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Occupation and Subjective Wellbeing in Aotearoa New Zealand

Abstract

This article investigates the relationship between occupation and wellbeing in New Zealand, using data from the New Zealand General Social Survey (NZGSS), the New Zealand Household Economic Survey (HES) and administrative records. It addresses a gap in information available to inform career decisions beyond pay and working conditions. Findings reveal that while higher incomes generally correlate with higher life satisfaction, this isn't always the case, with some occupations reporting higher or lower life satisfaction than expected based on income alone. 'Defence force, firefighters and police officers', 'teachers', and 'air and marine transport professionals' all have an average level of life satisfaction that is well above what might be expected based on their incomes. By contrast, while 'legal professionals' (lawyers) have the second-highest average income in the dataset, their life satisfaction is below average and well below what might be expected based on their income. This information on the relationship between occupation and wellbeing can aid career decision making, as well as help to identify occupations needing support to improve worker wellbeing.

Keywords wellbeing, occupation, labour market, job satisfaction, gender equity

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The choice of career is one of the most important decisions a person makes in their life. In OECD countries, people spend around a third of their waking hours in paid work, while employment and workplace quality rank among the most important drivers of happiness (De Neve et al., 2018). Our occupation affects not only how much we earn, but also how we allocate our time, what we do during our days, and who we socialise with (Viñas-Bardolet, Guillen-Royo and Torrent-Sellens, 2018). While changing career is possible, it comes with significant costs in time, effort and forgone opportunities. For all of these reasons, deciding on a career is a decision where it is important to choose wisely.

Despite the significant impact of career choices on people's lives, limited information is available to inform career decisions. Labour market analysis typically emphasises pay and hours of work as the main characteristics of job quality. In addition, job advertisements often mention fringe benefits, such as flexible work arrangements, health insurance and annual leave. Yet information on pay, working hours and fringe benefits present only a partial picture of how choosing a particular job will affect a person's life. Much less

widespread is information on the overall level of wellbeing associated with different types of occupations (Tenaglia, 2022).

This article aims to address this gap by exploring the relationship between occupation and wellbeing, as measured through life satisfaction (a widely used subjective wellbeing measure), in the New Zealand context. At an individual level, this information can help school leavers and those changing careers make more informed decisions. At an aggregate level, it provides insights into which occupations are characterised by lower subjective wellbeing outcomes and may be in need of support. Promoting workplace wellbeing across occupations is important because happy employees are more engaged, productive and successful in their careers (Bryson, Forth and Stokes, 2017; Walsh, Boehm and Lyubomirsky, 2018). Moreover, research shows that work experiences can spill over into home life and influence the quality of family life and relationships (Ford, Wang and Huh, 2018).

Occupation and subjective wellbeing

Subjective wellbeing refers to people's subjective experiences of their wellbeing. It is usually measured through self-reported responses in a survey asking how the individual feels and thinks about his or her life. One such measure is overall life satisfaction, which captures people's responses to survey questions on how they evaluate their lives overall. Life satisfaction data has been shown to be meaningfully associated with the things we would expect to be important to wellbeing, such as good health, secure incomes and strong social relationships, as well as being able to predict people's behaviour in real-world settings (OECD, 2013).

There is well-established evidence that having a job has a strong positive impact on life satisfaction (Clark and Oswald, 1994, Winkelmann and Winkelmann, 1998; Kassenboehmer and Haisken-DeNew, 2009). Being employed enables people to meet their financial needs (Diener and Oishi, 2000; Schyns, 2000). However, studies show that there is much more to employment than income alone (Ray, 2021). Jobs influence people's wellbeing in a variety of ways, including through needs gratification (e.g., enabling people to meet their financial and interpersonal needs), offering opportunities for personal growth and providing meaning in one's life, as well as through the existence of work-related stressors (Erdogan et al., 2012).

For example, having learning and development opportunities at work has been shown to be associated with greater life satisfaction (Perrone, Webb and Blalock; 2005; Rice et al., 1985). Similarly, people who experience a supportive environment at work generally report higher levels of life satisfaction (Michel et al., 2009). Having a sense of autonomy is also important. Employees who can freely choose their work activities or the way in which they perform their tasks are more likely to find their work meaningful and enjoy higher satisfaction with life (De Cuyper, Notelaers and De Witte, 2009; Day and Jreige, 2002).

At the same time, work-related stressors, such as job-related tension and work–non-work conflict, can negatively affect people's experiences of wellbeing. Research in this area shows that daily hassles, such as problems with one's supervisor, unfair treatment, or disliking one's daily activities, are associated with lower life satisfaction (Maybery et al., 2007; Gadermann and Zumbo, 2007; Rochlen, Good and Carver, 2009).

Aspects of work can also have an impact on non-work domains – for example, through the spillover of work stress into family and other social relationships, the time available to meet obligations in the non-work domain, or the ability to make ends meet (Carlson and Kacmar, 2000; Matthews and Barnes-Farrell, 2010). Conversely, the skills learned at work (e.g., time management, planning and problem-solving skills) may enhance non-work experiences, including family life (Ayres and Malouff, 2007). Given the spillover effects of work on non-work outcomes, the main focus of this study is to provide information on the relationship between occupation and New Zealanders' overall life satisfaction.[1] In turn, additional information is provided on how this relates to their incomes as well as their job satisfaction.

Similar studies in the UK have shown how life satisfaction differs between people in different types of occupations. For example, analysing data from the UK annual population survey, 2012–22 by occupation, Tenaglia (2022) found that managers and directors showed the highest mean levels of life satisfaction. They were also those with the highest percentage of permanent jobs, highest median gross annual earnings, and those who enjoyed more autonomy (as measured by opportunities to work from home). In Tenaglia's study, caring and leisure[2] occupations presented the highest level of feeling that life is worthwhile, but also presented a high risk of stress and less financial stability. Those in elementary occupations,[3] as well as sales and customer service occupations, were more likely to experience low life satisfaction and worthwhileness. Using the same dataset, Fujiwara, Dolan and Lawton (2015) found that creative occupations (for which they constructed their own occupational code) generally had higher than average levels of life satisfaction, worthwhileness and happiness than employment in general, although most creative occupations are

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also characterised by higher levels of anxiety.

