

Work conditions and financial difficulties in post-crisis Europe: Utility versus quality of working life

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Abstract

This article critically examines the relation between work and utility and challenges the mainstream economic view of well-being as a hedonic state for which work is a less pleasurable trade-off. It proposes a conception of work as a potential source of eudaimonic well-being, providing meaning and contributing to human flourishing and self-realisation. Based on micro-level data, the article shows the relevance of distinguishing between hedonic and eudaimonic well-being by way of comparing the effects of increased financial difficulties and deteriorated work conditions on these two types of well-being in five European Union countries – Germany, Poland, Portugal, Sweden and the UK – in the post global financial crisis years between 2009 and 2014. The article concludes by underlining the political importance of addressing aspects pertaining to the quality of working life and of creating jobs that serve to improve the eudaimonic well-being of citizens.

JEL Codes: I31, J28, J81

Keywords

Eudaimonia, Germany, global financial crisis, meaningful work, Poland, Portugal, quality of working life, Sweden, United Kingdom, work

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Introduction

The economic downturn generated by the 2007–2008 financial crisis not only produced more and more unemployment and diminished disposable income, but it also had long-lasting effects on work conditions (Santos et al., 2017, 2016). While the negative effects of tightened financial circumstances on well-being are fully acknowledged by mainstream economics (Piekalkiewicz, 2017), the effects of deteriorated work conditions are largely overlooked. Instead, they are studied within the scope of broader interdisciplinary studies on job quality (Findlay et al., 2013; Gallie, 2013a; Green et al., 2016). This article argues that mainstream economics' relative disregard for the impact of work conditions on well-being comes from its conceptions of work and utility. Hence, the article: (1) critically examines the relation between work and utility conceptualised as hedonic well-being in mainstream labour economics, (2) provides an alternative view of work as a potential source of eudaimonic well-being, (3) empirically demonstrates the relevance of distinguishing between the two types of well-being and (4) explores the intricate relation between work and well-being by comparing the effects of increased financial difficulties (FD) and worse work conditions on hedonic and eudaimonic well-being.

The standard models of labour supply and personnel economics are grounded on the assumption that work generates disutility, which is compensated by pecuniary rewards. Work is conceived as a means to get income and to consume, where utility is exclusively associated to the latter, that is, to the non-work domain. However, the disutility assumption has been confronted with challenging evidence from various strands of research within mainstream and heterodox economics, as well as from other social sciences. For example, based on subjective well-being indicators, happiness economics shows that the non-pecuniary costs of unemployment considerably outweigh the loss of income (Carroll, 2007; Helliwell and Huang, 2014; Winkelmann and Winkelmann, 1998). Similarly, behavioural economics emphasises that non-pecuniary motives must be taken into account if one is to fully explain effort levels at work (Charness and Kuhn, 2011; Dickinson and Villeval, 2008; Rebitzer and Taylor, 2011).

Although working for pecuniary motives alone is now a disputed idea, labour economics still falls short of contemplating work as an activity in which individuals also engage for the sake of it. In fact, the theory of compensating wage differentials (Rosen, 1986; Wells, 2010) has already acknowledged for some time now that workers derive utility from other facets of work (having an interesting job, good social climate at work, etc.). However, it is not defined which kind of utility is at stake here, namely whether the utility derived from these work facets differs from the utility derived from consumption. This article seeks to help fill in this gap in the literature by examining the types of utility at stake in work. To this end, we begin by questioning the concept of utility, contrasting two perspectives on human well-being: the hedonic approach (prevalingly embraced by economists), which defines well-being in terms of pleasure attainment and pain avoidance, and the eudaimonic approach, which focuses on meaning and self-realisation (Ryan and Deci, 2001). We then advance a conception of work as a meaningful activity with potential for self-realisation. Work is valued and sought after not just because of the desire and need to earn a living, but also because it is an integral part of eudaimonia, that is, of human flourishing.

The article is organised as follows. Section ‘Questioning the assumed disutility of work and the related concept of well-being’ reviews the literature from which the theoretical hypotheses derive. The assumption of the disutility of work is discussed in three steps: (1) by reviewing theoretical arguments on the (dis)utility of work and supporting empirical findings, (2) by distinguishing hedonic from eudaimonic conceptions of well-being and (3) by discussing the meaning of work and its relation to human flourishing. Section ‘Empirical study’ formulates the hypotheses that guide our empirical work and presents the results of the econometric analyses. Drawing on the FESSUD Finance and Well-Being Database (Santos et al., 2016), we compare the effects of increased FD and worse working conditions on hedonic and eudaimonic well-being between 2009 and 2014 in five European Union (EU) countries: Germany, Poland, Portugal, Sweden and the UK. Section ‘Discussion’ discusses the results and the last section presents a conclusion.

Questioning the assumed disutility of work and the related concept of well-being

The leisure-income trade-off and the (dis)utility of work

In standard labour supply models work is purely instrumental; only leisure and consumption, outside the work domain, can improve the welfare of individuals. These models include the extreme position that if individuals like working, it must be because they enjoy leisure at work (Dickinson, 1999). In fact, the labour supply model is framed in terms of a leisure-income trade-off from which work actually disappears (Derobert, 2001). However, in the 1980s, the theory of compensating wages (Rosen, 1986) extended the conventional model of labour supply by including in the workers’ utility function a variable that captures their preferences for the several facets of work. The utility/disutility derived from work facets is revealed through the willingness to accept reduced or to demand increased wages. Work ends up resembling more consumption – of pleasurable and unpleasurable facets of work – than production, and the worker as a producer is eclipsed and replaced by the worker as a consumer (Lopes, 2011).

