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How Common are Bad Bosses?

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Abstract

Bosses play a fundamental role in workplaces. Yet almost nothing is known about an important and basic question in labour economics and industrial relations. Are the right people promoted to be supervisors, team leaders, and managers? The infamous Peter Principle claims that incompetent bosses are likely to be all around us, but is that true? This paper provides the first statistically representative international estimates -- taking comparable data on 35 nations -- of the extent to which employees have 'bad bosses'. Using a natural measure, the paper calculates that approximately 13% of Europe's workers have a bad boss. Such bosses are most common in large organizations, in organizations without employee-representation committees, in the transport sector, and where workers themselves have no supervisory responsibility. Lastly, the paper offers a practical finding as a potential aid to human-resource training and hiring. Contrary to media portrayals, bad bosses are rated least-bad on 'respect for workers' and worst on their ability to get the job done. Lack of competence, not lack of consideration, appears to be the key problem.

Keywords: bosses, Peter Principle, job satisfaction, supervisors, well-being.

JEL codes: J28, I31, M54

Word count: 9500 approx. (excluding the Appendix, but including tables)

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"In a hierarchy, every employee tends to rise to his level of incompetence."

Laurence J Peter in The Peter Principle.

"Is there some reason my coffee is not here? Has she died, or something?"

Miranda Priestly in The Devil Wears Prada.

Introduction

Movie and media representations of bad bosses are widespread. Yet are bad bosses common or rare? This paper provides what we believe to be the first statistically representative cross-country estimates. We use data on 27,000 randomly sampled workers across 35 European nations. Our analysis creates a new boss-quality measure. We average across bosses' strengths and weaknesses in seven different domains (providing help, being respectful, giving encouragement, etc). We then calculate for each boss whether, in total, negative ratings outweigh positive ratings. An unweighted 'net' calculation of this kind seems a natural approach. Other metrics are possible, however, so we also provide a graphical way (in the later Figures 1 and 2) to allow readers to see the implications of choosing different boss-quality thresholds than the one emphasized in the paper. Overall, the paper finds that 13% of employees have a bad boss. Bad bosses are most common in large organizations, ones with no worker-representation committee, and in Transport. We also observe that employees who supervise others tend to assign higher ratings to their own boss. As a validation check, although not necessarily as a causal statement, we show that workers have greater job satisfaction levels in organizations where assessed boss quality is high.

Bosses self-evidently have a pivotal role in workplaces and in the working of the economy. Nevertheless, there is little knowledge about whether the right people are typically selected (although it is known from sources such as Dohmen 2004 and Cappelli and Conyon 2018 that performance ratings as an employee affect the probability of promotion). This paper offers new evidence on that question. Later results also offer indirect support -- consistent with work by Jones, Kalmi and Kauhanen (2010), Artz, Goodall and Oswald (2017), Lazear, Shaw, and Stanton (2015), and Hoffman and Tadelis (2018) -- for the influence of supervisor competence.

Peter and Hull (1969) became famous for the idea -- now known across the world as the Peter Principle -- that managers and supervisors are routinely promoted to one level too high, relative to their abilities, within organizations (Lazear, 2004; Barmby, Eberth and Ma, 2012).

Recent Gallup data reveal, moreover, that half of US employees say they have left a company because of a bad boss (Harter and Adkins, 2015; Herrera, 2018). Today there are also concerns about stress and psychological ill-health in workplaces (Clark, 2005; Jones, Latreille and Sloane, 2016; Bryson, Forth and Stokes, 2017). If bad bosses are indeed widely spread across organizations in the modern world, there is a considerable amount of evidence that this can be expected to have deleterious effects on employee well-being and workplace performance (Artz, Goodall and Oswald 2017; Bryson, Forth and Kirby, 2005; Lazear, Shaw and Stanton, 2015; Tepper, 2000; Bryson, Forth and Stokes, 2017). Hence these intellectual issues are significant ones in industrial relations, labor economics, and related parts of social science.

Currently, there is a significant lacuna in the research literature. There are no published papers -- to our knowledge[1] -- that assess in an internationally consistent way the rarity or commonness of 'bad bosses'. This study is a cautious attempt to provide estimates[2]. It uses the 2015 European Working Conditions Survey (EWCS). Broadly, the paper finds that, although a non-negligible number of bosses -- approximately one in eight -- can be classified as bad, the data are not as gloomy as might be expected from the picture painted by the Gallup survey information or any near-literal interpretation of the Peter Principle.

The background to this study is a familiar one. Supervisors and managers can have profound effects upon employees and on the ways in which organizations operate. Certain HRM practices and high job-satisfaction are believed to be positively associated with organizational performance (Bryson, 2004; White and Bryson, 2013; Böckerman and Ilmakunnas, 2012; Oswald, Proto and Sgroi, 2015; Jiang, Lepak, Hu and Baer, 2012; Bryson, Forth and Stokes, 2017). A contrasting negative-leader perspective studies the effects of bosses' bad behaviour, most commonly through work on 'abusive supervision' (Tepper 2000) and 'destructive leadership' (Einarsen, Aasland, and Skogstad, 2007). Bad bosses can have a major negative impact on workers. Hoel and Beale (2006) study workplace bullying in Britain. Bender, Heywood and Kidd (2017) find some evidence that supervisors' race and gender may affect how workers of the same race and gender are treated in the workplace. Green (2010) and Green and Tsitsianis (2005)

[1] After searches on the Web of Science and Google Scholar.

[2] It should be mentioned that a stream of work by economists Nick Bloom, John Van Reenen, and colleagues, tackles certain related issues for manufacturing industry, although with different methods.

discover greater intensification of work and reduced task discretion. Jones et al. (2016) document some possible effects on productivity from employees' psychological health. This study also links to conceptual work on 'expert leadership, including Goodall (2012) and Bäker and Goodall (2018). The quality of one's immediate boss is empirically both a key determinant of job satisfaction (Artz, Goodall and Oswald, 2017; Bäker and Goodall, 2018) and individual performance (Lazear, Shaw and Stanton, 2015).

Methodological issues

There is no standard methodology for this research problem. Hence we have attempted to build up from first principles.

We would like to acknowledge, however, that our chosen approach has some similarities to that taken independently[3], and on different data, in an interesting new paper by Hoffman and Tadelis (2018). Hoffman and Tadelis show that there is a strong statistical link between employee attrition and workers' assessments of how those workers feel they are being treated by their immediate supervisor.

Like all humans, individual bosses inevitably have individual strengths and weaknesses. Some overall metric, or average index, is therefore required. To try to avoid charges of arbitrariness, we begin with what seems the intuitive and natural benchmark (however, we also discuss variations around the benchmark). In the data set, we have assessments of the boss in seven dimensions. We are therefore able to create a simple 'net' score.

To give a flavor of the later method, a boss in this study will be classified as 'bad' if the person's net score across the summed criteria is negative. The seven criteria are: how workers rate their immediate boss in areas such as *feedback*, *respect*, *praise and recognition*, *help getting the job done*, *support for individual development*, *successful team-working*, and *helps and supports*. We provide a more detailed description is given below.

[3] We only became aware of this work after completion of our project. The two papers have quite different objectives; but there is an overlap in their spirit of using multiple questions (about bosses) answered by employees.

For the later calculations, random samples of employees are required. The data used[4] in the paper are drawn from (i) the European Working Conditions Survey (EWCS) for the year 2015, (ii) the General Social Survey of the United States for the year 2012, and the General Social Survey of the United States for the year 1996. The main part of the paper, however, concentrates on the European data. All the different data sets are statistically representative of the chosen populations. Descriptive statistics, and further details of the data sets for Europe and the USA, are given in an appendix. Tables A.1 and A.2, in the appendix, describe the wording of the key survey questions. Means and standard deviations are also reported.

It might be argued that there are two ways to tackle the research question. An observer-based approach would send external observers into a random sample of workplaces. The observers would be given training in how to record the actions, and make judgments about the quality, of the bosses that they see in the workplace. This research method arguably has the advantage that, as long as assessors could make accurate judgments, there would be some degree of objectivity to the data. Assessors could be trusted to be impartial. However, the procedure also has potential disadvantages. First, observers would find it hard to gauge in an even-handed way a wide variety of different kinds of environments about which they inevitably had no deep knowledge. Second, there would remain an amount of subjectivity, which in this case would come from the assessors' side. Third, and perhaps most important, the bosses would be likely to act differently when they knew that, on particular days, they were being observed.

A second, and alternative, procedure would be to gather data on the quality of bosses by asking questions of the employees themselves. This employee-based method also has a mixture of strengths and weaknesses. It has the advantage that workers are the ones who know the most about their line managers and who see them over long periods. Purcell and Hutchinson (2007) argue that it is employees' perceptions of manager practices, and not just the intended or implemented practices, that particularly matter. Moreover, employees understand the nature of the work and can assess their bosses' actions in many more settings than is feasible for any visiting social-science investigator, and thus are well placed, in principle, to evaluate the quality of their boss. The approach also has the potential strength that whatever a worker feels about his or her

[4] Most surveys do not report information about the role of supervisors, so we have to use selected years for which such data are available.

line manager, regardless of its exact objective truth, could have a fundamental influence. Nevertheless, this style of empirical inquiry would have disadvantages. First, workers might let personal animosity or attachment cloud their views about the strengths and weaknesses of an individual boss; second, employees might not understand the entire production process, and thus ultimately give honest but misinformed line-manager ratings; third, workers might fear their boss, and believe that their own answers could not be guaranteed to be confidential, and so might choose to give unduly favorable appraisals.

In an ideal world, both approaches would be undertaken. A degree of match between the two -- the observer-based methodology and employee-based methodology -- might then be sought. A good match would allow more confident judgements to be made about the proportion of good bosses and bad bosses. What the current paper does is to enquire, as thoroughly as it is able, into the second form of evidence. It averages across workers' subjective views, and a range of questions, in order to produce what we believe to be the first international sector-wide estimate of 'bad bosses' in today's workplaces.

Details on the method

The European Working Conditions Survey data set provides an opportunity to assess bosses across nations in a uniform way. It provides a sample, for the year 2015, of approximately 28,000 randomly sampled European employees. In each country, workers are asked:

To what extent do you agree or disagree with the following statements?

- ***Your immediate boss provides useful feedback on your work.*** *1= Strongly disagree. 2 = Tend to disagree. 3 = Neither agree nor disagree. 4 = Tend to agree. 5 = Strongly agree.*
- ***Your immediate boss respects you as a person.*** *1= Strongly disagree. 2 = Tend to disagree. 3 = Neither agree nor disagree. 4 = Tend to agree. 5 = Strongly agree.*
- ***Your immediate boss gives you praise and recognition when you do a good job.*** *1= Strongly disagree. 2 = Tend to disagree. 3 = Neither agree nor disagree. 4 = Tend to agree. 5= Strongly agree.*
- ***Your immediate boss is helpful in getting the job done.*** *1= Strongly disagree. 2 = Tend to disagree. 3 = Neither agree nor disagree. 4 = Tend to agree. 5 = Strongly agree.*

- ***Your immediate boss encourages and supports your development.*** *1= Strongly disagree. 2 = Tend to disagree. 3 = Neither agree nor disagree. 4 = Tend to agree. 5 = Strongly agree.*
- ***Your immediate boss is successful in getting people to work together.*** *1= Strongly disagree. 2 = Tend to disagree. 3 = Neither agree nor disagree. 4 = Tend to agree. 5 = Strongly agree.*
- ***Your immediate boss helps and supports workers.*** *1= Strongly disagree. 2 = Tend to disagree. 3 = Neither agree nor disagree. 4 = Tend to agree. 5 = Strongly agree.*

As is clear from the wording, these questions are meant to elicit assessments of the person's immediate boss, namely any form of line manager within the organization's hierarchy, whom we take to be the supervisor or manager directly above the interviewed employee. These questions arguably correspond with HR practices of "feedback", "respect", "praise and recognition", "help with getting the job done", "support for individual development", and "successful team working". As will be shown later, moreover, each of these variables enters a job satisfaction equation in a statistically significant way.

