Burnout in Europe

Relations with National Economy, Governance and Culture[1]

Version 1.0
October 2018

Prof. dr. Wilmar Schaufeli

KU Leuven, Belgium

&

Utrecht University, The Netherlands

[1] Please cite as: Schaufeli, W.B. (2018). *Burnout in Europe: Relations with national economy, governance, and culture*. Research Unit Occupational & Organizational Psychology and Professional Learning (internal report). KU Leuven, Belgium.

Summary

This study uncovers relationships between burnout at country level on the one hand, and a variety of national economic, governance, and cultural indicators on the other hand. Burnout data were used from the *6th European Working Conditions Survey* (2015) that includes random samples of workers from thirty-five European countries (total N=43,675). These burnout data were complimented with various economic, governance, and cultural indicators from other sources, such as the World Bank, Eurostat, and the United Nations.

The countries with the highest burnout levels are predominantly found in eastern (Poland) and southeastern Europe (Albania, Turkey, and the countries that constituted former Yugoslavia; Slovenia, Croatia, Serbia, Montenegro, and Macedonia). Countries with the lowest burnout scores are found in northwestern Europe (i.e., the Netherlands, Norway, Sweden, Denmark, and Finland).

In countries with poorer economic performance in terms of Gross Domestic Product (GPD), higher levels of burnout are observed. This relationship is curvilinear, meaning that among countries with the poorest economic performance a relatively small increase in GDP is associated with a relatively large decrease in burnout, whilst among the best performing countries a further increase in GDP decreases burnout levels only marginally.

It was observed that the level of burnout is higher: (a) in countries where work is considered more important and more highly valued; (b) in poorer governed countries with a weak democracy, corruption, gender inequality, and little integrity; (c) in less individualistic, hierarchical countries where people feel uncomfortable with uncertainty.

Taken together, the analyses show that burnout at country level is associated in a meaningful way with various economic, governance, and cultural indicators. The results of the current study mirror those that were obtained for work engagement using the same ECTS-2015 survey data, and also agree with studies on happiness and employee well-being.

The major caveat of the current study is the use of a single question as a proxy for burnout (*'I feel exhausted at the end of the working day'*). Although, circumstantial evidence is presented to support for the use of this one-item burnout measure, the results of the study should be interpreted with caution. Moreover, the fact that mere associations have been studied precludes causal interpretations; such as that a burred-out workforce leads to poor economic performance. The reverse might just as well be true.

The current study illustrates that burnout may not only be studied at the individual, psychological level, but also at the collective, national level as it relates in meaningful ways with various economic and socio-cultural indicators.

Contents

		Page
Summary		1
1.	Introduction	3
2.	Burnout, happiness, job satisfaction and work engagement	5
3.	Burnout levels across countries	6
4.	Burnout and the economy	10
5.	Burnout and governance	12
6.	Burnout, work values and national culture	13
7.	Conclusions	16
References		21
Appendix 1: Burnout levels and sample sizes across countries		23
Appendix 2: Overview of economic, governance, and cultural indicators		24

1. Introduction

This paper is the first to analyze differences in burnout across Europe using representative national samples. Rather than *individual* levels of burnout, mean levels of burnout of the country's *workforce* are analyzed. So far, this has not been done before.

The current paper uses burnout data from the *6th European Working Conditions Survey (EWCS) – 2015*. The EWCS assesses and quantifies the working conditions of employees and the self-employed, analyses relationships between different aspects of working conditions, identifies groups at risk and issues of concern, and monitors progress and trends. Eurofound carries out the EWCS and the market research company Ipsos did the fieldwork between February and December 2015. In total 43,675 workers were interviewed in thirty-five countries: the twenty-eight member-states of the European Union, the five candidate countries for EU membership – Albania, the former Yugoslav Republic of Macedonia (FYROM), Montenegro, Serbia, and Turkey – as well as Norway and Switzerland, being the two associated countries. The target population for the EWCS consists of all residents from these countries aged above 15 or older and in employment at the time of the survey. A multi-stage, stratified, random sample was drawn in each country (see Appendix 1).

The aim of the current paper is to assess national differences in levels of burnout and to link burnout at country level to economic and governance indicators, as well as to cultural values. To this end, data of multiple sources were used. In addition to burnout data from the EWCS-2015, economic and governance indicators from the *World Bank*, *EUROSTAT,* and various NGO's are used. Cultural values are taken from the *European Values Survey* and from Hofstede's national culture database. Appendix 2 includes more information about each of these indicators.

The most often used definition of burnout comes from Maslach, Jackson & Leiter (1996; p. 20) who describe it as '*… a state of exhaustion in which one is cynical about the value of one's occupation an doubtful of one's capacity to perform*'. More specifically, the core dimension of burnout — exhaustion — refers to serious and persistent fatigue, and feeling emotionally drained and worn out. The second dimension — cynicism — also includes loss of interest and enthusiasm, and doubts about the significance and meaning of one's job. The final dimension of burnout — lack of professional efficacy — refers to feelings of incompetence and ineffectiveness, and reduced personal accomplishment at work. In other words, burnout is a multidimensional construct that includes a stress reaction (exhaustion), a mental distancing response (cynicism), and a negative belief (lack of professional efficacy). For an overview about burnout, its measurement, antecedents, consequences, and explanations see Maslach, Schaufeli & Leiter (2001) and Schaufeli, Leiter & Maslach (2009).

Burnout is usually measured with the Maslach Burnout Inventory (MBI; Maslach, Jackson, Leiter, Schaufeli & Schwab, 2017). The MBI is a valid and reliable instrument to assess burnout that has good psychometric properties (Maslach, Leiter & Schaufeli, 2008). Unfortunately, instead of the full 16-item MBI only three items were included in the EWCS-2015, each representing a particular burnout dimension:

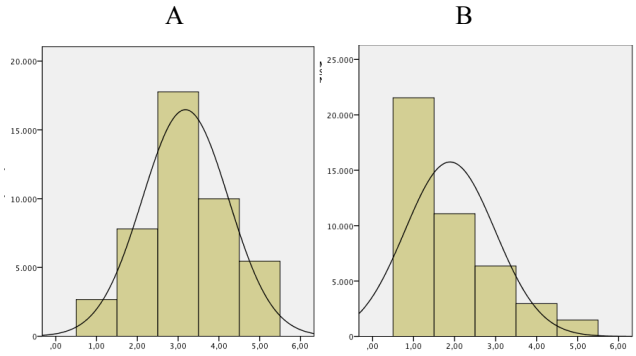
- *'I feel exhausted at the end of the working day'* (exhaustion)
- *'I doubt the importance of my work' (cynicism)*
- *'In my opinion, I am good at my job'*[2] *(professional efficacy)*

The reliability (internal consistency) of these three items is very poor with a value of Cronbach's α of .31 for the entire EWCS-sample (N =43,850), and values ranging between .10 and .42 across countries. As a rule of thumb, values of Cronbach's α should exceed .70. The reason for the low value of α is that the exhaustion and (reversed) efficacy items are virtually unrelated (r = -.03), whereas the correlations between the exhaustion and cynicism items and between the cynicism van efficacy items are very low; .20 and .21, respectively.

This means instead of a 3-item burnout scale single items should be used. In fact this agrees with the nature of the MBI that produces three subscale-scores for exhaustion, cynicism and professional efficacy, which – according to the test-manual – should *not* be combined into one single burnout score. Tellingly, correlations between the MBI-exhaustion and professional efficacy subscales range between -.04 and -.34 across nine different occupational groups (Maslach et al., 2017, p.40). This agrees with the low corresponding correlation in the EWCS. It has been convincingly argued that rather than a constituting element of burnout, professional efficacy should be seen as a consequence of burnout (Schaufeli & Taris, 2005). For these reaons, the single item that taps professional efficacy is ignored in the analyses below.

As can be seen in Figure 1, the frequency distribution of the cynicism item is heavily skewed; practically half of the respondents (49.6%) endorsed the lowest score (1), against only 3.5% the highest score (5). For the exhaustion item the corresponding rates are 6.1% and 12.5%, respectively.