In the economic literature, the conception of work as a source of disutility is related to a hedonic view of well-being, conceived as the satisfaction of individual preferences: the ‘hedonic price/wage theory states that individuals should accept lower wages for an occupation with personally desirable characteristics’ (Wells, 2010: 296). It is assumed that the satisfaction of preferences yields utility, or more precisely experienced utility (Kahneman and Thaler, 1991). Experienced utility is related to instant or temporal hedonic, pleasurable, experiences and to pain avoidance (Mitra et al., 2015), and effort is undisputedly considered painful.

As in standard economics, in popular representations work is often depicted as the antithesis of pleasure. That working is not pleasurable is documented by a large body of empirical work. Using the Day Reconstruction Method (DRM), Kahneman et al. (2004) show that time at work provides fewer positive feelings than leisure and time spent with family. Similarly, Kopperud and Vitterso’s (2008) DRM study shows that engaging in core work tasks provides lower pleasure than having breaks at work and commuting. However, various facets of work generate positive utility; in the economic literature,

such facets are associated with ‘hedonic’ value, and job quality is defined as ‘well-being from working’ (Clark, 2015: 2), that is, the well-being derived from ‘good jobs’ that is associated with experiencing pleasure. The valued work facets include decision-making, skill usage, job security and pay (Wells, 2010), a list to which Clark (2015) adds job content and interpersonal relations. These aspects are reported by workers as ‘being important’ and are shown to be highly related to job satisfaction.

To sum up, the discontinuous and contradictory image of well-being at work provided by the evidence collected by various social sciences suggests that the (dis)utility of work is much more complex than is commonly assumed. In our view, the apparently contradictory results can be reconciled, and a coherent account of work experience can be provided. This requires further elaboration of the concepts of utility and well-being regarding work. Viewing work as a meaningful activity and further elaborating its relationship with well-being call for a eudaimonic approach that conceives well-being as an active process in terms of human flourishing. This was well understood by institutional economists, such as Thorstein Veblen, who long ago pointed out that

[i]t is the characteristic of man to do something, not only to suffer the pleasures and pains through the impact of suitable forces. He is not simply a bundle of desires [...] but rather a coherent structure of propensities and habits which seek realisation and expression through unfolding activity. (Veblen in Kaufmann, 1999: 371–372)

The hedonic conception of well-being held by mainstream economists tends to disregard the role of active flourishing towards human welfare by merely focusing on consumption. The relation between work and human flourishing is also an aspect which is not given due attention in the job quality literature (Findlay et al., 2013; Gallie, 2013b). Even the literature on the economics of happiness that distinguishes evaluative from affective and eudaimonic well-being does not address work, nor its contribution to well-being (Benjamin et al., 2014; Clark, 2016).

Hedonism, eudaimonism and work

Psychologists advance two contrasting perspectives on well-being. The hedonic approach supports the idea that pleasure is the only good in human life, and the eudaimonic approach defends that realising one’s potential is the ultimate human goal. Hedonism associates well-being with a subjective experience constituted by high levels of positive affect, low levels of negative affect and high satisfaction with life. In contrast, eudaimonism considers that while pleasantness is a part, it is not enough to fully realise human well-being; the latter ‘is not so much an *outcome* or end state as it is a *process* of fulfilling or realising one’s daimon or true nature’ (Deci and Ryan, 2008: 2, our italics). Eudaimonia was first invoked by Aristotle as an answer to the fundamental question of how we should live (Ryff, 2014). Thus, it has an ethical dimension which is associated with the purpose and meaning of life.

Eudaimonism claims that well-being is more than a psychological or affective state; it is a way of living that is focused on what is intrinsically worthwhile and on acting virtuously. This entails that nurturing intrinsic aspirations has more beneficial effects on

psychological health than nurturing extrinsic goals. A growing body of empirical evidence shows that pursuing intrinsic goals (e.g. self-development, affiliation and health) is more positively related to well-being indicators (e.g. positive affect, vitality and self-actualisation), and less negatively related to measures of ill-being (e.g. depression and anxiety), than the pursuit of extrinsic goals (e.g. accumulation of money, fame and social image; Niemiec et al., 2009; Ryan et al., 2008). Moreover, the direct pursuit of hedonic activities has been shown to increase pleasure (positive affect) in the short run, but the pursuit of eudaimonic activities has revealed a more enduring effect on self-realisation (Ryan et al., 2008).

The self-determination theory, which endorses a eudaimonic perspective, argues that three kinds of ingredients (considered basic psychological needs) are required to achieve self-realisation (Deci and Ryan, 2008; Ryan and Deci, 2001): (1) control or self-determination over one's life, (2) competence and (3) social respect and care. These ingredients correspond to the facets of work reported in the economic literature that are associated with positive utility: discretion, skill usage, job security and interpersonal relations (Clark, 2015; Wells, 2010). Likewise, these are also the factors that were identified as the main ingredients of job quality in sociology-oriented literature (Findlay et al., 2013; Gallie, 2013b; Green et al., 2016).

Drawing on Aristotle, within the framework of lifespan theory of human flourishing, Ryff and Singer (2000) identify six ingredients of self-realisation: autonomy, personal growth, self-acceptance, life purpose, mastery and relatedness. More recently, Ryff (2014) claimed that only a few studies have directly analysed the relation between work and eudaimonia. Job quality studies, in turn, use measures involving affective states/feelings, such as job satisfaction (i.e. measures associated with hedonia), while focusing on well-being at work rather than on overall well-being. However, contrary to mainstream economics, work intensity (a measure of effort) is not associated with low well-being at work; rather, only when high work intensity is associated with low scope of discretion is the situation revealed to be detrimental to well-being (Lopes et al., 2014; Theorell et al., 2015). Jobs combining high work intensity and high level of discretion are termed 'active jobs' in the literature, which may be associated with both eudaimonia and hedonia. Moreover, the fact that volunteer work is shown to be positively related to eudaimonic well-being and not at all related to hedonic well-being suggests that work does involve eudaimonia (Son and Wilson, 2012).

