



Does good work have a positive effect on productivity? Developing the evidence base

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Introduction

The *Taylor Review of Modern Working Practices*¹ in 2017 argued that good work for all should be a national priority. The review also outlined that most businesses understand that providing ‘good work’ is not only a good thing to do in and of itself but that good work can also deliver business benefits. For example, that good work might help deliver productivity gains. Analysis by Frank Siebern-Thomas using European data from 1995–2000 suggests that countries with higher job quality have higher levels of labour productivity and vice versa². Given that the UK has what Bank of England Chief Economist Andy Haldane calls a ‘productivity problem’ – with the level of productivity flat-lining since the global financial crisis while, post-recovery, key competitor countries have surged ahead – good work might offer a new solution to this problem. Recognising this possibility, the UK Government’s Industrial Strategy includes good jobs as one of the foundations of boosting productivity.

Understanding if good work can deliver on this promise is important. Although many businesses may see a value in providing good work – both as part of their responsibilities as an employer and as a means of motivating better performance from staff – others may not. Gathering and engaging the policy and business community in the evidence base on the productivity impacts of good work is a first step. This essay reports the outcomes of our literature review and sectoral analysis that undertake this task³.

Examining the relationship between good work and productivity is not easy, and for two reasons. First, there is no ready-made dataset that can be used for the UK to analyse the two sets of variables together. Second, consistency within analyses is hampered by the inconsistencies in defining job quality and the wide variety of measures for productivity.

The good news is that the findings from our investigation into the link between good work and productivity are generally positive. We first undertook a literature review of the grey and academic literature examining seven dimensions of ‘good work’ and productivity measures. Second, we undertook new statistical sectoral analysis to identify how aspects of good work were affecting the productivity of workers. Our evidence base, summarised below, can contribute to helping the UK Government advance the case set out in its Industrial Strategy linking the pursuit of good work to the delivery of productivity gains.



Key findings

- ✓ Good work and productivity seem, on the whole, to be positively correlated. A positive correlation was found in four of the five dimensions of good work for which evidence exists in existing literature. Evidence for a fifth is mixed; some research found positive correlations, others not. For the remaining two dimensions there is simply a lack of evidence either way. In our sectoral analysis, with which we were able to examine all seven dimensions, there were positive results for five of the seven dimensions.
- ✓ With this sectoral analysis of the 17 sub-indicators across the seven dimensions, seven showed higher productivity with the better the quality of work. Only one sub-indicator showed lower productivity and eight showed an inverse-U shape (i.e. productivity is lowest for the two extreme ends of work quality – very good and very bad).
- ✓ The correlation is stronger for bad work and poor productivity. This should be a major concern and potential point for intervention.
- ✓ The pattern of correlation is not uniform: the strengths of the correlations vary amongst the seven dimensions. This suggests interventions that focus on different dimensions of good work may deliver more substantial productivity gains than others.
- ✓ In some cases the existence of ‘decent work’ rather than ‘excellent work’ seems to be the optimal point for generating productivity gains.

Below we explain our process and findings in more detail. We conclude by setting out the implications for the policy and business communities.

Measuring good work

As mentioned, part of the challenge of measuring the impacts of good work on productivity is that there are differing definitions and metrics used for job quality. Following the UK Government’s acceptance of the *Taylor Review’s* recommendation that the UK needed

a standard measure of job quality, the Measuring Job Quality Working Group (2018) was constituted and tasked with developing an agreed set of job quality measures⁴. Drawing on the work of the Chartered Institute of Personnel and Development (CIPD) with its new *UK Working Lives Survey*, the Working Group recommends seven broad dimensions by which to measure good work. The seven dimensions are terms of employment; pay and benefits; job design and the nature of work; social support and cohesion; health, safety and psychosocial wellbeing; work-life

Table 1: Prevalence of evidence for different aspects of job quality in relation to productivity in existing research.

Pay and benefits	Strong
Health, safety and psychosocial wellbeing	Moderate
Job design and nature of work	Moderate
Voice and representation	Moderate
Work-life balance	Weak
Terms of employment	Missing
Social support and cohesion	Missing

balance; and voice and representation. Each dimension has sub-indicators.

Measuring productivity

Productivity is an economic measure of the efficiency with which inputs into production are converted into outputs of goods and services. Although researchers use a variety of measures and indicators for productivity, there is at least an official measure. The UK Government's Office for National Statistics (ONS) generally uses labour productivity as its standard measure of productivity – the level of GDP per person or per person hour of labour input. However, productivity can be hard to capture in some sectors. The most obvious are health care and the public sector generally, where quantifying output can be difficult.

