

# Quantifying the Wellbeing Contribution of Job Quality

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A Student Research Project for BiGGAR Economics  
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# 1.

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## Executive Summary

This report is the output of a student research project facilitated by Economic Futures. It aims to quantify the effect of job quality on wellbeing.

It is intuitive that certain aspects of an individual's job can affect their overall wellbeing. It is less clear however how we might think about this relationship in more concrete, quantitative terms. This report uses data from the Scottish section of the UK Working Lives Survey to explore the quantitative relationship between different job characteristics and individual job/life satisfaction.

Traditionally within economics the relationship between work and wellbeing has been thought of as a simple function of income and hours worked (as opposed to time spent engaging in leisure). However, more recent research has found that including measures of job quality drastically improves the ability to predict an individual's stated wellbeing.

Broadly speaking, job quality accounts for a large proportion of job satisfaction (which itself accounts for about half of a person's reported life satisfaction). More specifically, a few key dimensions of job quality stand out above others. In particular, the impact of job quality on **health** (both physical and mental), the importance of work-life balance, finding your own work to be **meaningful** and **career development** capabilities all seem to be crucial factors in determining job and life satisfaction.

Standard deviations (a statistic that measures how dispersed data is in relation to the average) were used to quantify changes in job quality. In quantitative terms the analysis showed that:

- A 1-unit standard deviation increase in job meaningfulness increases job satisfaction by **0.32**
- A 1-unit standard deviation improvement in job health impacts increases job satisfaction by **0.21**
- A 1-unit standard deviation increase in reported work-life balance increases job satisfaction by **0.12**
- A 1-unit standard deviation increase in career development capabilities increases job satisfaction by **0.11**

Interestingly, the research suggested that aspects like relationships at work and voice seem to be less important.

Another important finding from the research was that it is not only objective quality characteristics that affect wellbeing, but also how well other job characteristics match up to an individual's preferences. Specifically, a 1-unit standard deviation increase in how well a job **matches** a person's desires was found to increase job satisfaction by 0.12. Furthermore, once other factors (including job quality, job matching and subjective fairness of one's own pay) were controlled for, **no definite relationship between income and life/job satisfaction was found.**

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Overall, it seems that job quality is a key avenue through which individual wellbeing can be improved, particularly in the areas of health impacts (both physical and mental), work-life balance and meaningfulness of work. One implication of this is that job quality, and therefore wellbeing, could be improved not only by **removing negative aspects** of work (like workplace injury risk, stress and overwork), but also through the **introduction of positive aspects** including feeling useful or valuable at work. Moreover, job quality appears to have an impact not only on more **physiological** conceptions of wellbeing like health, but also higher-level conceptions of wellbeing, for example **fulfilment**.

The dual importance of job quality and job matching identified in the research suggests that employers have a clear role to play in improving job quality. The findings of the research may also provide some support for public policies designed to improve job matching. Moreover, it is clear that the aspects discussed cannot be captured by simple measures of economic wellbeing, for example GDP.



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## 2.

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# Introduction

## 2.1 Background

This report is the output from a 6-week-long student project facilitated by the Economic Futures work placement programme.

## 2.2 Objectives

The main goal of this project is to attempt to quantify the effect that job quality has on individual wellbeing and, if possible, describe the value of these effects in money terms.

## 2.3 Acknowledgements

The dataset used in this report is the Scottish section of the UK Working Lives Survey, which was provided by the Chartered Institute of Personnel and Development (CIPD). Particular thanks are due to Marek Zemanik of the CIPD for facilitating access to the data and providing guidance throughout the project.

## 2.4 Structure

The rest of this report consists of a review of relevant ideas in the area of the economics of happiness, a description of the approach taken to the analysis and a discussion of the results of the statistical analysis. It is structured as follows:

- chapter 3 provides context for the report, giving information on the Scottish section of the UK Working Lives Survey dataset and highlighting relevant points for the analysis, as well as highlighting important concepts for wellbeing;
- chapter 4 discusses the methods used in analysis and provides an overview of the results;
- chapter 5 lays out the key quantitative results of the analysis; and
- chapter 6 summarises the report and highlights some possible implications.

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## 3.

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# Review

This section presents key Information for understanding wellbeing and its relationship with job quality.

### 3.1 Context for Wellbeing and Economics

Traditionally, economics has not directly focused on wellbeing but on factors that are instrumental to wellbeing such as income, level of consumption or the level of unemployment. However, in recent years there has been increased interest in thinking about wellbeing directly. The economist Andrew Clark, a leader in the field of the economics of happiness, along with other colleagues goes as far as saying that wellbeing should be treated as the “common currency” of the world, meaning that the common measure of economic evaluations should be wellbeing rather than money.<sup>1</sup>

This shift in thinking has occurred not only at the individual level, but also at the macroeconomic level. For example, the United Nations ‘Sustainable Development Goals’ include ‘decent work’ along with ‘good health and wellbeing’ as indicators of development. The Scottish Government’s ‘National Performance Framework’ also includes many indicators outside of just economic growth and poverty, for example:

- child wellbeing and happiness;
- loneliness;
- access to green spaces; and
- satisfaction with public services

The argument for moving away from GDP as the sole measure of societal progress made by those in the economics of happiness field can be seen to support similar arguments made by ecological economists, who have criticised the excessive value placed on consumption. Thinking about these two perspectives together, it could be argued that the standard economic lens of consumption and GDP is poorly-suited for capturing the socioeconomic effects of the coming structural transformation that comes with adjusting to climate change and that an alternative wellbeing lens would be superior. In fact, several economists have argued that GDP is not a good proxy for wellbeing. For example, Blanchflower and Oswald argue that in the past few decades increased GDP has not been associated with any rise in subjective wellbeing.<sup>2</sup>

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<sup>1</sup> De Neve et al. (2020), Taking a Wellbeing-years Approach to Policy Choice

<sup>2</sup> Blanchflower & Oswald (2011), International Happiness: A New View on the Measure of Performance

## 3.2 Scottish Section of UK Working Lives Dataset

### 3.2.1 Overview

The data used for analysis are a subset of data from the UK Working Lives Survey, particularly the data on Scottish individuals. The UK Working Lives Survey is run annually by the CIPD through YouGov. The current output of this survey is an annual report on the state of job quality in the UK and in Scotland specifically.

