

# Wellbeing and Productivity Briefing Note

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This note provides a preliminary overview of our thinking on the well-being-productivity nexus. Here we sketch what we consider to be the key mediating factors in the relationship between well-being and productivity, and associated research questions. The aim of this note is to provoke further discussion. It is a work in progress and is not by any means definitive.

## Themes

1. Physical health and productivity.
2. Mental health and productivity.
3. Work-related stress and productivity.
4. Workplace factors and productivity.
5. Workplace wellness programs and productivity.
6. ICT, productivity, and well-being.
7. The roles of social and human capital.
8. Productivity, prosperity and social value
9. Natural capital, well-being, and productivity.

## **Theme 1. Physical health and productivity.**

Poor physical health can cause people to spend more time absent from work as well as worsen their performance in the workplace. A range of physical health conditions have been linked to poorer productivity. These include chronic pain, heart disease, diabetes, arthritis, and asthma, amongst others. The degree of the productivity impairment may increase with the severity of the condition or the number of conditions present. As well as existing chronic health conditions, research has explored the relationships between certain behaviours that increase the risk of future health conditions and productivity. Health-risk behaviours include inadequate hours of sleep, low amounts of physical exercise, unhealthy diet, smoking, and being overweight. Interventions to improve health-related behaviours sometimes show associated improvements in productivity, but this does not appear to be a consistent finding. Further, it is not always clear whether reducing health-risks has a direct impact upon productivity, or rather whether improving overall health enhances psychological well-being (e.g. life satisfaction, self-esteem) which in turn can impact upon productivity.

- 1.1 Which physical health conditions have the greatest relationship with reduced productivity?
- 1.2 Is it possible to accommodate certain physical health conditions in the workplace so as to reduce their negative effects on productivity?
- 1.3 Is physical health more strongly associated with productivity in certain sectors or occupations?
- 1.4 Does aiming to increase productivity growth have a negative impact upon employee physical health?

Indicative references: (Alavinia, Molenaar, & Burdorf, 2009; Aldana, 2001; Boles, Pelletier, & Lynch, 2004; Brown, Gilson, Burton, & Brown, 2011; Burton, Chen, et al., 2005; Coulson, McKenna, & Field, 2008; Gates, Succop, Brehm, Gillespie, & Sommers, 2008; Hafner, Stolk, Saunders, Krapels, & Baruch, 2015; Hemp, 2004; Katz, Pronk, & Lowry, 2014; Meerding, IJzelenberg, Koopmanschap, Severens, & Burdorf, 2005; Mitchell & Bates, 2011; Schultz & Edington, 2009).

## **Theme 2. Mental health and productivity.**

Mental health describes 'a state of wellbeing in which the individual realises his or her abilities, can cope with the normal stresses of life, work productively and fruitfully, and is able to make a contribution to his or her community' (WHO, 2007). Statistics suggest that as many as one in six UK workers will be affected by mental health problems such as depression, anxiety, and unmanageable stress at any time and that this can have an impact upon both their levels of absenteeism and presenteeism. Impacts upon presenteeism may be particularly prominent as individuals are often reluctant to disclose the nature of their mental health problems to employers through fear of stigma and discrimination. Whilst it has been suggested that poor mental health is one of the largest causes of productivity losses in the workplace, it is sometimes hard to disentangle the relative effects of mental and physical health due to the reciprocal nature of the relationship between these two factors. In addition to the costs (in terms of lost productivity) of various mental health conditions, research suggests that raising levels of well-being or positive affect for individuals who do not necessarily report a mental health condition can also lead them to display greater labour productivity.

- 2.1 What is more important in terms of facilitating productivity growth, reducing mental health problems or increasing general levels of happiness?

- 2.2 Do factors more aligned with the eudaimonic conceptualisation of well-being (e.g. purpose, meaning, and personal growth) relate to labour productivity in the same way as subjective well-being?
- 2.3 Does mental health relate to productivity growth at the macroeconomic, as well as the microeconomic level?