Literature review findings

Using the key terms within the good work dimensions and the official and other measures of productivity, the first task of our investigation was a literature review (see Table 1)⁵. Around

450 UK and international articles and papers were identified, of which around 40 were then selected as indicative for full review. We found that some dimensions of good work have been more often examined than others. Where evidence has been found, the relationship between good work and productivity tends to be examined through indicators within a dimension, rather than demonstrating a link between the dimension as a whole and productivity (limiting our ability to say with confidence, for example, that voice and representation mechanisms improve productivity).

Examining the five areas that are researched in the extant literature, there are grounds for optimism. For the four of the five dimensions of good work for which evidence exists – pay and benefits; health, safety and psychosocial wellbeing; job design and the nature of work; and work-life balance – a positive impact on productivity is found. For the fifth dimension, depending on the mechanism of voice and representation within businesses, the existing evidence appears mixed but not discouraging.

Can we examine job quality and productivity 'in the round'?

A small number of studies have used multidimensional indexes of job quality to examine its relationship with productivity and any causality. These analyses find that productivity appears to positively impact job quality, although the impact of job quality on productivity is mixed and is dependent on the type of sector. It needs to be said, however, that few studies have tried to establish a causal link, despite emerging opinion that there might be a virtuous circle, with a mutually beneficial, even reinforcing, relationship between good work and productivity. No analyses to date that we have identified cover all seven dimensions of good work.

New sectoral analysis of the relationship between good work and productivity

Following our literature review, we undertook a sectoral analysis to produce new insights into job quality and productivity. The dataset we generated to explore the relationship between good work and productivity performance merges sectoral productivity data with the good work data from the UK-based Skills and Employment Survey⁶. It enables the first examination of the relationship between good work and productivity using all seven dimensions. It is based on every worker within a given sector having the same level of productivity but retaining their individual good work responses⁷. In this way labour

productivity (output per person hour) is the variable to be explained; sector employment and capital (e.g. machinery and equipment) are the controls⁸; and the individual responses to the good work variables are able to influence the sector outcome for workers in that sector.

The UK's general poor productivity performance is confirmed by the dataset, although there are considerable differences across sectors. In terms of the relationship between productivity and good work, the descriptive statistics calculate output per person hour for sub-indicators across the seven dimensions. The sub-indicators and dimensions are set out in Table 2.

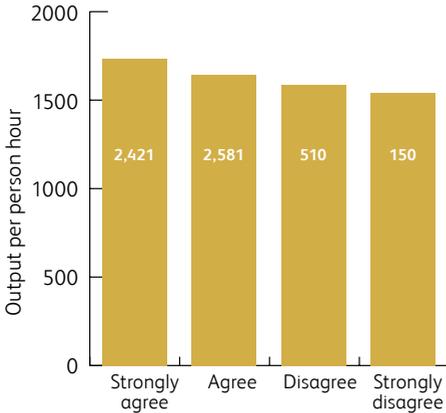
Table 2 summarises the nature of the relationship between labour productivity and each of the sub-dimensions of good work cross-sector. Of the 17 sub-indicators, seven showed higher productivity the better the work quality (see the example in Figure 1a). Only one sub-indicator showed lower productivity and eight showed an inverse-U shape (see the example in Figure 1b). The poorest good work category had the lowest productivity in 11 of the 17 sub-indicators. The highest quality work had the lowest productivity outcome in five cases. However, in the 14 cases where it was possible to move from the poorest quality work up to the second poorest, 13 were associated with an increase in productivity. The combination of a positive relationship between good work and productivity and, more particularly, the inverse-U shape relationship, implies that there is good reason for future policy and practice to focus on the poorest quality work end of the spectrum.

Table 2 Patterns in the good work sub-indicators

Sub-indicator	Dimension	Productivity with respect to good work				Lowest productivity outcome	
		Increasing	Falling	Inverse U	Other	Poorest good work	Highest good work
Is your job permanent?	 Terms of employment	✓				✓	
Chance of losing job in next 12 months			✓				✓
Satisfied with pay aspect of your job	 Pay and benefits	✓				✓	
After I leave my work I keep worrying about job problems	 Health, safety and psycho-social wellbeing			✓			✓
I find it difficult to unwind at the end of a work day				✓			✓
I feel used up at the end of a work day				✓			
In my current job I have enough opportunity to use my knowledge and skills	 Job design and nature of work	✓				✓	
How much choice do you have over way do your job					✓		
This organisation really inspires the very best in me							✓
My job requires that I help my colleagues to learn new things				✓		✓	
Importance of working with a team	 Social support and cohesion			✓		✓	
Importance of cooperating with colleagues		✓				✓	
Whether management arrange meetings where employees can express views		✓				✓	
Do you think that you personally would have any say in the decision about the change or not?	 Voice and representation	✓				✓	
Whether there are unions or staff associations at workplace		✓				✓	
I often have to work extra time, over and above the formal hours of my job	 Work-life balance			✓			✓
How often come home from work exhausted				✓		✓	

Figure 1: Common relationships between productivity and good work.
(Note: number of responses shown in the columns.)

