.015)	0.642*** (0.014)
EO-Standard		0.456*** (0.015)	0.449*** (0.015)	0.483*** (0.014)
CO-Higher		0.397*** (0.022)	0.422*** (0.018)	0.302*** (0.017)
Other		0.441*** (0.044)	0.431*** (0.043)	0.396*** (0.046)

Table 15: Modelling the gender pay gap (Contd.)

	<i>Dependent variable: Log of annual gross salary</i>			
	(1)	(2)	(3)	(4)
0.5 <= FTE < 0.75			0.275*** (0.074)	0.327*** (0.065)
0.75 <= FTE < 1			0.556*** (0.074)	0.620*** (0.065)
FTE = 1			0.531*** (0.074)	0.624*** (0.064)
Log of annual non-basic pay				0.044*** (0.001)
Constant	10.444*** (0.008)	10.058*** (0.012)	9.562*** (0.073)	9.266*** (0.065)
Observations	6,933	6,933	6,933	6,933
R-squared	0.016	0.420	0.437	0.520

Source: Revenue analysis.

Notes: Robust standard errors in parentheses.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

CO-Standard is excluded from the grade breakdown so the coefficients are interpreted as follows, using column 4 as an example: on average, an AP-Standard employee earns a gross salary that is 107 per cent higher than a CO-Standard employee, once FTE, gender and non-basic pay are accounted for. FTE < 0.5 is the excluded category in the FTE breakdown.

The gross salary data are transformed using the natural logarithm function in order to reduce the influence of extreme, atypical values and to interpret the model results as percentages. This transformation is common when analysing income data.

The first column of Table 15 indicates that men earn 15 per cent more than women on average. This figure differs slightly from the 16 per cent raw gap calculated in the previous section as, first, the data here have been logged transformed and, second, the dummy variable does not represent the exact same calculation as the raw gap (the raw gap expresses the salary difference relative to the male wage rather than the female wage).

As discussed in previous sections, civil service grades and the Higher pay scale are important determinants of salary differences by gender. Adding these to the model as additional control variables in column 2 reduces the gender pay gap to 5 per cent.¹⁰ Accounting for

¹⁰ If only grade is accounted for, and not the Higher scale, the gender pay gap would be 6 per cent on average.

employees' work patterns in column 3 reduces the gender pay gap further to 3 per cent. Finally, once the log of non-basic pay is added as a final control variable in column 4, the gender pay gap is reduced to 0 per cent.

The gender pay gap in column 4 is the only coefficient in any of the models which is statistically insignificant. The coefficient is interpreted as follows: once grade, the Higher pay scale, working patterns and non-basic pay are accounted for, men earn 0.4 per cent more than women on average, but this 0.4 per cent is statistically indistinguishable from zero. This result of a zero pay gap once observable characteristics are controlled for is expected, given the non-discriminatory nature of civil service pay structures.

Oaxaca-Blinder decomposition

In order to determine the relative importance of different observable characteristics to the gender pay gap, this section estimates an Oaxaca-Blinder decomposition. An Oaxaca-Blinder decomposition decomposes the difference in male and female earnings into the 'endowment' component that is due to men having more favourable characteristics than women, such as being in more senior grades, and into the component that is due to men and women earning a different return for given characteristics, which is typically thought to reflect pay discrimination. However, the decomposition cannot capture all the gender segregation effects between men and women, as some observable characteristics, such as grade and working patterns, may themselves reflect indirect forms of gender discrimination if, for example, caring and domestic responsibilities place a constraint on work life and career progression for women.

Given that an objective of this paper is to separate out the impact of individual characteristics on the gender pay gap in order to assist policy reform, it is also important to be aware of an identification problem associated with the use of dummy variables in decompositions where the number of categorical dummies exceed one (Oaxaca & Ransom, 1999). Specifically, it is not possible to estimate the relative effects of any particular dummy variable, as the impacts will change depending on the reference category used. Variables affected by the identification problem are grade and FTE status. To overcome this problem, the approach of Yun (2005) is followed to estimate the decompositions imposing a normalising restriction on each set of dummy variables, i.e. effects are expressed as deviation contrasts from the grand mean.

The raw salary gap is 15 per cent in Table 16 (the coefficient from column 1 in Table 15). Decomposing the raw salary gap using the Oaxaca-Blinder decomposition, it can be established that approximately three-quarters of the gap is due to grade differences, while approximately one-quarter is due to working patterns. A negligible amount is due to patterns of non-basic pay (2 per cent).