Indicative references: (Bell, 2017; NHS Information Centre, 2011; Goetzel et al., 2004; Hafner, Stolk, Saunders, Krapels, & Baruch, 2015; The Sainsbury Centre for Mental Health, 2008; Kessler, Greenberg, Mickelson, Meneades, & Wang, 2001; Mind, 2013, 2014; Naylor et al., 2012; Oswald, Proto, & Sgroi, 2015; Stewart, Ricci, Chee, Hahn, & Morganstein, 2003).

### **Theme 3. Work-related stress and productivity.**

Stress represents the adverse reaction to excessive perceived pressures and demands placed on the individual. It is considered to have various physical, psychological, social, and behavioural manifestations which would seem to limit productivity and well-being. These include sleep deprivation, depression, interpersonal issues, and drug and alcohol abuse. Indeed, high job-related stress has been associated with both greater absenteeism and presenteeism, although estimates concerning the extent of the association between stress and absenteeism may be underestimated as employees appear to be inclined to give alternative reasons for their stress-related absence. However it may not be all bad in terms of stress and productivity, with some research suggesting an inverted U-shape function. Moderate, short-lived stress may enhance performance, memory, and alertness, although most of this research is neurobiological and based on rodent samples.

- 3.1 To what extent do attempts to enhance organisational productivity impact upon employee stress levels?
- 3.2 What are the specific working practices implemented in the pursuit of productivity growth that can have the biggest impact upon work-related stress?
- 3.3 If stress is a reaction to perceived demands, are certain types of individuals or occupations more likely to experience work-related stress?
- 3.4 Is it preferable to promote resilience to workplace stressors or to eliminate the stressors themselves if trying to promote organisational well-being and productivity?

Indicative references: (Belkic, Landsbergis, Schnall, & Baker, 2004; Burton, Chen, et al., 2005; Burton, Conti, Chen, Schultz, & Edington, 1999; Chandola et al., 2008; Giga, Noblet, Faragher, & Cooper, 2003; Health and Safety Executive, 2017; Jeon et al., 2014; Kay, Gmelch, & Lovrich, 2015; McGrath, 1970).

### **Theme 4. Workplace factors and productivity.**

Unemployment is a key driver of mental ill-health yet, for those in work, poor working environments can have detrimental effects upon well-being and productivity. Certain workplace factors may be the result of efforts to increase productivity, although this is not always explicitly acknowledged in the literature. Heightened monitoring of performance, for example, can lead employees to experience less control, which has been linked to poorer productivity. Other workplace factors that have been linked to poorer employee productivity include unrealistic time demands, workplace bullying and incivility, and the perception that the organisation does not consider the health and well-being of their employees as an indicator of organisational success. Such factors are intuitively (and sometimes empirically) also linked to poorer personal well-being as feelings of autonomy, competence, and positive relations are considered necessary for high personal well-being. Certain physical characteristics of the work environment have been implicated as predictors of individual productivity

and well-being, for example temperature, ventilation, and 'green' buildings. These factors may have different implications in terms of financial costs and therefore organisational productivity.

- 4.1 What workplace factors are typically affected by attempts to enhance organisational productivity?
- 4.2 Are workplace factors able to directly undermine productivity, or do their effects mainly occur through indirect influences on well-being and workplace stress?
- 4.3 What personal factors may make an individual more sensitive to the effects of workplace factors?

Indicative references: (Black, 2008; Clements-Croome, 2006; Cox, Leka, Ivanov, & Kortum, 2004; Federspiel et al., 2004; Gohara & Iwashita, 2003; Hafner et al., 2015; Kosonen & Tan, 2004; Maslach & Leiter, 1997; Ryan & Deci, 2000; Spence Laschinger, Leiter, Day, & Gilin, 2009; Stolk, Hofman, Hafner, & Janta, 2014; Thatcher & Milner, 2014).