(1a) In my current job I have enough opportunity to use my knowledge and skills



(1b) My job requires that I help my colleagues to learn new things

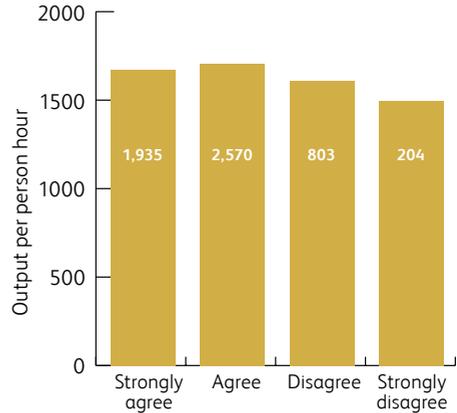


Figure 1 shows two examples from the 17 sub-indicators of good work explored in the analysis. These examples show the two most important patterns in the data (see Table 2). Overall, the relationship is generally either positive (good work is associated with higher productivity, Figure 1a) or inverse-U shaped (productivity is lower for the two extreme ends of good work, Figure 1b).

Using the new database, we also sought to explain productivity using the two control variables – employment and capital stock – and the seven dimensions of good work (aggregated from the 17 sub-indicators). Only the effects of the good work variables are shown (see Table 3).

Five of the seven dimensions have a positive relationship with productivity. Work-life balance is positive but not statistically significant. However, two of the dimensions are negative (we

return to this finding later). The value associated with each good work variable in Table 3 represents the difference in productivity between the poorest and the best work categories (e.g. very satisfied and very dissatisfied).

The results suggest that there is 8% higher productivity in those workers most satisfied with pay vis-à-vis those least satisfied (there are no sub-dimensions of pay). The same outcomes are found for job design and social support, and there is 14% higher productivity for the best voice and representation than in the poorest. Of the sub-indicators, we highlight just a few examples. The opportunity to use knowledge (part of job design and nature of work) and teamwork (part of social support and cohesion) are both strongly positively related to productivity. In addition, both voice and representation are separately positively related to productivity.

Table 3: Individual level regression with good work indices.

Variables	Change in productivity (%)
Terms of employment	-7
Pay and benefits	8
Health, safety and psychosocial wellbeing	-9
Job design and nature of work	8
Social support and cohesion	8
Voice and representation	14
Work-life balance	2

The negative value for terms of employment is caused by the considerably greater productivity performance amongst those who think they might lose their job in the next 12 months compared with those who do not think so. This finding is interesting and needs to be explored further because it is also the case that job insecurity is considered to be detrimental for wellbeing. Although the short-run effect of job insecurity might be to produce higher work effort and thereby, higher productivity, the long-term effects may be negative.

In the case of health, safety and psychosocial wellbeing, its three sub-indicators (outlined in Table 2) are all negatively related to productivity, although inclusion of more sub-indicators for this dimension will be explored in future analysis⁹. However, one of the sub-dimensions further illustrates the need to be careful in the interpretation of the finding, as the response of “never” to the statement “After I leave work I keep worrying about job problems”

is significantly negatively related to productivity, while the response of “occasionally”, which seems an acceptable job characteristic, is associated with the highest productivity outcome and significantly higher than the “never” outcome.

We also disaggregated the analysis by nine broad sectors (see Table 4). The analysis is the same as in Table 3, with the exception of the addition of variables that attempt to identify within-sector effects on productivity over and above the all-sector effects shown in the final row of Table 4. As the within-sector effects of good work account for some of the explanation of productivity, it produces a difference in the all-sector results between Tables 3 and 4.