Our aim in this paper is to understand the distribution of bad bosses. We therefore need to establish a bad-boss 'cutoff' level. To do this, assumptions have to be made about what a reasonable requirement is for a good or bad boss. On that, there is scope for debate and fair-minded disagreement. Therefore, in this study we err on the side of conservatism.

We begin by intentionally adopting the most natural criterion – a straightforward overall 'net' score for bosses. Thus we simply add up the plusses and the minuses. This is a symmetric rating method that leads to an unweighted net assessment. It gives an overall view of the quality of a boss. More precisely, the chosen criterion in this paper is the following: A line manager is classified as 'bad' if the person's combined net score on the seven questions is negative, that is, is overall in the 'disagree' columns. This cutoff corresponds, in the data set, to an aggregated boss score of 20 points or lower. [5]

[5] As an example, consider a boss who is right at the cut-off. Imagine that he or she is given by the employee a score of 2 out of 5 on 'feedback', a 2 out of 5 on 'helpful', a 2 on 'respect', a 3 on 'encourages', and a 4 on the other three questions ('praises', 'successful in teamwork', 'helps and supports'). Thus, the worker tends to disagree that the boss gives useful feedback; tends to disagree that the boss is helpful in getting the job done; tends to disagree that the boss

In this way, bosses are not required to be anywhere near perfect, nor even to be rated positively in every single aspect of their actions. Instead, the measure sums in an even-handed and numerical way across possible strengths and weaknesses. The logic of the chosen definitional cutoff of a score of '20 and below = bad boss' is therefore based on the intuition of net averages. Some individual-question negatives (for example, 'I disagree that the boss is helpful in getting the job done…') are allowed, without the individual being given the bad-boss tag, as long as the demerits are made up with offsetting plusses from a sufficient number of other questions from among the seven. A 'net' score emerges in which there is a simple averaging across his or her strengths and weaknesses as a boss.

It would be interesting, as a referee has pointed out, to have information on how the bosses rate the employees in their team. In our data, however, that is not possible.

Main calculations

The answers in the EWCS data set on Europe allow a calculation of the commonness or otherwise of 'bad bosses'. The method takes an aggregation of employees' judgments across the seven different questions. When we make this calculation, approximately *13% of workers are estimated to have bad bosses*. To illustrate how that number is derived, consider Figures 1 and 2. These provide visual plots of the distribution of bad and good bosses across the combined European economies. The first diagram, Figure 1, gives the frequency distribution of boss quality. It depicts the percentages of bosses who are given every individual score between the lowest feasible (a score of 7) and the highest feasible (a score of 35). [6] In passing, it may be worth noting that if we divide the data into two subsamples, of people who have supervisory responsibility themselves and people who do not, the two frequency patterns -- available upon request -- look almost exactly like the full-sample frequency distribution above. The second diagram, Figure 2, is the cumulative frequency distribution.

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is respectful; has no strong opinion on the question of whether the boss gives encouragement; tends to agree that the boss gives praise, and fosters team productivity, and provides help and support. This implies a net neutral score. This is a total of 21 points out of a possible 35. The arithmetical reason is that the three scores (2+2+2) below the indifference level (which is a 3) are exactly offset by three scores (4+4+4) above. Put differently, the employee is ambivalent about this hypothetical boss (2+2+2+3+4+4+4 = 21). Overall, across the seven elements by which the boss is assessed, the worker's view is then a neutral one – neither good nor bad.

[6] We think a fair criticism would be that the top score of 35 has a mechanical feel to it, where all the elemental scores are themselves high. But this is how the data come out, and for our calculations any top-end bunching has little effect.

The pattern in Figure 1 makes it clear that workers' views on their immediate bosses lead to an estimated boss-quality distribution that is bimodal. Hence, there are two spikes. These occur fairly high up the quality range at 28 points and then again right at the top at 35 points. The percentages of employees giving these two exact scores are, respectively, approximately 8% of employees and 13% of employees.

Figure 3 gives the distribution of bad bosses across industries. In comparing sectors, however, it should be borne in mind that sample sizes here are smaller than ideal, so we caution that our calculations ought to be viewed as some of the first, and tentative, international estimates. Figure 3 reveals that bad bosses are most common in Transportation and in Manufacturing, at 17.4% and 16.0% respectively. At slightly lower levels come Human Health and Social Work and Agriculture, Forestry and Fishing. The sample size for Manufacturing is fairly large (at 4412 workers), so the high number of bad bosses reported in that sector may, in this case, be somewhat reliable. These estimated numbers should perhaps be read as complementary to the influential work on manufacturing by Bloom and Van Reenen and colleagues (such as Bloom et al. 2012).

Other potential quality cut-offs

It is possible to raise objections to the unweighted approach that is used in our calculations. With this method, we have treated good and bad ratings in an even-handed, symmetric way. Under our chosen approach, therefore, a boss who had workers who were indifferent on all of the seven questions assessing that boss (so the worker said 'I neither agree nor disagree' on every occasion when asked about the boss's qualities) would narrowly escape the bad-boss label.

However, it should be emphasized here that other cut-offs are straightforward to apply. Readers can, in a sense, choose whatever quality cut-off they think personally appropriate. Figures 1 and 2 can then be inspected and the desired cut-off applied.

One possibility, as an option in assessing bosses, would be to start from the point of view that a boss should be viewed as someone who has consequences that are better than merely marginally positive. Then the almost -- but not quite -- minimal requirement would be someone who scores positively, in a net sense, in more than a single category. This criterion would imply a bad-boss categorization that begins at 22 points or less. It can be seen from Figure 2 that such a definitional rule would produce approximately an 18.5% estimate for the percentage of (fairly) bad bosses. As another and more extreme position, a boss might, say, be expected to score

positively on every one of the seven criteria. That would lead to a tough bar and produce a bad-boss definition as being anyone who was given less than a 4 out of 5 on any of the seven sub-criteria (approximately half of all bosses would fail by this benchmark). Alternatively, and more leniently, some investigators might merely wish to put asymmetric weight on negative assessments, so that negatives would be relatively hard to outweigh with positives. All of these could be calculated using the methodology, but the current paper takes an illustratively simple, symmetric stance and uses a 20-point cut-off.

Econometric boss-quality equations

Table 1 moves to micro-econometric equations for boss quality. Using the individual data, it examines the statistical correlates with boss quality. To form the dependent variable, we weight each of the employee's answers, on the 5 point scale, and then sum those numbers across the seven questions. This produces a rating, from 7 to 35, of the employee's boss. We treat this evaluation by each worker as a measure of 'Continuous Boss Quality'. Table 1's dependent variable is this measure. It has a mean and standard deviation of, respectively, 27.5 and 6.1. This simple arithmetical approach has some obvious drawbacks -- it deliberately imposes cardinality -- but the paper's later conclusions can be replicated using alternative kinds of ordinal estimators.

To the best of our knowledge, the results in Table 1 are among the first of their kind for cross-national workplaces. The columns in Table 1 build up in length and specification.[7] In the fullest specification, which includes a measure of general cheerful mood, and is shown in column 4 of Table 1, a number of independent variables remain statistically significant at conventional confidence levels. There is a strong estimated effect -- see the coefficient 1.619 in the first column of Table 1, for example -- from the size of workplace (which enters negatively). This finding seems an interesting one. It raises the possibility that large organizations intrinsically may find it harder to monitor who is, and who is not, ideal in a supervisory position. The result also potentially fits with a well-known conclusion (see later in the paper) in labor economics that job satisfaction tends to be lower in larger workplaces. Employees who themselves supervise others tend to rate their own bosses more highly (see, for example, the coefficient 0.864 in the first column of Table 1). This might be a form of leniency bias or reflect genuinely better bosses at higher levels in an

[7] We also checked a principal-components analysis; only one eigenvalue exceeded 1.0.

organizational hierarchy. Other independent variables in Table 1 include a dummy variable for employee representation in the workplace, which suggests, intriguingly, that there is some kind of positive association between allowing employees a formal way to express opinions and having a better boss. Such a finding chimes with earlier and influential work by Jones et al. (2010). Although not a central concern of the current study, this kind of result is striking enough that it might repay exploration in future research. Column 4 also controls, to try to pick up unmeasured personality, for a cheerful mood; pay; and hours of work (which enter negatively). The estimated age-profile in Table 1 is U-shaped. Middle-aged workers assign the lowest ratings to their bosses, which seems consistent, in principle, with the low well-being levels reported more generally by those who are in their midlife years (as in Blanchflower and Oswald, 2008, and Graham and Pozuelo, 2017).

On workers' assessments

How, in this data set, might the workers' evaluations of their bosses be checked and validated? If employees' answers about their bosses are genuinely informative -- rather than just randomly unpleasant or pleasant remarks -- those answers should be correlated with the workers' overall views of the desirability of their own job. Poor scores on boss-quality criteria, for example, should be associated *ceteris paribus* with less satisfied employees and ones who are considering leaving the organization.

It might be argued that workers who give favorable scores for their bosses are bound, by the nature of human personalities, to tend to give favorable job-satisfaction scores. Although it is not possible to control for this omitted-personality problem in a completely certain way, Table 2 does show that the key pattern is robust to the inclusion of other variables for a sunny kind of personality.

Table 2 reports satisfaction equations for Europe (asked in 32 different languages). Here the dependent variable is a measure of the job satisfaction of the approximately 28,000 randomly sampled European workers. More precisely, the wording of the question is "On the whole, are you 'very satisfied', 'satisfied', 'not very satisfied', or 'not at all satisfied' with working conditions in your main job?" As a check, we later examine equivalent equations for a question about whether the employee is enthusiastic about his or her job. [Table A.1 in the appendix gives full wordings]. For ease of reading, a simple OLS estimator is used. However, the results are essentially

unaffected by using instead an ordered estimator; those versions of the equations are available upon request.

The mean of the dependent variable in Table 2 is approximately 3.06 on a 4-point scale. It has a standard deviation (driven by the across-person variation) of approximately 0.68. A standard set of personal and demographic variables are included in the job satisfaction equations in Table 2. These include gender, age, marital and education dummies, and a set of dummy variables for different kinds of workplaces and employees.