### **Theme 5: Workplace wellness programmes and productivity.**

Workplace wellness programmes are interventions designed to improve the health and well-being of an organisation. A business may choose to invest in health and well-being initiatives in order to enhance corporate social responsibility, attract and maintain the best staff, and improve productivity. Workplace wellness programmes may be targeted at specific individuals or all employees and can be focused on reducing specific health risks or more integrated. Examples of interventions that have been implemented include on-site fitness centres, counselling, mindfulness, well-being information seminars, computerised goal-setting and reminders, and ergonomic changes. Whilst numerous studies have documented positive consequences of such interventions in terms of enhanced well-being and productivity, results are not always consistent. Certain factors have been suggested to influence the effectiveness of wellness programmes such as visible support of senior management and alignment with overall business objectives, but it is tricky to always pin-point the hindering factors in specific unsuccessful case studies.

- 5.1 What type of workplace interventions are the most effective in terms of improving organisational productivity?
- 5.2 What are the key factors that influence the success of workplace well-being programmes?
- 5.3 Do employee perceptions of workplace wellness programmes influence their effectiveness?
- 5.4 Can reported increases in productivity be sustained once an employee is no longer involved in a wellness intervention?

Indicative references: (Aldana, 2001; Black, 2008; Block et al., 2008; Burton, McCalister, Chen, & Edington, 2005; Cancelliere, Cassidy, Ammendolia, & Côté, 2011; Chapman, 2012; Goetzel & Ozminkowski, 2008; Halliwell, 2010; Henke, Goetzel, McHugh, & Isaac, 2011; McDaid et al., 2008; Pelletier, 2011; Riedel et al., 2001).

### **Theme 6: ICT, productivity, and well-being.**

Information and communication technology (ICT) can cover computers, software, telecommunications equipment, and semiconductors. At the macroeconomic level, ICT appears to have been accounting for an increasing amount of economic growth since the 1970's. The growth rate of labour productivity has been shown to be more strongly associated with the growth of ICT than with that of non-ICT capital. At the microeconomic level, the relationship between ICT adoption and productivity growth is more complex, with research suggesting that concurrent investments in training and organisational change are needed in order to reap the productivity benefits of ICT. As well as

directly enhancing productivity, ICT can support to development of new innovations. The relationship between the adoption of ICT in the workplace and employee well-being is also not clear-cut. On the one hand, ICT can allow for easier communication between employees, location flexibility, and greater job autonomy due to easier access to information. On the other hand, expectations of constant availability and technical problems can lead to stress and undermine psychological well-being. The increasing use of computers in the workplace may also lead to musculoskeletal symptoms, thereby having negative effects on physical well-being and productivity.

6.1 Does ICT in the workplace have the potential to enhance or undermine organisational social capital?

6.2 To what extent are the productivity benefits of ICT generalizable across industries?

6.3 Do employees view the increasing adoption of ICT within organisations as a factor that benefits the ease and efficiency of their work, or as a threat to their job security?

Indicative references: (Bordi, Okkonen, Mäkinen, & Heikkilä-Tammi, 2018; Corrado, Haskel, & Jonas-Lasinio, 2017; Díaz-Chao, Sainz-González, & Torrent-Sellens, 2015; Hagberg, Tornqvist, & Toomingas, 2002; Miller & Atkinson, 2017; O'Mahony & Vecchi, 2005; Oulton & Srinivasan, 2005; Spiezia, 2012; Stadin et al., 2019).

#### **Theme 7: The roles of social and human capital.**

Social capital describes the resources embedded within a group that allow it to function effectively. Social capital can therefore cover factors such as interpersonal relationships, shared norms, and mutual understandings. High levels of social capital have been proposed to aid organisational productivity by facilitating co-operation and effective sharing and assimilation of knowledge. Particular attention has been granted to the role of organisational trust in enhancing productivity as this factor can facilitate greater willingness to exert effort at work without fear of exploitation. Social capital should enhance well-being by creating a sense of connectedness and belonging. Human capital describes the skills and knowledge possessed by each individual. High levels of human capital are proposed to directly influence productivity and also indirectly via facilitating the creation of new technologies etc. At the same time, human capital may promote greater personal well-being by allowing individuals to feel competent. Human and social capital are often suggested to be intricately linked because they are created through the same processes. Education, for example, both socialize young people and teaches them skills.

