best companies™

Our 8 Factor Methodology

2022 Process

For a better workplace™

Contents

1. Introduction

1.1. Why publish our Methodology?

In 2006, we decided that organisations interested in taking part in our survey should know exactly how we collect data, how we analyse it, and how we award accreditations and generate list positions. Whilst other companies may withhold details of their methodology, be it models or processes, we decided that transparency was important and should not be put at risk from fears of intellectual property being stolen by others. It would, however, be remiss of us if we did not point out that significant investment has been made in creating this methodology and all rights of copyright and intellectual property, to the resulting methodology, the statements, factors and overall survey are owned and protected by Best Companies and may not be used by any other individual or organisation.

We have attempted to make this document as easy to read as possible, by only going into as much detail as is necessary to make our methods clear and understandable, whilst not delving too deeply into theoretical background. If further information is required, we recommend the books detailed in the references section.

1.2. History and Theoretical Background of the 8 Factor Model

Best Companies' original workplace engagement survey was researched and developed by a consultancy team supported by academics from the University of Plymouth with more than 60 years of research expertise between them. The process also had input from the Department for Trade and Industry.

Many companies in the field of employee engagement will define a model before statistically testing their pre-defined model. However, this will only ever be as good as the model-builder's own experience. In contrast, Best Companies' model is built on a much more robust approach to this issue:

- Aspects of work experience with the potential to impact on employee engagement were identified following an extensive literature review.
- A pool of survey statements was designed to measure all of these potential areas.
- An initial study was piloted on approximately 2,000 employees completing all the statements in the pool.
- Exploratory Factor Analysis was used to identify the major factors defining people's experience of their workplace and to identify the most useful statements in measuring those factors. Many other statements were discarded at this stage.
- These statements and the model as a whole were re-checked, after a year's data had been collected. Confirmatory Factor Analysis was used to check that the factors originally found were appropriate and were well measured by the statements used. Confirmatory Factor Analysis has been repeated every year since the development of the survey using data from

both the commercial and not-for-profit sectors. It is also used to adjust the statements set in order to continuously improve the measurement of the factors.

- Each year, alternative statements are tested in order to further develop the measurement of the factors and engagement, and to keep the survey current in the face of changes to work culture, industry practices, and the use of language.
- In September 2020, we reduced the number of “core statements” required in order to obtain factor scores and consequently a Best Companies Index (BCI) score. Prior to this date, 49 statements contributed to the factor scores and our overall measure of engagement (BCI). However, to provide clients with additional flexibility, we performed Confirmatory Factor Analysis to identify the statements which provide the best measurement of the factors. We also selected the more difficult statements to enable us to differentiate amongst the very best organisations. We still allow clients to include all of the 75 statements within their survey if they so wish, however, they have the ability to select as few as 24 statements.

We do not claim to have the final and definitive model of employee engagement, merely the most robust and researched model to date.

This document explains the above points in more detail, including how we use this methodology to create the Best Companies to Work For lists and Best Companies Accreditation standards.

2. Developing the Survey

2.1. Choosing a Survey Type

The items within our survey are predominantly a series of statements, in which respondents must respond on a seven-point scale, ranging from Strongly Disagree to Strongly Agree:

- Strongly Disagree
- Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Agree
- Strongly Agree

Often in surveys, a five point scale is used (with the “slightly” categories removed) but seven points provide a finer granularity of data and gives the employees who are responding a greater choice; in addition, we have retained the “Neither agree nor disagree” response option to improve the reliability of the data (as participants are not forced to choose a response that is not a true reflection of their attitudes).

This type of response format was invented by Rensis Likert and it has a number of advantages over other response formats[1]:

- Power – this format provides more granular data (compared to, for example, a yes/no format)
- Simplicity – a consistent and understandable response format reduces complexity (and therefore error)
- Flexibility – the statement format of items allows a large range of statements to be asked
- Economy – the statements used can be short and to the point
- Comparability – all statements can be on the same scale
- Summated Values – we can add (or average) the scores across respondents and items

As this type of item is well established in the Social Sciences, issues with statistical analysis and validity of results have been extensively studied and can be accounted for in our methodology.

2.2. Employee Comments

On each survey we also collect free-text response data from employees. This section is non-compulsory for those filling in the survey but is a valuable source of data when it is used. However well developed, no survey can be perfect and cover every issue that might arise in the employee environment, and so the free-text questions provide a way to analyse and track current and emerging issues that are important to employees in a particular organisation.