Making subjective wellbeing data available by occupation for the New Zealand context can help school leavers and those intending to make a career change make more informed decisions, as well as identify the need for specific policy intervention to help support the wellbeing of workers in certain types of occupations. To that end, this study seeks to answer the following questions:

- What is the average life satisfaction of New Zealanders by occupation at age 40 (mid-career) and how does this relate to their income?
- What is the relationship between income and job satisfaction in New Zealand and how is people's job satisfaction related to their overall life satisfaction?
- Does women's experienced life satisfaction across occupations differ from that of men?

Sales support workers have among the lowest average incomes of any occupation and also have one of the lowest average levels of life satisfaction, similar to the findings by Tenaglia ...

Data and measurement

The analysis in this study is based on data collected by Statistics New Zealand on the life satisfaction, job satisfaction, incomes, occupation and demographic characteristics of approximately 20,000 New Zealanders. Information on life satisfaction, job satisfaction, occupation and demographic characteristics comes from the New Zealand General Social Survey (NZGSS, 2014, 2016 and 2018) and the New Zealand Household Economic Survey (HES, 2018). Pooling and Z-standardising data on these indicators across multiple waves of the NZGSS and the HES ensured a larger number of observations and enabled more granular analysis across occupations.

Life satisfaction is measured on an 11-point scale using the following question in the NZGSS: 'Where zero is completely dissatisfied, and ten is completely satisfied, how do you feel about your life as a whole?' (0, completely dissatisfied – 10, completely satisfied). In the 2018 HES a 5-point labelled Likert scale was used (very dissatisfied, dissatisfied, no feeling either way, satisfied, very satisfied). Both the NZGSS and HES responses were Z-standardised to a mean of 0 and a standard deviation of 1 to allow for the data to be analysed jointly. Job satisfaction is available only in the NZGSS and is measured on a 5-point scale, with respondents asked: 'Please think about the last four weeks in your job. How do you feel about your job?' (1, very satisfied – 5, very dissatisfied). Incomes are calculated from administrative records. Estimated mean incomes are reported relative to 2014 wages and salaries and are adjusted by the consumers price index to reflect constant 2017 New Zealand dollars.

Occupational classification is based on the Australian and New Zealand Standard Classification of Occupations (ANZSCO) (Statistics New Zealand, 2019). ANZSCO (Version 1.3) consists of nine overarching categories: managers, professionals, technicians and trades workers, community and personal service workers, clerical and administrative workers, sales workers, machinery operators and drivers, labourers, and residual categories. The analysis in this article started from the level 4 classification, which is the most granular classification of occupations. Subsequently, occupations were grouped together to ensure a minimum of 50 observations per occupation, resulting in a total of 83 occupations in the final dataset.

The above information was analysed through the Integrated Data Infrastructure (IDI), an anonymised New Zealand dataset that allows researchers to access Statistics New Zealand information without being able to identify specific people in the data.[4] Only aggregate results – such as the averages reported here – can be released from the IDI. Regression analysis was used to obtain the average life satisfaction and income for each occupation after controlling for demographic effects. These estimates were then used to generate predicted values for life satisfaction and income for a representative person at age 40.

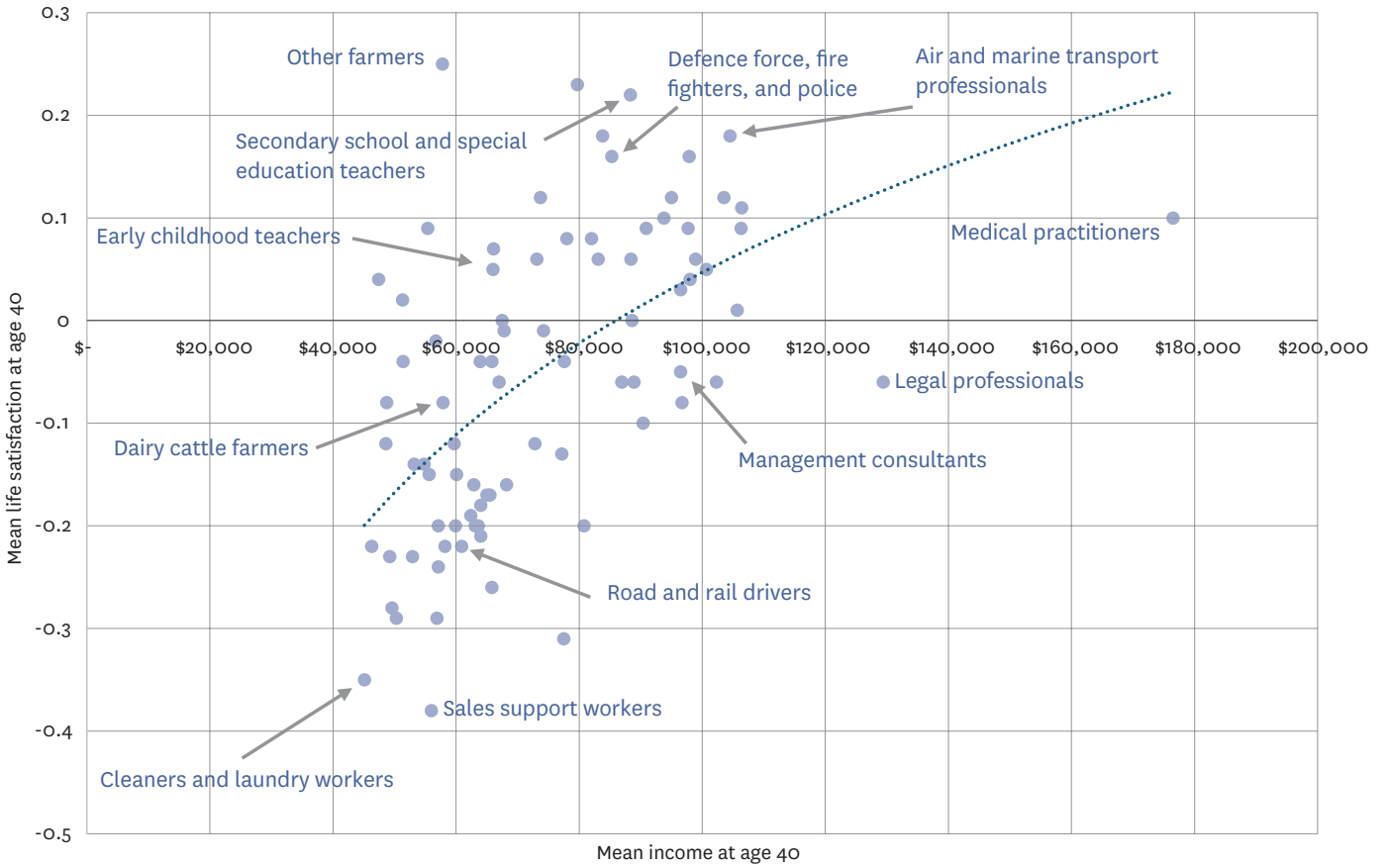
The results described below are based on three rounds of analysis. The first round of analysis explores the average life satisfaction of New Zealanders by occupation at age 40 (mid-career), in relation to their income. The second round of analysis takes a narrower view of the relationship between income and job satisfaction in New Zealand and explores how people's job satisfaction is related to their overall life satisfaction. The third round of analysis examines whether women's subjective wellbeing across occupation differs from that of men. All analyses were controlled for differences between occupations in age, sex and ethnicity.