In Table 2 the key variables are how the employee evaluates the activities of his or her immediate boss. As can be seen, each of the boss-assessment variables has the natural implied sign. Thus in column 1 of Table 2, for example, the coefficient on the positively coded variables of Gives Useful Feedback is 0.180, with a large t-statistic. The implied effect-size in a job satisfaction equation is substantial. As the value of this variable can vary from 1 to 5, the coefficient implies that the difference between a boss score of 1 and a boss score of 5 translates into a job satisfaction difference of approximately 0.9 job-satisfaction points. Within Table 2, each of the seven boss characteristics -- listed vertically in the table -- has a coefficient of approximately 0.2-0.3 in value. These are cross-sectional estimates, so should be treated extremely cautiously, but do seem consistent with the notion that the nature of boss behavior may have considerable implications for employees' well-being at work. Artz et al. (2017), although not of exactly the same kind, provides evidence that a newly competent boss will raise the job satisfaction of workers.

Table 3 moves to an alternative specification. It is suggestive of three further conclusions. The first is that, as in column 1, the seven items seem to enter together, with less collinearity than might have been expected. In column 2 of Table 3 the boss variables are compressed into a single composite. As explained earlier, 'continuous boss quality' is defined to run from a low of 7 to a high of 35. The composite coefficient in the second column of Table 1 is 0.045 with a small standard error. People who have bosses whom they rate highly across the seven criteria are far more likely, holding other observables constant, to be contented at work. As an illustrative calculation, a putative move from having the worst possible boss to having the best possible boss would imply a move of 28 points in boss quality, which, when multiplied by 0.045 leads to an implied greater level of job satisfaction of 1.26 points.

As explained above, intrinsically happy individuals might view their boss and job through rose-tinted glasses. If that were the case, the positive correlation between job satisfaction and perceived boss-quality could be due to an omitted personality variable. Therefore, a second contribution of Table 3 is to seek an approximate correction for the intrinsic personality (or, arguably, mood on the interview day) of the individual worker. This is done with a cheerfulness variable. The independent variable 'cheerful mood' in column 3 of Table 3 is calculated from a separate question from the EWCS data set; within the questionnaire the cheerfulness question is separated from the boss-quality questions by many pages. The wording of the cheerfulness question, which is meant from the wording to apply to life rather than the job, is: *Which is the closest to how you have been feeling over the last two weeks? I have felt cheerful and in good spirits: All of the time; Most of the time; More than half of the time; Less than half of the time; Some of the time; At no time.*

Controlling for cheerfulness appears here -- encouragingly -- to have almost no effect on the key estimates. It can be seen in column 3 of Table 3 that when the cheerfulness variable is entered in the job satisfaction equation there is robustness in the coefficient on the boss-quality variable. It alters only from 0.045 to 0.040, and retains statistical significance at any conventional level of confidence. That stability is valuably suggestive. The evidence in Table 3 does not seem to favor the view that workers who appreciate their bosses merely have positive personalities that tend to be appreciative of everything (including their jobs).

Another possible concern is that the positive link between bosses and the worker's job satisfaction might operate partly through compensatory levels of earnings and hours of work. Yet column 4 of Table 3 checks this and reveals that adjustments for those influences do not alter the main conclusion. In column 4, the logarithm of the individual worker's earnings and their weekly hours worked are included as extra independent variables. As would be expected, the former enters positively and the latter negatively. A set of controls for workplace size are also included in column 4 of Table 3. However, none of these additional variables makes a difference to the coefficient estimate on 'continuous boss quality'. It remains unchanged, in column 4, at 0.040.

Figure 4 gives a graphical representation of the relevance of boss variables in a worker job-satisfaction equation. Using column 4 of Table 3, the coefficients imply that boss quality is the single largest element.

An extension: bosses in the USA

This section of the paper briefly describes different, but potentially complementary, material. Here the analysis is for the United States and uses the data set known as the General Social Survey. Pooled cross-sectional estimates from the GSS are given for the year 2012. The sample size in these regression equations is much smaller than before: it is approximately 600 employees. That is because the necessary questions are not routinely asked in the regular GSS annual surveys. However, the 2012 GSS data set has the interesting and unusual feature that it asks workers whether they have witnessed bad kinds of behavior in their workplace (and if so by whom). This potentially allows a comparison to be made between bad behavior by various kinds of people, including the person's boss.

Although the sample is small, this appears to be one of the first occasions in which GSS data have been used to examine bad behavior among bosses. The behaviors highlighted in GSS fall broadly within the set identified by Tepper (2000, 2007) as 'abusive supervision' (see Table 1 in the first of these: Constructs That Capture Nonphysical Supervisor Hostility p. 263). The bad behaviors identified in GSS are worded in the survey as:

- *I have been denied a raise or promotion without being given a valid reason*
- *I have been lied to by co-workers or supervisors*
- *I have been treated in a rude or disrespectful manner at work*
- *I have received emails, text messages, mobile cell phone calls, or other electronic, internet or social network communications from people at work that were harassing or threatening*
- *People at work have spread rumors or gossip about me*
- *I have felt ignored, excluded or isolated from others at work*
- *I have been the target of derogatory comments or jokes at work.*

Using these categories, approximately two thirds of employees say they have witnessed bad behavior. The questionnaire makes it possible to identify the sources. In the analysis the key question used to create independent variables for the regression equations of Table 4 is "In the past 12 months, the person engaged in these types of behavior has most often been: a coworker, your supervisor or boss, a customer/client/patient". Mean proportions are: a coworker 31% of the time; a supervisor or boss 17% of the time; customers/clients/patients 15% of the time. These variables are then entered, in Table 4, as independent variables in a US job satisfaction equation.

Table 4 reveals, first, that overall job satisfaction levels are markedly lower among employees who have observed certain bad behaviors. When clients have behaved badly, that coefficient, in the first column of Table 4, is -0.426, which is nearly half a job satisfaction point. In column 1 of Table 4, which is for the full sample, what is noticeable is that the Boss Behaved Badly variable has the largest negative coefficient when compared to the other two kinds of bad behavior (by coworkers and clients). We reject the null hypothesis that -0.856 is equal -0.543. Moreover, these coefficients on behavior are large when contrasted with the personal characteristics. Table 4 produces the same kind of result for a smaller sample where some kind of bad behavior was reported. Column 3 omits workers who attribute bad behavior to not being given an increase in pay or promotion (actions that might be justifiable by a boss and might not necessarily be 'bad') and similar conclusions hold. Later columns of Table 4 indicate robustness.

Some further evidence, of an older kind, is provided in Table 5. The dependent variables again include job satisfaction in the United States GSS, but in this case the data are from the year 1996. Here the main variable is a set of answers to questions such as *'when was the last time you were really angry, irritated or annoyed at your boss?'*, or at a coworker, or at a subordinate, or a client, and so on. Also '*how intense would you say your anger or irritation was?*', *'how often did you think about it?*', and *how long did the anger and irritation last?* Table 5's results, again on admittedly small samples, suggests that bosses apparently have the most important negative consequences. The other coefficients are dominated in size by that on 'mad at boss'. The Appendix offers further results, including a corroborative equation-specification for 'enthusiasm'.

Practical implications and discussion

Might this study's findings be helpful, in a practical sense, to those who select and train bosses in modern workplaces? By the nature of the scoring system used in the paper, it is feasible to work out *where* bad bosses are relatively at their worst and relatively at their best (or perhaps least-bad would be the appropriate wording). This can be done across the seven criteria.

Figure 5 and Table A5 in the Appendix provide more detailed information. As a possible implementable discovery to aid in better supervisor training and hiring, Figure 5 makes it clear that bad bosses are relatively strongest on their 'respect for workers' and weakest on their 'ability to get the job done' and on attention to 'employee development'. This seems an intriguing finding. It does not mean that respect is irrelevant; Table 2 shows that respect is correlated with job

satisfaction. Instead, what the result suggests, importantly, is something less intuitive. It is that the Devil Wears Prada conception of a boss -- in which Miranda Priestly is a disdainful human being who is openly rude to employees -- in fact *is not the typical kind of bad boss* even though it is perhaps a common kind of media representation.

The empirical conclusions here are more consistent with the idea that a bad boss tends to be someone who lacks sufficient competence. That potentially links the current study's findings back to a literature on the technical knowledge and sheer core-business competence of supervisors (see, for instance, Jones et al. 2010, who document a major beneficial role from feedback from superviors, and Artz et al. 2017, where it is shown that employees have higher job satisfaction where, e.g., their boss could do their job if necessary). In choosing the best people to promote, hiring committees may tend to concentrate too much, at the margin, on finding individuals with empathy and insufficiently on the need for actual technical knowledge. In modern workplaces, the problem is apparently not primarily that bad bosses are disrespectful.

Approximately one eighth (more precisely, 13%) of Europe's workers have been found here to have a bad boss. This estimated number may seem surprisingly low[8] to those who know the Gallup finding on half of employees having had a boss bad enough to force them to quit, or who had expected that scornful Miranda-Priestly types would be found widely across the industrialized world's workplaces. Nevertheless, the paper's calculation should be kept in perspective. It stems from the presumption here that an appropriate cutoff rule for the definition of a bad boss is an aggregate score that is negative (that is, a score of 20 or worse on the summed integers over the seven questions). That might be seen as setting a bar that is low and rather lenient on bosses; to escape the bad-boss classification here does not require that a boss be positively valuable, only that he or she be a zero or above.

To allow a different cut-off to be chosen, Figure 2 makes it possible visually to calculate the percentages of bad bosses that would be generated under alternative cutoff rules. A related question is: what can be said here about 'good bosses'. Because the data exhibit a skewed distribution, there is no single way to address that particular question. For example, it can be seen from Figure 1 that approximately 13% of bosses are given by their workers a 'perfect' score of 35 out of 35; that would be one way to define a good boss, but it appears to us to be a rather extreme

[8] Our own intuition, when beginning the project, was that the number would be higher than 13%.

one. More broadly, Table 1 gives equations that effectively offer statistical predictors of the probability of a very good boss compared to a fairly good boss (and so on). The current study has focused on the rarer 'bad boss' end of the distribution, where it might be argued that a fairly natural and clear cut-off -- for 'badness' -- can be defined.

Given length constraints, we briefly review other points below.

Further potential concern 1: Bosses in these data sets are not randomly assigned, so some of the causality is unclear.

This is an important query. One answer is that much of the current paper engages in a new form of measurement rather than only hypothesis-testing. The paper aims to measure the commonness or otherwise of bad bosses; that does not require an assessment of how those bosses came to be appointed. The econometric work points to a persistent type of correlation, between boss variables and levels of worker satisfaction, and these patterns are not widely known and thus seem worth documenting as systematically as possible. Nevertheless, they remain correlations.

Further potential concern 2: Some of the variables in the empirical work use subjective data. Such data may be unreliable.

There is evidence that subjective well-being scores are correlated with, and predictive of, objective and observable phenomena. Examples include Oswald and Wu (2010). It might also be pointed out that corporations around the world make use of subjective satisfaction data, in market research and their human resources divisions, so such data might be said to have passed a key Chicago-esque 'market' test. Finally, workers' feelings -- about their bosses and other aspects of their working environment -- seem likely to be intrinsically important in governing the actual actions of those workers. As mentioned earlier, this approach is common in the associated literature examining destructive and abusive bosses. Disgruntled employees, whether or not there is an objective case for their disgruntlement, may be less productive ones and be ones who intend to quit. In this special sense, subjectivity may not be a disadvantage.