Finally, while work provides fewer positive emotions when compared with other daily activities, work core tasks are nonetheless associated with perceptions of being in control and feelings of engagement, which are two basic components of eudaimonia (Kopperud and Vitterso, 2008). Indeed, having control over one's life and engaging in activities one considers intrinsically worthwhile are often proxies for eudaimonia in the empirical literature (Ryan et al., 2008).

The meaning of work and human flourishing

Major classical political economists have pointed out the link between work and human flourishing. Marx emphasised that work, if organised in non-alienating circumstances, can provide people with the opportunity for self-realisation and a meaningful life. In

turn, Marshall stressed that ‘it is the science of activities and not that of wants [... which] may claim to be the interpreter of the history of man’ (Marshall, 1966 (1890): 116). According to Marshall, certain types of activity are pursued not for ulterior motives, but because they are ends in themselves. He refuses to make the theory of consumption the ‘scientific basis of economics’ and insists that the primary task of economists is to develop a theory of activities.

Hinchcliffe (2004) contends that the still prevailing instrumental and quite devalued view of work originates in Aristotle’s distinction between *techne* (technical activities whose ends are external to themselves, like producing use-values) and *arete* (virtuous activities motivated by ethical dispositions). According to Aristotle, it is *arete* which is associated with *eudaimonia*: ‘humankind realizes its value through activities far apart from anything as vulgar as the creation of use-value’ (cited in Hinchcliffe, 2004: 538). Work and virtuous activities would then belong to separate domains, which would mean that work and *eudaimonia* would be antithetical.

Recently, Rosso et al. (2010) built an integrative conceptual model of meaningful work, which ‘highlights the importance of the reciprocal dynamics between individuals and groups [... whereby] the individual works to benefit the self and the collective, and the fruits of this work enhance both self and collective’ (Steger et al., 2012: 324). Thus, in this view, the meaningfulness of work by and large rests on the perceptions of the impact of one’s work on others, on which the sense of one’s worth is significantly based. Work, as experienced by workers in contemporary societies, may hence be said to be ethically driven (Lopes, 2018).¹ Once we accept that work has an ethical dimension, as it is now becoming consensual in studies on the subjective experience of work, it is legitimate to consider work as an opportunity for human flourishing and it is by no means incompatible with the instrumental nature of work. The two domains are intertwined rather than separate.

Empirical study

The data and the hypotheses

Our study is based on micro-level data collected by the FESSUD Finance and Well-Being Survey, a cross-sectional survey designed to assess the impact of the financial crisis on well-being (Santos et al., 2016). The survey was carried out in Germany, Poland, Portugal, Sweden and the UK, countries selected to account for different types of financial systems and Welfare State regimes in the EU. It consisted of telephone interviews (landline and mobile phone) carried out in November/December 2014 with nationally representative samples of households. The questionnaire was applied to the individual (aged 18 or older) in the household who declared he or she knew about and was co-responsible for making decisions about household finances. The sample size ranged from 1300 in Portugal to 1501 in Poland and Sweden, with a total of 7009 interviews conducted. The formula used to calculate the sample size took into account the desired margin of error (2.5%) for a 95% confidence level, as well as population size. The data set was weighted to correct for demographic biases, namely for household type, household size and household income. The overall response rate (completed interviews to cases reached) was on average 13.3%, which is relatively low but reasonable for a fairly lengthy telephone interview on a difficult topic (i.e. household finances). Since we are interested in work issues, the empirical

Table 1. Responses to questions on household financial situation.

	Portugal	Poland	UK	Germany	Sweden
Manage on a lower household income	77.7*** (n = 493)	68.8*** (n = 525)	54.5*** (n = 518)	45.6 (n = 655)	46.1 (n = 553)
Draw on my savings to cover ordinary living expenses	53.4*** (n = 464)	52.9*** (n = 512)	44.9 (n = 528)	40.4 (n = 655)	34.3** (n = 552)
Get into debt to cover ordinary living expenses	14.8 (n = 506)	22.4*** (n = 512)	25.9*** (n = 543)	12.1 (n = 670)	10.5 (n = 553)
Cut back on holidays or new household equipment	82.7*** (n = 489)	66.9*** (n = 516)	59.0*** (n = 536)	46.8 (n = 664)	26.3*** (n = 545)
More worried about not being able to pay bills/credit commitments	71.7*** (n = 492)	48.7*** (n = 491)	39.3*** (n = 538)	23.9 (n = 668)	18.0** (n = 553)

Question: Please tell me whether or not each of the following has happened to you in the past 5 years. Percentage of yes responses among employees, excluding DK/NA answers.

* Significantly different from Germany at 10% applying a chi-square test to the equality of proportions between countries, at **5% and at ***1%.

analysis considers only respondents who declared they were employed, gathering 1936 observations with non-missing values in all variables.²

In the countries of the study, Portuguese employees report their households were severely hit by the financial crisis, with an average score of 7.0 (on a 1–10 scale, with 1 being ‘not bad’ and 10 ‘extremely bad’), followed by the Polish (4.5), the British (4.4), the German (3.4) and the Swedish (2.6) (Santos et al., 2016: 90–92). Notwithstanding these contrasting perceptions, country divergences are less pronounced, though still very marked, in responses about changes occurring between 2009 and 2014 in the households’ financial situation (Table 1) and work conditions (Table 2).