Results

Occupation, income and life satisfaction

Figure 1 shows the average life satisfaction and average income for people in different occupations based on data from the NZGSS and HES together with administrative income data. After controlling for differences between occupations in age, sex and ethnicity, the expected life satisfaction and income of a person at age 40 (mid-career) for 83 different occupations was estimated. Each point plotted in Figure 1 represents a different occupation, with the height of the point on the vertical axis indicating the average life satisfaction of people in that occupation and the distance of the point on the horizontal axis showing the average income. Only a handful of examples are labelled in Figure 1, but Table 1 in the statistical appendix provides an overview of the expected income and life

Figure 1: Life satisfaction and income by occupation at age 40



Source: New Zealand General Social Survey, 2014–18, Household Economic Survey 2018, and IDI

satisfaction of a person at age 40 for all 83 occupations in the dataset.

The dotted line through the middle of Figure 1 shows the relationship between life satisfaction and income implicit in the data used to produce the chart. As expected, occupations with higher average incomes tend to have higher average life satisfaction. For example, air and marine transport professionals (pilots) have both a high average income and high life satisfaction. Sales support workers have among the lowest average incomes of any occupation and also have one of the lowest average levels of life satisfaction, similar to the findings by Tenaglia (2022).

However, it is also clear that income is not the only thing that counts for subjective wellbeing. There are many occupations where the life satisfaction point is plotted above the dotted line, indicating jobs where people are more satisfied with their lives than one would expect based on income. Defence force workers, fire fighters and police officers all have an average level of life satisfaction that is well above what might be expected from their incomes, as do teachers, which may be explained by the perceived societal value of their work (Dur and Van Lent, 2019). Occupations that fall below the dotted line are those where people are less satisfied with their lives than would be expected from their income. For example, medical practitioners and legal professionals (lawyers) have the highest and second-highest average income in the dataset but their life satisfaction is below average, and well below what might be expected based on their income (the blue dotted line).

Figure 1 also shows that sometimes jobs in relatively similar industries can have very different subjective wellbeing outcomes. For example, dairy cattle farmers in Figure 1 have similar incomes to other farmers, but much lower life satisfaction. The poor wellbeing of dairy farmers is in line with earlier reports on their mental health, with half (48%) of dairy farmers indicating they had experienced a mental health issue in 2023 (Dairy NZ, 2023). Contributing factors to these low levels of subjective wellbeing among dairy farmers might include negative public perceptions of their occupation due to environmental concerns, a demanding work schedule, financial pressures, and potential feelings of isolation and limited social interaction (Renews, 2021), as well as high average debt levels (Ma, Renwick and Zhou, 2020).

Another example where jobs in a similar industry can have very different subjective wellbeing outcomes is the field of management. As Figure 1 shows, management consultants are less satisfied with their lives than might be expected given their incomes. In fact, referring to Table 1, it is evident that management consultants have a lower average life satisfaction than any other occupation with management in the title except retail managers.[5] This highlights the degree to which specific job characteristics are associated with people's experienced wellbeing.

Job satisfaction, income and life satisfaction

The second round of analysis zoomed in more specifically on the relationship between income and job satisfaction in New Zealand and how people's job satisfaction is related to their overall life satisfaction.