Further potential concern 3: A central role in the analysis is given to subjective assessments of the quality of the immediate boss, and the main dependent variable is also a subjective assessment of job satisfaction, so inferences from cross-sectional regressions may be biased by omitted personality variables. Employees seem, in a common sense way, to be in a fairly good position to

answer questions about the competence of their boss. Nevertheless, this correlational concern remains a valid one; ideally a fixed-effects analysis would be preferable; it would allow unobservable personal characteristics to be differenced out. This limitation is potentially a significant one. However, we have been able to do one extra correction (though we would not claim that it is a perfect solution). The paper's principal results are robust to the inclusion of an extra independent variable for the person's cheerfulness with life. In Table 3, for example, the third and fourth columns show that the inclusion of a cheerful-mood control does not alter the punchline of that part of the analysis. Importantly, the estimated coefficient on boss quality changes only marginally (from 0.045 to 0.040). Hence, it appears unlikely that the statistical connection between perceived boss quality and worker satisfaction is some form of spurious pattern due merely to underlying personality or an equivalent.

Lastly, and on a more positive note, it is natural to reflect on one previous strand of writing, and to mention two earlier studies that try to measure aggressive or abusive boss behavior. The first used data from the Netherlands and examined two rather general forms of undesirable boss behavior – experiencing 'unpleasant situations' and 'aggression' (Hubert and van Veldhoven, 2001). These authors calculated the prevalence of these behaviors in Dutch workplaces to be 11%. The second study estimated the frequency of workers' exposure to aggressive actions by their supervisor in a sample of approximately 2500 employees in the US (Schat, Frone, & Kelloway, 2006). In that sample, 13.5% of US workers reported having been exposed to aggression from their boss or supervisor (see Table 4.6 of Schat et al. 2006). These research papers differ from ours because they focus on explicitly negative behavior such as aggression. Nevertheless, the similarity in size of these three estimated percentages (ours for Europe's nations at 13%, 11% in the Netherlands, and 13.5% in the United States), seems potentially of interest.

Conclusions

Most economists and industrial relations researchers would accept that boss quality is likely to be important, and arguably extremely important, to the efficient working of a labor market. Yet little is known about whether 'bad' bosses are common or rare. That is paradoxical. Decades of research have, by contrast, been put into the systematic measurement of levels of employment, unemployment, quality of working conditions, fear of job loss, pay, job satisfaction, commuting-to-work times, unionization, stress levels at work, and other labor-market variables.

The contribution of this paper has been to estimate the prevalence of bad bosses in cross-national data. To our knowledge, the results are the first of their kind. Our definition of a bad boss is an intuitive one. It does not require that bosses be good at everything. Instead, the analysis averages across a range of positive and negative judgments as assigned by a boss's employees. The cut-off rule for a 'bad' boss is then a boss who gets an overall 'net' assessment that is negative (in other words, where the minuses outweigh the plusses). More precisely, the boss-quality score is calculated over seven summed categories -- helping, respect, feedback, encouragement, praise, etc. On each of the seven categories, a negative assessment, in this data set, is a score of less than 3. Bad bosses in this study therefore are those who have total summed scores of less than 21 (namely, less than three multiplied by seven). Figure 1 in the paper depicts the calculated frequency distribution of boss-quality scores in the data set.

Using this definition, we are able to calculate that 13% of Europe's workers have a bad boss. This figure is lower [9] than might have been expected by those who believe in, for example, any strong version of the so-called Peter Principle. The paper has also examined a series of boss-quality regression equations. These equations reveal, among other results, that boss-quality scores are greatest in small workplaces, in places where there are worker-representation committees, among employees who themselves have supervisory responsibility, and outside the Transport sector. Various correlations between boss quality and worker outcomes have also been documented here; these, we would emphasize, are not definitively causal, although the patterns seem of interest, and are consistent with the existence of a link between employees' satisfaction and the quality of their boss. Some of the econometric results are for US data. Finally, this paper's findings suggest, in a more practical vein, that the key problem of bad bosses may not be that they are unpleasantly disrespectful of others (like the iconic Miranda Priestly in The Devil Wears Prada), but rather that they may lack the sheer technical competence to get the job done.

These issues demand further attention.

[9] It should perhaps be mentioned that we ourselves had expected a higher figure for the proportion of bad bosses. It may be that public perceptions of bosses are biased by the fact that citizens who are unhappy with their boss tend to be the ones who speak out about 'the boss'. Hence Amanda Priestly types may be rarer than is imagined.

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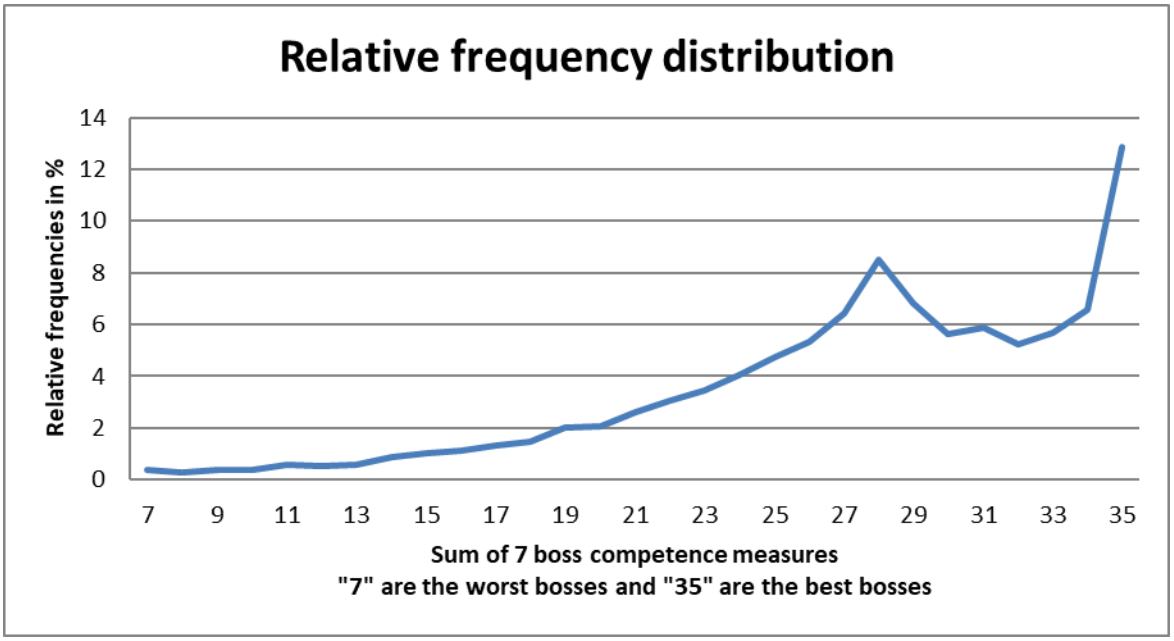
Figure 1: The frequency distribution of boss quality in Europe

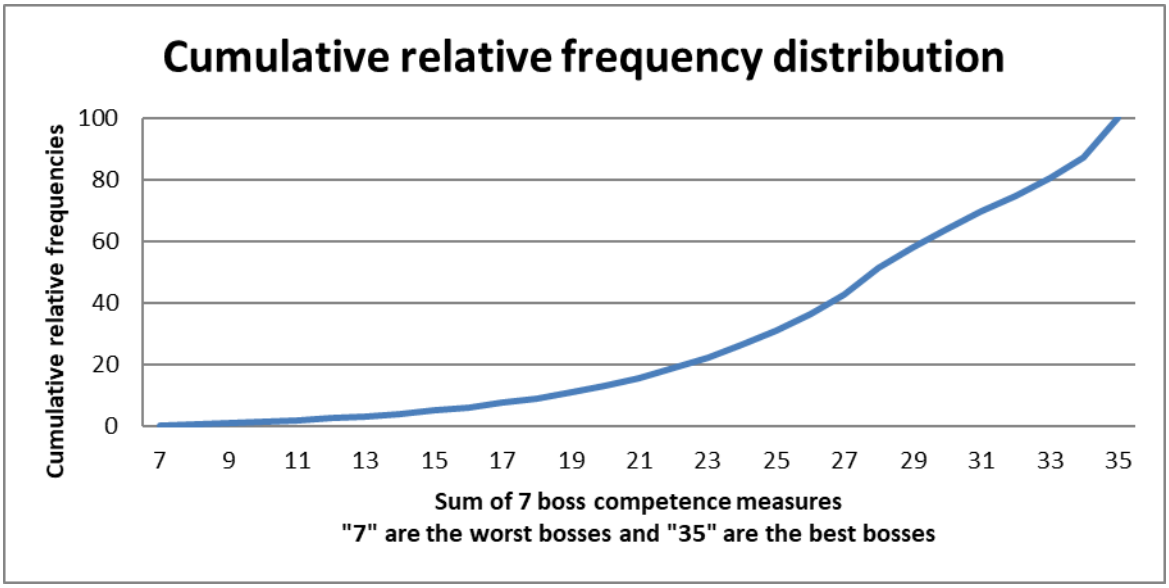


Larger numbers on the horizontal axis indicate better bosses.

Employees assess their boss using seven criteria. On each of these seven, they assign the boss a good score (of 4 or 5 points), a bad score (of 1 or 2 points), or an indifferent score (of 3 points). Thus the boss-quality scale here runs from a low of 7 to a high of 35. A perfect score for a boss is thus 35 (namely, five points multiplied by seven criteria). An indifferent boss score would be 21 (namely, three points multiplied by seven criteria).

The paper's definitional cut-off for a 'bad boss' is 20 points and below. The reason is that this cut-off corresponds to a net negative assessment, when summed, across the seven criteria. However, the diagram allows calculations to be read off for any other chosen cut-off definition of 'bad'.

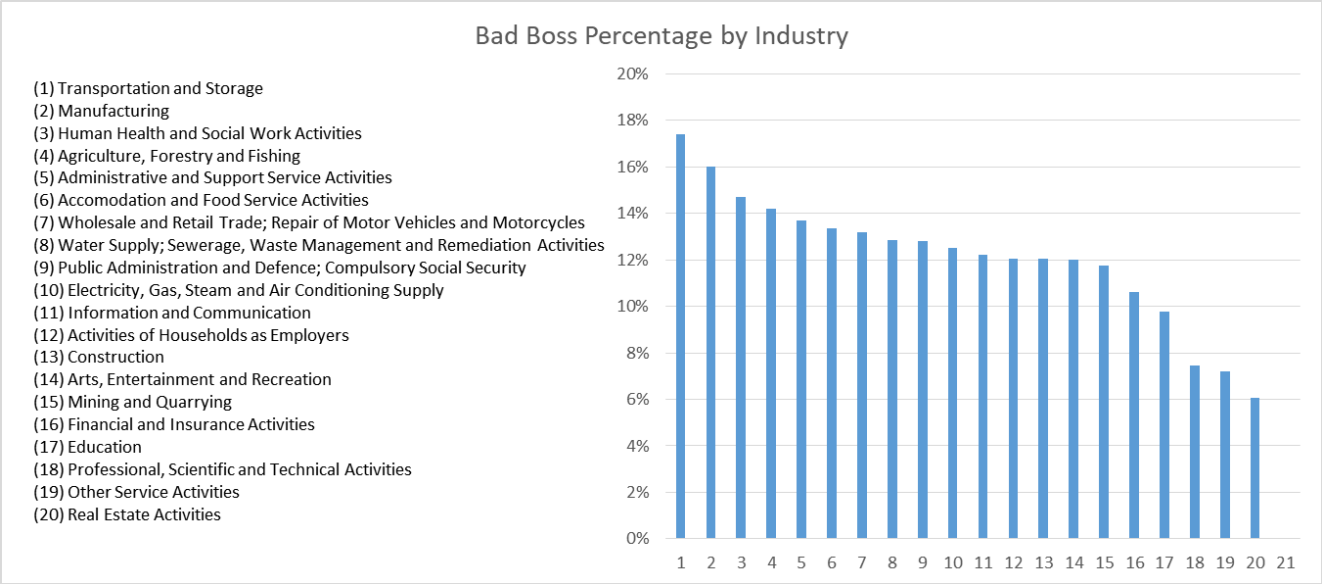
Figure 2: The cumulative distribution of assessed boss quality in Europe



The boss-quality scale here runs from a low of 7 to a high of 35. Larger numbers on the horizontal axis indicate better bosses.