Table 16: Decomposing the gender pay gap

	<i>Share of endowments (%)</i>	
Due to endowments (E) – men having more favourable characteristics than women	0.147	
Of which: Grade patterns	0.109	74
Working patterns	0.035	24
Non-basic pay patterns	0.004	2
Coefficient effect (C)	-0.004	
Shift effect (U)	0.004	
Raw differential [$R=(E+C+U)$] – the raw gender pay gap	0.147	
Adjusted differential (C+U) – what is due to pay discrimination	0.000	
Endowments as % of gender pay gap [E/R]	1.000	

Source: Revenue analysis.

None of the gap is explained by men earning a different return for the same characteristics (although this would typically be the case in economy-wide studies of gender pay where salaries are negotiated rather than set by government pay circulars). The decomposition thus establishes that the gender pay gap does not result from direct gender discrimination. However, given that grade is the dominant explanation for the gap, and non-observable gender barriers to career advancement may exist, the next section looks at grade in more detail.

Gender inequalities in reaching senior grade positions

Given the importance of grade differences in explaining the gender wage gap, this section examines how gender affects the likelihood of reaching the most senior grades in Revenue, defined here as AP or higher. Currently, 9 per cent of Revenue staff are in senior grades. A total of 12 per cent of all men are in senior grades while 7 per cent of all women are in senior grades.

The results from the logistic model are expressed as odds ratios: a value of 1 means that men have the same chance of occupying AP positions as women, values smaller than 1 mean that men are less likely to do so, and values greater than 1 indicate that men are more likely to do so.

In Table 17, column 1 highlights that men are 1.8 times more likely than women to be in senior grades in Revenue, which is in keeping with the descriptive analysis in previous sections. However, other factors beyond gender will influence the odds ratio.

When age and human capital accumulation (proxied here by tenure) are added, the likelihood of a man being in a senior grade remains roughly 1.8 times that of a woman (columns 2 and 3). Given the gender distribution of these factors is reasonably even in Revenue, this outcome is not surprising.

It is only when working patterns are accounted for that the odds ratio drops substantially from 1.8 to 1.5. This implies that when comparing men and women with the same working patterns, the same age and the same human capital, men's odds of having reached a senior grade are 50 per cent higher than those of women.

Some divisions in Revenue are notable for their higher share of senior grades, which would be a factor favourably influencing the likelihood of attaining these grades.¹¹ When this is added as a final explanatory variable in column 6, the odds ratio narrows slightly to 1.4.¹²

This model shows that gender differences in accessing senior positions persist when several key influences are held constant, in particular working patterns, which can to a large extent be interpreted as reflecting caring duties of children and relatives.

However, there are important factors which are not available in the data, such as breaks in employment or the likelihood of entering promotion competitions, which may also influence the gender differences in outcome. As documented by Bosquet et al. (2019), women in the French public sector are much less likely to apply for promotion than men, and investigating this phenomenon in the Irish public sector would be a useful avenue for future research.

¹¹ The organisation-wide share of senior grades is 9 per cent. The Revenue Board, all legislation divisions, High Wealth Individuals, Large Corporates and the Planning Divisions all have a share that is at least double this.

¹² If senior grade is defined as PO grade or higher, the results remain broadly similar albeit slightly higher (1.5 instead of 1.4 in the final model in column 5).

Table 17: Probability of being in senior grade in Revenue

	(1)	(2)	(3)	(4)	(5)
Male (dummy variable)	1.745*** (0.147)	1.805*** (0.153)	1.807*** (0.153)	1.496*** (0.130)	1.354*** (0.124)
Tenure (in years)		1.019*** (0.003)	1.028*** (0.005)	1.031*** (0.005)	1.033*** (0.006)
Age (in years)			0.985** (0.007)	0.987* (0.007)	0.993 (0.007)
Full-time employee (dummy variable)				3.022*** (0.478)	3.106*** (0.507)
Senior-grade-dominated division (dummy variable)					8.459*** (0.843)
Constant	0.078*** (0.005)	0.050*** (0.005)	0.084*** (0.021)	0.029*** (0.009)	0.015*** (0.005)
Observations	6,944	6,944	6,944	6,944	6,944
Pseudo R-squared	0.0103	0.021	0.0221	0.0368	0.1344

Source: Revenue analysis.

Notes: Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

All coefficients in this logistic model are odds ratios. For example, the coefficient for senior-grade-dominated division is read as follows: holding gender, tenure, age, and full-time status constant across employees, an employee in a senior-grade-dominated division is 8.5 times more likely to reach a senior grade than an employee in another division.

Policy recommendations

This paper found that approximately three-quarters of the gender pay gap in Revenue is due to grade differences, while approximately one-quarter is due to working patterns. In light of these results, this section considers what policies may improve participation and success rates for women in job competitions, as well as the role of flexible work in the civil service, a mode of work receiving greater prominence since the onset of Covid-19.