The analysis is based on the 2022 survey results, which include around 6,000 respondents at the UK-wide level and 1,050 respondents in Scotland. There are 343 questions in total, of which around 95 concern job characteristics.

### 3.2.2 Limitations

There are a few key features of the survey that should be highlighted for the purposes of the analysis. First, although the aim is to use this sample to draw conclusions about the Scottish population more generally, the sample is not completely representative of the population. For example, higher socio-economic classes are over-represented and lower socio-economic classes are under-represented. This can be seen in the graph below where the distribution of people across social classes is plotted, with “A” representing the highest social class.

**Figure 3-1: Comparing Sample and Population Social Class Distributions**



Moreover, the survey only applies to those who are currently employed, so those who are unemployed are not represented. Finally, it should be noted that respondents usually do not answer all questions. This means that if there are any underlying reasons for people not responding, there may be some biased in the results.

## 3.3 Theory Review

### 3.3.1 What is Job Quality?

Broadly speaking, “job quality” refers to aspects of a job that affect quality of life within work. The definition of job quality used in this report

does not include measures of income.

Job quality is an inherently multifaceted concept, meaning that it is made up of many dimensions that cannot necessarily be reduced. For example, the CIPD's own framework of job quality (the "Good Work" framework) includes seven dimensions:

1. Pay and benefits
2. Contracts
3. Job design
4. Work-Life Balance
5. Relationships at work
6. Voice and Representation
7. Health and Wellbeing

The OECD<sup>3</sup> provides an overview of a wide range of frameworks of job quality. Furthermore, the OECD<sup>4</sup> has also compared a set of international frameworks in terms of their dimensions. The table below modifies the table presented by the OECD, by only including individual-level dimensions of job quality, in order to compare some of the frameworks most relevant to this project.

**Table 3-1: Comparison of Job Quality Frameworks**

Dimension	Examples of Suggested Indicator	Fair Work Convention	CIPD Good Work Framework	Krekel, Ward and De Neve (2019)	Taylor Review
<b>Earnings</b>	Average earnings, share of low paid workers, rate of in-work poverty	✓	✓	✓	✓
<b>Work Hours and Working Time Arrangements</b>	Average actual or usual hours worked per week or year, share of involuntary part-time employment, share of workers with excessive or unsocial hours of work, share of workers with short-term flexibility over working time	✓	✓	✓	✓
<b>Job Security</b>	Share of temporary workers, share of workers with short job tenure, share of self-employed workers	✓	✓	✓	✓

<sup>3</sup> OECD (2016), Measuring and Assessing Job Quality: the OECD Job Quality Framework

<sup>4</sup> OECD (2013), How's Life 2013: Measuring Wellbeing, Chapter 5, Table 5.1



<b>Lifelong Learning</b>	Share of working age population or employed persons participating in education and training, share of employed persons who have more/less education than is normally required in their occupation	✓	✓	✓	✓
<b>Safety and Health at Work</b>	Occupational injury rate, occupational disease contraction rate, stress at work, share of workers with high exposure to physical health risk factors	✓	✓	✓	✓
<b>Work Organisation and Content</b>	Subjective indicators of autonomy at work, work intensity, workers self-assessment of the extent to which they do a useful work, satisfaction with type of work in present job	✓	✓	✓	✓
<b>Workplace Relationships</b>	Subjective indicators of relationships with colleagues and supervisors, discrimination, harassment				
<b>Social Security System</b>					
<b>Unemployment Insurance and Other Cash Income Support</b>	Unemployment insurance coverage, replacement rate, beneficiaries of cash income support		✓		
<b>Family Friendly Policy</b>	Entitlements to maternity/parental leave, annual leave, childcare facilities, employment situation of mothers of young children		✓		✓
<b>Pension</b>	Pension coverage	✓	✓		
<b>Health Insurance</b>	Health insurance coverage, employees with supplemental medical insurance plan, share of employees entitled to sick leaves	✓			✓

To quantify the effects of job quality on wellbeing however, more than a framework is needed as job quality itself must first be quantified. There have been several attempts to create indexes of job quality. As with job quality frameworks, indices are also often multidimensional, meaning that there is not one value attributed to “job quality” but rather a set of values, each corresponding to a different dimension of job quality.

This is important because it is not necessarily appropriate to simply add each of these values together. To do this would be to make the implicit assumption that if different dimensions can act as substitutes or compensate for each other in terms of overall wellbeing, whereas in reality it may be the case that there is no increase in the quality of relationships at work that can compensate for, say, poor health and wellbeing.

When thinking about the relationship between job characteristics and an individual's wellbeing not all characteristics can be sorted into being 'good' or 'bad': some characteristics are only subjectively good or bad and so their effect on wellbeing depends on the individual.

However, job characteristics can be sorted into two broad categories: (1) objective job quality characteristics (characteristics that everyone agrees are either good or bad) and (2) subjective characteristics (that can have either positive or negative effects). Here, while objective quality characteristics have a direct effect on wellbeing, the effect of subjective characteristics can only be understood through their interactions with individual attributes (both preferences and skills), that is, how well certain characteristics 'match' with what a person looks for in a job. The table below provides some examples of these two categories.