2.3. Employee Demographic Information

The survey also collects demographic information on the respondents:

- Job Grade
- Hours Worked
- Gender Identity
- Age
- Salary Band
- Postcode and Location
- Employment Group (as defined by the organisation)
- Job Role
- Years of Service
- Proportion of time spent working remotely

This data is used when reporting information back to organisations in the Workplace Insight Tool (WIT) in which we allow both factor and statement data to broken down by demographic categories. This allows the key issues for each demographic to be identified (rather than treating all employees as the same). The employment group variable allows any company to split their employees in any way which is useful to them. To maintain confidentiality, if a single group contains just one employee and

[1] This response format is often erroneously referred to as a Likert scale. A Likert scale is made up of several items (usually each with Likert style response formats) the responses to which are added together. Likert himself insisted that the term scale should not be applied to single items. The Best Companies factors are measured using Likert scales in this more accurate sense of the term.

they respond to the survey, all other groups in that demographic are made un-readable; to ensure no single respondent's data are exposed.

2.4. Question Design and Survey Construction

There is a lot to consider when creating survey items and it is not such a straightforward process as it might seem. This section outlines some of the relevant considerations which we took into account when creating the statement pool from which the current survey derives. They are also considered when we create new items, either as part of our regular improvement of the employee survey, or as bespoke statements for individual companies. It is important that the statements are relevant (based on strong knowledge of the subject matter at hand). They must also avoid a range of potential problems the most important of which are set out below:

- Knowledge – this is when a statement is asked for which the target respondent will have to guess the answer. For example, "My boss likes me", will tell you what people think their boss thinks, but not actually whether their boss does like them.
- Leading Statements – these are statements which subtly prompt the respondent to answer in a particular way. For example, "Our recently upgraded IT system helps me to work efficiently"- by mentioning that the IT system has been recently upgraded the statement pushes the respondent towards endorsing its merits. The statement would be more neutral if 'recently upgraded' were dropped.
- Definition of concepts – complex or easily misinterpreted concepts can cause bias or make the data noisier and therefore need to be avoided.
- Clarity of language – unfamiliar or easily misinterpreted language may be a potential source of bias. We therefore try to use everyday language in our statements.
- Culturally loaded language or concepts which will produce different responses from different cultural groups need to be avoided.
- Multiple statements – statements must contain only a single proposition otherwise there is a danger that respondents may agree with one proposition in a statement and disagree with another.
- Social desirability of response – respondents prefer answers which create a good or socially favourable impression of themselves. Statements where some answers are clearly more socially desirable than others are better avoided.
- Yea and Nay saying – research has found that some people have global tendencies towards agreeing with statements irrespective of content (Yea sayers) whilst others have a bias towards disagreeing (Nay sayers). When the statements in a survey are either all positively phrased or all are negatively phrased the difference between yea sayers and nay sayers masquerades as a difference in whatever the survey is measuring (e.g. engagement). For this and other reasons our survey mixes items where agreement indicates positive work experiences with items where "disagree" responses indicate positive experiences. We also recommend that clients who are using bespoke statements have a similar mix of positive and negative items.

- Hostility – when asking a lot of statements, it is surprisingly easy to create a feeling of hostility in the respondent (e.g. “Who are they to be asking me all these personal things?”). The generation of hostility can affect the answers to the remaining statements. This issue is important not only for statement design but also for the explanation and instructions given to respondents. Hostility becomes a greater risk when the motives of the questioner are not trusted or when respondents fear that their answers may not remain anonymous. Best Companies takes great care to ensure that answers given by individual respondents remain confidential to Best Companies and that respondents are aware of this.
- Order of statements – the order in which statements are presented can cause “response contraction”; if positively worded and negatively worded statements, or statements around a similar topic (e.g. Leadership) are grouped together, respondents may tend to give the same answer to all of them. It is better to mix positive and negative items and items related to different topics. This induces respondents to think about each statement individually.

2.5. Developing the Statements – Review and Evolution

However, much care is taken in writing statements, the ultimate test of whether they are functioning as intended, is to study the data which they produce. This is why each year a small number of statements on the Best Companies survey are “evolution statements”. These are new statements which we are evaluating (and the data from which are not presented to clients). New statements never become scoring statements on the survey without having first been checked out as an evolution statement.

Every year a similar set of checks is carried out on both evolution statements (to evaluate whether they should be added to the survey) and current statements (to detect items that might need to be replaced). The distribution of responses across the various answers to each statement is considered to check that statements are producing a good level of variation in response and that answers are not stacked up at one end of the agree/disagree spectrum. We also look at the number of people who answer each statement in order to confirm that people are not skipping over statements which they have difficulties in answering. Finally, as we explain below, Confirmatory Factor Analysis allows us to assess how well each statement measures one of the eight factors and to detect cases where there may be excessive overlap between statements.