The paper's definitional cut-off for a 'bad boss' is 20 points and below. The reason is that this cut-off corresponds to a net negative, when summed, across the seven assessment questions that are asked about the boss's behaviour.

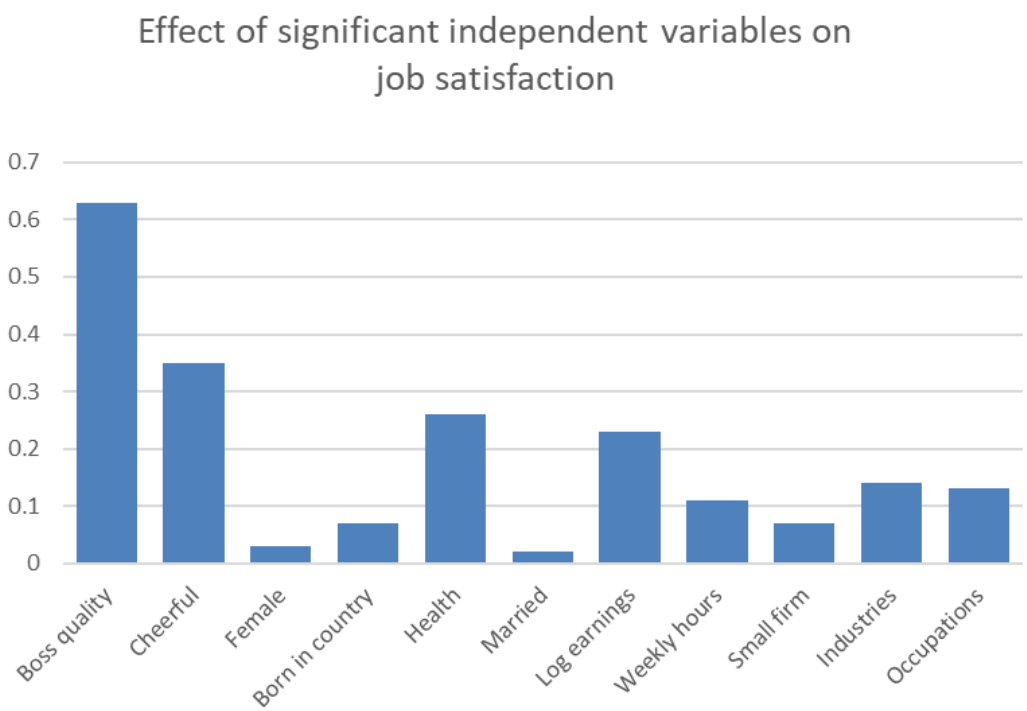
Figure 3: The distribution of bad bosses across twenty industries



The proportion of bad bosses in each of twenty industries is on the vertical axis.

As in earlier diagrams, the definitional cut-off used here for a 'bad boss' is 20 points and below.

Figure 4: Exploring the correlation between boss quality and employee job satisfaction



Note: positive values are computed by differencing the effects on job satisfaction between the 10th percentile and the 90th percentile of each variable, unless noted otherwise. All values based on Table 4, column 4 estimates.

Boss quality: a 34 boss quality rating versus an 18 rating

Cheerful: cheerful most of the time (category 5) versus cheerful some of the time (category 2).

Female: effect on job satisfaction of being a women versus a man

Born in country: born in the country versus not born in the country

Health: good health (category 4) versus bad health (category 2)

Married: effect on job satisfaction of being married versus not married

Log earnings: 90th %ile earnings (3000 Euros per month) versus 10th %ile earnings (300 Euros per month)

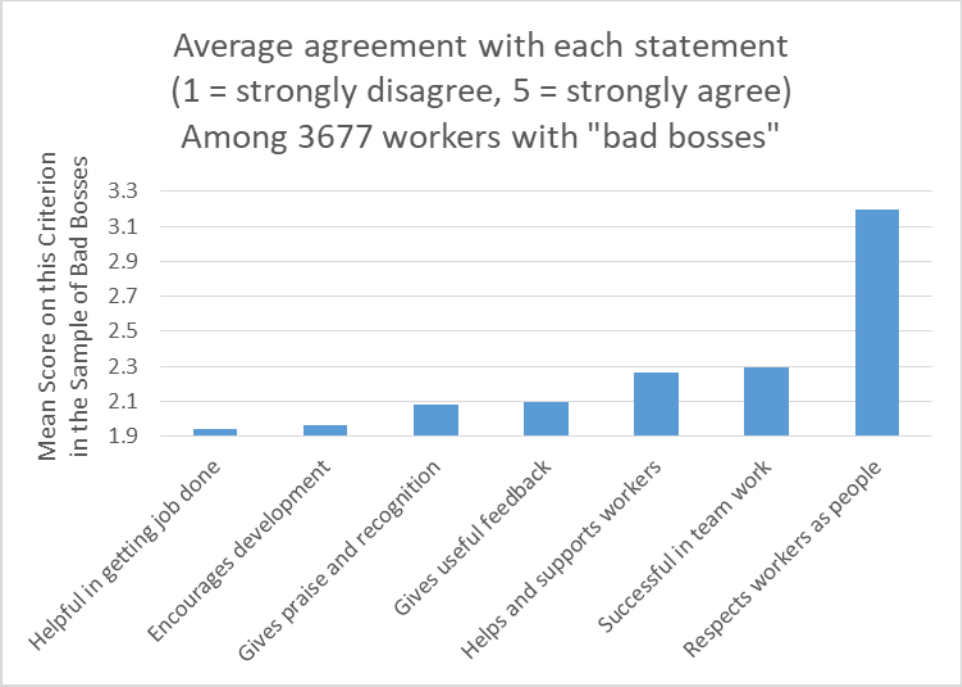
Weekly hours: 10th %ile weekly work hours (22) versus 90th %ile hours (50)

Small firm: working in a small firm (< 10 workers) versus a big firm (> 250 workers)

Industries: 90 %ile industry (arts, entertainment and recreation) versus the 10th % ile industry (accomodation and food services)

Occupations: 90th %ile occupation (managers) versus the 10th %ile

Figure 5: On which particular criteria do 'bad bosses' tend to do well and do badly?



This figure gives the mean score on each of the seven criteria. It shows that bad bosses tend to be rated particularly poorly on 'helpful at getting the job done' and 'encouraging development'. Perhaps surprisingly, however, they are rated fairly highly on 'respect for their employees'.

Further information is given in the Appendix.

Table 1: Boss-quality equations for Europe (EWCS 2015)

	(1)	(2)	(3)	(4)
Medium firm	-1.230***	-1.123***	-1.064***	-1.086***
	(-7.932)	(-8.724)	(-8.380)	(-8.401)
Big firm	-1.619***	-1.409***	-1.289***	-1.247***
	(-7.378)	(-7.678)	(-7.256)	(-7.992)
Supervisory responsibilities	0.864***	0.703***	0.603***	0.580***
	(8.742)	(6.408)	(5.463)	(4.736)
Female	0.250***	0.117	0.176**	0.118
	(2.796)	(1.254)	(1.982)	(1.126)
Age	-0.116***	-0.096***	-0.070***	-0.082***
	(-3.963)	(-3.522)	(-2.789)	(-3.250)
Age squared	0.001***	0.001***	0.001***	0.001***
	(3.913)	(3.835)	(3.045)	(3.397)
Immigrant	-0.371**	-0.077	-0.052	0.036
	(-2.150)	(-0.566)	(-0.398)	(0.274)
Physical health	1.619***	1.562***	0.880***	0.897***
	(18.046)	(17.265)	(11.016)	(10.998)
Married	0.331***	0.210**	0.170*	0.149
	(3.053)	(2.093)	(1.755)	(1.475)
Primary education	1.835**	1.686**	1.701**	1.858*
	(2.570)	(2.044)	(2.211)	(1.825)
Lower secondary education	0.890	1.150	1.118	1.116
	(1.445)	(1.589)	(1.595)	(1.182)
Upper secondary ed.	0.854	1.383*	1.318*	1.401
	(1.295)	(1.849)	(1.824)	(1.368)
Post-sec. non-tertiary ed.	1.225*	1.220*	1.219*	1.383
	(1.699)	(1.808)	(1.830)	(1.444)
Short-cycle tertiary ed.	1.193	1.104	1.098	1.015
	(1.604)	(1.379)	(1.394)	(0.930)
Bachelor degree ed.	1.780***	1.206*	1.189*	1.107
	(2.794)	(1.713)	(1.715)	(1.080)
Master degree ed.	1.662**	1.315*	1.349*	1.288
	(2.416)	(1.744)	(1.817)	(1.248)
Doctorate degree ed.	1.074	0.399	0.526	0.194
	(1.205)	(0.434)	(0.583)	(0.155)
Employer tenure	0.006	0.002	0.001	-0.002
	(0.867)	(0.308)	(0.100)	(-0.361)
Public sector employer	0.262*	-0.240*	-0.238*	-0.228
	(1.866)	(-1.816)	(-1.830)	(-1.522)

Joint private-public employer	0.155	0.026	-0.068	-0.191
	(0.750)	(0.132)	(-0.348)	(-0.858)
Not-for-profit employer	0.325	0.215	0.222	0.298
	(0.886)	(0.606)	(0.682)	(0.888)
Employees are represented	0.248	0.452***	0.403***	0.406***
	(1.628)	(3.612)	(3.470)	(3.123)
Cheerful mood (of employee)			1.454***	1.377***
			(25.526)	(24.825)
Log monthly earnings				0.309**
				(1.970)
Weekly hours worked				-0.027***
				(-4.192)
Industries (21)	No	Yes	Yes	Yes
Occupations (9)	No	Yes	Yes	Yes
Countries (35)	No	Yes	Yes	Yes
Constant	22.476***	22.435***	17.609***	16.871***
	(23.130)	(23.664)	(18.607)	(12.088)
R-squared	0.056	0.0927	0.151	0.146
Observations	27025	27025	27025	22127

Notes: t-statistics are in parentheses; *, **, and *** represent statistical significance at the 10%, 5% and 1% levels. Heteroskedasticity-robust standard errors are clustered at the country level. The mean of the dependent variable is 27.5 (SD 6.1).

