Workforce Gender Segregation in Australia

Background Paper: Analysis of Supply-Side Drivers using HILDA data

Analysis of Supply-Side Drivers using HILDA data

Further information relating to this report may be obtained by emailing info@treasury.wa.gov.au.

Contents

Background

This paper discusses the methodology and findings of the econometric analysis conducted by WA Treasury on the supply-side correlates of workforce gender segregation using Household Income and Labour Dynamics of Australia (HILDA) survey data.[1]

The objective of the analysis is to examine factors underlying the sorting of men and women between female-dominated and male-dominated occupations and industries.

The analysis was conducted as an input to the report on Workforce Gender Segregation in Australia prepared for the Council on Federal Financial Relations (CFFR).

[1] The HILDA Survey was initiated and is funded by the Australian Government Department of Social Services (DSS) and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). The findings, views and any errors or omissions are those of the authors.

Purpose and Scope

Gender workforce segregation – the tendency for women and men to work in different occupations and industries – is a persistent feature of labour markets all over the world, irrespective of the level of socio-economic development.

Explanations for occupational gender segregation are generally categorised in the literature into supply-side and demand-side factors.[2] Supply-side explanations focus on the worker – their values, aspirations, educational attainment, and household roles and responsibilities – as factors explaining distinct career outcomes between men and women. On the other hand, demand-side explanations focus on decisions and actions by employers, such as gender-biased recruitment, selection and hiring practices, evaluation and promotion practices, and overall workplace culture, as factors influencing occupational choice. It is important to note that some factors operate on both the supply and demand sides. These include factors such as gender stereotyping and cultural norms around gender.

The purpose of this paper is to add to the quantitative evidence base on supply-side correlates of segregation, to help inform the development of policies to address gender segregation in the Australian workforce. In particular, this paper analyses the influence of three key supply-side factors – unpaid caring responsibilities, education attainment, and parental influence – on shaping distinct career outcomes between men and women. A more detailed discussion of how these factors influence segregation is provided below.

[2] See Carranza E, Das S, and Kotikula A (2023), Gender-Based Employment Segregation: Understanding Causes and Policy Interventions, the World Bank Group, for a detailed survey of the literature.

Methodology

The analysis employs a multinomial logistic regression approach. This approach was preferred over a standard binomial model (i.e., logistic or probit model) as it allows us to examine three or more outcomes in the dependent variable – in this case the sorting of men and women between gender-neutral, female- and male-dominated occupations and industries.

It is important to note that the results should be interpreted in terms of correlations[3] rather than causality due to concerns about omitted-variable bias and reverse causality, which are likely to occur given the multidimensional and inter-woven nature of the issue at hand. This means that while a significant relationship between two variables exists, it does not necessarily imply that a change in one variable causes a change in the other (cause-and-effect relationship).

Correlates of occupation and industry outcomes are examined using the following reduced form equation:

$$IND_i \text{ or } OCC_i = \alpha + \beta_1 CHDCARE_i + \beta_2 EDUPATH_i + \beta_3 INGEN_i + CONTROLS_i + \varepsilon_{i,}$$

The dependent variables (*IND* and *OCC*) are nominal (unordered) outcomes variables, which refer to the gender composition of the industry (IND) or occupation (OCC) that the individual is currently employed in (or previously employed in if currently unemployed).

There is no consensus in the literature on the threshold where an industry or occupation becomes female-dominated or male-dominated. This report follows the approach taken by the Committee for Economic Development of Australia (CEDA), which classifies an industry or occupation as female-dominated if the female share of employment is 70 or more, and male-dominated if the female share is 30 percent or less. This approach allows us to focus on occupations and industries where gender segregation is most pronounced. The degree of gender segregation by occupation and industry (see Appendix 1 for details) was measured using ABS 2021 Census Data (ANZSCO 2-digit and ANZSIC 1-digit level).