Figure 1: Frequency distributions of the exhaustion (A) and cynicism (B) items



This particular score distribution of the cynicism item together in combination with its very low correlation with exhaustion (r =. 20) – the core symptom of burnout – precludes its use as an indicator of burnout in the EWCS-sample. As a result, we are left with only one 'burnout' item that – in fact – taps exhaustion: *'I feel exhausted at the end of the working day'*[3]. It appears that the corresponding MBI-item correlates .80 with the MBI-exhaustion subscale and .69 with the remaining four items of that subscale among 28,738 employees from an international

[2] This item should be reversed, as a *low* score on professional efficacy is indicative of burnout.

[3] The original MBI-item reads: '*I feel used up at the end of the workday*'. Moreover, this item is scored on a seven point rating scale ranging from '*never*' (0) to '*always*' (6). The ECTS-item was scored using a five-point rating scale ranging from '*always*' (1) to '*never*' (5). Scores for this item were reversed, so that a high score indicates a high level of exhaustion (i.e., burnout).

burnout database. This means that 64% of the variance of the ECTS exhaustion item is shared with the MBI-exhaustion subscale and 48% with the remaining items of that subscale. This considerable overlap warrants using a single item as indicator of work-related exhaustion, the core symptom of burnout.

In order to further validate the single exhaustion item it was related to other ECTS-items that tap demanding aspects of the job and alternative indices of health and well-being, respectively. It appeared that a high score on exhaustion was related various types of job demands such as, emotionally disturbing situations at work (r = .20), work-family conflict (r = .31), work pace (r = .28), and working to tight deadlines (r = .23). Moreover, workers who score high on the single exhaustion item neither feel healthy (r = -.20), nor satisfied with their job (r = -.26), active and vigorous (r = -.25), nor calm and relaxed (r = -. 28). Instead they feel anxious (r = .20), stressed at work (r = .35), and too tired after work to do household jobs (r = .46). Moreover, they suffer from overall fatigue the last 12 months (r = .32), have difficulty falling asleep (r = .20), and wake up with a feeling of exhaustion and fatigue (r = .35).

Although most correlations above are weak to moderate, they are all significant and in the expected direction. And what is more, they show consistently that exhaustion – as assessed with the single item *'I feel exhausted at the end of the working day'* – is associated with a demanding job and various alternative indicators of employee health and well-being. So taken everything together, the ECTS exhaustion item can be used as a proxy measure for burnout.

2. Burnout, happiness, job satisfaction and work engagement

At country level, burnout (i.e., exhaustion) is moderately, positively related with cynicism (r = .44; p < .01) and *not* significantly related with professional efficacy (r = -.17, *n.s.*). So in contrast to the rather weak correlation of .20 at individual level, exhaustion and cynicism are much stronger positively interrelated at country level. Like at individual level, association with professional efficacy is non-significant at country level.

Burnout at country level is negatively associated with happiness (r = -.54; p < .001), job satisfaction (r = -.50; p < .01), and work engagement (r = -.39; p < .05). Happiness is a context-free measure that taps the subjective enjoyment of one's *life as a whole*. Clearly, this not only includes work but also other areas of life, such as leisure and social relationships, as well as the physical environment, people's financial situation, and so on. So happiness is a general, omnibus measure of well-being. National levels of happiness were taken from the World Database of Happiness and refer to *all* inhabitants of a particular country and not only to the working population like work engagement and job satisfaction.

Job satisfaction and work engagement are, in contrast, work-related measures. The country's levels of job satisfaction and work engagement were taken from the European Values Survey and the EWCS-2016[4], respectively. The size of the correlations with happiness and job satisfaction is similar, meaning that burnout is

[4] For more details see: Schaufeli, W.B. (2018). Work engagement in Europe: Relations with national economy, governance and culture. *Organizational Dynamics, 47*, 99-106.

not only negatively related *work-related* well-being (job satisfaction), but also with a *context-free* well-being (i.e., happiness).

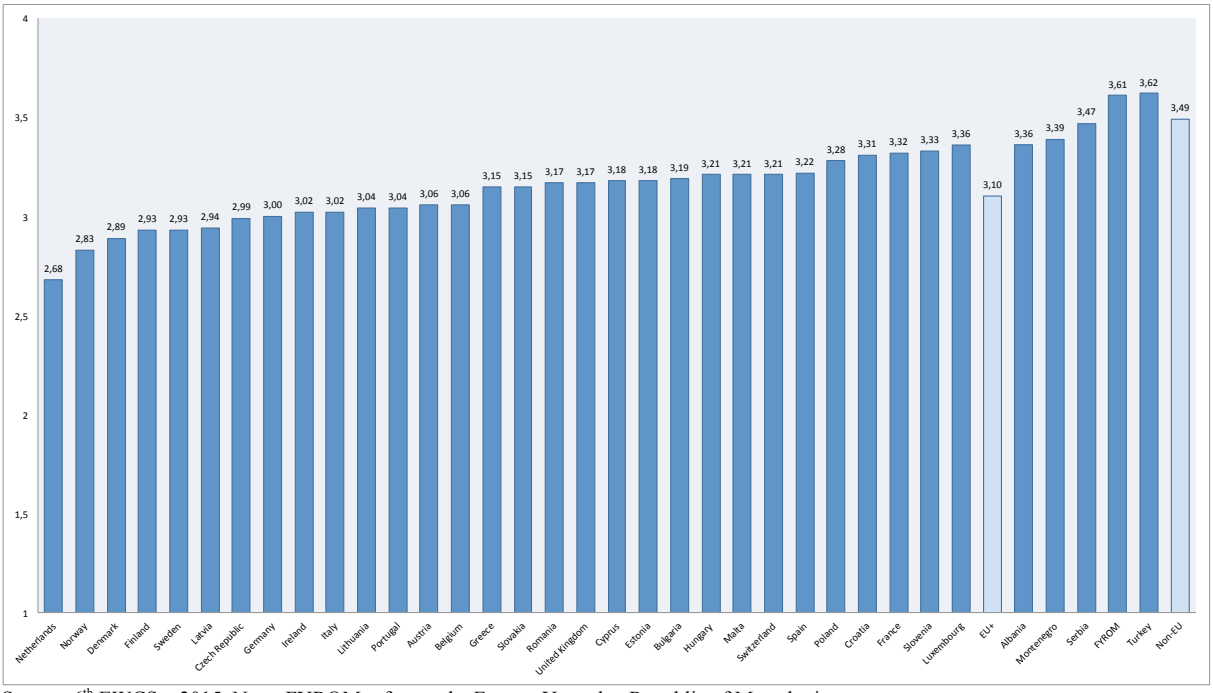
Although job satisfaction and work engagement are both work-related, positive states of mind, they differ in levels of activation (Salanova, del Libano, Llorens & Schaufeli, 2014). Engaged employees are proactive, feel more challenged, and have a stronger drive than their satisfied colleagues, who are reactive, feel less challenged and more satiated. So work engagement is a high activation and job satisfaction is a low activation psychological state. Tellingly, at country level, burnout is less strongly negatively related with the former than with the latter.

Conclusion. Relations with happiness, job satisfaction and work engagement confirm the validity – at country level – of the single exhaustion item that is used as proxy measure for burnout in the current study. It appears that in countries with high burnout levels, people do not feel happy, are not satisfied with their jobs, and do not feel engaged at work.

3. Burnout levels across countries

Although levels of burnout differ systematically between countries ($F_{(43674, 34)} = 47.97$; $p < .0001$), only a modest 3.7% of the variance in burnout is explained at country-level. This means that many other factors also play a role, such as type of profession and working conditions. These factors will be considered in a future, separate study.