**Table 3-2: Examples of Job Quality Vs. Job Matching Characteristics**

Job Quality	Job Matching
<ul style="list-style-type: none"> <li>Stress at work</li> <li>Risk of physical injury</li> <li>Good work-life balance</li> <li>Feeling like your job is worthwhile</li> <li>Security</li> <li>Flexibility</li> </ul>	<ul style="list-style-type: none"> <li>Number of hours worked</li> <li>Management and organisation style</li> <li>Work location (home, office, hybrid etc.)</li> <li>Full- or part-time employment • How well personal skills match up to job requirements</li> <li>How well qualifications match up to job requirements</li> </ul>

While it is possible to distinguish between job quality and job matching characteristics, it may still be that their effects on wellbeing are not independent of each other. For example, the importance of job matching may decrease as autonomy increases, or as skill development opportunities becomes more available.

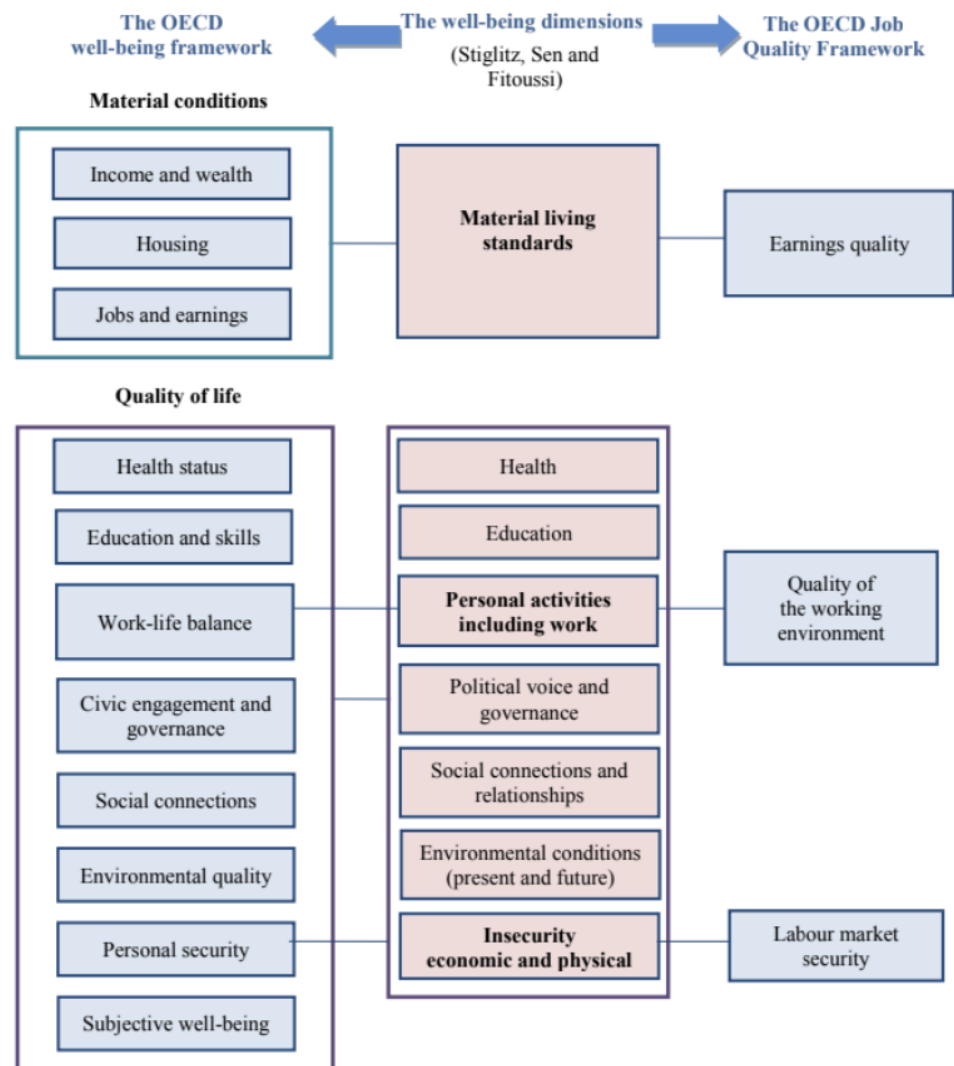
### 3.3.2 What is Wellbeing?

The determination of an individual's overall wellbeing is clearly complex and includes more than just their job. The Diagram below (created by the OECD<sup>5</sup>) illustrates how

<sup>5</sup> OECD (2016), Measuring and Assessing Job Quality the OECD Job Quality Framework

different frameworks of general wellbeing relate to each other and how work fits into these frameworks.