In the review conducted by Russell et al. (2017), several barriers to promotion which impact women in the Irish civil service are highlighted. A lack of self-confidence among women is one factor. The authors cite a study by *Harvard Law Review* which found that women tend to apply for promotion when they believe they meet four out of

five criteria, whereas men tend to apply if they meet two out of five. Russell et al. (2017) suggest several policy recommendations which may increase the confidence and the numbers of women applying for promotion. Increased mentoring and coaching may actively encourage staff to apply for promotions. This would enhance the confidence of staff to apply for new positions or transfer to different roles. Mentoring may also improve efficiency within departments as it may increase the transfer of skills and expertise. Another recommendation is to implement career development supports which would help staff, both those actively seeking promotion and those not, to develop skills and competencies across a range of functions. These supports would aim to develop the skills of staff and diversify their work experience, which would help enhance their contribution within their department.

The number of part-time workers, both male and female, among those at higher grades within Revenue is very low or zero. Russell et al. (2017) highlight the need for a greater openness to flexible working arrangement across grades and departments. The authors suggest this could be achieved by structuring jobs as sets of tasks which could be configured differently across members of staff. Allocating employees to different functions could be done based on FTE numbers rather than headcount, which could help managers to be more open about their staff working flexible hours. Flexible work practices are likely to be a much stronger norm in the post-pandemic world, but, as highlighted by Nicks et al. (2021), it is important that they are regularly monitored to assess any unintended unequal impacts regarding pay and promotion, particular if there is a gendered pattern to their uptake.

The Australian Public Service (APS) provides an empirical example of a targeted approach to both flexible working and promotion. Under their action plan, *Balancing the Future: Australian Public Service Gender Equality Strategy 2016–2019*, the APS introduced measures to increase both the number of women overall in the service as well as in higher grades. One such initiative is ‘All Roles Flex’, where the objective is that any job in the APS can be done flexibly, through job-share, part-time hours or working remotely. All agencies in the APS now adopt a ‘flexible by default’ approach. Other adopted measures include driving an enabling culture within the APS and measuring and evaluating their gender balance in order to highlight problematic areas within departments. When the action plan was reviewed, the share of female secretaries, the highest grade in the APS, had increased from 26 per cent to 50 per cent, while the percentage of staff using flexible

working conditions had modestly increased from 47.2 per cent to 50.9 per cent, with a key takeaway being that flexible work could be influenced by positive role modelling (McIntyre et al., 2018). The latter finding, in particular, has relevance for the transition away from Covid-19 work patterns.

Finally, there is also scope to adjust public policy more broadly. Russell et al. (2019) found that, even when in paid work, women perform considerably more care work than men. It is unlikely that policies to support career progression or flexible work practices will be sufficient to curb this tendency. The imbalance could be addressed, though, by rethinking current policy design and promotion of paternity and parental leave, or by allowing unpaid maternity leave to be taken by either parent. These types of broader policy initiative around caring responsibilities may influence the choices of both men and women in the workplace and indirectly assist female career progression.

Conclusion

Women make up the majority of those employed in Revenue but are underrepresented at most senior grades and overrepresented at junior grades. Women are five times more likely than men to work part-time. Women in junior grades are also more likely than men to be at the top point of their pay scale, suggesting the presence of grade stagnation (women not applying for or obtaining promotion). Further to this, once working patterns (part-time status) and other explanatory factors are accounted for, men remain 1.4 times more likely than women to be in senior grades. These factors all contribute to a raw gender pay gap of 16 per cent. In all of the most common civil service grades, salaries for women are typically lower than for men.

The analysis decomposes the gender pay gap into its constituent parts, with grade differences being the leading cause of the pay gap. They account for approximately three-quarters of the gap, while approximately one-quarter is due to working patterns. The statistical model designed to account for these various factors results in a gender pay gap of zero. In other words, there is no unidentified explanation, such as wage discrimination, for the existence of Revenue's gender pay gap.

That said, the leading role of grade in the explanation requires further reflection. Women may face barriers to career progression, often linked to their caring responsibilities, and this can be understood as a form of indirect gender discrimination. Introducing measures to

facilitate promotions for all staff would likely have particular benefits for women in Revenue, given the patterns identified in this report. The action plan of the APS also provides useful insights on restructuring the role of flexible working in the civil service, but any such practices should be regularly monitored to guard against unintended unequal impacts in pay and promotion.

The Gender Pay Gap Information Bill, when enacted, will require employers to publish information in relation to the remuneration of their employees by reference to gender. It is the hope that the publication of the type of analysis provided in this article will lead to greater transparency within the workforce and help to identify and overcome the factors that contribute towards the gender pay gap. Future research could usefully analyse in further detail the interaction between grade patterns and working patterns, as well as identify the propensity of women to seek promotions, in order to continue to advance understanding of Revenue's gender pay gap.

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