Tables 1 and 2 indicate that between 2009 and 2014 the households’ financial situation and work conditions deteriorated the most in Portugal, followed by Poland. On average, the Swedish, followed by the Germans, were the least affected. The UK occupies an intermediate position, even if closer to Germany than Poland.³

Perceived changes in family life and community involvement (Table 3) are less pronounced across these countries, while changes in life satisfaction again display a wide variation, with a higher percentage of the Portuguese respondents (66.4%) declaring a deteriorating overall life satisfaction (Table 4).

As it can be seen from the phrasing of the questions reported in Tables 1–4, respondents were asked about (their perceptions of) changes in their households’ financial situation, working conditions, family life and community involvement and overall life satisfaction. This represents an important advantage regarding the absolute levels of well-being. Indeed, the analysis of absolute levels of well-being poses added interpretative difficulties. Bruni (2008), for example, highlights the role of personality, the gap between aspirations and achievements (i.e. reports of well-being resulting from low aspirational levels), and social comparisons. Since the data we use refer to perceived changes rather than absolute levels, the measurement of well-being is deemed to be less affected, though still influenced, by these factors. This may be even more relevant

Table 2. Responses to questions on work conditions.

	Portugal	Poland	UK	Germany	Sweden
Lost your job?	16.2** (n = 511)	20.7*** (n = 549)	15.0 (n = 546)	11.9 (n = 696)	12.6 (n = 553)
Had to do less interesting work?	34.4*** (n = 509)	31.2*** (n = 549)	25.1*** (n = 545)	17.2 (n = 694)	14.6 (n = 543)
Had to take a reduction in pay?	69.3*** (n = 509)	35.2*** (n = 547)	31.1*** (n = 546)	19.4 (n = 696)	12.4*** (n = 553)
Had to work shorter hours?	10.4 (n = 511)	16.3*** (n = 547)	18.6*** (n = 546)	8.5 (n = 696)	9.6 (n = 553)
Had to work more intensively at work?	76.5*** (n = 509)	61.2 (n = 541)	70.4*** (n = 546)	62.4 (n = 616)	56.0** (n = 549)
Had to work longer hours?	68.3*** (n = 510)	54.6*** (n = 550)	54.0*** (n = 547)	35.8 (n = 696)	42.3** (n = 553)
Had to take a second job?	15.7** (n = 511)	31.1*** (n = 550)	12.3 (n = 546)	11.5 (n = 696)	4.6*** (n = 553)
Had less job security?	57.2*** (n = 510)	51.6*** (n = 549)	43.9*** (n = 542)	18.6 (n = 689)	23.7** (n = 550)

Question: *Please tell me whether or not each of the following has happened to you in the past 5 years.* Percentage of yes responses among employees, excluding DK/NA answers.

*Significantly different from Germany at 10% applying a chi-square test to the equality of proportions between countries, at **5% and at ***1%.

Table 3. Responses to questions on family life and community involvement.

	Portugal	Poland	UK	Germany	Sweden
Spent less time with family/friends	61.5*** (n = 497)	58.1* (n = 515)	46.3** (n = 527)	52.9 (n = 674)	27.8*** (n = 549)
Less involved in unpaid voluntary work	50.3 (n = 334)	22.9*** (n = 371)	48.1* (n = 422)	54.0 (n = 550)	39.0*** (n = 505)
Felt a decrease in the overall control over my life	28.8** (n = 489)	34.6*** (n = 484)	39.2*** (n = 536)	13.7 (n = 645)	21.4*** (n = 549)

Question: *Please tell me whether or not each of the following has happened to you in the past 5 years.* Percentage of yes responses among employees, excluding DK/NA answers.

*Significantly different from Germany at 10% applying a chi-square test to the equality of proportions between countries, at **5% and at ***1%.

in the context where the financial crisis produced different impacts on individual aspirations (Boffo et al., 2017).

Based on the reasoning presented in Section ‘Questioning the disutility of work and the related concept of well-being’ and the available data, we formulate four hypotheses. First, considering that hedonia (i.e. pleasure-seeking) and eudaimonia (i.e. human flourishing) are distinct but related types of well-being (Benjamin et al., 2014; Clark, 2016; Ryan and Deci, 2001), Hypothesis 1 (H1) states that hedonia and eudaimonia are distinct though related phenomena. Second, supposing that work fosters human flourishing that

Table 4. Change in life satisfaction.

	Deteriorated	Stayed the same	Improved	Is change in life satisfaction equal to Germany? (p value of Wilcoxon-Mann-Whitney test)
Portugal (n = 510)	66.4	26.6	7.0	0.000
Poland (n = 553)	28.7	38.3	33.0	0.012
UK (n = 548)	24.3	40.5	35.2	0.149
Germany (n = 697)	17.2	47.8	35.0	–
Sweden (n = 550)	11.4	42.0	46.6	0.000

Question: *Compared to 5 years ago, has your overall life satisfaction deteriorated, stayed more or less the same or improved?* Percentage of yes responses among employees, excluding DK/NA answers.

brings about a type of well-being (i.e. eudaimonic well-being) qualitatively different from that delivered by income and consumption (i.e. hedonic well-being), Hypothesis 2 (H2) states that depressed work conditions and FD are associated with a decline in both types of well-being, hedonia and eudaimonia. Hypothesis 3 (H3) states that depressed work conditions are more associated with a decline in eudaimonia than increased FD. Hypothesis 4 (H4) states that depressed work conditions have a larger impact on eudaimonia than on hedonia.

Building composite indicators of eudaimonia, FD and deteriorated work conditions

While self-reported satisfaction with life is already established as a reliable measure of hedonic well-being, measuring eudaimonia is more complex. Indeed, all available measures involve the construction of indices composed of a diversity of indicators, where control over one's life is a key component in all of them (Bruni, 2008; Deci and Ryan, 2008; Ryff, 2014).