Figure 2: Mean levels of burnout in Europe (scale 1-5)[5]



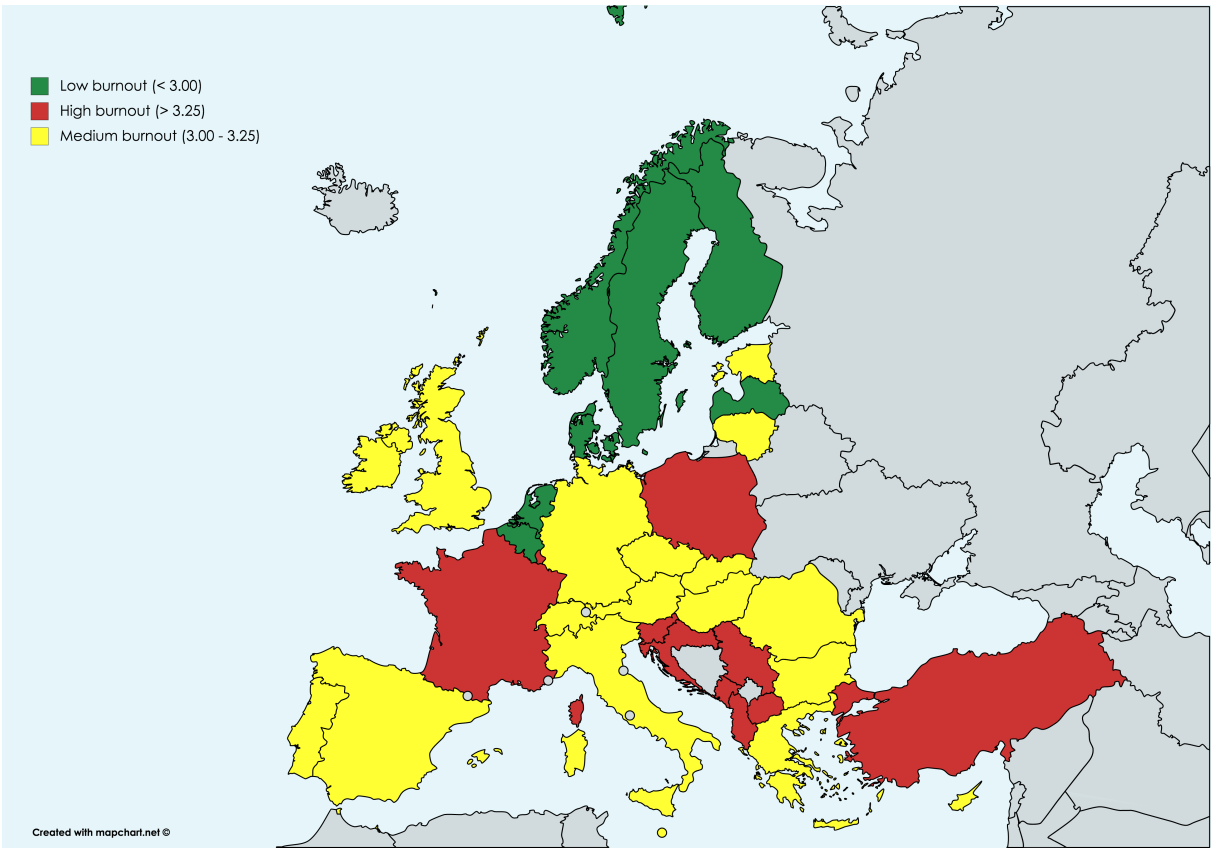
Source: 6th EWCS – 2015. Note: FYROM refers to the Former Yugoslav Republic of Macedonia.

[5] In the EWCS exhaustion (i.e. burnout) is scored on a scale ranging from 1=always to 5=never, which implies that *low* scores indicate a *high* level of burnout. In order to avoid confusion, scores are reversed so that a *high* score indicates a *high* level of burnout.

As can be seen in figure 2, the highest burnout-scores among the EU+ countries[6] are observed in Luxemburg, Slovenia, France, Croatia and Poland. Levels of burnout do not differ significantly amongst these five countries. Clearly, the level of burnout among non-EU countries is higher than among EU+ countries ($F_{(43673, 1)} = 712.83$; $p < .0001$). All non-EU countries score above the average burnout score of any other EU+ country. The highest burnout scores among the non-EU countries are found in Turkey and Macedonia. In contrast, Dutch workers feel least burned-out. In fact, the level of burnout in the Netherlands is significantly lower than in *all* other countries. Burnout levels in Norway, Denmark, Sweden and Latvia are also relatively low and do not significantly differ amongst each other.

As displayed in figure 3 below, countries with high burnout levels are predominantly found in eastern (Poland) and southeastern Europe (Albania, Turkey, and the countries that constituted former Yugoslavia; Slovenia, Croatia, Serbia, Montenegro, and Macedonia). In contrast, countries with low burnout levels are found in northwestern Europe (the Netherlands, Belgium, Denmark, Norway, Sweden, Finland and Latvia). France is a notable exception, being the only western European country with relatively high burnout scores. A large-scale study of a consultancy firm confirms this picture and estimates that 3.2 million French workers are on the verge of burnout[7].

Figure 3: Levels of burnout in Europe (scale 1-5)



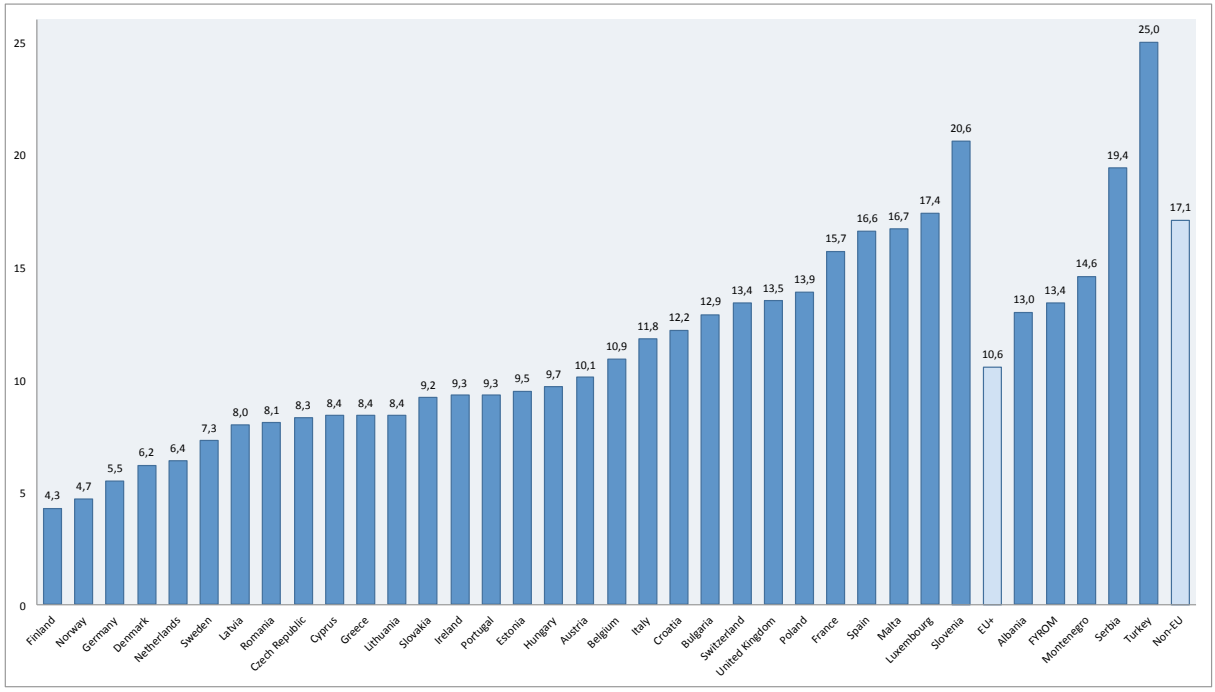
Source: 6th EWCS - 2015

[6] Norway and Switzerland are added to the EU countries because both countries have intimate socio-economic and cultural ties to the EU member states.

[7] See: https://www.thelocal.fr/20140127/millions-of-french-workers-close-to-burn-out

Another way of comparing the prevalence of burnout across countries is to classify employees as 'burned-out' by selecting only those with a maximum score. People who endorse the maximum score (i.e., 5) indicate that they '*always*' feel exhausted at the end of the working day. In order to minimize the risk of false positives this rather strict criterion is used, instead of a more relaxed criterion, which would also include those who feel exhausted '*most of the time*' (i.e., 4).