The key explanatory variables of interest are childcaring responsibilities (*CHDCARE),* post-secondary education pathways *(EDUPATH),* and parental influence *(INGEN)*. In addition, we control for a set of individual-level covariates (*CONTROLS*) such as age, gender, marital status, country of birth and state of residence. α is a constant term. ε is a stochastic error term, representing the influences of omitted variables.

[3] A correlation between variables does not automatically mean that the change in one variable is the cause of the change in the values of the other variable.

HILDA is an annual household-based longitudinal survey, which follows around 17,000 individuals each year since 2001. We employ data from the 20th wave of the 'general' version of the HILDA Survey, supplemented by data on employment by occupation and industry from the ABS 2021 Census. The 20th wave was preferred over the latest wave (21st) based on the availability of data for the key variables of interest in the baseline regression equation.

We obtained estimates for the full sample as well as gender-based subsamples to tease out any gender specific factors that may contribute to employing occupation/industry outcomes.

The rationale for variable choice and operationalisation of key explanatory variables using HILDA are discussed in detailed below.

Rationale and Variable Description

This section discusses the rationale for inclusion of key explanatory variables and a description of the variables (see Appendix 2 for details on how the variables were constructed).

To examine the impact of childcaring responsibilities and its influence on occupation and industry choice, we test the share of time devoted to caring for children (CCTIME) as a proxy variable. Based on the literature, we hypothesize that men and women who are responsible for looking after dependent children are less likely to work in male-dominated occupations and industries compared to female-dominated occupations and industries. This hypothesis is underpinned by two arguments. First, a greater burden of unpaid care (which has historically fallen on women) restricts the types of suitable jobs and roles.[4] The primary care givers of children are more likely to be drawn into careers that offer flexible work arrangements to help them manage unpaid care responsibilities including child and elder care around work commitments. Second, primary caregivers are also more likely to be locked out of 'greedy jobs' that reward individuals for long hours and hours worked at specific times of the day.[5]

[4] Okamoto, Dina & England, Paula. (1999). Is There a Supply Side to Occupational Sex Segregation? Sociological Perspectives. 42.

[5] Sobeck, Kristen (2022), Greedy jobs, labour market institutions, and the gender pay gap, Accessed 9 August 2023.

Post-secondary education choices have been identified in the literature as a driver of workforce gender segregation.[6,7] We hypothesize that vocationally-qualified and STEM-qualified men and women are more likely to be employed in male-dominated industries relative to female-dominated and gender-neutral ones. We explore this by including variables on the type of post-secondary education (EDTYPE) and the field of education (EDFIELD). Entry into and career progression in a particular occupation often requires a particular qualification. This educational requirement can 'lock in' workforce gender segregation if there is also gender segregation in the educational decisions made by males and females before they enter the workforce.

The literature suggests that the type of education (i.e., vocational compared to university education) is associated with gender segregation. Likewise, industries and occupations which require Science, Technology, Engineering and Mathematics (STEM) qualifications are more likely to be gender segregated compared to those that require non-STEM qualifications. It is important to note that we do not examine the factors influencing education pathways but rather, assuming that the education pathway is a given, we examine its influence on occupation and industry outcomes of individuals.[8]

Social and cultural views around gender appropriate roles and occupations can also have a bearing on workforce segregation.[9,10] These gender stereotypes are the product of multiple influences, including family attitudes to gender, available role models, and the influence of peers. Parents are argued to be a key agent of socialisation - shaping individuals' attitudes, aspirations, and expectations. They provide the early messages, models, and reinforcements in the development of gender identity and gender-typed behaviours that influence occupational choice. It is argued that adolescents are more likely to choose a field of study that resembles their parents' occupational field owing to the intergenerational transmission of occupation-specific skills, cultural capital, social networks, but also occupation-specific aspirations and beliefs.[11,12]

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6 Smyth, E., & Steinmetz, S. (2008). Field of Study and Gender Segregation in European Labour Markets. International Journal of Comparative Sociology, 49(4-5), 257-281.

7 Smyth, Emer & Steinmetz, Stephanie. (2015). Vocational Training and Gender Segregation Across Europe. Comparative social research.