7.1 To what extent might attempts to improve organisational productivity undermine social capital?

7.2 Can higher levels of productivity facilitate the development of human capital? And if so, how?

7.3 Is there any evidence of a causal link between levels of human and social capital?

Indicative references: (Bijlsma & Koopman, 2003; Brien, Ratna, & Boddington, 2012; Brooks & Nafukho, 2006; Costa, 2003; Dinda, 2006; Healy & Côté, 2001; Sabatini, 2008).

#### **Theme 8: Productivity, prosperity and social value.**

What is the purpose of productivity growth? The economy should deliver prosperity, and it is commonly assumed that productivity is a key part of this. But what kind of prosperity does productivity growth deliver? The linkages between productivity and improvements in human welfare or social development are varied and often unclear. Productivity growth may raise average incomes, impact upon government fiscal balances and allow for greater investments in social development. It is also speculated that individuals could use productivity gains to increase their leisure time rather than

income. However, boosting productivity without increasing output can threaten full employment if work is not spread more evenly (e.g. potentially by reducing the length of the working week). There are also activities that rely on time and attention in order to function well. Pursuing productivity growth may change their character and undermine their value. The relationship between social development and productivity growth could also be bidirectional. Improvements in health, life expectancy and economic security may motivate people to invest in human capital, for example.

- 8.1 What kind of prosperity does productivity growth support?
- 8.2 In what ways might productivity growth undermine social development and human welfare?
- 8.3 To what extent is productivity growth more beneficial for social development in developing, rather than developed, nations?
- 8.4 In the face of a decline in productivity growth, what are the steps that the UK might take in order to best foster social development?

Indicative references: (Birdsall, 1993; Dengler & Strunk, 2018; Jackson, 2012; Jackson & Victor, 2011; Klitgaard, 2017; Mair, Druckman, & Jackson, 2018; Ranis, 2004; Sharpe, 2004; Tompa, 2002).

### **Theme 9: Natural capital, well-being, and productivity.**

Natural capital refers to those aspects of the environment that can provide goods and ecosystem services which benefit people. This includes species, freshwater, land, minerals, and air, plus natural processes and functions such as pollination and climate regulation. The role of natural capital as an input factor is generally ignored in most traditional Multi-Factor Productivity (MFP) growth measures, with the exception of recent work being conducted by the OECD. This may be because of difficulties in accounting for the full contribution of ecosystem services to productivity. Many of the influences of natural capital on productivity may be indirect. The natural environment can erode machinery hence damaging physical capital whilst greenspace and air quality can have effects on mortality rates, health, and presenteeism. Nevertheless, the contribution of natural capital to productivity growth in certain sectors (e.g. forestry, mining) is likely to be much greater than in the aggregate economy. Here, when (non-renewable) natural capital may be in decline, this has the potential to hinder productivity growth. Whether this occurs appears to depend largely upon whether natural capital can be replaced by technology. The importance of natural capital for well-being has been emphasized, as evidenced by the recent rise in 'green prescribing'.

- 9.1 To what extent do attempts to enhance productivity impact upon levels of natural capital?
- 9.2 How important is natural capital as a determinant of productivity growth in the UK?
- 9.3 Can technology avert any negative consequences of a decline in natural capital on productivity growth and well-being?

Indicative references: (Atkinson, 2015; Bleischwitz, 2001; Bowen, 2016; Brandt, Schreyer, & Zipperer, 2017; Engelbrecht, 2009; Fitter, 2013; Graff Zivin & Neidell, 2013; Hamilton, Naikal, & Lange, 2019; Jepson, Cameron, & Robertson, 2010; Squires, Reid, & Jeon, 2008; Vemuri & Costanza, 2006).

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