**Figure 3-2: OECD Diagram of Wellbeing Determination**



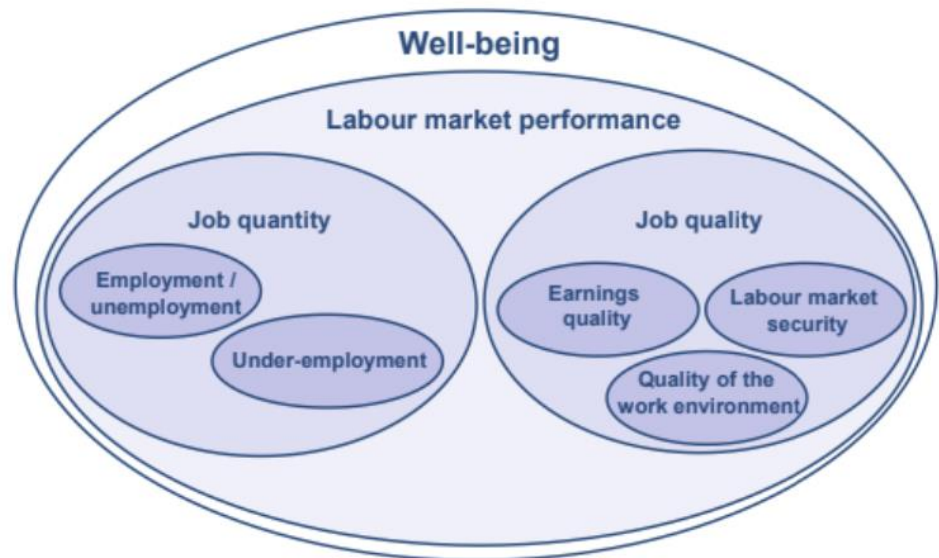
Source: OECD (2016), Measuring and Assessing Job Quality: the OECD Job Quality Framework

It should however be noted that, while not highlighted by the OECD, the factor of health as well as social connections and relationships could be related to job quality. Furthermore a corollary to “Political voice and governance” could also be included to account for workplace voice and representation.

The OECD also provides a theoretical structure for how job characteristics relate to wellbeing, as shown below.<sup>6</sup>

<sup>6</sup> Ibid.

**Figure 3-3: OECD Diagram of Wellbeing and Job Characteristic**



Source: OECD (2016), Measuring and Assessing Job Quality: the OECD Job Quality Framework

Importantly, there is a distinction made between job quality (defined generally) and job quantity (which consists of employment status and under-employment). Given the nature of the dataset the effect of employment status cannot be explored, however under-employment can be thought of as a factor of job matching and is something that can be considered.

However, “wellbeing” remains ill defined. In fact, there are many different ways of thinking about wellbeing. First, there is a distinction to be made between subjective and objective measures of wellbeing.

Subjective wellbeing refers to a person’s own reported understanding of their wellbeing (for example reported job satisfaction or reported life satisfaction). Alternatively objective measures of wellbeing refers to real aspects (which can be both tangible and intangible) of wellbeing. This could for example include indicators such as, access to food, level of stress or level of freedom.

This objective approach to wellbeing can be thought of as a ‘capabilities approach’, that treat dimensions of job quality, security, health etc. as being non- substitutable ends rather than means. In this case, these indicators are themselves direct measures of wellbeing.

However, this is not the only distinction to be made in terms of wellbeing: a distinction is also often made between different forms of wellbeing. Specifically, authors often distinguish between ‘hedonic’ and ‘eudemonic’ wellbeing.

Hedonic wellbeing refers to what might be thought of as the standard conception of wellbeing in economics: the wellbeing obtained from meeting desires (or even needs). Eudemonic wellbeing centres around the concept of ‘eudaimonia’, which

describes a state of having achieved human flourishing, for example through mastery of one's craft, feeling purpose in life or finding value in hard work. These two forms of wellbeing are quite separate from each other and as such wellbeing itself can be considered multidimensional.

One model for thinking about the possible relationship between different forms of wellbeing is Maslow's hierarchy of needs, which describes the relationship between different needs and desires as hierarchical. A graphic representation of Maslow's hierarchy is shown below.

**Figure 3-4: Maslow's Hierarchy of Needs**



Source: <https://www.simplypsychology.org/maslow.html>

An interesting feature of Maslow's hierarchy of needs is that needs higher up on the pyramid can only be met once needs below it have been achieved, meaning that, for example, wellbeing could only be improved through self-actualisation once a basic level of physiological needs have already been met. It may be that a similar relationship exists between eudemonic wellbeing and hedonic wellbeing.

This structure implies that different needs or forms of wellbeing are limited in their ability to act as substitutes, and compensate, for each other. However, that is not to say that there is no substitution within the different forms of wellbeing. This is important when thinking about job quality as it is possible for needs to be met outside of work. For example, it may be that relationships at work matter less when an individual already has strong relationships outside of work.

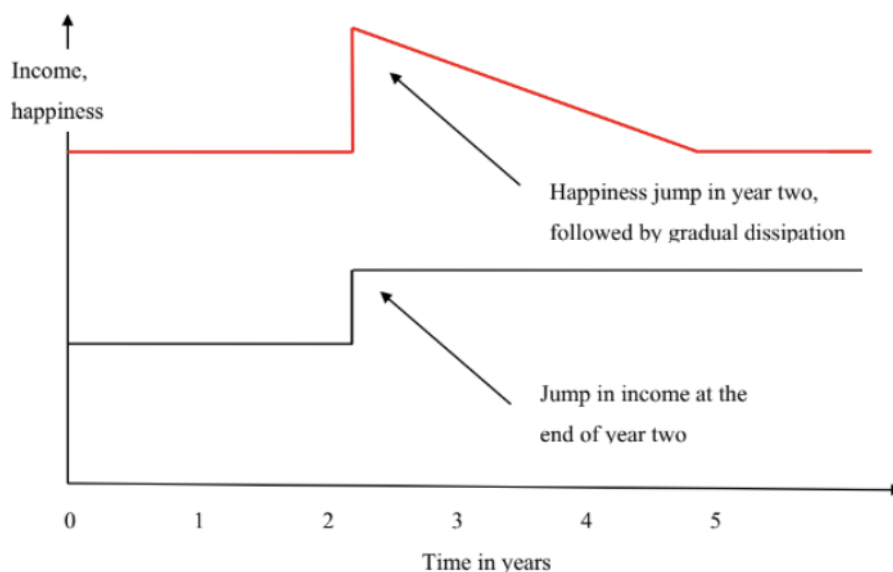
### 3.3.3 Complicating Factors

Several important complicating factors are often highlighted in the wellbeing literature. The first group of these consists of 'comparison effects' and 'adaptation effects'.