8 HILDA data does not lend itself to the analysis of factors influencing education choice - the Longitudinal Surveys of Australian Youth (LSAY) would be a more appropriate data set to examine this.

9 Corcoran, Mary E & Courant, Paul N, 1985. 'Sex Role Socialization and Labor Market Outcomes', American Economic Review, American Economic Association, vol. 75(2), pages 275-278, Ma

10 Carranza E, Das S, and Kotikula A (2023), Gender-Based Employment Segregation: Understanding Causes and Policy Interventions, the World Bank Group

11 Busch-Heizmann, Anne. (2015). Supply-Side Explanations for Occupational Gender Segregation: Adolescents' Work Values and Gender-(A)Typical Occupational Aspirations. European Sociological Review. 31. 48-64.

12 Goldin, C., & Katz, L. F. (2011). The Cost of Workplace Flexibility for High-Powered Professionals. The ANNALS of the American Academy of Political and Social Science, 638(1), 45–67

To examine the influence of parents on employment outcomes, we proxy parental influence by including the gender balance of the father's (FOCC) and mother's (MOCC) occupations as independent variables. We hypothesise that men and women whose parents were employed in female-dominated industries and occupations are more likely to be employed in female-dominated industries relative to male-dominated ones. However, given that parental influence on an individual's career choice naturally extends beyond the parents' occupations, interpretation of these variables should be approached with caution.

We control for several individual-level covariates, including citizenship status (MIGRANT), marital status (PARTNERED), age (AGEGROUP), state of residence (STATE) and gender (in the full sample).

Results

Tables 1 and 2 report regression estimates for the occupation and industry specifications respectively. Columns 1 and 2 of each table report estimates for the full sample controlling for gender. Columns 3 and 4 report estimates for the male sample, and Columns 5 and 6 report estimates for the female sample.

The results present the coefficient estimates in the form of relative risk ratios (RRRs), with male-dominated occupation/industry selected as the reference category. In general, if an RRR is greater than 1, then this indicates that with increasing values of the variable of interest there is an increased likelihood of a case falling into a female-dominated or gender-neutral occupation/industry than a male-dominated occupation/industry. If the RRR is less than 1, then this indicates that with increasing values of the variable of interest there is decreased likelihood of an individual falling into the female-dominated or gender-neutral occupation or industry relative to a male dominated one. If the RRR equals 1, then there is no relationship between the variable of interest.

Results for occupational gender segregation

Child-caring responsibilities: For the variable CCTIME, only the RRR for the female sample (column 6) is statistically significant, suggesting that all else being equal, a 1 percent increase in the share of weekly time devoted to looking after children is associated with an increase in the likelihood of a woman being employed in a female-dominated occupation compared to a male-dominated occupation by 2.71 times. However, the results indicate that a similar relationship does not hold true for men. It is important to note that the analysis does not explain why this is the case, i.e., it does not allude to what features of the female-dominated occupations are resulting in this relationship.

Post-secondary education: The RRRs for the variable EDTYPE are statistically significant across all samples. Based on the full sample (column 2), this suggests that all else equal, the likelihood of a vocationally qualified person being employed in a female-dominated occupation is 0.2 times that of a university qualified person. This relationship holds true for both gender subsamples (columns 4 and 6). This suggests that vocationally qualified individuals are less likely to be employed in a female-dominated occupations and more likely to be employed in a male-dominated occupation. At the same time, it also suggests that holding all else equal, university qualified individuals are more likely to be employed in a female-dominated occupation and less likely to be employed in a male-dominated one. We observe a similar relationship in columns 1, 3 and 5 for gender-neutral occupations.

The RRRs for the variable EDFIELD are statistically significant across all samples. Based on the full sample (column 2), this suggests that, holding all else equal, the likelihood of a non-STEM qualified person being employed in a female-dominated occupation is 7.5 times that of a STEM qualified individual. The relationship also holds true for both subsamples (columns 4 and 6), suggesting that STEM qualified individuals are less likely to be employed in female-dominated occupations and more likely to be employed in a male-dominated occupation. At the same time, it also suggests that non-STEM qualified individuals are more likely to be employed in a female-dominated occupation and less likely to be employed in a male dominated one. We could also observe from columns 1, 3 and 5 that a STEM qualified individual is more likely to be employed in male-dominated occupations relative to gender neutral ones and vice versa.