Accordingly, our measure of hedonia is obtained from the survey question on the evolution of overall life satisfaction (Table 4). As all the other questions refer to negative evolutions, we recoded this variable to facilitate interpretation, attributing the highest value (three) to a negative change, the intermediate value (two) to unchanged satisfaction and the lowest value (one) to a positive evolution in overall life satisfaction.

As for eudaimonia, we constructed a composite indicator by applying the Principal Component Analysis (PCA) to the three items that address dimensions usually associated with eudaimonia: overall control over life, time spent with family and friends, and involvement in unpaid voluntary work (Table 3). Although involving just a few questions, our measure contemplates three out of the six dimensions considered to fully capture eudaimonia (Ryff and Singer, 2000), namely environmental mastery, relationships with others and autonomy. The PCA revealed only one underlying dimension (eigenvalue 1.56 – accounting for 52.1% of the variance), on which the three items had large and positive loadings (Table 9 in the Appendix). Individuals' scores for that component are our indicator of eudaimonia. The 0.00 score corresponds to the average level of the

Table 5. Composite indicators by country.

	Portugal	Poland	UK	Germany	Sweden
Deteriorated work conditions (DWC)	0.34*** (n = 503)	0.32*** (n = 524)	0.07*** (n = 533)	-0.32 (n = 605)	-0.37 (n = 535)
More intense work (MIW)	0.43*** (n = 503)	-0.0008*** (n = 524)	0.06*** (n = 533)	-0.21 (n = 605)	-0.19 (n = 535)
Financial difficulties (FD)	0.51*** (n = 427)	0.24*** (n = 406)	0.032*** (n = 495)	-0.27 (n = 594)	-0.47*** (n = 544)
Eudaimonia	0.25*** (n = 321)	-0.06* (n = 330)	0.18 (n = 406)	0.07 (n = 515)	-0.33*** (n = 501)

These indicators correspond to the respective scores resulting from the PCA (see text).

*Significantly different from Germany at 10% using a t-test, at **5% and at ***1%.

eudaimonia indicator across individuals, positive values show that the indicator is above average (indicating a higher deterioration of eudaimonia) and negative values indicate a below average level.⁴

To construct the deteriorated work conditions indicator, we applied the PCA to the eight questions related to several dimensions of work (Table 2). Although FD are captured in a separate indicator, we kept the question about changes in pay in this indicator because pay is a relevant dimension of work. Indeed, while job pay is important for individuals' financial situation, it is also an important form of recognition for the work performed (Méda and Vendramin, 2013) and may thus be also considered an intrinsic feature of work. The PCA analysis of work-related questions generated two components with an eigenvalue greater than one. After Varimax rotation, questions related to job security, job interest and pay have high loadings on the first factor, while questions on work intensity and longer working hours have positive loadings on the second factor (Table 10 in the Appendix). Given the items involved, we named the first component 'Deteriorated Work Conditions' (DWC) and the second one 'More Intensive Work' (MIW).

Finally, the indicator of FD was constructed by applying the PCA to the five questions about households' financial situation (Table 1). The analysis revealed only one underlying dimension on which all items have high factor loadings (Table 11 in the Appendix). Since the 'Deteriorated Work Conditions' indicator has a high factor loading on the question about reduction of pay, we computed the correlation between DWC and the FD indicator. The resulting correlation coefficient is 0.45; consequently, it does not prevent the inclusion of both variables in the regression analysis.

Table 5 displays the positions of the five countries for the indicators constructed, where an increase denotes a worsening of the situation between 2009 and 2014, as perceived by the respondent.

Portugal and Poland present above average deteriorated work conditions (DWC), the UK remains around average, and Germany and Sweden display below average values (DWC, MIW, FD and eudaimonia have an average of zero when observations for all countries are taken into account). As for work intensity (MIW), Portugal once again is the country where the situation deteriorated the most, but Poland is now close to the average, as is the UK, while the remaining two countries report an increase in work intensity below

average. Finally, the relative position of the countries regarding FD is very similar to that of DWC, with Portuguese and Polish respondents reporting a worsening of their financial situation, but not the respondents in the UK, Germany and Sweden. As for eudaimonia, Portugal registers the largest decline, while Sweden displays the smallest. The countries' behaviour in terms of hedonia is similar to that of eudaimonia (Table 5). However, Sweden stands out in that a substantial percentage of respondents (46.6%) report a positive evolution in overall life satisfaction, followed by Germany and the UK (35% each) and Poland (33%), with Portugal (7%) exhibiting an extremely low value (Table 4).

Testing the hypotheses

H1 states that eudaimonia and hedonia are separate but related phenomena. The Spearman's correlation coefficient between the two well-being indicators is 0.23 and is statistically significant, meaning that, as expected, a decrease in eudaimonia is associated with a decrease in hedonia. We take this as supporting evidence for H1; the two measures of well-being are correlated but the correlation is weak, suggesting that the two indicators capture different aspects of well-being.

In order to test H2–H4, we regressed eudaimonia and hedonia with indicators of work conditions and FD, controlling for socio-economic determinants of well-being.⁵ The controls selected from the survey are: age and its square, a dummy for females, income quintile, a dummy for part-time workers, a dummy for temporary contract, dummies for occupation (high-skilled white collars, high-skilled blue collars, low-skilled blue collars, the military, other occupations; low-skilled white collars as base category), dummies for the composition of households (single, single parent, couple with children, extended family, and other households; couple as base category), dummies for the education level (no formal education, primary education, tertiary education; secondary education as base category), and dummies for countries (Germany as base country). Note that the controls refer to the present individual situation and not to the change occurred in the previous 5 years.