Figure 2: Job satisfaction, income and life satisfaction by occupation at age 40

Figure 2a: Job satisfaction and income

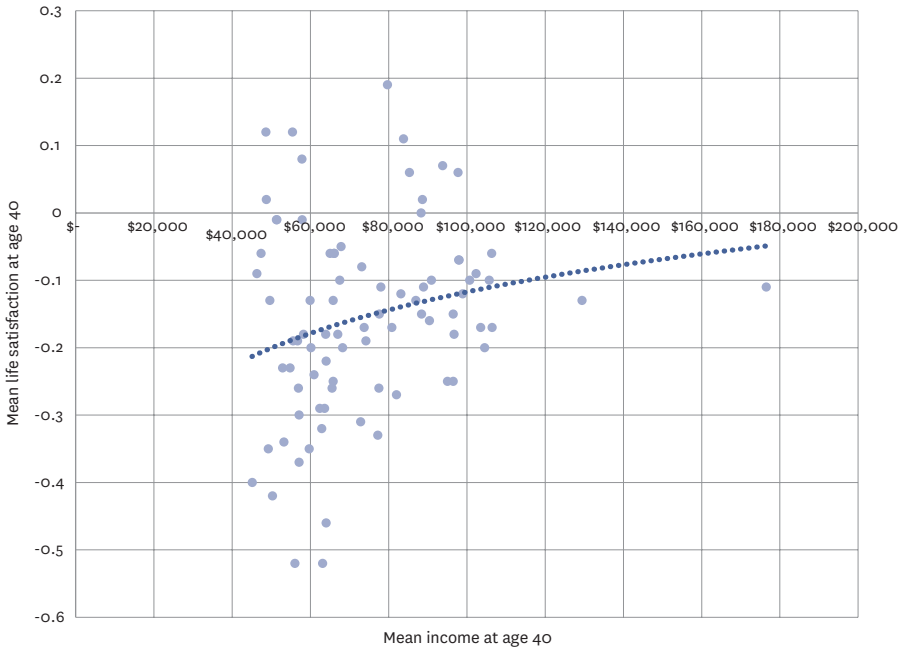
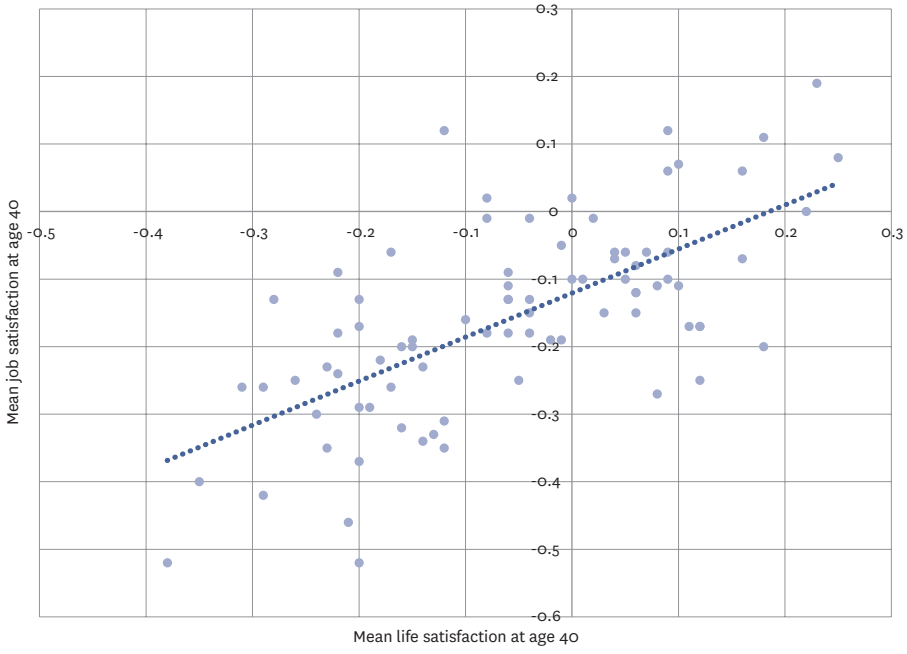


Figure 2b: Job satisfaction and life satisfaction



Source: New Zealand General Social Survey, 2014–18, Household Economic Survey 2018, and IDI

Many studies have demonstrated a positive correlation between job satisfaction and overall life satisfaction, with an average observed correlation of about 0.40 (Bowling, Eschleman and Wang, 2010). Some of this correlation may be inflated, as job satisfaction and life satisfaction tend to be measured using similar questions (Schimmack, Schupp and Wagner, 2008). Yet, also in studies of the relationship between job satisfaction and spousal reports on life satisfaction (i.e., where the two measures are reported by different people), the correlation between the two variables remained greater than 0.27 (Judge et al., 1998). Moreover, studies show that there is meaningful variation between job satisfaction and life satisfaction depending on context. For example, the reported correlation between job satisfaction and life satisfaction has been shown to be particularly high for jobs that may be regarded as a lifestyle choice and where high demands on personal life are placed, such as for people who are self-employed (Thompson, Kopelman and Schriesheim, 1992), flight attendants (Ayres and Malouff, 2007) and physicians (Judge et al., 1998).

Figure 2 shows the relationship between average job satisfaction (on the vertical axis) and average income (Figure 2a) and between average job satisfaction and average life satisfaction (Figure 2b) in our sample, with each point on the charts again representing a specific occupation. Figure 2a shows that the relationship between income and job satisfaction among occupational classes in New Zealand is relatively weak ($r^2 = 0.32$). Although job satisfaction increases somewhat as income rises, this effect is small compared with the relationship between income and life satisfaction that is evident in Figure 1. This highlights the importance of financial needs gratification for life satisfaction compared with job satisfaction. Although the relationship discussed here is a cross-section across occupations, the strong statistical association between income and life satisfaction is also found in other New Zealand studies at the individual level (e.g., Brown, Woolf and Smith, 2012; Carver and Grimes, 2019; Smith and Davies, 2020). In contrast, Figure 2b shows that across occupations there is a strong relationship between job satisfaction and life satisfaction (r2 = 0.45), in line with the meta-analysis by Bowling and colleagues (2010). This suggests that job satisfaction captures aspects of job quality other than income that are relevant to people's overall subjective wellbeing, as measured by life satisfaction.

The subjective wellbeing of men and women across occupations

The third round of analysis explored whether experiences of women in the workforce may differ from what the overall findings on the relationship between occupation, income and subjective wellbeing suggest. We were only able to do this for 57 occupations, because the survey sample was too small to produce meaningful estimates for some jobs after dropping male respondents. The results of this analysis are presented in Figure 3 and in detail in Table 2, which includes results for both men and women separately.

Figure 3a shows the average life satisfaction of women in a specific occupation on the vertical axis compared with the average life satisfaction for men and women combined on the horizontal

axis. There is a lot of consistency between women and the overall population with regard to which jobs are associated with high life satisfaction. Nonetheless, there are some occupations where large differences can be observed. For example, average life satisfaction is lower than expected for female road and rail drivers and for female natural or physical scientists. This may point to the challenges that women experience in professions that are traditionally male-dominated (Martin and Barnard, 2013). Conversely, average life satisfaction is higher than expected for female accommodation and hospitality managers and for female general managers and legislators, which have a higher proportion of female workers.