Parent's occupations: The RRRs for the variable FOCC in column 2 are statistically significant. This suggests that if an individual's father worked in a female-dominated occupation when he/she was 14 years of age, the likelihood of the individual being employed in a female-dominated occupation is 1.5 times of being in male-dominated one. The results for the male and female subsamples are not statistically significant, hence we do not find that this relationship varies by gender. We also do not find any statistical evidence to suggest that mother's occupation has an influence on occupation choice.

The control variables in the regression such as age, state of residence, marital status and citizenship status are not statistically significant, suggesting that they do not have a major bearing on influencing occupational outcomes of individuals. As expected, the estimated coefficients on gender are large and highly significant.

Results for industry gender segregation

Child-caring responsibilities: The RRR for CCTIME for the female sample is statistically significant and suggests that all else being equal, a 1 percent increase in the share of weekly time devoted to looking after children is associated with an increase in the likelihood of a woman being employed in a female-dominated industry compared to a male-dominated one by 3.6 times. This indicates that women with greater childcare responsibilities are more likely to be employed in a female-dominated industry compared to a male-dominated one. The results indicate that a similar relationship does not hold for men. It is important to note that the analysis does not explain why this is the case, i.e., it does not allude to what features of the female-dominated industries that are driving this choice.

Post-secondary education: The results for the variables on education suggest that vocationally qualified individuals are less likely to be employed in a female-dominated industries and more likely to be employed in a male-dominated industries. At the same time, it also indicates that a university qualified individual is more likely to be employed in a female dominated industry and less likely to be employed in a male-dominated one. Likewise, a STEM qualified individual is less likely to be employed in female-dominated industry and more likely to be employed in a male-dominated one. At the same time, it also suggests that non-STEM qualified individuals are more likely to be employed in a female-dominated industry and less likely to be employed in a male dominated one. This result is consistent with the result for occupational segregation.

Parent's occupations: Our results do not provide any statistical evidence to suggest that parental occupation influences industry gender segregation.

Other variables in the regression such as age, state of residence, marital status and citizenship status are not statistically significant suggesting that they do not have a major bearing on industry gender segregation. As expected, the estimated coefficients on gender are large and highly significant.

Table 1: Correlates of Employing Occupation (Relative Risk Ratios)

	DEPENDENT VARIABLE: OCCUPATION (REF: MALE-DOMINATED)					
	FULL SAMPLE		MALE SAMPLE		FEMALE SAMPLE	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	GENDER-NEUTRAL	FEMALE-DOMINATED	GENDER-NEUTRAL	FEMALE-DOMINATED	GENDER-NEUTRAL	FEMALE-DOMINATED
CCTIME	0.933	1.674	0.612	1.081	1.553	2.767*
	(0.334)	(0.630)	(0.294)	(0.696)	(0.958)	(1.701)
EDTYPE (REF: ACADEMIC)						
VOCATIONAL	0.283***	0.249***	0.246***	0.132***	0.533***	0.556***
	(0.0271)	(0.0270)	(0.0276)	(0.0211)	(0.108)	(0.113)
NO POST SECONDARY	0.332***	0.282***	0.324***	0.132***	0.488***	0.525***
	(0.0442)	(0.0434)	(0.0507)	(0.0340)	(0.129)	(0.139)
EDFIELD (REF: STEM)						
non-STEM	3.580***	7.563***	3.387***	6.774***	4.463***	8.911***
	(0.316)	(0.856)	(0.337)	(1.014)	(0.881)	(1.849)
FOCC (REF: MALE- DOMINATED)						
GENDER-NEUTRAL	1.328***	1.222***	1.419***	1.206	1.188	1.141
	(0.119)	(0.125)	(0.147)	(0.180)	(0.223)	(0.215)
FEMALE-DOMINATED	1.656***	1.541***	1.758***	1.409	1.584	1.570
	(0.255)	(0.265)	(0.308)	(0.332)	(0.551)	(0.547)
MOCC (REF: MALE-DOMINATED)						
GENDER NEUTRAL	1.183	1.143	1.222	1.198	1.112	1.065
	(0.189)	(0.210)	(0.231)	(0.341)	(0.350)	(0.336)
FEMALE DOMINATED	1.114	1.191	1.084	1.170	1.316	1.381
	(0.177)	(0.216)	(0.204)	(0.327)	(0.413)	(0.435)
GENDER (REF: MALE)						
FEMALE	4.006***	12.221***				
	(0.421)	(1.400)				
CONSTANT	1.071	0.239***	1.290	0.312***	2.042	1.448
	(0.267)	(0.0689)	(0.379)	(0.135)	(0.989)	(0.706)
NO OF OBSERVATIONS	**5,326**	**5,326**	**2,492**	**2,492**	**2,834**	**2,834**