'Comparison effects' refer to effects that depend on relative rather than absolute values. For example the wellbeing effect of income may not only depend on the

absolute value of that income, but also how that level of income compares to others (for example co-workers). In the context of job quality, it may be that esteem has a strong comparison component. 'Adaptation effects' describe how over time, even with characteristics staying the same, wellbeing may return to some normal level. This relationship is illustrated below.

**Figure 3-5: Illustration of Adaptation Effects**



Source: Clark (2018), Four Decades of the Economics of Happiness: Where Next?

Adaptation effects can be thought of as a type of comparison effect, where the reference for comparison is an individual's former self, rather than co-workers or society more broadly. The possibility of these effects raises the question of whether any increases in wellbeing from increased job quality will persist over time in terms of subjective wellbeing and there is in fact some evidence of comparison and adaptation effects for subjective job satisfaction, at least for wages.<sup>7</sup>

The second group of complications relates to surveys specifically and consists of 'mood effects' and 'reporting style effects'. 'Mood effects' exist when an individual's mood, and therefore their current sense of wellbeing, does not represent their general sense of wellbeing in a certain period of time. Reporting style effects refers to how individuals may report the same underlying level of wellbeing at different levels on a given scale. Accounting for these issues requires surveying individuals more than once.

A common argument in the wellbeing literature is that around one third of wellbeing is genetically determined<sup>8</sup>. This could be interpreted as saying that wellbeing is, to a certain extent fixed over time. However, Professor Andrew Clark argues that it is not

<sup>7</sup> Diriwaeachter and Shvartsman (2018), The Anticipation and Adaptation Effects of Intra- and Interpersonal Wage Changes on Job Satisfaction

<sup>8</sup> For example, see the Green Book Supplementary Guidance on Wellbeing (2021)



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genes alone that are significant, but rather the interaction between an individual's genes and their environment.<sup>9</sup>

Specifically, it is the interaction between particular genes that make people more or less susceptible to certain events (for example happiness reducing events). In this case, even though genetics have a significant role, steps can still be taken to improve wellbeing.

A similar point can be made regarding an individual's personality, where wellbeing depends not on environment alone but on the interaction between personality and the environment, that is, their outlook on life events.<sup>10</sup>

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<sup>9</sup> Clark (2018), Four Decades of the Economics of Happiness: Where Next?

<sup>10</sup>Boyce (2009), Understanding Fixed Effects in Human Well-Being

## 4.

# Methodology

The following section lays out the chosen methodology for quantifying effects.

## 4.1 Constructing Dimensions of Job Quality

To quantify effects of job quality, nine different job quality dimensions, along with a job matching dimension, were created. These dimensions were made by first converting responses to survey questions into numerical form, then standardising the values of responses across every question. The questions were then sorted into dimensions before an average for each specific dimension was calculated. The underlying questions that make up each dimension are shown in the table below.

**Table 4-1: Job Characteristics Dimensions and Underlying Questions**

Dimensions	#Qs	Elements
1. Security	1	<ul style="list-style-type: none"> <li>Subjective likelihood of Losing your job</li> </ul>
2. Health	4	<ul style="list-style-type: none"> <li>My organisation is supportive of people's mental health</li> <li>My organisation encourages staff to talk openly about mental health problems</li> <li>Extent to which work positively or negatively affects mental health</li> <li>Extent to which work positively or negatively affects mental health</li> </ul>
3. Work-Life Balance	4	<ul style="list-style-type: none"> <li>Frequency of short notice working</li> <li>Ease in taking a few hours off to take care of personal or family matters</li> <li>Finding it difficult to fulfil commitments outside of work because of job</li> <li>Finding it difficult to relax in personal time because of work</li> </ul>
4. Relationships	7	<ul style="list-style-type: none"> <li>Line manager respects me as a person</li> <li>Line manager treats me fairly</li> <li>Line manager is supportive if I have a problem</li> <li>Quality of relationships with colleagues in team</li> <li>Quality of relationships with staff managed</li> </ul>





		<ul style="list-style-type: none"><li>▪ Quality of relationships with customers, clients or service users</li><li>▪ Quality of relationships with suppliers</li></ul>
5. Voice	7	<ul style="list-style-type: none"><li>▪ Trade Union</li><li>▪ Non-union staff association or consultation committee</li><li>▪ One-to-one meetings with your line manager</li><li>▪ Team meetings</li><li>▪ How good or poor managers are at seeking the views of employees or employee representatives</li><li>▪ How good or poor managers are at responding to suggestions from employees or employee representatives</li><li>▪ How good or poor managers are at allowing employees or employee representatives to influence final decisions</li></ul>
6. Autonomy	7	<ul style="list-style-type: none"><li>▪ Influence over tasks done in job</li><li>▪ I am allowed to make decisions about what methods I use to complete my work</li><li>▪ I have considerable opportunity for independence and freedom in how I do my work</li><li>▪ I am allowed to decide on my own how to go about my job</li><li>▪ My job gives me a chance to use my personal initiative or judgement in carrying out the work</li><li>▪ My job allows me to make a lot of decisions on my own</li><li>▪ I can modify my performance objectives to emphasise some aspects of my job and play down others</li></ul>
7. Meaning	11	<ul style="list-style-type: none"><li>▪ My job is a way of earning money -nothing more</li><li>▪ How often job involves complex tasks</li><li>▪ How often job involves learning new things</li><li>▪ How often job involves interesting tasks</li><li>▪ Feeling of doing useful work for the organisation</li><li>▪ I feel inspired at work</li><li>▪ Feeling of doing useful work for society</li></ul>