Since the eudaimonia indicator is a continuous variable, ordinary least squares (OLS) is the appropriate regression tool.⁶ The coefficient of MIW (0.29) is slightly larger than the coefficient of FD (0.26), and that of DWC (0.19), (Model 1 in Table 6). The results of DWC, MIW and FD support H2 that states that depressed work conditions, like increased FD, are associated with a decline in eudaimonia. In line with our theoretical framework, this means that deterioration in the quality of work is associated with a negative effect on eudaimonia, which supports the view that work is actually related to human flourishing.

Regarding H3, although the average impact of MIW on eudaimonia is larger than that of FD, the difference is not statistically significant. In addition, the average value of the coefficient of DWC is smaller than that of FD, but the F-test to the equality of these coefficients does not rule out that they are equal (p value = 0.2243). Overall, we are not able to confirm H3, which states that depressed work conditions are more associated with a decline in eudaimonia than are FD. Moreover, DWC is less grievous for eudaimonic well-being than MIW,⁷ that is, workers with less interesting work, less job security and less pay experienced a lesser decline in eudaimonia when compared with those who had to work more intensively and for longer hours.

Table 6. Regressions for changes in eudaimonia and hedonia.

	Model 1	Model 2
Dependent variable	Eudaimonia	Hedonia
Deteriorated work conditions (DWC)	0.187*** (0.027)	0.159** (0.079)
More intensive work (MIW)	0.286*** (0.030)	0.129** (0.055)
Financial difficulties (FD)	0.262*** (0.030)	0.385*** (0.121)
High-skilled white collar	0.052 (0.056)	-0.137 (0.124)
High-skilled blue collar	-0.030 (0.040)	-0.208 (0.219)
Low-skilled blue collar	0.125 (0.075)	-0.219 (0.397)
The military	-0.159 (0.090)	-0.447* (0.241)
Other occupation	0.077 (0.079)	-0.068 (0.173)
Age	-0.010 (0.015)	0.108*** (0.040)
Age squared	0.0001 (0.00017)	-0.0005 (0.0004)
Income quintile	-0.003 (0.006)	-0.099* (0.055)
Part-time job	0.001 (0.059)	0.239* (0.127)
Temporary contract	-0.054 (0.039)	-0.158 (0.124)
Poland	-0.396*** (0.030)	0.199*** (0.063)
Portugal	-0.329*** (0.050)	1.979*** (0.129)
Sweden	-0.282*** (0.015)	-0.522*** (0.056)
UK	-0.192*** (0.033)	-0.119** (0.057)
Number of observations	1936	1936
R2/pseudo R2	0.247	0.151

Model 1 was estimated with OLS and Model 2 with ordered logit. R2 is for the OLS and pseudo R2 is for the ordered logit. Gender, family composition and education level are controlled for, but they are not presented to save space. Base categories are: low-skilled white-collar and Germany. The standard deviations (in brackets) were obtained assuming correlation of errors within countries (clusters by country).

*Significant at 10%, at **5% and at ***1%.

In what concerns the control variables, the type of contract (permanent or temporary) and job (part-time or full-time) do not relate to a change in eudaimonia, nor do the occupational categories.

Table 7. Proportionality of key coefficients using models 1 and 2 of Table 6.

	(1) DWC (eudaimonia eq.)/ DWC (hedonia eq.)	(2) MIW (eudaimonia eq.)/ MIW (hedonia eq.)	(3) FD (eudaimonia eq.)/ FD (hedonia eq.)
Ratio	1.17	2.21	0.68
Statistical Test	(1) = (3) Chi (2) = 0.54 p value: 0.4621	(2) = (3) Chi (2) = 2.44 p value: 0.1182	–

DWC: deteriorated work conditions; MIW: more intensive work; FD: financial difficulties.
The statistical test is based on a non-linear Wald test.

Given that hedonia is assessed with a categorical scale, ordered logit regression was used. This logit model estimates the probability of an individual having experienced a given change in well-being. As expected, increased FD and worse work environments (measured by both MIW and DWC) considerably reduce hedonic well-being (Model 2 in Table 6). Overall, our findings indicate that, even after controlling for FD, increased work intensity (MIW) and deteriorated working conditions (DWC) reduce hedonic well-being (supporting H2).

Model 2 shows that an increase of one unit in FD, DWC or MIW increases the odds ratio of being on a lower level of hedonic well-being by a factor of 0.46, 0.17 or 0.13, respectively.⁸ Hence, financial circumstances, related to income and consumption, have a greater average impact on hedonia than work conditions.⁹ The marginal effects convey the same qualitative information, but their size varies along with the values of the explanatory variables and with the change of well-being.¹⁰

Country-specific effects on hedonia are relevant: Poland and mainly Portugal had a greater decline in hedonia than Germany, whereas Sweden and the UK registered a smaller decline. The fact that the effects are different for eudaimonia and hedonia shows that the two types of well-being are different (H1).

Finally, we test the impact of work conditions on eudaimonia and hedonia (H4). This task is difficult because the two indicators are expressed in different scales. In this case, we can look at the proportionality of the coefficients of the two models (Hausman and Ruud, 1987), analysing the relative sizes of the coefficients of the work-related variables (DWC and MIW) and the FD coefficients in the hedonia and eudaimonia equations.¹¹ Looking at the average values, we observe that the FD coefficient is relatively bigger in the hedonic equation than in the eudaimonia equation, and that, conversely, the work indicators (DWC and MIW) have bigger coefficients in the eudaimonia regression than in the hedonia regression (Table 7). However, the Wald test cannot reject the proportionality of coefficients (Table 7), which means that H4 is not statistically supported when using this technique.