Figure 4: Percentage of 'burned-out' workers in Europe

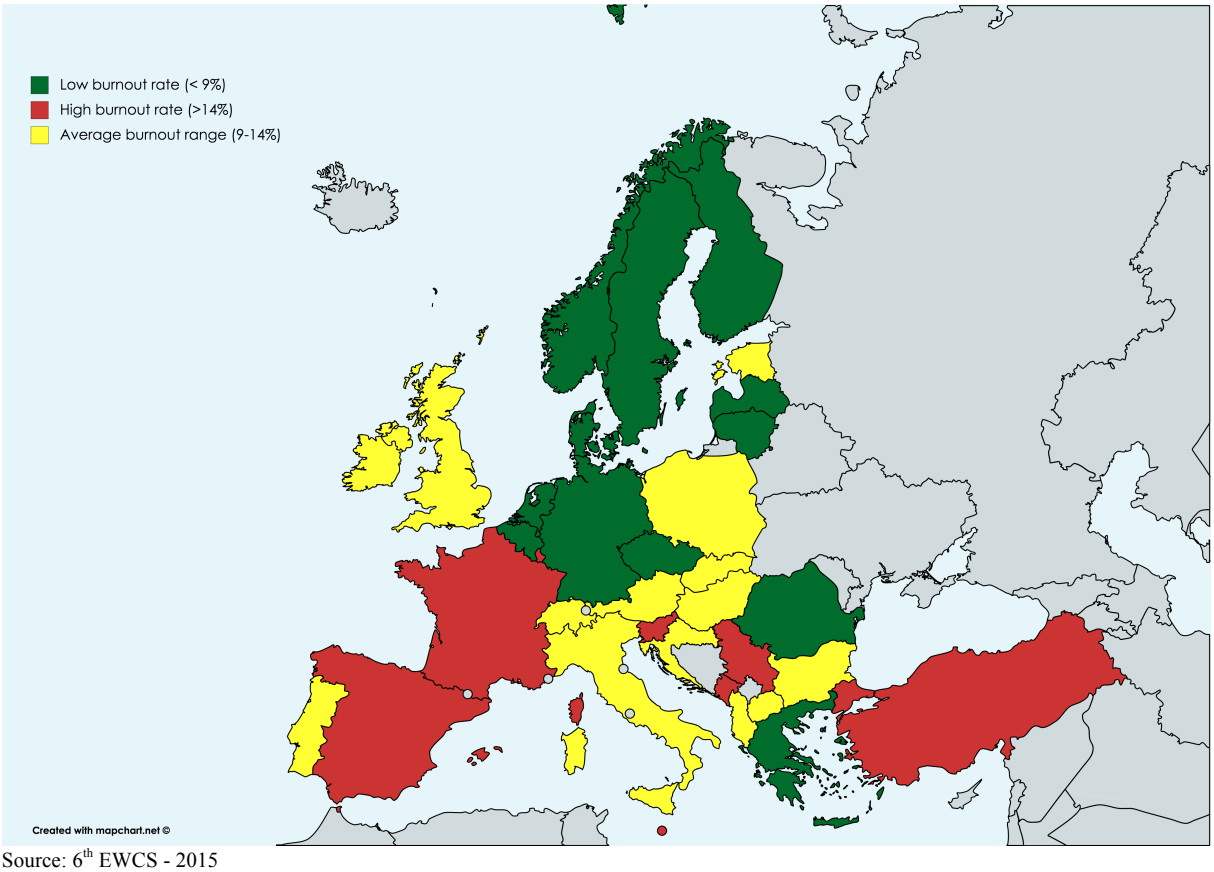


Source: 6th EWCS - 2015

It appears that, on average, 10% of the EU+ workforce feels burned-out against 17% of the non-EU countries. In the EU+ group proportions of 'burned-out' workers vary between 4.3% (Finland) and 20.6% (Slovenia). Also in the non-EU countries burnout rates differ considerably, ranging from 13% in Albania to 25% in Turkey.

Essentially the rank-order between countries in figure 4 does not differ much as compared to figure 3. For instance, in both cases the same six countries show the highest burnout prevalence: Turkey, Serbia, Montenegro, Slovenia, Luxemburg, and France. On the positive side the Netherlands, Norway, Denmark, Sweden, and Finland show the lowest burnout prevalence, both in terms of levels (figure 3) as well as rates (figure 4). Only Latvia (level) and Germany (rate) are not included twice in the group of countries with the lowest burnout prevalence.

Figure 5: Burnout rates in Europe (%)



Source: 6th EWCS - 2015

Taken together, the overall picture that workers in southeastern Europe feel less burned-out than their colleagues in northwestern Europe is corroborated, albeit that compared to figure 3 this seems somewhat less outspoken in figure 5. The reason why some countries like Spain and Germany 'change color' has to do with the score distribution. For instance, two countries might have identical mean burnout levels, but when the score distribution of one country is skewed, more workers are classified as 'burned-out' (i.e. endorsed the maximum score) as compared with the other country.

Conclusion. It seems that burnout is most prevalent in Turkey, France and some former Yugoslavian countries (i.e., Serbia, Montenegro, and Slovenia). Depending on whether burnout levels (figures 2- 3) or burnout rates (figures 4-5) are considered, Croatia, Albania and Poland (mean sores) or Spain (rates) may be added to the list of most burned-out countries. In contrast, burnout is least prevalent in the Netherlands and the Nordic countries (i.e., Norway, Sweden, Denmark and Finland). Depending on whether mean burnout levels (figures 2-3) or burnout rates (figures 4-5) are considered, Belgium, and Latvia (mean scores) or Germany, Lithuania, the Czech Republic, Romania and Greece (rates) may be added.

4. Burnout and the economy

As can be seen from table 1 below, burnout at country level is positively related with the number of working hours per week. This means that in countries where employees work longer, burnout levels are higher and in countries where employees work less, burnout levels are lower.

In contrast, economic performance (GDP per capita) and productivity (GDP per capita and per hour) are both *negatively* associated with burnout, albeit that only the former relationship is statistically significant. Hence, in countries with lower economic performance, more burnout occurs (and vice versa).

Tellingly, in counties where people work the least hours of all (notably in the Netherlands, Belgium, Norway, Denmark, Sweden and Germany)[8], the prevalence of burnout is lowest. However, two exceptions to this rule exist; work hours are also low in France and Luxemburg but burnout levels are high.

Table 1: Burnout and the economy

Economic indicator	*Correlation*
• Working hours per week	.60***
• Economic performance (GPD)	- .39*
• Productivity	- .20