1. Sample - Working Age Population (15-64 Years)
2. Other variables in the regression included marital status (partnered or not), citizenship status (migrant or not), age, state of residence.
3. Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 2: Correlates of Employing Industry (Relative Risk Ratios)

	DEPENDENT VARIABLE: INDUSTRY (REF: MALE-DOMINATED)					
	FULL SAMPLE		MALE SAMPLE		FEMALE SAMPLE	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	GENDER-NEUTRAL	FEMALE-DOMINATED	GENDER-NEUTRAL	FEMALE-DOMINATED	GENDER-NEUTRAL	FEMALE-DOMINATED
CCTIME	1.799	3.247***	1.881	2.472	1.813	3.590**
	(0.719)	(1.373)	(1.003)	(1.695)	(1.126)	(2.233)
EDTYPE (REF: ACADEMIC)						
VOCATIONAL	0.397***	0.182***	0.343***	0.124***	0.638**	0.318***
	(0.0426)	(0.0218)	(0.0439)	(0.0209)	(0.136)	(0.0682)
NO POST SECONDARY	0.468***	0.161***	0.394***	0.106***	0.751	0.268***
	(0.0675)	(0.0275)	(0.0675)	(0.0289)	(0.214)	(0.0786)
EDFIELD (REF: STEM)						
non-STEM	2.530***	5.977***	2.493***	5.943***	2.265***	5.026***
	(0.247)	(0.720)	(0.275)	(0.907)	(0.509)	(1.185)
FOCC (REF: MALE- DOMINATED)						
GENDER-NEUTRAL	1.143	1.076	1.269**	1.108	0.835	0.830
	(0.110)	(0.118)	(0.141)	(0.170)	(0.167)	(0.168)
FEMALE-DOMINATED	1.111	1.212	1.138	1.145	0.984	1.115
	(0.182)	(0.218)	(0.214)	(0.272)	(0.336)	(0.381)
MOCC (REF: MALE-DOMINATED)						
GENDER NEUTRAL	1.026	0.864	1.075	1.046	0.763	0.608
	(0.177)	(0.170)	(0.209)	(0.303)	(0.325)	(0.260)
FEMALE DOMINATED	1.008	0.987	1.115	1.441	0.626	0.554
	(0.173)	(0.193)	(0.217)	(0.409)	(0.263)	(0.234)
GENDER (REF: MALE)						
FEMALE	2.478***	7.403***				
	(0.285)	(0.920)				
CONSTANT	1.931**	0.580*	2.098**	0.444*	4.857***	5.333***
	(0.505)	(0.175)	(0.640)	(0.197)	(2.712)	(3.006)
Observations	**5,305**	**5,305**	**2,481**	**2,481**	**2,824**	**2,824**

1. Sample - Working Age Population (15-64 Years)
2. Other variables in the regression included marital status (partnered or not), citizenship status (migrant or not), age, state of residence. In models 1 & 2 (for the full sample) we also control for gender.
3. Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Discussion

In this paper we set out to empirically examine the supply-side factors underpinning gender workforce segregation. We find that childcare responsibilities, education pathways and father's occupations are correlated with occupational outcomes that in turn can underpin occupational gender segregation.