An alternative test of H4 is to convert the two indicators into a binary scale. The hedonia scale was transformed into a dummy variable that takes value one when life satisfaction deteriorates and zero otherwise. As the sense of control over one's life is a key component of eudaimonia, we only use this question to measure eudaimonia, taking value one if overall control decreases and zero otherwise.¹²

Given the binary nature of the dependent variables, the regressions for eudaimonia and hedonia are estimated using a logit regression. They show that both MIW and DWC have a larger effect on eudaimonia (0.48 and 0.47, respectively) than on hedonia (0.306

Table 8. Regressions for changes in eudaimonia and hedonia as binary variables, changes in hedonia standardised and robustness checks.

Dependent variable	Model 1	Model 2	Model 3	Model 4 - work conditions do not include pay	Model 5 - work conditions do not include pay
	Eudaimonia as binary variable	Hedonia as binary variable	Hedonia standardised	Eudaimonia as continuous variable	Hedonia measured with 3 levels
Deteriorated Work Conditions (DWC)	0.480*** (0.074)	0.306*** (0.112)	0.0712* (0.0324)	0.085** (0.022)	0.102 (0.086)
More Intensive Work (MIW)	0.473*** (0.142)	0.308*** (0.053)	0.0613* (0.0221)	0.279*** (0.025)	0.117** (0.051)
Financial Difficulties (FD)	0.818*** (0.100) (...)	0.667*** (0.101) (...)	0.1733** (0.0560) (...)	0.290*** (0.034) (...)	0.407*** (0.126) (...)
No. observ	1936	1936	1936	1936	1936
R2/ Pseudo R2	0.211	0.272	0.279	0.229	0.1503

Model 1 and 2 were estimated with logit, Models 3 and 4 estimated with OLS, and Model 5 was obtained with ordered logit. In Models 4 and 5 the variables DWC and MIW were obtained without the item on reduction in pay. The other control variables present in Table 6 are also included in all regressions. The standard deviations (in brackets) were obtained assuming correlation of errors within countries (clusters by country). * significant at 10%, ** 5%, and *** 1%.

and 0.308 respectively), which supports H4 (Models 1 and 2 in Table 8). The Wald test rejects the equality of the DWC coefficients of the hedonia and eudaimonia equations (p value = 0.0380), while the equality of the MIW coefficients cannot be rejected (p value = 0.1553). Consequently, in line with H4, there is evidence that an increase in DWC affects more eudaimonia than hedonia.

A third way of testing H4 is to standardise the hedonia variable (note that the eudaimonia variable is already standardised). Then, we applied the OLS to re-estimate the hedonia regression, and compare it with the regression for eudaimonia (model 1 of Table 6). We observe that the impact of the two work-related variables is larger in eudaimonia than in hedonia – now the impacts are comparable as they are measured in units of dependent variable's standard deviation (Table 8). For example, a unitary increase in DWC leads to a decline in eudaimonia equivalent to 0.18 of its standard deviation, whereas the effect on hedonia is a decline equal to 0.07 of this variable standard deviation. The equality of the coefficients of DWC or MIW for eudaimonia and hedonia is statistically rejected through a Wald test (p -values of 0.0004 and 0.0000, respectively). This test shows the strongest evidence in favour of H4.

As robustness checks, we removed the question on pay from the work conditions indicators to assign financial issues only to the FD variable. The PCA on the seven work-related questions continues to produce two factors with broadly similar interpretations to those previously obtained. Estimation results are broadly the same, with the work-related variables having statistically significant effects on eudaimonia, but now only MIW affects significantly hedonia (Models 3 and 4 in Table 8).

The control variables part-time work and fixed term contract capture important work characteristics, and the variable of present income level is related to FD. Consequently, one may ask: do these controls hamper the effects of our variables of work conditions and FD on well-being outcomes? In order to answer this question, we excluded the three controls from the equations of eudaimonia and hedonia. The results obtained are similar to those including the controls,¹³ the main change being that the work indicators are now statistically significant for eudaimonia at only 10%. This indicates that the initial inclusion of these controls does not lessen the impact of worse work conditions and FDs on well-being.

The measure of eudaimonia encompasses quite diverse components of life, which can react differently to work conditions and FD. We then ran a separate regression on the determinants of each of the three components of the eudaimonia indicator. The dependent variables are now binary, with value one for affirmative responses to each of the respective questions (see Table 3). Overall, the results are qualitatively similar to those using the composite indicator: MIW, DWC and FD have a statistically significant and positive effect on the deterioration of the three different aspects of eudaimonia.

Discussion

The interest in eudaimonia is growing. Benjamin et al. (2014) show that eudaimonic aspects of well-being, namely acting virtuously and having a meaningful life, are ranked even higher than happiness and life satisfaction. However, this discussion has just started in the work domain. Our findings support the claim that hedonia and eudaimonia are distinct though related types of well-being (H1), which is in line with other recent work (Clark, 2016). These findings are relevant for designing policies that promote eudaimonic well-being in addition to hedonic well-being. Moreover, the fact that worse working conditions and increased FD are associated with a decline in both hedonia and eudaimonia (H2) shows that policies aimed at improving both the quality of work and income advance the two types of well-being.

While leisure and consumption were shown to be associated with the two types of utility, in accordance with our theoretical assumptions, our study has also shown that leisure and consumption are not the only types of utility. The fact that worse working conditions are more associated with eudaimonia than with hedonia (H4) suggests that work conditions have a more important role in human flourishing than in happiness and life satisfaction and, perhaps most importantly, that the deterioration of working life may seriously compromise self-realisation. Policymakers, but also trade unions that tend to prioritise wage bargaining (e.g. income and contracts) over other work dimensions (e.g. control over work content and work organisation) should thus pay more attention to the latter. But a change in organisational and public policies may not suffice to effectively improve job quality, and thereby eudaimonia. It may also be necessary to improve political and economic democracy both within and outside work organisations (Lopes, 2018).