Interestingly, there is much less variation across occupations in the relationship between average female income and average income for the total population (Figure 3b). While there is some variation – with female financial brokers and investment advisors having particularly low incomes relative to the average for their profession – overall there is consistency across occupations. Nonetheless, the average income for women in any given occupation is about 76% of the average for the total population. The gap between average female and average total incomes in the data used here is greater than the official gender pay gap because we measure total income, not hourly pay rates, and have made no attempt to control for difference in career stage by sex within occupations.

Figure 3: Life satisfaction and income by occupation, women vs total population

Figure 3a: Life satisfaction

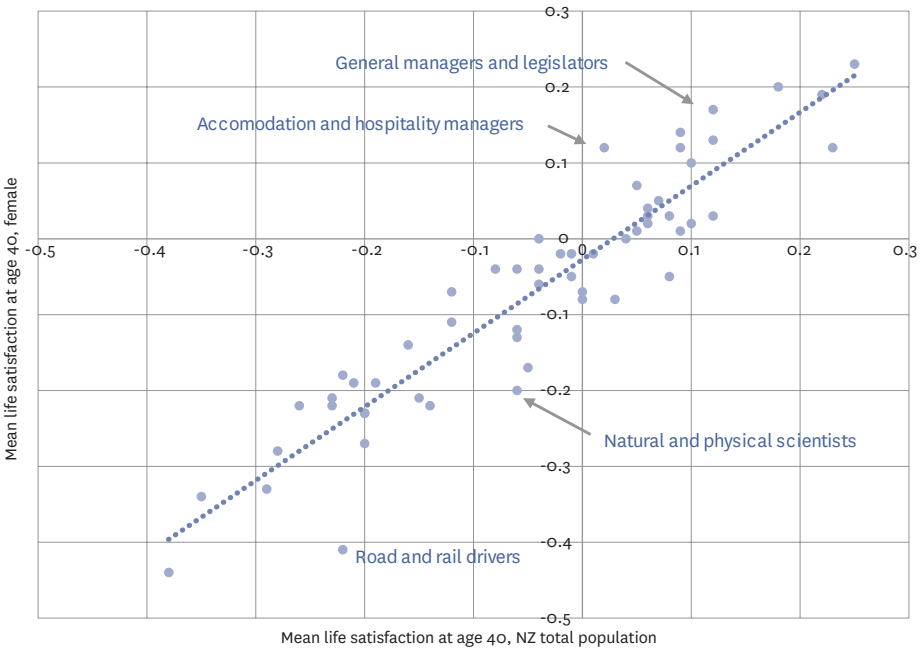
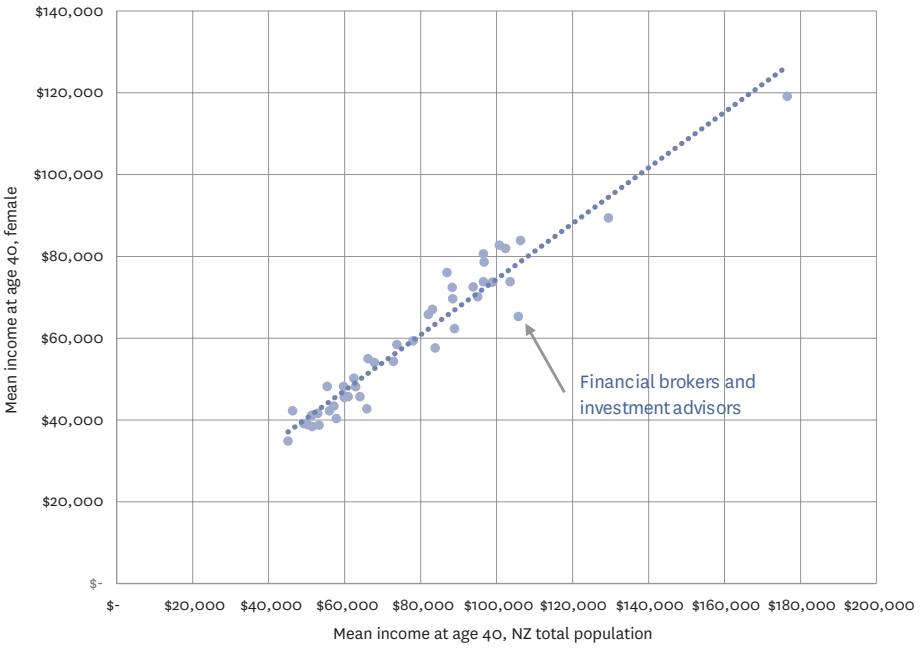


Figure 3b: Income



Source: New Zealand General Social Survey, 2014–18, Household Economic Survey 2018, and IDI

Discussion

The results presented in this article highlight the relevance of looking at factors other than income when evaluating different career choices and demonstrate that there is more to jobs than income alone. This raises important questions as to why certain occupations are associated with lower average wellbeing and others coincide with higher average wellbeing than one might expect based on income alone. In practice there is no one-size-fits-all, and job characteristics that may be disadvantageous to some (e.g., working alone, working late, or working in a high-intensity job), may work well for others. The results nonetheless offer relevant information for people to reflect on in relation to career choices and the reasons why subjective wellbeing differs across people in different occupations.

For policymakers and others – such as employers, professional bodies or trade unions – who have an interest in the wellbeing of people in different occupations, the results offer important insights into which jobs are associated with high non-pecuniary costs or benefits. For those occupations in New Zealand where subjective wellbeing is lower than might be expected based on income (e.g., medical practitioners and legal professionals), this signals a case for exploring the reasons why this is so. On the other hand, for those occupations that are associated with relatively high levels of wellbeing compared to income (e.g., early childhood teachers, secondary and special education teachers, defence force workers, firefighters and police officers), it is important to ensure that low levels of income do not become a barrier for people to continue to do their work with passion, especially given the high perceived societal value of many of these occupations (Dur and Van Lent, 2019).