		<ul style="list-style-type: none"> <li>▪ I am highly motivated by my organisation's core purpose</li> <li>▪ The work I do serves a satisfying purpose</li> <li>▪ The work I do is important</li> <li>▪ The work I do makes the world a better place</li> </ul>
8. Design	3	<ul style="list-style-type: none"> <li>▪ Right equipment to don job effectively</li> <li>▪ Right digital tools to communicate effectively with the team</li> <li>▪ Workload (e.g. too much, too little)</li> </ul>
9. Development	6	<ul style="list-style-type: none"> <li>▪ Access to career development programmes</li> <li>▪ Coaching and mentoring</li> <li>▪ Opportunities to develop new skills</li> <li>▪ The organisation I work/worked for encourages promotion from within</li> <li>▪ Line manager supports my learning and development</li> <li>▪ Line manager supports my longer career development</li> </ul>
Matching	3	<ul style="list-style-type: none"> <li>▪ My current job feels like my niche in life</li> <li>▪ Perception of being over, under or appropriately qualified</li> <li>▪ Perception of lacking skills, having corresponding skills or having skills to cope with more demanding duties</li> </ul>

It should be noted however that some job characteristic questions were included independently, rather than being sorted into a dimension. Specifically for job matching, the factors of hours mismatch and working in a preferred location were included independently. Number of jobs, career expectations, commute time and fairness of pay were also included independently.

## 4.2 Quantifying Effects on Wellbeing

### 4.2.1 Choice of Outcome Variable

Subjective job satisfaction was chosen as the key outcome variable for the analysis which, within the Scottish section of the UK Working Lives survey, is measured on a 0 to 5 scale. The choice was made to use job satisfaction over life satisfaction as the determination of life satisfaction is a far more complex and its use would provide far less definite results. Furthermore, it is possible that job satisfaction can act as a proxy for life satisfaction when looking at the effects of job characteristics, as any

changes in life satisfaction might be assumed to be proportional to changes in job satisfaction.

#### 4.2.2 Model Choice

The method chosen for estimating effect sizes is similar to a standard regression model, however given the non-representative nature of the survey, individuals are weighted based on how over- or under-represented their social class was in the survey. This is done so that our results may apply to the Scottish population more broadly. Furthermore, to be in line with similar analysis in the literature, variables are included to account for differences across industries and occupations.

### 4.3 Map of Determination

The diagram below illustrates how all of these concepts are linked and shows how dimensions of job quality determine job satisfaction and therefore life satisfaction.

**Figure 4-1: Map of Causation for Job Characteristics and Job Satisfaction**



### 4.4 Monetisation

The chosen method for monetising the wellbeing effects of job characteristics is one proposed by Clark and Oswald<sup>11</sup>, whereby the equivalent increase in income required to have the same wellbeing effect as a particular factor is calculated by:

$$\text{Monetised Wellbeing Effect} = \frac{\text{Estimated Effect of Factor}}{\text{Estimated Effect of £1 More of Income}}$$

<sup>11</sup> Clark and Oswald (2002), A Simple Statistical Method for Measuring How Life Events Affect Happiness



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# Results

Job characteristics are a central determinant of wellbeing, though estimated importance varies greatly across characteristics.

### 5.1 Overall Importance of Job Characteristics

To assess whether job quality is important in determining wellbeing, a simple model was created to act as a comparison. This simple model looked at life satisfaction as a simple function of income and hours worked, along with some controls for example the industry in which a person works (so that wellbeing discussed is for a given job). This model was a poor predictor of wellbeing accounting for only 7% of the variation in individual wellbeing.

The alternative model, which includes other factors particularly job quality and job matching factors, does a far better job at predicting an individual's wellbeing, accounting for 73% of variation in job satisfaction across individuals

### 5.2 Quantifying Effects of Job Characteristics

The following section describes the estimated quantitative effects of each dimension of job quality and of job matching. All effects are reported in terms of a 1-unit standard deviation (1SD) increase from the mean. This means that a 1-unit increase represents a movement from the average value of a factor to the average distance at which each observation lies from that average point.

The factors are reported in three groups, with the strongest reported on first, followed by less significant factors and then finally factors whose importance could not be distinguished from zero. First are the factors revealed to be most important for individual wellbeing:

- The factor with the largest estimated effect is 'meaning', which measures people finding value in what they do at work, with a value of 0.32.
- Health' which captures the effects of work on both physical and mental health as well as how supportive the work environment is concerning mental health, has an estimated effect of 0.21.
- 'Work-life balance', which includes several different factors of balancing work and life outside of work, has an estimated value of -0.12 (as the underlying questions are posed in negative terms).
- 'Development', describing a worker's capability to improve their skills, qualifications, get promoted and be supported in doing so, is estimated to have an effect of 0.11.

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The above factors stand out above others in that their effects are large. The following factors are those which, while smaller, may still be important:

- 'Autonomy', which describes how flexible a job is (for example in terms of role or objectives) has an estimated effect of 0.06.
- 'Voice', which measures the extent to which employees' views are heard and considered has an estimated effect of 0.05.

Finally, there were a few dimensions of job quality whose effects could not be distinguished from zero (at least using the chosen dataset). These were:

- 'Security', which captures the reported likelihood of losing your job
- 'Relationships', which captures the quality of relationships with those around you at work.
- 'Design', which captures if the workload is too much or too little along with whether the physical and digital resources are available to complete tasks.