The results suggest that there are some important differences between sectors in the effects of good work on productivity. The overall results (final column), when the sector effects are included are almost the same as those reported in Table 3, although one or two percentage effects

Table 4: Individual level regression with good work indices for nine broad sectors (change in productivity, %).¹⁰

Variables	Primary	Construction	Low-tech manufacturing	High-tech manufacturing	Less knowledge-intensive Private Businesses	Knowledge-intensive private Businesses	Public administration	Education	Health	Overall
 Terms of employment	-33	+	-	-	-7	-	-	+	7	-7
 Pay and benefits	-	+	-	-	+	23	+	+	+	8
 Health, safety and psychosocial wellbeing	-	+	+	-	-	-11		+	+	-8
 Job design and nature of work	-	+	-	-	13	14		+	-42	10
 Social support and cohesion	+	+	-15	+	-	22	+	14		+
 Voice and representation	60	+	-13	+	-	17	+	+	-	14
 Work-life balance	55	-	3	13	-	10	+	+	30	+

Note: only statistically significant coefficients are shown. Where values are insignificant, only the possible direction of the impact on productivity is shown.

are marginally smaller. Even bearing in mind the earlier discussion that the estimates reflect the difference between the poorest quality work and the best (e.g. very dissatisfied and very satisfied), some of the sector estimates seem large. The primary sector and the health sector stand out in this regard, although we have already noted the problem of defining productivity in the public sector. On the other hand, the knowledge-intensive sector suggests considerable support for the link between good work and productivity, with the exception of health, safety and psychosocial wellbeing.

Implications for research and policy

These initial findings are positive and encouraging. They suggest that good work can be encouraged as a route to improved productivity. Poorer quality work strongly correlates with poor productivity. Therefore, if the UK's long tail of poor productivity businesses is to be addressed, one point of focus for government policy should be those sectors with high incidences of poor-quality work or work that is poor quality by several measures. Moreover, our findings suggest that businesses do not always need to have best or leading-edge practice when it comes to good work in order to reap productivity gains. Action from government to encourage businesses to introduce changes across some of the seven dimensions that most strongly correlate to productivity could be valuable.

We have said that there are gaps in the evidence base on good work and productivity. In the literature review we could not find evidence for all the dimensions. We would like to see new research on two in particular: terms of employment and social support and cohesion. We also identified limitations in the surveys available for the analysis. We recommend that UK Government and other survey funders should explore the potential support that might be given to investigating good work and productivity through existing high-quality surveys, such as the Skills and Employment Survey and the CIPD's UK Working Lives Survey. We understand that the existence of evidence will not necessarily lead, in all cases, directly to changes in practice. Activities to support these findings to be translated into workplace practice will be important if the UK is to address its productivity performance. However, we would still encourage further research be undertaken to fill some of the evidence gaps.

The review of extant literature confirmed that there are inconsistencies in how both job quality and productivity are measured, and some measures are simply proxies. Standard approaches are needed for both. We would suggest that the ONS's measure of labour productivity be encouraged for use in research – not least for research that is directly government funded. Second, that the good work measures of job quality be adopted by the UK Government and similarly encouraged. We suspect that the UK Government adopting the seven dimensions will drive its use amongst researchers and help businesses identify where improvements in job quality need to be made to help improve productivity.

Endnotes

Does good work have a positive effect on productivity? Developing the evidence base

- 1 Taylor, M., 2017. *Good work: Taylor review of modern working practices*. London: HM Government. Available from: <https://www.gov.uk/government/publications/good-work-the-taylor-review-of-modern-workingpractices>. [Accessed October 2019]
- 2 Siebern-Thomas, F., 2005. Job quality in European labour markets. In: S. Brazen, C. Lucifora and W. Salverda, eds. *Job quality and employer behaviour*. New York, NY: Palgrave Macmillan, 31–66.
- 3 Our colleagues from the Warwick Institute for Employment Research Wil Hunt and Sudipa Sarkar were part of the project team.
- 4 Irvine, G., White, D. and Diffley, M., 2018. *Measuring good work*. Dunfermline: Carnegie UK Trust.
- 5 Warhurst, C., *et al.*, forthcoming for the Carnegie UK Trust.
- 6 We would like to thank Alan Felstead of Cardiff University and Duncan Gallie of Oxford University for facilitating our early access to the latest Skills and Employment Survey data for these analytical purposes.
- 7 There are 60 sectors and each worker is allocated one of the 60 productivity measures.
- 8 For details, see Bosworth, D., *et al.*, forthcoming for the Carnegie UK Trust.
- 9 It should be emphasised that these findings emerge from initial analysis. Further, more comprehensive, analysis using the dataset is forthcoming, published by the Warwick Institute for Employment Research and Carnegie UK Trust.
- 10 Details of this sectoral classification can be found in Bosworth, D. *et al* (op cit.). Indicatively, the Primary sector includes agriculture, mining and forestry; Low-Tech Manufacturing covers food, paper and water treatment and supply; Knowledge Intensive covers film & television, telecommunications and computer programming; Less Knowledge Intensive cover accommodation, food & beverage and travel.