Here the dependent variable is boss-quality. This is a continuous variable, not a binary variable. It is created by adding up the seven boss characteristic measures and thus reaching a sum, in integers, that can range from 7 (worst quality boss) to 35 (best quality boss). The mean of the dependent variable is 27.534 (SD 6.113).

Cheerful mood is included as a form of personality control. It indicates how often, in the last two weeks, workers “have felt cheerful and in good spirits”, taking on the values of 1 (at no time) to 6 (all of the time).

Table 2: Employee job-satisfaction equations for Europe (EWCS 2015)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Boss gives useful feedback	0.180***						
	(24.851)						
Boss is helpful in getting job done		0.155***					
		(18.100)					
Boss respects workers as people			0.261***				
			(27.982)				
Boss encourages development				0.207***			
				(29.767)			
Boss gives praise and recognition					0.193***		
					(29.242)		
Boss successful in team work						0.205***	
						(30.145)	
Boss helps and supports workers							0.175***
							(16.033)
Female	0.009	0.017*	0.013	0.010	0.011	0.015	0.010
	(0.865)	(1.811)	(1.317)	(1.115)	(1.118)	(1.566)	(0.951)
Age	-0.009***	-0.010***	-0.009***	-0.008***	-0.008***	-0.008***	-0.010***
	(-2.654)	(-3.279)	(-2.887)	(-2.636)	(-2.665)	(-2.607)	(-3.055)
Age squared	$1.4x10^{-4}$***	$1.6x10^{-4}$***	$1.4x10^{-4}$***	$1.4x10^{-4}$***	$1.4x10^{-4}$***	$1.2x10^{-4}$***	$1.6x10^{-4}$***
	(4.059)	(4.693)	(4.116)	(4.109)	(4.030)	(3.862)	(4.567)
Immigrant	-0.072***	-0.077***	-0.062***	-0.066***	-0.069***	-0.085***	-0.065***
	(-4.549)	(-4.775)	(-4.001)	(-4.580)	(-4.314)	(-5.723)	(-3.667)
Physical health	0.212***	0.216***	0.202***	0.201***	0.207***	0.204***	0.211***
	(22.955)	(21.713)	(20.147)	(21.670)	(22.464)	(20.597)	(18.779)
Married	0.022**	0.031***	0.019**	0.022**	0.024***	0.023**	0.027***
	(2.287)	(3.364)	(2.079)	(2.447)	(2.592)	(2.482)	(2.999)
Primary education	-0.051	-0.038	-0.031	-0.022	-0.025	-0.033	-0.025
	(-0.836)	(-0.960)	(-0.583)	(-0.419)	(-0.385)	(-0.532)	(-0.600)
Lower secondary education	-0.040	-0.023	-0.017	0.003	-0.006	-0.017	-0.018
	(-0.667)	(-0.558)	(-0.311)	(0.058)	(-0.109)	(-0.279)	(-0.454)
Upper secondary ed.	-0.037	-0.019	-0.018	0.004	-0.007	-0.008	-0.020
	(-0.619)	(-0.479)	(-0.340)	(0.070)	(-0.117)	(-0.131)	(-0.492)
Post-sec. non-tertiary ed.	-0.054	-0.040	-0.030	-0.017	-0.028	-0.025	-0.036
	(-0.761)	(-0.841)	(-0.471)	(-0.277)	(-0.400)	(-0.345)	(-0.800)
Short-cycle tertiary ed.	-0.037	-0.025	-0.020	0.004	-0.012	-0.001	-0.027
	(-0.648)	(-0.668)	(-0.388)	(0.085)	(-0.216)	(-0.010)	(-0.670)
Bachelor degree ed.	-0.008	0.003	$2.8x10^{-4}$	0.031	0.012	0.027	0.002
	(-0.150)	(0.085)	(0.006)	(0.662)	(0.217)	(0.470)	(0.049)
Master degree ed.	-0.025	-0.014	-0.027	0.004	-0.008	0.011	-0.011
	(-0.400)	(-0.337)	(-0.488)	(0.080)	(-0.121)	(0.168)	(-0.267)

Doctorate degree ed.	-0.027	-0.030	-0.042	-0.017	-0.033	0.007	-0.031
	(-0.503)	(-0.688)	(-0.942)	(-0.368)	(-0.579)	(0.141)	(-0.536)
Employer tenure	$5.3x10^{-4}$	$4.7x10^{-4}$	$6.5x10^{-5}$	$3.1x10^{-4}$	$4.6x10^{-4}$	0.001	$5.8x10^{-5}$
	(1.054)	(0.962)	(0.128)	(0.751)	(0.954)	(1.133)	(0.123)
Public sector employer	0.006	0.007	$-4.1x10^{-4}$	0.005	0.005	0.004	-0.001
	(0.361)	(0.414)	(-0.025)	(0.295)	(0.302)	(0.252)	(-0.091)
Joint private-public employer	0.008	0.001	-0.002	$-4.9x10^{-4}$	0.003	-0.006	0.010
	(0.282)	(0.027)	(-0.084)	(-0.018)	(0.106)	(-0.220)	(0.365)
Not-for-profit employer	0.034	0.034	0.018	0.036	0.017	0.047	0.021
	(0.734)	(0.717)	(0.408)	(0.766)	(0.371)	(1.038)	(0.420)
Employees are represented	-0.007	0.001	-0.003	-0.006	-0.007	-0.004	-0.003
	(-0.588)	(0.086)	(-0.310)	(-0.577)	(-0.652)	(-0.329)	(-0.262)
Industries (21 categories)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupations (9 categories)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	1.741***	1.854***	1.336***	1.627***	1.688***	1.633***	1.773***
	(24.521)	(23.684)	(17.068)	(21.650)	(22.704)	(22.917)	(23.045)
R-squared	0.180	0.166	0.201	0.210	0.203	0.193	0.175

Notes: All estimations are for 27,981 observations. t-statistics are in parentheses; *, **, and *** represent statistical significance at the 10%, 5% and 1% levels. Heteroskedasticity-robust standard errors are clustered at the country level. Job satisfaction takes on the values of 1 (not at all satisfied) to 4 (very satisfied) and is derived from the question: "On the whole, are you very satisfied, satisfied, not very satisfied or not at all satisfied with working conditions in your main job". Each boss characteristic takes on values of 1 (strongly disagree or never) to 5 (strongly agree or always) and is defined as follows:
Gives useful feedback: [The boss] provides useful feedback on your work.
Helpful in getting job done: [The boss] is helpful in getting the job done.
Respects workers as people: [The boss] respects you as a person.
Encourages development: [The boss] encourages and supports your development.
Gives praise and recognition: [The boss] gives you praise and recognition when you do a good job.
Successful in team work: [The boss] is successful in getting people to work together.
Helps and supports workers: Your manager helps and supports you.

Table 3: Further OLS job-satisfaction equations for Europe (EWCS 2015)

	(1)	(2)	(3)	(4)
Boss gives useful feedback	0.008*			
	(1.651)			
Boss is helpful in getting job done	0.009**			
	(1.963)			
Boss respects workers as people	0.094***			
	(14.110)			
Boss encourages development	0.059***			
	(7.984)			
Boss gives praise and recognition	0.051***			
	(7.362)			
Boss successful in team work	0.055***			
	(9.274)			
Boss helps and supports workers	0.060***			
	(7.044)			
Continuous measure of boss quality		0.045***	0.040***	0.040***
		(37.157)	(31.477)	(28.057)
Cheerful mood (of employee)			0.114***	0.116***
			(27.779)	(27.075)
Log monthly earnings				0.099***
				(5.215)
Weekly hours worked				-0.004***
				(-6.344)
Medium firm				-0.035**
				(-2.403)
Big firm				-0.071***
				(-4.642)
All demographic and job controls	Yes	Yes	Yes	Yes
Industries (21 categories)	Yes	Yes	Yes	Yes
Occupations (9 categories)	Yes	Yes	Yes	Yes
Constant	1.178***	1.280***	1.033***	0.367**
	(15.702)	(17.541)	(13.157)	(2.421)
R-squared	0.253	0.245	0.277	0.297
Observations	27981	27981	27981	22127

Notes: t-statistics are in parentheses; *, **, and *** represent statistical significance at the 10%, 5% and 1% levels. Heteroskedasticity-robust standard errors are clustered at the country level. Job satisfaction takes on the values of 1 (not at all satisfied) to 4 (very satisfied) and is derived from the question: "On the whole, are you very satisfied, satisfied, not very satisfied or not at all satisfied with working conditions in your main job". Each boss characteristic takes on values of 1 (strongly disagree or never) to 5 (strongly agree or always) and is defined as follows:
Gives useful feedback: [The boss] provides useful feedback on your work.
Helpful in getting job done: [The boss] is helpful in getting the job done.

Respects workers as people: [The boss] respects you as a person.
Encourages development: [The boss] encourages and supports your development.
Gives praise and recognition: [The boss] gives you praise and recognition when you do a good job.
Successful in team work: [The boss] is successful in getting people to work together.
Helps and supports workers: Your manager helps and supports you.
Continuous boss quality adds the seven boss characteristic measures together and reaches a sum ranging from integers of 7 (worst quality boss) to 35 (best quality boss). Cheerful mood indicates how often in the last two weeks workers "have felt cheerful and in good spirits", taking on the values of 1 (at no time) to 6 (all of the time).

United States Results

Table 4: OLS job satisfaction equations for the United States (GSS 2012)

	All workers		Workers never denied a raise		All workers		Workers never denied a raise	
	All work places	Bad work places	All work places	Bad work places	All work places	Bad work places	All work places	Bad work places
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Boss behaved badly	-0.856***	-0.391**	-0.728***	-0.372*	-0.862***	-0.351**	-0.796***	-0.415**
	(-6.039)	(-2.460)	(-4.454)	(-1.934)	(-5.714)	(-2.123)	(-4.553)	(-2.072)
Coworkers behaved badly	-0.426***		-0.358***		-0.481***		-0.453***	
	(-3.891)		(-3.002)		(-4.040)		(-3.499)	
Clients behaved badly	-0.543***	-0.151	-0.386**	-0.084	-0.627***	-0.200	-0.513***	-0.148
	(-3.830)	(-0.897)	(-2.272)	(-0.396)	(-4.274)	(-1.080)	(-2.873)	(-0.631)
Female	-0.175	-0.069	-0.157	-0.023	-0.186	0.004	-0.250*	-0.052
	(-1.553)	(-0.452)	(-1.291)	(-0.127)	(-1.520)	(0.023)	(-1.914)	(-0.260)
Age	-0.029	-0.011	-0.020	0.024	-0.029	-0.001	-0.011	0.060
	(-1.257)	(-0.325)	(-0.810)	(0.567)	(-1.181)	(-0.025)	(-0.413)	(1.209)
Age squared	0.000	0.000	0.000	-0.000	0.000	0.000	0.000	-0.001
	(1.600)	(0.590)	(1.136)	(-0.348)	(1.456)	(0.223)	(0.609)	(-1.104)
Black	-0.150	-0.208	-0.143	-0.280	-0.213	-0.264	-0.210	-0.284
	(-1.192)	(-1.204)	(-0.968)	(-1.218)	(-1.537)	(-1.422)	(-1.230)	(-1.080)
Race is not Black or White	-0.003	-0.083	0.152	0.207	0.057	0.006	0.252	0.308
	(-0.018)	(-0.370)	(0.977)	(0.850)	(0.331)	(0.027)	(1.463)	(1.108)
Physical health	0.113**	0.100	0.118**	0.129	0.122**	0.090	0.128**	0.104
	(2.293)	(1.391)	(2.250)	(1.566)	(2.141)	(1.100)	(2.159)	(1.118)
Education	-0.055***	-0.046	-0.065***	-0.074*	-0.058**	-0.057	-0.072***	-0.099**
	(-2.706)	(-1.421)	(-3.162)	(-1.884)	(-2.411)	(-1.634)	(-2.788)	(-2.218)
Married	0.250***	0.270**	0.273***	0.323**	0.219**	0.170	0.302***	0.296*
	(2.687)	(2.151)	(2.718)	(2.158)	(2.160)	(1.239)	(2.666)	(1.713)
Union member	0.179	0.206	0.115	-0.028	0.054	-0.048	-0.077	-0.309
	(1.142)	(0.984)	(0.672)	(-0.124)	(0.336)	(-0.207)	(-0.435)	(-1.258)