Conclusion

This article critically examines the relation between work and utility and challenges the mainstream economic view of well-being as a hedonic state, offering an alternative view

of work as a potential source of eudaimonic well-being, which must be understood as a process towards self-realisation. Standard labour supply models generally conceive work as an instrumental activity that is pursued for the ultimate end of consumption. While this motive cannot be discarded, as it dates back to Aristotle, it is clearly insufficient to account for work as a whole. We argue that work is a meaningful activity associated with eudaimonia, which is a conception of well-being that brings to the fore the potential contribution of work to human flourishing.

First, this empirical study attempts to demonstrate the relevance of distinguishing hedonia from eudaimonia in the work domain, and, second, to compare the effects of deteriorated work conditions and increased FD on the two kinds of well-being. In doing so, it examines the relation between job quality and two generic measures of well-being, unexplored in the existing literature that focuses on job-related aspects of well-being but still does not discriminate the hedonic and eudaimonic dimensions of well-being.

Although this empirical exercise provides important insights, it is not yet utterly conclusive. The analysis needs to be supplemented by additional empirical work. In particular, more robust indices of eudaimonia are to be developed, including (at least) the six dimensions associated with human flourishing, as well as better measures of deteriorated work conditions, which should include other relevant components of job quality, such as autonomy at work.

Notwithstanding the tentative nature of this empirical study, it defends work as a source of eudaimonic well-being. Our findings suggest that work yields benefits that are at least as important as pecuniary compensation. This is not to deny that for many people work is actually a source of severe psychological disorders (Theorell et al., 2015), and that workers' efforts are by and large inadequately compensated (OECD, 2015). Indeed, our results show that the 2007–2008 crisis has reduced well-being through the deterioration of both financial and working conditions, even if with varying intensity within and for different countries.

Distinguishing hedonic from eudaimonic well-being raises deep theoretical issues for labour economics and has enormous practical implications for how work should be organised. Our results highlight the political importance of addressing aspects pertaining to the quality of work, in addition to the creation of jobs, as a means to improve the eudaimonic well-being of citizens. As for research, a next step would be to continue to systematically inquire what conditions must be met to ensure that work is a meaningful and self-fulfilling activity.

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Notes

1. The fact that most people, employed and unemployed, declare that they would wish to work, even if they had no financial needs (Gallie, 2013b), suggests that work is not merely instrumental.
2. For detailed information on these methodological procedures, see Santos et al. (2016).
3. To guarantee they are representative of the population, we use survey weights in the computation of the country averages in all descriptive statistics.
4. The composite indicators obtained with the PCAs below are computed from the scores of the respective component, and the interpretation is the same of the eudaimonia indicator. In other words, the indicators of eudaimonia, financial difficulties and work conditions have a mean of zero and a standard deviation of one.
5. Because individual observations may be correlated within each country, the option cluster-robust standard errors was used with each country as the cluster variable.
6. The existence of collinearity between DWC and FD is ruled out by the low values of the VIF indicators, which are 1.34 and 1.28 for FD and DWC, respectively.
7. The coefficients of DWC and MIW are statistically different (p-value: 0.0032).
8. The impact on the odds ratio is given approximately by the respective coefficient, but the exact effect is obtained as $\exp(\beta)-1$, where β is the estimated coefficient.
9. At 10% significance we can reject the equality of the coefficients of MIW and of FD (p-value=0.0675), but not the equality of those of DWC and FD (p-value=0.2146).
10. At the mean of the independent variables, the probability of a decrease in life satisfaction increases by 0.056 when the FD indicator increases one unity (approximately one standard deviation of this variable), which is equivalent to a variation of 24.6%, taking as reference the average probability of a decrease in life satisfaction (0.2275). A unitary increase in DWC or MIW increments the probability of a decrease in life satisfaction by 0.023 or 0.018, respectively.
11. For this purpose, we used the “suest” command from Stata (see Stata Base Reference Manual 15, p. 2658).
12. The mean of the new variable for eudaimonia is 0.24, and the mean for the new hedonia variable is 0.22.
13. Results available from the corresponding author upon request.

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Appendix

Table 9. PCA loadings matrix of eudaimonia.

	Component
Spent less time with family/friends	0.782
Less involved in unpaid voluntary work	0.722
Felt a decrease in the overall control over my life	0.656
KMO	0.598
Eigenvalue	1.562
% of variance	52.074

PCA: principal component analysis; KMO: Kaiser–Meyer–Olkin test.

Table 10. PCA loadings matrix of work conditions (varimax rotation).

	Deteriorated work conditions (DWC)	More intense work (MIW)
Lost your job?	0.684	-0.088
Had to do less interesting work?	0.604	-0.227
Had to take a reduction in pay?	0.599	0.198
Had to work shorter hours?	0.601	-0.285
Had to work more intensively at work?	0.092	0.808
Had to work longer hours?	0.115	0.829
Had to take a second job?	0.467	0.120
Had less job security?	0.618	0.281
KMO	0.725	
Eigenvalue	2.402	1.386
% of variance	30.026	17.323

PCA: principal component analysis; KMO: Kaiser–Meyer–Olkin test.

Table 11. PCA loadings matrix of household's financial situation.

	Component
Manage on a lower household income	0.733
Draw on my savings to cover ordinary living expenses	0.682
Get into debt to cover ordinary living expenses	0.594
Cut back on holidays or new household equipment	0.753
More worried about not being able to pay bills/credit commitments	0.770
KMO	0.792
Eigenvalue	2.515
% of variance	50.294

PCA: principal component analysis; KMO: Kaiser–Meyer–Olkin test.