Our findings suggests that women with childcare responsibilities are less likely to be employed in male-dominated occupations and industries, and more likely to be employed in female-dominated occupations and industries. We do not find a similar relationship for men – indicating that women's' occupation and industry outcomes are sensitive to childcare responsibilities, but this is not the case for men.

This result is consistent with the literature which suggests that primary carers - who have historically been women – are more likely to seek employment in occupations and industries that offer flexibility to organise work around family commitments. Male-dominated industries, such as construction and mining, generally tend to offer less flexibility to arrange work commitments around care responsibilities.

We also find that the choice of post-secondary education pathway can have a bearing on workforce segregation due to its impact on which occupation and industries an individual is qualified to enter. Taking into account the gender composition of labour force in terms of educational attainment – where only 42 percent of the vocational workforce are women (compared to the 58 percent of men)[13] and only 29 percent of STEM workforce are women (compared to the 71 percent of men)[14] – it is reasonable to assume that the gender imbalance in educational attainment in the labour force is passed on to the labour market in the form of driving distinct occupation and industry outcomes for men and women. This could also indicate that the gender-segregating factors that influence career choices may be manifesting earlier in life, influencing individuals' decisions regarding their education pathways.

We also find some evidence to suggest that the father's occupation can influence an individual's occupation choice. An individual whose father was employed in a female-dominated occupation is more likely to be employed in a female-dominated occupation relative to a male-dominated one. We do not find any evidence to suggest that a mother's occupation has a bearing on occupation outcomes. It is important to note that parental influence on an individual's career choices naturally can extend beyond the parents' occupations, the variable examined here (i.e., parents' occupation) does not fully capture this, hence these results must be interpreted with caution.

[13] Australian Bureau of Statistics (2023), Labour Force Surveys

[14] Commonwealth of Australia (2022), 'Australia's STEM Workforce', Office of Chief Scientist

Appendix 1: Classification of Industries and Occupations

Gender Segregation by Occupation (ANZSCO 2 Digit)

HILDA Code	Occupation	Female Share of Employment
Female-Dominated		
24	Education Professionals	72.3
25	Health Professionals	75.3
41	Health and Welfare Support Workers	75.1
42	Carers and Aides	84.8
51	Office Managers and Program Administrators	74.3
52	Personal Assistants and Secretaries	96.6
53	General Clerical Workers	85.8
54	Inquiry Clerks and Receptionists	84.2
55	Numerical Clerks	77.6
63	Sales Support Workers	72.6
Male-Dominated		
11	Chief Executives, General Managers and Legislators	29.6
12	Farmers and Farm Managers	27.7
26	ICT Professionals	21.2
30	Technicians and Trades Workers,	7.9
31	Engineering, ICT and Science Technicians	28
32	Automotive and Engineering Trades Workers	2.2
33	Construction Trades Workers	1.8
34	Electrotechnology and Telecommunications Trades Workers	2.8
44	Protective Service Workers	23.1
70	Machinery Operators and Drivers	7.3
71	Machine and Stationary Plant Operators	15.2
72	Mobile Plant Operators	5.0
73	Road and Rail Drivers	8.3
74	Store persons	26.7
80	Labourers	14.7
82	Construction and Mining Labourers	3.2
84	Farm, Forestry and Garden Workers	28.6
89	Other Labourers	24.1

HILDA Code	Occupation	Female Share of Employment
Gender-Neutral		
10	Managers	35.7
13	Specialist Managers	39.6
14	Hospitality, Retail and Service Managers	49.2
20	Professionals	54.4
21	Arts and Media Professionals	51.8
22	Business, Human Resource and Marketing Professionals	53.0
23	Design, Engineering, Science and Transport Professionals	34.3
27	Legal, Social and Welfare Professionals	67.9
35	Food Trades Workers	33.0
36	Skilled Animal and Horticultural Workers	34.3
39	Other Technicians and Trades Workers	47.1
43	Hospitality Workers	69.6
45	Sports and Personal Service Workers	65.2
50	Clerical and Administrative Workers	69.6
56	Clerical and Office Support Workers	38.0
59	Other Clerical and Administrative Workers	55.2
60	Sales Workers	50.4
61	Sales Representatives and Agents	45.3
62	Sales Assistants and Salespersons	62.8
83	Factory Process Workers	37.5
85	Food Preparation Assistants	47.7
81	Cleaners and Laundry Workers	60.8