The values presented in this article are averages for each occupation and do not in themselves tell us the causal impact of choosing a particular career on a person's wellbeing. It is likely that people with different personalities tend towards different jobs and that this accounts for some of the differences in life satisfaction between occupation groups. For example, people choosing to work in sports and personal service might be more optimistic than people in other careers. Similarly, some professions that seem to have high life satisfaction relative to their income (e.g., farmers or chief executives) might have a higher income in reality than is reflected in the administrative income data used here. For example, a vehicle owned by the farm rather than the farmer is not paid for out of the farmer's taxable income, but still contributes to the farmer's overall consumption.

An additional limitation is that some occupations have been clustered together to achieve an acceptable sample size for statistical analysis. For example, the category of sports and personal service workers includes fitness instructors and sports coaches on the one hand, as well as funeral directors and beauty therapists. The values presented in Table 1 are the average for the category, and the specific jobs within the category may be quite different. Future studies can build on additional waves of NZGSS, HES, and potentially Household Labour Force Survey data to further increase the sample size and allow for additional granularity in the analysis.

Future studies could also explore the relationship between occupation and other subjective wellbeing measures, such as experiences of anxiety or stress and feeling a sense of meaning and purpose in life. Existing research suggests that the relationship between occupation and subjective wellbeing may differ depending on which measure is used (Tenaglia, 2022; Fujiwara, Dolan and Lawton, 2015). For example, in their research on the relationship between creative jobs and wellbeing, Fujiwara, Dolan and Lawton found that creative occupations have higher than average levels of life satisfaction, worthwhileness and happiness than employment in general, while at the same time being characterised by higher than average levels of anxiety.

Compared with much of the public policy debate in New Zealand, the focus of this article could be seen as quite narrowly descriptive. There is little discussion here of implications for either labour market regulation or allocation of government resources. However, most of the choices that matter for people's wellbeing are made by individuals, families and whānau. Efficient markets and effective public policy are built on the assumption that people are relatively well informed about decisions that affect their welfare. Good public policy requires well informed citizens and this is not always the case.

One important route to better public policy – and better outcomes for people – is providing information that informs people about the consequences of actions for their wellbeing. O'Donnell et al. (2014) characterise this sort of activity as 'de-shrouding' and identify it as one of the most significant public policy uses of wellbeing data. While interventions of this sort will obviously focus on public communication of the data in non-technical contexts, the credibility of such public-facing documents also depends crucially on the credibility of the underlying data and methodology used to develop it. The primary purpose of the analysis in this article is to contribute to 'de-shrouding' career decisions in New Zealand by making the relevant information publicly available in a credible source. However, there is also a broader goal: to illustrate the potential value of 'de-shrouding' activities in a New Zealand public policy context.

1 The approach taken here is largely descriptive and focuses on the provision of information for groups interested in the relationship between occupation and wellbeing. For a more detailed analysis of the theoretical drivers of aspects of the working environment, we recommend the OECD overview of the subject (OECD, 2017).

2 Leisure occupations include jobs in hospitality, sport, leisure and tourism.

3 Elementary occupations usually involve manual labour, such as cleaning services or physical labour.

4 IDI disclaimer: Access to the data used in this study was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Data and Statistics Act 2022. The results presented in this study are the work of the author, not Statistics New Zealand or individual data suppliers. These results are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI), which is carefully managed by Statistics New Zealand. For more information about the IDI, please visit https://www.stats.govt.nz/integrated-data/.

5 This includes general managers and legislators; ICT managers; miscellaneous hospitality, retail and service managers; advertising, public relations and sales managers; miscellaneous specialist managers; business administration managers; education, health and welfare services managers; construction, distribution and production managers; accommodation and hospitality managers; and office and practice managers.