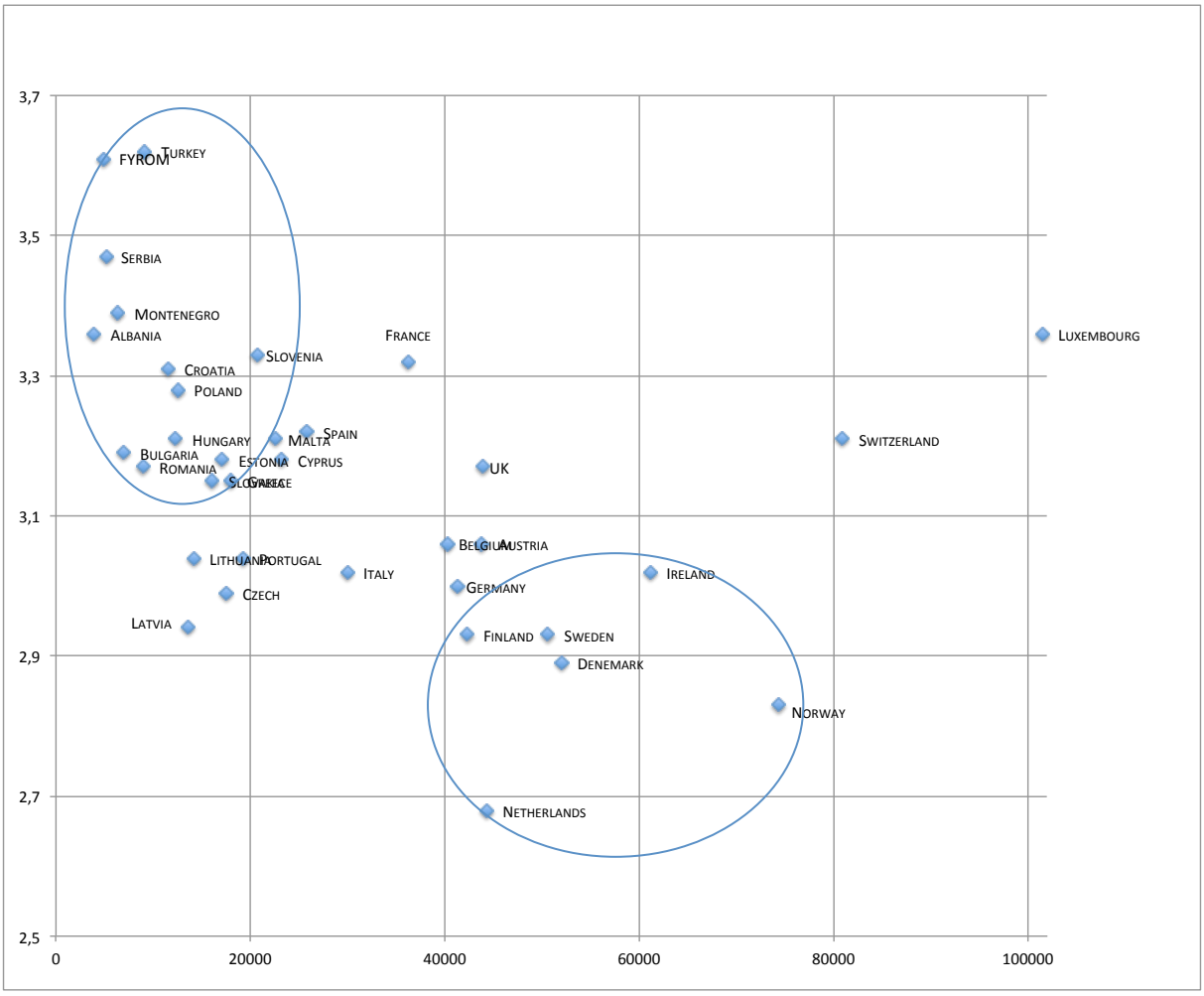
Note: *** p <.001; ** p <.01

Figure 6 reveals that burnout levels are highest in countries with low economic performance in southeastern and eastern Europe. This is particularly true for Turkey, Macedonia, Serbia, Montenegro, Albania, and Croatia, and a to a somewhat lesser degree also for Poland, Hungary, Bulgaria, Romania, Slovakia, and Greece. Luxemburg and Switzerland are outliers because they have a very high GDP and also a relatively high level of burnout. In a sense both Luxembourg and Switzerland are atypical countries because they are small and their economy is dominated by a large financial sector that boosts their GDP. In a similar vein, the Netherlands is also an outlier because it has by far the lowest level of burnout but ranks only number seven when it comes to GPD.

Hence, despite a few atypical cases, figure 6 illustrates that burnout levels are higher in those countries with lower economic performance.

[8] See: https://data.oecd.org/emp/hours-worked.htm

Figure 6: Burnout and economic activity (GDP/capita)



Source: Word Bank and 6th EWCS - 2015

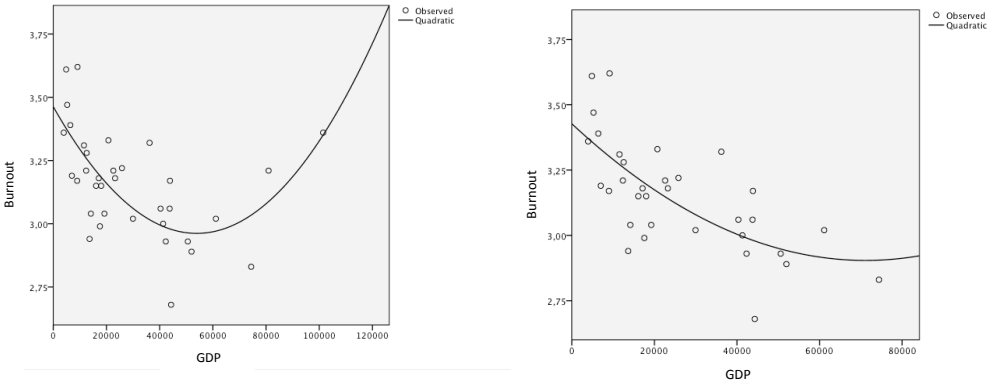
As can be seen from figure 7 below burnout is curvilinear related with economic performance (GDP). This U-shape curvilinear effect is quite strong when *all* countries are considered (Figure 7A) but turns into an L-shape and is much weaker when both outliers (Luxemburg and Switzerland) are excluded from the analysis (Figure 7B)[9].

Generally speaking, the lower the country's economic performance, the higher the level of burnout of its workforce. This effect is particularly strong for countries with the lowest GDP's and levels off when GDP increases.

[9] For A: $R^2 = .45$; $\beta = 1.28$; $p < .01$; the logarithmic function adds 33% variance to the linear function. For B: $R^2 = .49$; $\beta = .62$; $p < .01$; the logarithmic function adds 3% variance to the linear function.

Figure 7: The curvilinear relationship between burnout and economic activity (GDP/capita)

A B



Conclusion. Burnout at country level is substantially and positively related with economic indicators such as average working hours per week and economic performance (GPD). In countries with *lower* GDPs and *more* working hours, higher levels of burnout are observed. This may sound contradictory, because good economic performance seems to imply that people work hard. Yet the contrary is true, in countries with a lower GDP people work *more* hours compared to countries with a higher GDP (r = -.70). A country's economic performance is largely driven by productivity, not by long working hours. In fact, productively is *negatively* related with working hours (r = -.65). So in countries with low GDP's – which are predominantly found in the eastern and southeastern part of Europe – people work long hours without being very productive. The opposite is true for northwestern and northern European countries; their workers work less hours but are more productive, for instance, due to automation, robotization, and the use of IT.

It is important to note that the relationship between burnout and GDP is curvilinear instead of linear. This means that for countries with lower economic performance a relatively small increase in GDP is associated with a relatively large decrease in burnout. For better performing countries a further increase in GDP decreases burnout levels only marginally.

5. Burnout and governance

Relationships of burnout with five governance indicators were studied, the country's: (1) level of corruption; (2) level of public integrity; (3) state of democracy; (4) gender inequality; and (5) income equality. Countries are well-governed when corruption, gender inequality and income inequality are low, and integrity and democracy are high. See Appendix 2 for a detailed description of each of these indicators.

Table 2 displays an overview of the relationships of burnout which each of these five governance indicators, which, when taken together, indicate the overall quality of a country's governance and institutions.

Table 2: Burnout and governance

Governance indicator	*Correlation*
• Corruption (CPI)	-.59**
• Integrity (IPI)	- .69**
• Democracy (DIX)	- .72***
• Gender inequality (GII)	.52**
• Income inequality (Gini)	.15

Note: *** p <.001; ** p <.01

Burnout is negatively related with corruption, integrity and the state of democracy, and positively with gender inequality. No significant correlation is observed for income inequality, which means that the level of burnout is independent from the country's income distribution. It should be noted, though, that the indices assessing corruption, integrity and democracy are highly interrelated ($.84 < r < .94$)[10]. So the more democratic countries are, the higher their level of integrity, and the lower the level of corruption as perceived by its inhabitants.

Please note that the corruption index is based on *subjective* perceptions, whereas the indices for integrity and democracy are based on *objective*, administrative and archival data. So obviously, at country level, subjective perceptions and objective indices of governance are closely related.

Conclusion. Burnout at country level is strongly related to governance: in poorer governed countries with a weak democracy, corruption, gender inequality, and little integrity the workforce is more burned-out than in better governed countries. Tellingly, income inequality doesn't seem to matter for burnout.

6. Burnout, work values and national culture

Two sets of culture indicators were related to burnout: (1) work values that reflect the importance and the centrality of work and leisure, and (2) national culture. The country's work values were retrieved from the European Values Study that was carried out in 2008 and included representative, stratified samples of the adult population of eighteen years old or older of forty-seven European countries.