Gender Segregation by Industry (ANZSIC 1 Digit)

HILDA Code	Industry	Female Share of Employment
Female-Dominated		
16	Education and Training	73.0
17	Health Care and Social Assistance	75.8
Male-Dominated		
2	Mining	18.7
3	Manufacturing	29.5
4	Electricity, Gas, Water and Waste Services	20.7
5	Construction	13.5
9	Transport, Postal and Warehousing	23.3
Gender-Neutral		
1	Agriculture, Forestry and Fishing	30.1
6	Wholesale Trade	31.5
7	Retail Trade	54.3
8	Accommodation and Food Services	55.1
10	Information Media and Telecommunications	40.6
11	Financial and Insurance Services	50.4
12	Rental, Hiring and Real Estate Services	53.8
13	Professional, Scientific and Technical Services	42.6
14	Administrative and Support Services	53.1
15	Public Administration and Safety	50.1
18	Arts and Recreation Services	45.1
19	Other Services	44.0

Appendix 2: Variable Definition and Construction

Variable	HILDA Variables	Coding Convention and Variable Construction
OCC	jbmo62/pjoto62	Measure of the degree of segregation in main employing occupation (1=Gender neutral; 2=Female-dominated, 3= Male-dominated) Degree of Gender Segregation by Occupation was measured using ABS 2021 Census Data (ANZSCO 2 - Digit) – Share of Females (30-70% - Gender neutral; 70% & over - Female-dominated; 30% & below – Male-dominated)
IND	jbmi61/pjoti61	Measure of the degree of segregation in main employing industry (1=Gender Neutral; 2=Female-dominated, 3= Male-dominated) Degree of Gender Segregation by Industry was measured using ABS 2021 Census Data (ANZIC 1 - Digit) – Share of Females (30-70% - Gender neutral; 70% & over – Female-dominated; 30% & below – Male-dominated)
CCTIME	lsemp lscom lserr lshw lsod lschd lsocd lsvol lscar	Share (%) of weekly time devoted to caring for children. lschd / (lsemp + lscom + lserr + lshw + lsod + lschd + lsocd + lsvol + lscar) *Note: only observations reporting less than 128 hours of weekly hours were used*
EDTYPE	edhigh1	Type of highest education qualification (1=Academic; 2=Vocational; 3=No Post Secondary)
EDFIELD	edpsqfd	Field of highest education qualification (1=STEM; 2=non-STEM).
FOCC	fmfo62	Gender balance of the individual's father's occupation when respondent was 14 years of age (1 = Gender-neutral; 2=Female-dominated, 3= Male-dominated) *Note: same methods used for OCC (above)*
MOCC	fmmo62	Gender balance of the individual's mother's occupation when respondent was 14 years of age (1 = Gender-neutral; 2=Female-dominated, 3= Male-dominated) *Note: same methods used for OCC (above)*

Variable	HILDA Variables	Coding Convention and Variable Construction
PARTNERED	mrcurr	Marital Status (1=Partnered; 0= Not Partnered)
MIGRANT	ancob	Migrant (1= Yes; 0= No)
AGEGROUP	hgage	Age Group (1=15-24 Years; 2 =25-34 Years; 3 = 35-44 Years; 4= 45-54 Years; 5= 55-64 Years; 6 = Over 65)
GENDER	hgsex	Gender (1 = Male; 2 = Female)
STATE	hhstate	State of Residence (1= NSW; 2=VIC; 3=QLD; 4=SA;5=WA;6=TAS; 7=NT; 8=ACT)