However, this is not to say that these factors are not valued by workers, only that a definite relationship was not found within the dataset. For example, regarding job security Clark finds that the proportion of employees who rank job security as 'very important' is between 53-63%<sup>12</sup>. Relatedly, Sverke et al. finds that risk of job loss negatively affects job satisfaction and wellbeing more generally.<sup>13</sup>

Crucially, it was found that job matching also has a large and definite impact on wellbeing, with an estimated effect of 0.12. This level of significance puts job matching on the same level as the most important dimensions of job quality.

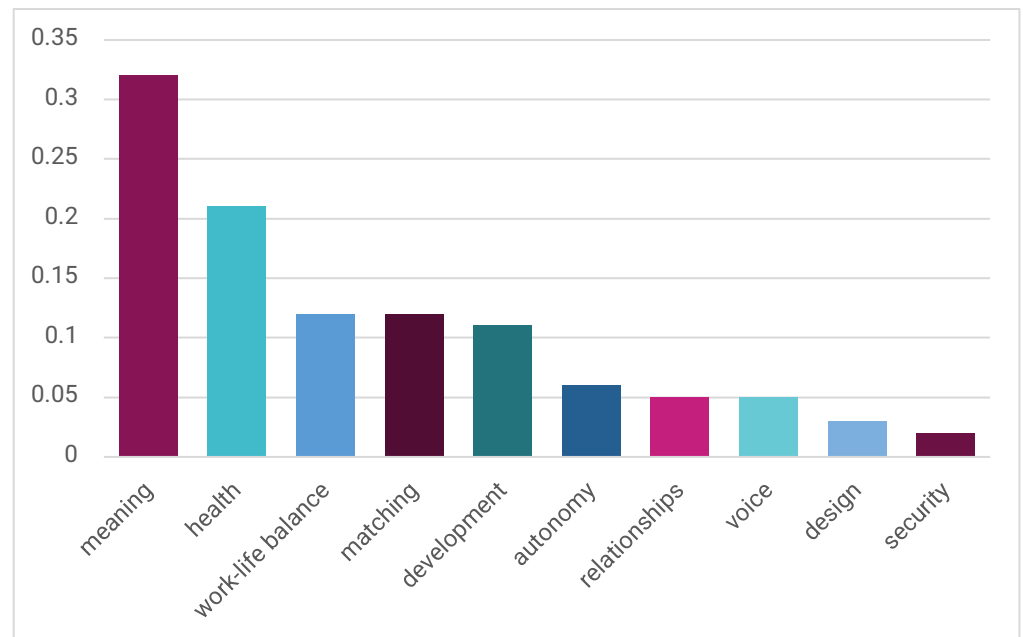
All the estimated effects are summarised in Figure 5-1 and Figure 5-2. In the second figure the dots indicate the specific effect size that has been estimated and the whiskers indicate the range within which the true effect is estimated to lie with 90% certainty.

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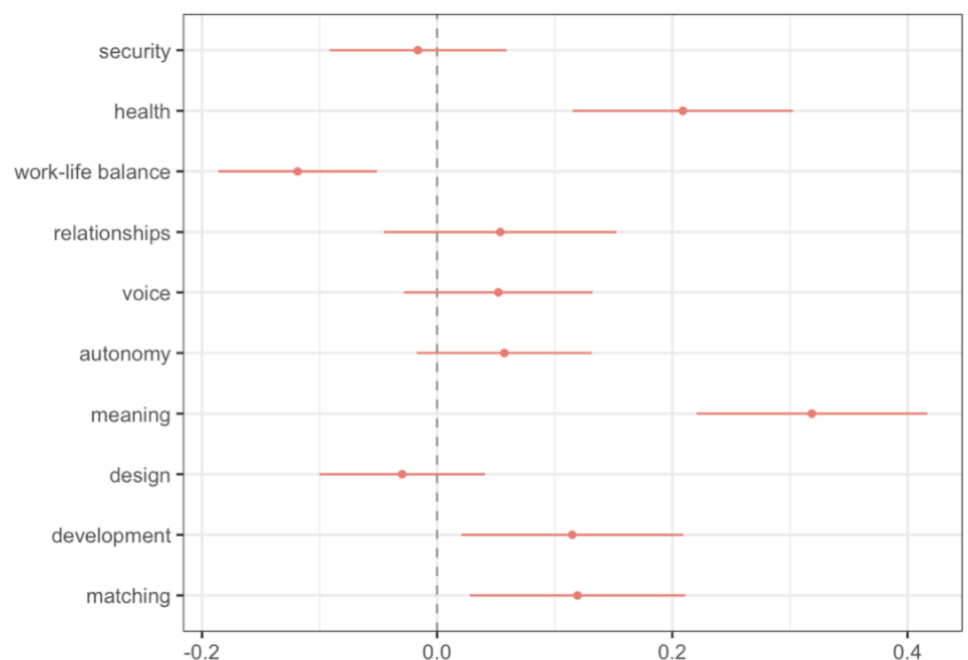
<sup>12</sup> Clark (2010), Work, Jobs and Well-being Across the Millennium

<sup>13</sup> Sverke, Et al. (2002), No Security: A Meta-Analysis and Review of Job Insecurity and its Consequences

**Figure 5-1: Bar Chart of Job Characteristics Effects on Wellbeing**



**Figure 5-2: Dot and Whisker Plot of Job Characteristics Effects on Wellbeing**



One interesting point to note is that the relative importance of each dimension seems to be the same across males and females, meaning that at least in terms of gender these results can be generalised and do not only apply to specific groups. In the future it might be enlightening to see if effects vary over other dimensions for example region or age.