Public sector employer	0.235*	0.204	0.235	0.326	0.250*	0.294	0.278*	0.569**
	(1.722)	(1.006)	(1.629)	(1.445)	(1.648)	(1.307)	(1.757)	(2.126)
Weekly hours worked					0.010**	0.014**	0.007*	0.011*
					(2.426)	(2.472)	(1.699)	(1.930)
Medium firm					-0.258*	-0.304	-0.173	-0.243
					(-1.690)	(-1.362)	(-1.057)	(-0.911)
Big firm					-0.043	-0.025	0.030	-0.021
					(-0.283)	(-0.117)	(0.189)	(-0.087)
Ordered income categories (12)	No	No	No	No	Yes	Yes	Yes	Yes
Industries (20 categories)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupations (21 categories)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	6.537***	5.148***	6.014***	3.778***	5.608***	3.965***	5.273***	3.029**
	(7.255)	(5.108)	(4.297)	(3.302)	(4.968)	(3.237)	(3.683)	(2.101)
R-squared	0.214	0.194	0.225	0.283	0.282	0.263	0.333	0.403
Observations	630	399	488	265	547	356	412	229

Notes: t-statistics are in parentheses and based on heteroscedasticity-robust standard errors; *, **, and *** represent statistical significance at the 10%, 5% and 1% levels. Job satisfaction takes on the values of 1 (completely dissatisfied) to 7 (completely satisfied) and is derived from the question: "All things considered, how satisfied are you with your (main) job?" Weekly hours worked includes all jobs. Firm-size indicators include only those employees working at firms with multiple job sites. Ordered income categories are groupings of last year's income that range in size of $1,000 increments up until $10,000, then $5,000 increments until $25,000 and then finally earnings over $25,000. Boss behaved badly, coworkers behaved badly and clients behaved badly are indicator variables that equal one when respondents answer in the affirmative for each group to the question: "In the past 12 months, the person who has engaged in these types of behaviors has most often been: a co-worker, your supervisor or boss, a customer/client/patient." See the Appendix for a list of the behaviors in question and proportions of workers experiencing each behavior.

Table 5: OLS job satisfaction equations for the United States (GSS 1996)

	Job satisfaction	Intensity of anger	How often thought about it	How long anger lasted	Job satisfaction	Intensity of anger	How often thought about it	How long anger lasted
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Mad at boss	-0.322***	0.493*	0.531***	0.535***	-0.289***	0.724**	0.552***	0.643***
	(-3.786)	(1.888)	(3.989)	(3.040)	(-3.280)	(2.521)	(3.910)	(3.315)
Mad at co-workers	-0.150**	-0.660**	-0.159	-0.129	-0.156*	-0.382	-0.078	0.041
	(-1.991)	(-2.509)	(-1.229)	(-0.740)	(-1.856)	(-1.296)	(-0.564)	(0.213)
Mad at subordinate worker	0.105	0.246	-0.148	0.001	0.040	0.316	-0.048	0.091
	(0.837)	(0.588)	(-0.790)	(0.003)	(0.311)	(0.725)	(-0.262)	(0.293)
Mad at client	-0.161	-0.324	-0.256	-0.262	-0.200	0.037	-0.125	-0.056
	(-1.073)	(-0.788)	(-1.604)	(-1.054)	(-1.181)	(0.081)	(-0.730)	(-0.218)
Mad at someone else at work	-0.132	-0.515	0.228	0.022	-0.114	-0.527	0.305	0.197
	(-1.169)	(-1.247)	(0.974)	(0.079)	(-0.921)	(-1.271)	(1.236)	(0.619)
Mad at anything/anyone else	-0.051	0.040	0.099	-0.010	-0.047	0.217	0.173	0.218
	(-1.138)	(0.174)	(0.870)	(-0.065)	(-0.917)	(0.821)	(1.430)	(1.269)
Female	-0.007	0.603***	0.117	0.196*	0.000	0.632***	0.124	0.232*
	(-0.168)	(3.422)	(1.472)	(1.807)	(0.002)	(3.065)	(1.384)	(1.843)
Age	0.001	0.042	0.014	-0.000	-0.005	0.021	0.018	0.018
	(0.107)	(1.009)	(0.784)	(-0.014)	(-0.408)	(0.431)	(0.747)	(0.544)
Age squared	0.000	-0.001	-0.000	-0.000	0.000	-0.000	-0.000	-0.000
	(0.689)	(-1.457)	(-1.015)	(-0.073)	(1.136)	(-0.761)	(-0.859)	(-0.525)
Black	-0.059	0.156	-0.098	0.268*	-0.041	-0.016	-0.121	0.192
	(-0.987)	(0.590)	(-0.803)	(1.814)	(-0.589)	(-0.052)	(-0.921)	(1.168)
Race is not Black or White	-0.054	0.154	-0.280*	0.039	0.016	0.250	-0.332*	0.118
	(-0.692)	(0.409)	(-1.697)	(0.183)	(0.197)	(0.515)	(-1.842)	(0.426)
Physical health	0.148***	-0.314**	-0.086*	-0.204***	0.130***	-0.267*	-0.105*	-0.148*
	(5.496)	(-2.521)	(-1.706)	(-2.870)	(4.138)	(-1.804)	(-1.879)	(-1.817)
Education	-0.017**	-0.025	0.014	0.035	-0.014	0.004	0.024	0.031
	(-2.074)	(-0.677)	(0.861)	(1.535)	(-1.521)	(0.092)	(1.329)	(1.191)

Married	0.107***	-0.155	-0.068	0.002	0.036	-0.086	-0.044	0.108
	(2.798)	(-0.941)	(-0.878)	(0.015)	(0.851)	(-0.459)	(-0.527)	(0.925)
Union member	-0.125*	-0.152	-0.205*	0.159	-0.101	-0.137	-0.124	0.156
	(-1.709)	(-0.576)	(-1.669)	(1.040)	(-1.280)	(-0.463)	(-0.928)	(0.943)
Weekly hours worked					0.004**	0.009	-0.005	0.003
					(2.226)	(1.208)	(-1.389)	(0.556)
Medium firm					-0.059	-0.192	0.066	0.068
					(-1.085)	(-0.807)	(0.630)	(0.466)
Big firm					-0.076	0.022	-0.083	-0.052
					(-1.357)	(0.085)	(-0.751)	(-0.337)
Ordered income categories (12)	No	No	No	No	Yes	Yes	Yes	Yes
Industries (11 categories)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupations (9 categories)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.088***	6.624***	2.390***	3.736***	3.210***	5.502***	2.244***	2.382**
	(11.377)	(5.344)	(4.276)	(5.196)	(8.689)	(3.248)	(2.940)	(2.046)
R-squared	0.098	0.078	0.068	0.071	0.109	0.092	0.116	0.091
Observations	1838	872	738	874	1448	695	598	696

Notes: t-statistics are in parentheses and based on heteroscedasticity-robust standard errors; *, **, and *** represent statistical significance at the 10%, 5% and 1% levels. Job satisfaction takes on the values of 1 (very dissatisfied) to 4 (very satisfied) and is derived from the question: "On the whole, how satisfied are you with the work that you do?" Intensity of anger takes on values of 0 (weakest possible) to 10 (most intense possible) based on the question: "How intense would you say your anger or irritation was?" How often thought about it takes values of 1 (never) to 4 (very often) based on the question: "How often have you thought about this situation since it happened?" How long anger lasted takes on the values of 1 (seconds) to 6 (felt it continuously up until now) and is based on the question: "How long did your anger or irritation last?" Weekly hours worked includes all jobs. Firm size indicators include only those employees working at firms with multiple job sites. Ordered income categories are groupings of last year's income that range in size of $1,000 increments up until $10,000, then $5,000 increments until $25,000 and then finally earnings over $25,000. The "mad at" variables are constructed from the following question: "Within the last month, think about the last time you felt really angry, irritated or annoyed. Who were you angry, irritated or annoyed at?" The "mad at" indicator variables reflect all those at work the respondent could have gotten mad at including the boss, a co-worker, a subordinate at work, a customer or client and someone else at work. The "mad at anything/anyone else" indicator includes spouse or partner, son, daughter, mother, father, sister, brother, another family member, a friend, an acquaintance, a neighbor, government agency, someone who was supposed to provide a service, a public figure, a stranger (including crowds), yourself or an object or circumstance.

APPENDIX TABLES

APPENDIX

Table A1: Control-variable summary statistics (EWCS 2015, GSS 2012, GSS 1996)

Control variables with descriptions	Mean (Standard deviation) EWCS 2015	GSS 2012	GSS 1996
Job satisfaction (EWCS): = 1 if not at all satisfied with working conditions in main job to 4 if very satisfied.	3.063	-----	-----
	(0.682)	-----	-----
Job satisfaction (GSS 2012): = 1 if completely dissatisfied with the main job to 7 if completely satisfied.	-----	5.325	-----
	-----	(1.198)	-----
Job satisfaction (GSS 1996): = 1 if very dissatisfied with the work you do to 4 if very satisfied.	-----	-----	3.250
	-----	-----	(0.816)
Female: = 1 if respondent is female and 0 if male.	0.512	0.506	0.534
	(0.500)	(0.500)	(0.499)
Age: respondent's age in years	42.121	41.589	40.551
	(11.660)	(13.237)	(12.682)
Age squared: square of respondent's age in years	1910.090	1904.570	1805.130
	(992.930)	(1175.328)	(1131.681)
Immigrant: = 1 if respondent was not born in surveyed country and 0 otherwise.	0.086	-----	-----
	(0.281)	-----	-----
Black: = 1 if respondent is Black and 0 otherwise.	-----	0.152	0.138
	-----	(0.360)	(0.345)
Race not Black or White: = 1 if respondent is not Black or White and 0 otherwise.	-----	0.116	0.057
	-----	(0.320)	(0.232)
Physical health (EWCS): = 1 if health in general is very bad to 5 if health is very good.	4.048	-----	-----
	(0.734)	-----	-----
Physical health (GSS 2012): = 1 if health in general is poor to 5 if health is excellent.	-----	3.613	-----
	-----	(0.996)	-----
Physical health (GSS 1996): = 1 if health in general is poor to 4 if health is excellent.	-----	-----	3.162
	-----	-----	(0.734)
Married: = 1 if respondent is married and 0 otherwise.	0.652	0.463	0.503
	(0.476)	(0.499)	(0.500)
Education (EWCS): ordered categories from lowest level of education by country (= 1) to highest level (= 9)	4.991	-----	-----
	(1.712)	-----	-----
Education (GSS 2012 and GSS 1996): the highest grade of schooling that the respondent finished	-----	13.959	13.717
	-----	(3.012)	(2.733)
Tenure: number of years respondent has been in company or organization	9.961	-----	-----
	(9.674)	-----	-----
Public sector employer: = 1 if respondent works in the public sector and 0 otherwise.	0.292	0.190	-----
	(0.455)	(0.393)	-----
Joint private public sector employer: = 1 if respondent works in a joint private-public organization/company, 0 otherwise.	0.037	-----	-----
	(0.189)	-----	-----
Not-for-profit employer: = 1 if respondent works in the not-for-profit sector or an NGO and 0 otherwise.	0.011	-----	-----
	(0.104)	-----	-----