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Statistical appendix

Table 1: Mean life satisfaction and income by occupation at age 40

Occupation	Sample	Rank			Predicted value at 40			Proportion female	Mean age	ANZSCO code
		Life Satisfaction	Job Satisfaction	Income	Life Satisfaction	Job Satisfaction	Income			
Other farmers	219	1	5	63	0.25	0.08	$57,800	23%	43.6	121
Health therapy professionals	84	2	1	31	0.23	0.19	$79,700	71%	43.1	252
Secondary school and special education teachers	228	3	11	24	0.22	0	$88,300	64%	43.8	2414
Air and marine transport professionals	60	4	55	6	0.18	−0.2	$104,500	<10%	42.2	231
Chief executives and managing directors	276	5	4	27	0.18	0.11	$83,800	35%	48.1	1111
Defence Force members, fire fighters and police	192	6	7	26	0.16	0.06	$85,300	19%	41.3	441
Policy analyst	87	7	21	12	0.16	−0.07	$97,900	45%	41.8	224412
Accountants, auditors and company secretaries	348	8	62	17	0.12	−0.25	$95,000	55%	42.6	221
Miscellaneous education professionals	78	9	44	37	0.12	−0.17	$73,700	69%	47.7	249
General managers and legislators	339	10	45	7	0.12	−0.17	$103,500	40%	45.3	1112
ICT managers	99	11	46	3	0.11	−0.17	$106,400	24%	43.2	135
Miscellaneous hospitality, retail and service managers	207	12	6	18	0.1	0.07	$93,800	52%	42.4	149
Medical practitioners	126	13	30	1	0.1	−0.11	$176,500	43%	40.7	253
Sports and personal service workers	204	14	2	70	0.09	0.12	$55,400	59%	38.6	45
Advertising, public relations and sales managers	324	15	16	4	0.09	−0.06	$106,300	38%	42.9	131
Miscellaneous specialist managers	93	16	26	19	0.09	−0.1	$90,900	45%	43.8	139
Health diagnostic and promotion professionals	120	17	8	13	0.09	0.06	$97,700	65%	41	251
Sales, marketing and public relations professionals	213	18	68	29	0.08	−0.27	$82,000	55%	39	225
Financial and insurance clerks	159	19	31	32	0.08	−0.11	$78,000	62%	41.6	552
Social and welfare professionals	300	20	17	44	0.07	−0.06	$66,100	70%	45.8	272
Business administration managers	762	21	33	10	0.06	−0.12	$98,900	48%	44.4	132
Midwifery and nursing professionals	531	22	40	23	0.06	−0.15	$88,400	88%	43.3	254
Plumbers	123	23	23	38	0.06	−0.08	$73,100	< 5%	37.3	334
Primary and intermediate school teachers	351	24	34	28	0.06	−0.12	$83,100	80%	43.4	2412
Early childhood (pre-primary school) teachers	351	25	18	45	0.05	−0.06	$66,000	91%	41	2411
ICT business and systems analysts	165	26	27	9	0.05	−0.1	$100,700	36%	40.1	2611
Education, health and welfare services managers	150	27	22	11	0.04	−0.07	$98,000	74%	49.6	134
Floor finishers and painting trades workers	135	28	19	81	0.04	−0.06	$47,400	< 4%	41.3	332
Construction, distribution and production managers	270	29	41	15	0.03	−0.15	$96,500	20%	43.9	133
Accommodation and hospitality managers	123	30	12	75	0.02	−0.01	$51,300	56%	40.8	141
Financial brokers and dealers, and investment advisers	138	31	28	5	0.01	−0.1	$105,700	54%	42.5	222
Human resource and training professionals	153	32	9	22	0	0.02	$88,600	73%	41.7	223
Office and practice managers	279	33	29	42	0	−0.1	$67,500	87%	45.9	512
Architects, designers, planners and surveyors	216	34	15	41	−0.01	−0.05	$67,800	44%	38.8	232
Contract, programme and project administrators	183	35	52	36	−0.01	−0.19	$74,200	74%	43.1	511
Inquiry clerks and receptionists	189	36	53	67	−0.02	−0.19	$56,700	86%	40.2	54
Other ICT professionals	150	37	42	33	−0.04	−0.15	$77,600	24%	40.9	26
Personal assistants and secretaries	162	38	35	46	−0.04	−0.13	$65,800	96%	44.2	521
Accounting clerks and bookkeepers	219	39	48	52	−0.04	−0.18	$63,900	86%	44.5	551
Farm, forestry and garden workers	291	40	13	74	−0.04	−0.01	$51,400	30%	41.6	841
Management consultant	150	41	63	16	−0.05	−0.25	$96,500	46%	42.2	224711
Other information and organisation professionals	144	42	32	21	−0.06	−0.11	$88,900	56%	45.3	224

Occupation	Sample	Rank			Predicted value at 40			Proportion female	Mean age	ANZSCO code
		Life Satisfaction	Job Satisfaction	Income	Life Satisfaction	Job Satisfaction	Income			
Natural and physical science professionals	156	43	36	25	−0.06	−0.13	$86,900	37%	42.2	234
Tertiary education teachers	171	44	24	8	−0.06	−0.09	$102,300	49%	49.4	242
Legal professionals	144	45	37	2	−0.06	−0.13	$129,400	54%	41.8	271
Automotive electricians and mechanics	189	46	49	43	−0.06	−0.18	$67,000	< 3%	39.3	321
Software and applications programmers	312	47	50	14	−0.08	−0.18	$96,700	22%	39.5	2613
Dairy cattle farmer	177	48	14	62	−0.08	−0.01	$57,900	22%	35.7	121313
Project builder	255	49	10	79	−0.08	0.02	$48,700	< 2%	37.7	133112
Engineering professionals	375	50	43	20	−0.1	−0.16	$90,400	10%	41.6	233
Arts and media professionals	120	51	3	80	−0.12	0.12	$48,600	40%	43.8	21
General clerical workers	480	52	76	60	−0.12	−0.35	$59,700	81%	44.5	53
Agricultural, medical and science technicians	144	53	72	39	−0.12	−0.31	$72,800	50%	44.2	311
Electronics and telecommunications trades	105	54	74	35	-0.13	-0.33	$77,200	9%	43.3	342
Other factory process workers	225	55	75	72	−0.14	−0.34	$53,200	44%	42.2	83
Panel beaters, and vehicle body builders, trimmers and painters	57	56	59	71	−0.14	−0.23	$54,800	< 11%	43.4	324
Retail managers	285	57	56	58	−0.15	−0.2	$60,100	55%	41.2	142
Construction and mining labourers	180	58	54	69	−0.15	−0.19	$55,600	3%	41	821
Sales representatives and agents	549	59	73	55	−0.16	−0.32	$62,900	60%	40.7	61
Electricians	177	60	57	40	−0.16	-0.2	$68,200	< 3%	39.7	341
ICT and telecommunications technicians	111	61	65	48	−0.17	−0.26	$65,500	19%	38.4	313
Mobile plant operators	213	62	20	49	−0.17	−0.06	$65,000	7%	41.2	721
Fabrication engineering trades workers	141	63	58	50	−0.18	−0.22	$64,000	< 4%	40.9	322
Other clerical and administrative workers	570	64	69	56	−0.19	−0.29	$62,400	51%	42.9	59
Other technicians and trades workers	249	65	38	59	−0.2	−0.13	$59,900	34%	40.3	39
Building and engineering technicians	213	66	47	30	−0.2	−0.17	$80,800	15%	42.8	312
Food trades workers	309	67	78	65	−0.2	−0.37	$57,100	36%	38.3	351
Health and welfare support workers	228	68	70	53	−0.2	−0.29	$63,600	79%	45.8	411
Prison and security officers	138	69	82	54	−0.2	−0.52	$63,100	24%	42.7	442
Food process workers	279	70	81	51	−0.21	−0.46	$64,000	30%	43.4	831
Skilled animal and horticultural workers	189	71	25	82	−0.22	−0.09	$46,300	37%	40.3	36
Road and rail drivers	552	72	61	57	−0.22	−0.24	$60,900	11%	47.3	73
Bricklayers, carpenters and joiners	171	73	51	61	−0.22	−0.18	$58,200	< 4%	38.9	331
Hospitality workers	210	74	77	78	−0.23	−0.35	$49,200	70%	34.8	431
Sales assistants and salespersons	648	75	60	73	−0.23	−0.23	$52,900	56%	41	621
Store persons	240	76	71	64	−0.24	−0.3	$57,100	13%	41.5	74
Machine and stationary plant operators	387	77	64	47	−0.26	−0.25	$65,800	23%	42.8	71
Carers and aides	486	78	39	77	−0.28	−0.13	$49,600	88%	44.9	42
Other labourers	450	79	80	76	−0.29	−0.42	$50,300	28%	41.7	89
Glaziers, plasterers and tilers	108	80	66	66	−0.29	−0.26	$56,900	< 6%	38	333
Mechanical engineering trades workers	192	81	67	34	−0.31	−0.26	$77,500	< 3%	43.9	323
Cleaners and laundry workers	219	82	79	83	−0.35	−0.4	$45,100	64%	45.5	811
Sales support workers	111	83	83	68	−0.38	−0.52	$56,000	73%	40.6	63