[10] Because such high correlations between predictors indicate multicollinearity no regression analysis was carried out.

Four different work values were included, each of which was assessed by a single item:

- Importance of work: *'Work is important in my life'*
- Importance of leisure: *'Leisure time is important in my life'*
- Work as a duty: *'Work is a duty towards society'*
- Work centrality: *'Work should always comes first, even if it means less spare time'*

Data about national culture were retrieved from the seminal work of Geert Hofstede, who identified six basic dimensions of national culture (power distance, individualism, masculinity, uncertainty avoidance, long-term orientation, and indulgence)[11]. For a more detailed description of each of these dimensions see Appendix 2.

As can be seen from table 3, the importance of work and work centrality are both significantly and positively related to burnout: in countries where work comes first and plays a central role in people's lives, a higher burnout prevalence is observed. However, the correlations with the importance of leisure and work as a duty lack significance. So taken together, in countries where people value work, burnout is more prevalent than in countries with a less strong work ethic.

Table 3: Burnout and work values

Work value indicator	*Correlation*
• Importance of work	.35*
• Importance of leisure	- .26
• Work as duty	- .12
• Work centrality	.47**

Note: ** p <.01; * p < .05

Table 4 displays the relationships between burnout and the Hofstede's six dimensions of national culture. Individualism is negatively, and power distance, masculinity, and uncertainty avoidance are positively associated with burnout at country-level. This means that workers feel less burned-out in countries with loosely knit social frameworks in which individuals are expected to take care of only themselves and their immediate families

[11] Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations* (2nd Ed.), Thousand Oaks CA: Sage Publications.

(individualism). In contrast, burnout is high in countries where people accept a hierarchical order in which everybody has a place and which needs no further justification (power distance), as well as in countries that value competition, achievement, assertiveness, and material rewards for success (masculinity). Finally, burnout is also more prevalent in countries that maintain rigid codes of belief and behavior and are intolerant of unorthodox behavior and ideas (uncertainty avoidance).

Table 4: Burnout and national culture

Culture indicator	*Correlation*
• Power distance	.57***
• Individualism	- 55***
• Masculinity	.35*
• Uncertainty avoidance	.52**
• Long-term orientation	.00
• Indulgence	-.26

Note: *** p <.001; ** p <.01; * p < .05

A regression analysis that includes *all* culture indicators as predictors of burnout reveals that only uncertainty avoidance contributes to its prediction[12]. Hence, uncertainty avoidance overrides all other cultural dimension and is most important for the level of burnout of a country's workforce. Other dimensions such as power distance, individualism, and masculinity are also related to burnout, albeit not independently from uncertainty avoidance.

Conclusion. In addition to work centrality and work importance, four of the six national culture dimensions are significantly related to burnout: power distance, individualism, masculinity and uncertainty avoidance. However, when all culture dimensions are simultaneously analyzed, only uncertainty avoidance appears to have a unique impact on burnout. This means that burnout is particularly prevalent in countries where people feel uncomfortable with uncertainty and ambiguity.

[12] $R^2 = .22$; $\beta = .46$; $p < .01$.

7. Conclusions

The current study set out to uncover the relationships between burnout at country level on the one hand, and a variety of national economic, governance, and cultural indicators on the other hand. This study is unique because for the first time the same indicator for burnout is used in thirty-five random, national samples across Europe. The most important findings can be summarized as follows:

1. *Levels of burnout differ systematically between European countries.*
2. *Countries with the highest burnout levels are mainly found in eastern (Poland) and southeastern Europe (Albania, Turkey, and the countries that constituted former Yugoslavia; Slovenia, Croatia, Serbia, Montenegro and Macedonia).*
3. *Countries with the lowest burnout levels are found in western and northern Europe (the Netherlands, Belgium, Denmark, Norway, Sweden, Finland, and Latvia).*
4. *The Dutch workforce suffers by far the least from burnout. France is a notable exception, being the only western European country with a workforce that scores high on burnout.*
5. *In economically poorer performing countries where people work more hours, burnout is higher than in better performing countries where people work less hours.*
6. *The relationship of burnout with economic performance is curvilinear; for countries with lower economic performance the relationship with burnout is stronger than for countries with higher performance.*
7. *The country's level of burnout is related with governance: in poorer governed countries with a weak democracy, more corruption, gender inequality, and little integrity the workforce is more burned-out than in better governed countries.*
8. *Burnout is higher in countries where work is more important and more highly valued.*
9. *Burnout is higher in less individualistic countries with more power distance and uncertainty avoidance. The latter stands out as the most significant culture dimension: in countries where people feel uncomfortable with uncertainty and ambiguity burnout is most prevalent.*

Burnout and work engagement in Europe: a comparison

Unfortunately, the results of the current study cannot be compared with other investigations because no other systematic cross-national studies on burnout exist. However, recently a study was carried out using the same ECTS data and focusing on work engagement (Schaufeli, 2018), the positive opposite of burnout (Schaufeli & De Witte, 2007).

As expected, the results that are found in the current study mirror that of the previous work engagement study. For instance, by large, the same countries with *high* burnout prevalence also exhibit *low* levels of work engagement, such as Turkey, Montenegro, Serbia, Croatia, and Albania. In contrast, countries with *low* burnout prevalence exhibit *high* levels of engagement, such as Belgium, the Netherlands, Norway and Denmark. Tellingly, the Netherlands is the country with the lowest burnout prevalence and it also boasts the most engaged workforce with one in every three workers feeling engaged and one in every five highly engaged.

However, there are also some notable exceptions; the French workforce exhibits *high* burnout levels but also *high* engagement levels, whereas, in contrast, the German workforce exhibits *low* burnout levels and *low* engagement levels. The latter also applies to Greece and Sweden. Although burnout and engagement are each other's — non-perfect — opposites at the individual level (Schaufeli & De Witte, 2007; Schaufeli, Taris & Van Rhenen, 2008), this needs not be true at the country level as the current study shows. For an explanation of this seemingly counter-intuitive result, see the discussion of the so-called ecological fallacy below.

The results of the current study mirror that on work engagement also in other respects[13]. For instance, burnout at country level is positively related to working hours and negatively to economic performance (GDP), whereas the opposite is true for work engagement. So in countries with more working hours en less economic performance, the workforce suffers more from burnout and is less engaged at work. Interestingly, in contrast to work engagement, *no* association was found between burnout and productivity. Most likely, this is explained by the fact that, in essence, work engagement reflects the worker's motivation to perform at work. This is illustrated by research findings that show that work engagement is not only related to job performance at the *individual* level (Christian, Garza & Slaughter, 2011), but also to organizational performance at corporate *business* level (Harter, Schmidt & Hayes, 2002), even prospectively (Schneider, Yost, Kropp, Kind & Lam, 2018).

Like work engagement, the relation with economic performance and burnout is curvilinear. Roughly speaking, in both cases the same poorer performing eastern and southeast European countries score unfavorably when it comes to burnout (high) and work engagement (low). Conversely the same western and northern European countries score favorably in terms of low burnout and high engagement levels.

The results for governance are similar but opposite for burnout and work engagement as well; in less well-governed counties with more corruption, less integrity, a poorer functioning democracy and more gender inequality, higher levels of burnout and lower levels of work engagement are observed compared to better governed countries. It is noteworthy that the country's income inequality neither matters for burnout, nor for work engagement. Obviously, at country-level non-material governance factors are more important for worker's well-being than the nation's income distribution. This agrees with a large scale, global study on well-being across countries, as we will se below (Diener, Diener & Diener, 2009).

[13] For the full research report see: https://www.wilmarschaufeli.nl/publications/Schaufeli/491a.pdf

As far as national work values are concerned, both burnout and work engagement are oppositely related to work centrality. In countries where people value work highly and work comes first, workers feel more burned-out and less engaged. In addition, in countries where work is considered more important for life, burnout levels are higher (but engagement levels are *not* lower; at least the correlation fails to reach significance). It is no coincidence that the Netherlands – the country with by far the lowest burnout levels and the least working hours[14] – boasts world's most favorable work-life balance[15].