Represented by a group (EWCS): = 1 if a trade union, works council or a similar committee representing employees exists at respondent's company and 0 otherwise.	0.500	-----	-----
	(0.500)	-----	-----
Union member (GSS 2012 and GSS 1996): = 1 if respondent belongs to a labor union and 0 otherwise.	-----	0.071	0.090
	-----	(0.258)	(0.286)
Medium firm (EWCS): = 1 if 10 - 249 employees work in respondent's company or organization and 0 otherwise.	0.440	-----	-----
	(0.496)	-----	-----
Big firm (EWCS): = 1 if more than 250 employees work in respondent's company or organization and 0 otherwise.	0.343	-----	-----
	(0.475)	-----	-----
Medium firm (GSS 2012 and GSS 1996): = 1 if 10 - 99 people work at respondent's location (for firms with multiple sites)	-----	0.383	0.304
	-----	(0.486)	(0.460)
Big firm (GSS 2012 and GSS 1996): = 1 if more than 99 people work at respondent's location (for firms with multiple sites)	-----	0.413	0.324
	-----	(0.493)	(0.468)
Weekly hours worked (EWCS): number of hours respondent usually works per week in main job.	38.168	-----	-----
	(10.576)	-----	-----
Weekly hours worked (GSS 2012 and GSS 1996): hours worked last week, or if did not work last week, hours usually work.	-----	40.746	-----
	-----	(13.875)	-----
Log of earnings (EWCS): natural log of monthly earnings.	6.899	-----	-----
	(0.901)	-----	-----
Income categories (GSS 2012 and GSS 1996): 12 income groups increase by $1,000 until $10,000, then by $5,000 until $25,000.	-----	10.541	10.001
	-----	(2.644)	(2.844)
Industry categories	21	20	11
Occupation categories	9	21	9
Main sample observations	27,981	630	1,838

Table A2: Boss qualities and related variables (EWCS 2015, GSS 2012, GSS 1996)

Boss qualities and related variables with descriptions	Mean (Standard Deviation) EWCS 2015	GSS 2012	GSS 1996
Gives useful feedback: The boss provides useful feedback on your work = 1 if strongly disagree to 5 if strongly agree	3.889 (1.123)	----- -----	----- -----
Helpful in getting job done: The boss is helpful in getting the job done = 1 if strongly disagree to 5 if strongly agree	3.731 (1.242)	----- -----	----- -----
Respects workers as people: The boss respects you as a person = 1 if strongly disagree to 5 if strongly agree	4.418 (0.852)	----- -----	----- -----
Encourages development: The boss encourages and supports your development = 1 if strongly disagree to 5 if strongly agree	3.870 (1.145)	----- -----	----- -----
Gives praise and recognition: The boss gives you praise and recognition when you do a good job = 1 if strongly disagree to 5 if strongly agree	3.883 (1.154)	----- -----	----- -----
Successful in team work: The boss is successful in getting people to work together = 1 if strongly disagree to 5 if strongly agree	3.952 (1.075)	----- -----	----- -----
Helps and supports workers: Your manager helps and supports you = 1 if never to 5 if always	3.791 (1.156)	----- -----	----- -----
Continuous boss quality: The sum of the above 7 boss quality measures - ranges from 7 (worst possible) to 35 (best possible)	27.534 (6.113)	----- -----	----- -----
Boss behaved badly: = 1 if in the past 12 months, the person who has engaged in the se types of behaviors has most often been the boss and 0 otherwise.	----- -----	0.168 (0.374)	----- -----
Coworkers behaved badly: = 1 if in the past 12 months, the person who has engaged in the se types of behaviors has most often been a co-worker and 0 otherwise.	----- -----	0.313 (0.464)	----- -----
Clients behaved badly: = 1 if in the past 12 months, the person who has engaged in the se types of behaviors has most often been a customer/client/patient and 0 otherwise.	----- -----	0.152 (0.360)	----- -----
Mad at boss: = 1 if the last time you were really angry, irritated or annoyed was at your boss and 0 otherwise.	----- -----	----- -----	0.054 (0.225)
Mad at co-worker: = 1 if the last time you were really angry, irritated or annoyed was at a co-worker and 0 otherwise.	----- -----	----- -----	0.055 (0.228)
Mad at subordinate worker: = 1 if the last time you were really angry, irritated or annoyed was at a subordinate worker and 0 otherwise.	----- -----	----- -----	0.016 (0.125)
	-----	-----	0.014

Mad at client: = 1 if the last time you were really angry, irritated or annoyed was at a customer or client and 0 otherwise.	-----	-----	(0.118)
Mad at someone else at work: = 1 if the last time you were really angry, irritated or annoyed was at someone else at work and 0 otherwise.	-----	-----	0.014
	-----	-----	(0.118)
Mad at anything/anyone else: = 1 if you were mad at family member, friend, anyone else, yourself or an object or circumstance and 0 otherwise.	-----	-----	0.230
	-----	-----	(0.421)
Intensity of anger: How intense would you say your anger or irritation was? Ranges from 0 (weakest possible) to 10 (most intense possible)	-----	-----	6.289
	-----	-----	(2.342)
How often thought about it: How often have you thought about this situation since it happened? Ranges from 1 (never) to 4 (very often)	-----	-----	2.395
	-----	-----	(0.982)
How long anger lasted: How long did your anger or irritation last? Ranges from 1 (seconds) to 6 (felt it continuously up until now)	-----	-----	3.568
	-----	-----	(1.445)

Table A3: GSS 2012 Proportion of workers experiencing bad behaviors either often or sometimes

Bad behaviors	When most often the offender is: Boss	Co-worker	Client
I have been denied a raise or promotion without being given a valid reason.	0.330	0.137	0.177
I have been lied to by co-workers or supervisors.	0.453	0.315	0.250
I have been treated in a rude or disrespectful manner at work.	0.217	0.152	0.198
I have received emails, text messages, mobile cell phone calls or other electronic, Internet or social network communications from people at work that were harassing or threatening.	0.019	0.036	0.010
People at work have spread rumors or gossip about me.	0.142	0.208	0.115
I have felt ignored, excluded or isolated from others at work.	0.311	0.188	0.219
I have been the target of derogatory comments or jokes at work.	0.142	0.178	0.094
Observations	106	197	96

Table A4: OLS job enthusiasm equations (EWCS 2015)

	(1)	(2)	(3)	(4)
Gives useful feedback	0.023***			
	(2.593)			
Helpful in getting job done	0.002			
	(0.260)			
Respects workers as people	0.060***			
	(5.366)			
Encourages development	0.104***			
	(8.344)			
Gives praise and recognition	0.046***			
	(3.851)			
Successful in team work	0.056***			
	(5.385)			
Helps and supports workers	0.079***			
	(6.916)			
Continuous boss quality		0.052***	0.042***	0.040***
		(22.761)	(22.000)	(21.464)
Cheerful mood			0.209***	0.208***
			(29.866)	(24.686)
Log monthly earnings				0.110***
				(4.292)
Weekly hours worked				-0.002**
				(-2.257)
Medium firm				-0.056***
				(-3.071)
Big firm				-0.104***
				(-4.557)
All demographic and job controls	Yes	Yes	Yes	Yes
Industries (21 categories)	Yes	Yes	Yes	Yes
Occupations (9 categories)	Yes	Yes	Yes	Yes
Constant	1.921***	1.960***	1.508***	1.062***
	(14.692)	(15.341)	(10.590)	(6.343)
R-squared	0.192	0.185	0.239	0.241
Observations	27949	27949	27949	22107

Notes: t-statistics are in parentheses; *, **, and *** represent statistical significance at the 10%, 5% and 1% levels. Heteroskedasticity-robust standard errors are clustered at the country level. Job enthusiasm takes on the values of 1 (never) to 5 (always) and is derived from the question: "Please tell me how often you feel this way: I am enthusiastic about my job". Each boss characteristic takes on values of 1 (strongly disagree or never) to 5 (strongly agree or always) and is defined as follows:
Gives useful feedback: [The boss] provides useful feedback on your work.
Helpful in getting job done: [The boss] is helpful in getting the job done.
Respects workers as people: [The boss] respects you as a person.
Encourages development: [The boss] encourages and supports your development.

Gives praise and recognition: [The boss] gives you praise and recognition when you do a good job.
Successful in team work: [The boss] is successful in getting people to work together.
Helps and supports workers: Your manager helps and supports you.
Continuous boss-quality adds the seven boss characteristic measures together and reaches a sum ranging from integers of 7 (worst quality boss) to 35 (best quality boss). Cheerful mood indicates how often in the last two weeks workers "have felt cheerful and in good spirits", taking on the values of 1 (at no time) to 6 (all of the time).

Table A5: European results: On which criteria are bad bosses rated well or badly?

Boss qualities and related variables with descriptions	**Mean** *(Standard Deviation)* Bad boss	Non-bad boss	**Difference in means**
Gives useful feedback: The boss provides useful feedback on your work = 1 if strongly disagree to 5 if strongly agree	2.093 *(1.015)*	4.161 *(0.861)*	2.068
Helpful in getting job done: The boss is helpful in getting the job done = 1 if strongly disagree to 5 if strongly agree	1.94 *(0.986)*	4.002 *(1.034)*	2.062
Respects workers as people: The boss respects you as a person = 1 if strongly disagree to 5 if strongly agree	3.196 *(1.227)*	4.602 *(0.590)*	1.406
Encourages development: The boss encourages and supports your development = 1 if strongly disagree to 5 if strongly agree	1.965 *(0.933)*	4.158 *(0.864)*	2.193
Gives praise and recognition: The boss gives you praise and recognition when you do a good job = 1 if strongly disagree to 5 if strongly agree	2.082 *(1.025)*	4.156 *(0.899)*	2.074
Successful in team work: The boss is successful in getting people to work together = 1 if strongly disagree to 5 if strongly agree	2.291 *(1.076)*	4.203 *(0.821)*	1.912
Helps and supports workers: Your manager helps and supports you = 1 if never to 5 if always	2.266 *(1.046)*	4.022 *(0.984)*	1.756