Table 2: Female and male mean life satisfaction and income by occupation at age 40

	Mean life satisfaction at 40		Mean income at 40		Mean female-male gap at 40
Occupation	Female	Male	Female	Male	Life satisfaction
Other farmers	0.23	0.27	$40,300	$63,700	-0.04
Chief executives and managing directors	0.20	0.09	$57,600	$115,700	0.11
Secondary school and special education teachers	0.19	0.04	$72,400	$103,300	0.15
General managers and legislators	0.17	s	$73,800	s	s
Sports and personal service workers	0.14	0.00	$48,200	$50,400	0.14
Miscellaneous education professionals	0.13	s	$58,400	s	s
Accommodation and hospitality managers	0.12	−0.09	$41,100	$65,600	0.21
Advertising, public relations and sales managers	0.12	0.07	$83,900	$111,900	0.05
Health therapy professionals	0.12	0.15	$59,300	$209,000	−0.03
Miscellaneous hospitality, retail and service managers	0.10	0.23	$72,500	$108,000	−0.13
ICT business and systems analysts	0.07	−0.09	$82,700	$101,100	0.16
Social and welfare professionals	0.05	−0.14	$55,000	$79,800	0.19
Midwifery and nursing professionals	0.04	−0.10	$69,600	$159,500	0.14
Accountants, auditors and company secretaries	0.03	0.05	$70,100	$150,500	−0.02
Business administration managers	0.03	0.06	$73,700	$102,400	−0.03
Financial and insurance clerks	0.03	−0.25	$59,300	$55,100	0.28
Medical practitioners	0.02	0.09	$119,100	$83,300	−0.07
Primary and intermediate school teachers	0.02	0.25	$67,000	$85,800	−0.23
Early childhood (pre-primary school) teachers	0.01	0.18	$51,900	$78,000	−0.17
Health diagnostic and promotion professionals	0.01	s	$78,400	s	s
Education, health and welfare services managers	0.00	0.11	$76,000	$111,400	−0.11
Farm, forestry and garden workers	0.00	0.17	$38,400	$95,100	−0.17
Contract, programme and project administrators	−0.02	0.18	$58,300	$78,000	−0.20
Financial brokers and dealers, and investment advisers	−0.02	s	$65,300	s	s
Inquiry clerks and receptionists	−0.02	s	$44,200	s	s
Legal professionals	−0.04	0.11	$89,400	$59,900	−0.15
Personal assistants and secretaries	-0.04	s	$51,600	s	s
Software and applications programmers	−0.04	−0.10	$78,600	$60,400	0.06
Architects, designers, planners and surveyors	−0.05	−0.09	$54,000	$93,200	0.04
Sales, marketing and public relations professionals	−0.05	0.18	$65,800	$111,200	−0.23
Accounting clerks and bookkeepers	−0.06	0.15	$48,900	$86,000	−0.21
General clerical workers	−0.07	−0.39	$48,200	$53,700	0.32
Office and practice managers	−0.07	s	$52,200	s	s
Construction, distribution and production managers	−0.08	s	$73,800	s	s
Human resource and training professionals	−0.08	0.00	$72,300	$106,900	−0.08
Agricultural, medical and science technicians	−0.11	−0.18	$54,300	$85,400	0.07
Tertiary education teachers	−0.12	s	$81,900	s	s
Other information and organisation professionals	−0.13	0.23	$62,300	$83,800	−0.36
Sales representatives and agents	−0.14	−0.22	$48,100	$68,200	0.08
Management consultant	−0.17	s	$80,600	s	s
Skilled animal and horticultural workers	−0.18	−0.25	$42,200	$45,100	0.07
Food process workers	−0.19	−0.05	$45,700	$55,800	−0.14
Other clerical and administrative workers	−0.19	−0.20	$50,200	$64,100	0.01
Natural and physical science professionals	−0.20	0.00	$76,000	$105,500	−0.20
Retail managers	−0.21	0.08	$45,800	$100,100	−0.29

Occupation	Mean life satisfaction at 40		Mean income at 40		Mean female-male gap at 40
	Female	Male	Female	Male	Life satisfaction
Sales assistants and salespersons	−0.21	−0.14	$41,600	$69,500	−0.07
Hospitality workers	−0.22	0.10	$39,100	$91,900	−0.32
Machine and stationary plant operators	−0.22	−0.26	$42,700	$73,900	0.04
Other factory process workers	−0.22	−0.08	$38,700	$58,800	−0.14
Health and welfare support workers	−0.23	−0.31	$48,200	$48,500	0.08
Other technicians and trades workers	−0.23	−0.19	$45,500	$64,400	−0.04
Food trades workers	−0.27	s	$43,400	s	s
Carers and aides	−0.28	−0.39	$39,400	$42,700	0.11
Other labourers	−0.33	−0.27	$38,800	$53,700	−0.06
Cleaners and laundry workers	−0.34	−0.12	$34,800	$59,300	−0.22
Road and rail drivers	−0.41	−0.19	$45,700	$65,100	−0.22
Sales support workers	−0.44	s	$42,200	s	s

Note: s indicates fewer than 50 male respondents