Finally, the relations of burnout and work engagement with Hofstede's national culture dimensions differ slightly. In countries with large power distance, less individualism, and more uncertainty avoidance burnout levels are high and engagement levels are low. However, in addition, burnout is more prevalent in competitive and achievement-oriented countries (masculinity), whereas levels of work engagement are higher in countries which value enjoying life and having fun (indulgence). The most important national culture dimension for burnout is uncertainty avoidance, whereas for work engagement this is individualism. Hence, burnout is most often observed in countries where people feel uncomfortable with uncertainty and ambiguity and maintain rigid codes of belief and behavior and are intolerant of unorthodox behavior and ideas. In contrast, work engagement is most often observed in countries where people's self-image is defined in terms of 'I' instead of 'we' and where a preference exists for loosely-knit social groups in which individuals are expected to take care of only themselves and their immediate families.

Burnout and well-being in context

Generally speaking, the results obtained in the current study on burnout in Europe, mirror those that were previously obtained for work engagement. And what is more they also agree with studies on happiness, employee well-being. For instance, according to the UN World Happiness Report 2017, Turkey, Albania, Serbia, Croatia, Macedonia, and Montenegro – the countries with the highest burnout-scores – are ranking very low (i.e., between #70 and #110 – the total list includes 156 countries). In contrast, Norway, Sweden, Denmark, Finland and the Netherlands – the countries with the least burned-out workforce – all rank in the top-ten of most happy countries in the world.

Also the economic findings of the current study agree with previous research that showed convincingly that happiness at country level is positively related to the nation's average income (Diener & Oshi, 2000) and GDP (Lykken, 1999, pp 9-12). Similar as in the current study for burnout, the national level of happiness is *not* associated with income inequality, as assessed by the Gini (Diener, Diener & Diner, 2009).

Moreover, Diener and Biswas-Diener (2008) observed that the happiest countries in the world not only are economically developed but also democratic, high in human rights, and high in equal rights for women. In another study Diener et al. (2009) investigated almost 1.5 million people from fifty-five countries around the globe and found negative correlations ($-.48 < r < -.52$) with gross human rights violation (e.g., detention without charge), civil rights, (e.g., independent courts), and political rights (e.g., freedom of the press).. These results let Diener and Biswas-Diener (2008; p.132) conclude that; *'...good societies are absolutely necessary for providing*

[14] See: https://stats.oecd.org/Index.aspx?DataSetCode=AVE_HRS

[15] 9.3 on a 10-point scale of the OECD Better Life Index: http://www.oecdbetterlifeindex.org/topics/work-life-balance/

the supportive structure in which pursuing happiness can be successful. Living in a well-off, stable, and well-governed society helps happiness'. It seems that it also might prevent burnout.

Finally, using data from fifty-five countries, Arrindell et al., (1997) studied the relationship between subjective well-being at country level, national culture and economy. Like in the current study, they found that countries were well-being was low were characterized by high power distance, low individualism, and high uncertainty avoidance. After controlling for purchasing power (wealth), uncertainty avoidance appeared the most powerful predictor. So in countries with high uncertainty avoidance, people had lower levels of well-being, irrespective of the country's wealth. This agrees with the findings of the current study, albeit that this included burnout instead of well-being.

It can be concluded that the results of the current study on burnout across Europe confirm – by and large – that at country-level associations with economic, governance and cultural indicators are *similar but in opposite direction* as with work engagement (Schaufeli, 2007). Moreover, the current results are also in line with cross-national research on happiness and subjective well-being. The fact that the findings that are present in this research report agree with other cross-national studies on well-being – including work engagement –underscores their the validity and robustness.

Critical remarks

The current study is not without problems that should be taken into consideration when interpreting the results. First and foremost, instead of an established well-validated questionnaire, such as the Maslach Burnout Inventory (Maslach et al., 1996, 2017), only one item was used the assess burnout (i.e., *'I feel exhausted at the end of the working day'*). Therefore, rather than a multi-dimensional assessment, burnout was reduced to its core symptom: exhaustion. Two pieces of circumstantial evidence support the use of a single-item measure, though: (1) the current item correlates .80 with the full MBI-exhaustion subscale in an independent, composite, international sample of nearly 30,000 workers; (2) using seven independent samples, West, Dyrbye, Satele, Sloan, & Shanafelt (2012), showed convincingly that a single exhaustion item (i.e., *'How often do you feel burned out from your work'*) can be used as a valid indicator for assessing burnout. Nevertheless, strictly speaking the current study assessed work-related exhaustion so that a cross-national study on the full burnout-syndrome still stands out.

Second, using cut-off scores for burnout as is done in figures 3 and 5 is not without problems because by classifying countries information is lost. For instance, when a cut-off score of 3.25 is used, the Polish workforce with a score of 3.28 is classified as 'burned-out', whereas Spain workforce with a score of 3.22 is not. Yet, the difference between both countries is very small. So there is a price to be paid for classifying countries. This means that classifications presented in this paper should be interpreted with caution. For that very reason *two* types of classifications are displayed that reflect burnout levels (on a 1-5 scale) and rates (percentage of workers that '*always*' experience work-related exhaustion).

Third, since *associations* between burnout and economic, governance, and cultural indicators have been studied no causal order can be established; correlation does not imply causation. For instance, the fact that burnout is

negatively associated with economic performance can either mean that a burned-out workforce impedes economic performance, or alternatively that a poorly performing economy produces burnout. Based on the current study, it is not possible to decide which causal interpretation is correct.

Fourth, the ECTS-sample is rather small and consists of only thirty-five European countries. Although the current study covers almost the entire European continent, this relative small sample implies a lack of statistical power. This means that in smaller samples, statistical significant results are less likely to be found. However, aggregating measures at country level counterbalances this lack of statistical power to some extent since it leads to higher correlations because of greater reliability of aggregated measures[16].

Last but least, when interpreting the results of the current study one should be aware of the so-called *ecological fallacy*. This is a logical fallacy in the interpretation of statistical data where inferences about the nature of individuals are deduced from the group to which those individuals belong. Although this fallacy applies to all results, it is particularly important to keep in mind when interpreting counter-intuitive results. For instance, it was observed that in France both burnout and work engagement are high at country level, which implies that both are *positively* related. However, it would be wrong – the ecological fallacy – to infer that *individuals* who feel burned-out also feel engaged at work. Quite to the contrary, at individual level, burnout and work engagement are *negatively* related (Goering, Shimazu, Zhou, Wada, & Sakai, 2017). The current study shows that at *country*-level high burnout and work engagement may coexist, despite the fact that at *individual*-level both are opposite states of mind. In essence, the ecological fallacy points out that economic, governance, and cultural processes at country level differ fundamentally from psychological processes at individual level.

Final remark

The current study illustrates that burnout may not only be studied at the individual level, but also at the national level. In other words, burnout should not only be seen as an individual, psychological state, but also as a collective phenomenon with economic and socio-cultural ramifications at national level.

[16] In addition to the Pearson's product-moment correlations that are reported in this paper, also Spearman's rank-order correlations have been computed that are often used in smaller samples. Results were virtually identical, which lends further credit to the obtained findings.

References[17]

Arrindell, W.A., Hatzchristou, C., Wensink, J., Rosenberg, E, Van Twillert, B., Stedema, J, & Meijer, D. (1997). Dimensions of national culture as predictors of cross-national differences in subjective well-being. *Personality and Individual Differences, 23*, 37-55.

Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work Engagement: a quantitative review and test of its relations with task and contextual performance. *Personnel Psychology, 64*, 89–136.

Diener, E. & Biswas-Diener, R. (2008). *Happiness: Unlocking the mysteries of psychological wealth*. Malden, MA: Blackwell.

Diener, E., Diener, M., & Diener, C. (2009). Factors predicting the subjective well-being of nations (pp. 43-70). In E. Diener (Ed.), *Culture and well-being.* New York: Springer.

Diener, E. & Oishi, S. (2000). Money and happiness: Income and subjective well-being across nations (pp. 185-218); In E. Diener & E.M. Shuh (Eds.), *Culture and subjective well-being*. Cambridge, MA: MIT Press.