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## 5.3 Findings on Pay

One of the key findings from this analysis, and one that may contradict prior notions of wellbeing, is that pay seems to have no definite effect on wellbeing after all of the other factors are accounted for (particularly job characteristics along with subjective fairness of pay).

This finding remains true even after reducing the sample down to only those below a certain level of income (for example below £100,000). It is because of this that it is impossible to monetise effects using the chosen method which was discussed above. While perhaps seeming unintuitive, this finding is actually somewhat consistent with the broader literature, where pay is found to have only a modest positive effect.<sup>14</sup>

Taking the limitations of our dataset (being non-representative of the UK population, having a large number of non-responses related to income and not being especially large in terms of sample size) along with the very small effects found in the literature together, it makes sense that no definite relationship is found.

Contrasting this finding regarding objective pay, the subjective pay measure of fairness of pay is found to have a large effect on wellbeing. Specifically, moving from having no strong feeling on one's own pay to feeling that the pay level is appropriate (or moving from feeling that pay is unfair to having no strong feeling) increases job satisfaction by 0.17.

We might conclude that this effect exists because individuals care about fairness, however this survey question only refers fairness of one's own pay. Alternatively, it could be that this is partly capturing the 'comparison effects' mentioned previously, where it is relative income that most greatly affects income, rather than the actual level of income itself.

## 5.4 Job Quality – Job Matching Interactions

It was previously mentioned that, while separable, job quality and job matching may have some effect on each other. Specifically, the point was raised that autonomy or development could improve job matching. Again, sample size limits how precisely this can be investigated, however statistically a possible small positive relationship between autonomy and how well a job fits a person was found, whereas no such relationship was found for development.

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<sup>14</sup> Clark (2015), What Makes a Good Job? Job Quality and Job Satisfaction



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## 6.

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# Conclusion

The effect of job characteristics is quantifiable and crucial to understanding to understanding wellbeing.

### 6.1 Key Takeaways

Overall, work is central to many people's lives, and job quality seems to be an important factor in determining individual's job satisfaction and therefore overall life satisfaction. With this in mind, it can be argued that improving job quality is an important way of improving wellbeing, along with the functioning of the economy and society. Moreover, this fact is true not only for workers in middle and upper socio-economic brackets but also for those in lower socio-economic brackets. This way of thinking about wellbeing and the economy cannot be captured by general economic measures like GDP nor even broader measures like unemployment or level of inequality.

Certain dimensions of job quality seem to stand out as important above others. Specifically, job meaningfulness, health effects (both physical and mental), work-life balance and career development capabilities are all crucial. While the effects of other dimensions seem to be smaller, this could be due to limitations of the dataset.

An important implication of this is that wellbeing can be improved not only by removing negative aspects of work like risk of physical accidents, stress or overwork, but also through the introduction of new positive aspects. This indicates that it is possible for employment itself to have an overall positive impact on wellbeing.

Moreover, benefits also span from more physiological forms of wellbeing, like health, to higher level, eudemonic forms of wellbeing, for example through providing meaning to life. This suggests that it may be useful to think more about the relationship between different forms of wellbeing in the future.

Interestingly, no definite relationship was found between pay from work and job or life satisfaction. However, this finding is somewhat in line with the findings of other research. On the other hand, fairness of pay does seem to be of great importance for individuals and their wellbeing. Furthermore, it is not only objective job quality that matters, but also how well a job matches with individual attributes, both in terms of preferences and skills.

Thinking back to the objective capabilities approach referenced earlier, this suggests that it may be appropriate to think of job quality as an end in itself and an indicator of wellbeing, similar to health, education or democracy.





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## 6.2 Implications

The significant effects of both job quality and job matching on wellbeing highlight possible roles for employers, employees and legislators in increasing wellbeing.

### 6.2.1 Employers

Employers have a central and active role in determining both the quality characteristics that exist in a given job (where even for characteristics which may be thought of as inherent for an occupation or industry, effects can be minimised or counteracted) along with which worker is matched up to a particular job.

### 6.2.2 Employees

While employees may have a lesser role in deciding where they work compared to employers due to the nature of labour markets in the real world, they still have some control over matching when in the job, particularly when they have the autonomy or voice to modify their role and objectives. This means that realising benefits of autonomy and voice in wellbeing requires action on the part of employees.

### 6.2.3 Legislators

Legislators can have an impact not only on job quality, for example through the introduction of health and safety regulations, but also on job matching, for example through social security programmes or universal basic income both of which could be used to enable individuals to spend longer searching for a job that matches their skills and preferences well.

## 6.3 Limitations

Some of the limitations of the dataset used in this analysis have already been discussed, however there are also some aspects to highlight with the approach taken more generally. First, the analysis is only concerned with individual wellbeing. In reality however, it is likely that job quality has an impact not only on individual wellbeing, but wellbeing more widely.

An obvious example of this is that wellbeing effects may ‘spill over’ from a worker to other household members. There is in fact evidence of these ‘spillover effects’ in the context of psychological wellbeing and workplace relationships<sup>15</sup>. In light of this, it is possible that focusing on individual wellbeing has resulted in an underestimation of the total wellbeing effects of job quality.

Another potential limitation is that several crucial complicating factors that are often highlighted in the wellbeing literature, namely comparison and adaptation/anticipation effects, personality- and genetic-environment effects and mood and reporting style effects have not been fully accounted for.

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<sup>15</sup> Liu et al. (2020), Work-to-Family Spillover Effects of Workplace Gossip: A Mediated Moderation Model



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Finally, the assumption was made that job satisfaction can be used as a proxy for life satisfaction, however the relationship between the two may not be so simple, as was seen with Maslow's hierarchy of needs.

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