Goering, D. D., Shimazu, A., Zhou, F., Wada, T., & Sakai, R. (2017). Not if , but how they differ : A meta-analytic test of the nomological networks of burnout and engagement, *Burnout Research, 5*, 21–34.

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87*, 268–279.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations* (2nd Ed.), Thousand Oaks, CA: Sage Publications.

Lykken, D. (1999). *Happiness: The nature and nurture of joy and contentment*. New York: St. Maritn's Griffin.

Maslach, C., Jackson, S.E., & Leiter, M.P. (1996). *Maslach Burnout Inventory Manual (3rd. Ed.)*. Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., Jackson, S.E., Leiter, M.P., Schaufeli, W.B. & Schwab, R.L (2017). *Maslach Burnout Inventory Manual (4rd. Ed.)*. Palo Alto, CA: Mind Garden.

Maslach, C., Leiter, M.P. & Schaufeli, W.B. (2008). Measuring burnout. In C.L. Cooper & S. Cartwright (Eds.). *The Oxford handbook of organizational well-being* (pp. 86-108). Oxford: Oxford University Press.

Maslach, C., Schaufeli, W.B. & Leiter, M.P. (2001). Job Burnout. *Annual Review of Psychology, 52*, 397-422.

Salanova, M., del Libano, M., Llorens, S., & Schaufeli, W.B. (2014). Engaged, workaholic, burned-out or just 9-to-5? Toward a typology of employee well-being. *Stress & Health 30*, 71-81.

Schaufeli, W.B. (2018). Work engagement in Europe: Relations with national economy, governance and culture. *Organizational Dynamics, 47*, 99-106.

Schaufeli. W.B. & De Witte, H. (2017). Work engagement in contrast to burnout: real and redundant! *Burnout Research, 5*, 58-60.

Schaufeli, W.B., Leiter, M.P. & Maslach, C. (2009). Burnout: 35 years of research and practice. *Career Development International, 14*, 204-220.

Schaufeli, W.B. & Taris, T.W. (2005). The conceptualization and measurement of burnout: Common ground and worlds apart. *Work & Stress, 19*, 356-262.

Schaufeli, W.B., Taris, T.W., & Van Rhenen, W. (2008). Workaholism, burnout and engagement Three of a

[17] The publications that have been (co-)authored by Schaufeli can be downloaded from www.wilmarschaufeli.nl.

kind or three different kinds of employee well-being. *Applied Psychology: An International Review, 57*, 173-203.

Schneider, B., Yost, A. B., Kropp, A., Kind, C., & Lam, H. (2018). Workforce engagement: What it is, what drives it, and why it matters for organizational performance. *Journal of Organizational Behavior, 39*, 462–480.

West, C. P., Dyrbye, L. N., Satele, D. V., Sloan, J. a., & Shanafelt, T. D. (2012). Concurrent Validity of Single-Item Measures of Emotional Exhaustion and Depersonalization in Burnout Assessment. *Journal of General Internal Medicine*, 1–8. http://doi.org/10.1007/s11606-012-2015-7.

Appendix 1

Sample sizes, means and standard deviations of burnout per country- 6th EWCS-2015

EU-countries	*N*	*Mean*	*Standard deviation*
Austria	1,027	3.06	1.06
Belgium	2,561	3.06	1.10
Bulgaria	1,061	3.19	1.05
Croatia	1,001	3.31	0.95
Cyprus	1,001	3.18	0.91
Czech Republic	1,001	2.99	1.00
Denmark	1,000	2.89	0.97
Estonia	1,009	3.18	0.92
Finland	1,000	2.93	0.87
France	1,526	3.33	1.05
Germany	2,088	3.00	0.92
Greece	1,001	3.15	0.94
Hungary	1,012	3.21	1.00
Ireland	1,055	3.02	1.00
Italy	1,399	3.20	0.99
Latvia	978	2.94	1.03
Lithuania	1,002	3.04	0.99
Luxembourg	1,003	3.36	1.08
Malta	1,003	3.21	1.15
The Netherlands	1,025	2.68	1.09
Poland	1,191	3.28	1.03
Portugal	1,027	3.04	1.03
Romania	1,062	3.17	0.95
Slovakia	995	3.15	0.96
Slovenia	1,601	3.33	1.14
Spain	3,354	3.22	1.18
Sweden	1,001	2.93	0.99
United Kingdom	1,622	3.17	1.09
Candidate countries	6,036	3.51	1.05
Albania	1,002	3.36	0.99
FYROM (Macedonia)	1,009	3.61	1.20
Montenegro	999	3.39	1.02
Serbia	1,028	3.47	1.08
Turkey	2,000	3.62	1.08
Associated countries	2,033	3.02	1.00
Switzerland	1,005	3.21	1.04
Norway	1,028	2.83	0.94
Total sample	43,675	3.18	1.06

Appendix 2

Overview of economic, governance, and cultural indicators used in the study

Indicator		*Definition*	*Source*
Type	*Operationalization*		
Economic			
• Working hours	Working hours/week	The average number of hours corresponds to the number of hours the person normally works. This covers all hours including extra hours, either paid or unpaid, which the person normally works.	Office of National Statistics (UK)
• Overall economic activity	Gross Domestic Product (GDP) per capita in USD	Gross domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period. It can be seen as an indicator of economic performance and is considered the world's most powerful statistical indicator of national development and progress	World Bank
• Productivity	Productivity/person/hour	Labor productivity per hour worked is calculated as real output per unit of labor input (measured by the total number of hours worked).	Eurostat
Governance			
• Corruption	Corruption Perceptions Index (CPI)	The CPI aggregates data from a number of different sources that provide perceptions of business people and country experts of the level of corruption in the public sector.	Transparency International
• Integrity	Index of Public Integrity (IPI)	The IPI is a composite index consisting of six components: judicial independence, administrative burden, trade openness, budget transparency, citizenship and freedom of the press. It aims to give an objective and comprehensive picture of the state of control of corruption.	European Research Centre for Ant-Corruption and State Building (ERCAS)
• Democracy	Democracy Index (DIX)	The DIX measures the state of democracy in 167 countries. The index is based on 60 indicators grouped in five different categories measuring pluralism, civil liberties, and political culture.	Economist Intelligence Unit
• Gender inequality	Gender Inequality Index (GII)	The GII measures gender inequalities in three important aspects of human development— (1) reproductive health, measured by maternal mortality ratio and adolescent birth rates; (2) empowerment, measured by proportion of parliamentary seats occupied by females, and proportion of adult females and males aged 25 years and older with at least some secondary education; and (4) economic status, expressed as labor market participation and measured by labor force participation rate of female and male populations aged 15 years and older.	United Nations
• Income inequality	Gini-Index	The Gini-index is a measure of statistical dispersion intended to represent the income or wealth distribution of a nation's residents, and is the most commonly used measure of inequality. The Gini coefficient measures the inequality of levels of household income. A value of zero expresses perfect income equality, and a value of 100 expresses maximal inequality.	CIA- The World Fact Book
Cultural			
• Importance of work	*'Work is important in my life'*	Percentage of people that say work is very or quite important in their lives	European Values Survey
• Importance of leisure	*'Leisure time is important in my life'*	Percentage of people that say leisure time is very or quite important in their lives	European Values Survey
• Work as duty	*'Work is a duty towards society'*	Percentage of people that agree or agree strongly that work is a duty towards society	European Values Survey
• Work centrality	*'Work should always comes first, even if it means less spare time'*	Percentage of people that agree or agree strongly that work should always come first even if it means less spare time	European Values Survey
• Power distance	Answers on a set of survey questions	The degree to which the less powerful members of a society accept and expect that power is distributed unequally. People in societies exhibiting a large degree of Power Distance accept a hierarchical order in which everybody has a place and which needs no further justification. In societies with low Power Distance, people strive to equalize the distribution of power and demand justification for inequalities of power.	ITIM international
• Individualism vs. collectivism	Answers on a set of survey questions	The high side of this dimension, called individualism, can be defined as a preference for a loosely-knit social framework in which individuals are expected to take care of only themselves and their	ITIM international