3. Creating a data-driven model of employee engagement

3.1 Overall approach

The most important point to make about the development of the employee survey is that it was driven by data, not by theory, and not by an assumption that survey items are transparent. The set of eight factors measured by the Best Companies employee survey is driven by the data and not by the intuitions or pet theory of a consultant. The eight factors which emerged from the initial study were not

in any way pre-specified, in some cases surprising the researchers themselves, as some expected factors were absent and other, unexpected, factors emerged.

Many people assume that you can tell what determines people's responses to a survey item just by looking carefully at the wording of the item, the assumption that survey items are "transparent". However, we assert that people will vary in their interpretations of an item, and what matters is the range of interpretations amongst survey respondents, not the interpretation of the survey analyst. Moreover, when somebody is asked about an aspect of their experiences at work, their answers will depend on the particular examples that come to mind when the survey is being completed.

To clarify our point, consider a statement such as 'I feel that I lack support from my manager'. If the respondent has just had an argument with their manager, occasions when support was evident, but not available, may be prominent in his/her mind and will colour the response. More generally, somebody's response to a statement such as this will be partly determined by their general feelings about their manager; somebody who gets on well with their manager will easily bring to mind examples of them being supportive, whilst somebody who dislikes their manager is more likely to think of examples of them failing to support. The point here is that responses to a statement such as 'I feel that I lack support from my manager' only partially reflects the exact topic of the statement (how much support somebody actually gets from their manager) and partially reflects something more general (the respondent's overall feelings concerning their manager). There is no way you can tell by looking at the wording of a statement how these two different ingredients will combine to determine the response. Our approach relies on letting the data, combined with appropriate methods of analysis, tell us what is influencing respondents' answers to the survey statements.

3.2. Identifying the Factors – Exploratory Factor Analysis

The mathematical basis of Exploratory Factor Analysis (EFA) is not simple and there are a range of technical issues in its application (If you want to understand the statistical basis and inner workings of Factor Analysis techniques, we recommend Paul Kline's "An Easy Guide to Factor Analysis" and Dennis Child's "The Essentials of Factor Analysis"). However, what Factor Analysis does at a conceptual level, and how it helps to solve the problem highlighted in the previous section, is not too difficult to understand.

EFA refers to a set of statistical techniques, that take data from a large number of variables (in this case, our statements) and finds where there is a shared influence on the answers. These shared influences are known as factors (or sometimes as common factors); please note, we can either talk about the factor influencing the answer to the statement or about the statement measuring the factor- these are two different ways of describing the same thing. For example, the statements "People in our team don't care much for each other" and "I feel a strong sense of family in my team" share a common influence. We interpret the factor that influences both these statements as representing the respondent's general feelings about the team of colleagues with whom they work, and we label it 'My Team'. Any aspect of workplace experience which is important enough to engender strong feelings will influence the responses to multiple statements and thus give rise to a factor in the EFA. Given an

appropriate pool of statements EFA identifies the elements which are dominant in people's thoughts and feelings concerning their workplace experience.

Factor Analysis also provides us with a Factor Loading describing how strongly every statement is influenced by the corresponding factor; these range on a scale of 0 (statement is not influenced by the factor) to 1 (statement is driven solely by the factor). In psychological research, a value of 0.3 or higher is generally regarded as indicating that the statement is potentially useful for measuring the factor, which makes the average loading of 0.76 for Best Companies' statements from the factors a pointer to excellent measurement. Factor loadings also provide us with the solution to the problem mentioned at the end of section 3.1. In other words, they tell us how somebody's general feelings concerning a topic area (in other words the factor) and their views on the specific topic of the statement combine to determine their response. Higher factor loadings imply more influence of the factor and correspondingly less influence of the specifics of the statement.

A major strength of EFA is that the factors it generates are "discrete"; this means that they are measuring conceptually different things. It also ensures that we are not asking statements that are influenced by two different factors (therefore not being a good measure of either), a number of statements from our original pool were discarded because they showed the influence of more than one factor. However, the statement that the factors are discrete should not be misinterpreted as saying they are unrelated to one another- this is not the case (see section 3.5).

3.3. Testing the model – Confirmatory Factor Analysis

Whilst EFA explores the shared influences between the statements to develop a factor model, Confirmatory Factor Analysis (CFA) exists as its perfect counterpart, as it checks (Confirms) whether the models created by EFA work with new datasets.

As well as overcoming some technical problems with EFA, one strength of CFA is that it provides a lot of evidence on how well the model fits the data. If factors which are not included in the model are represented in the set of statements used, the model will not be a good fit to the data. The same applies if a statement has been assigned to the wrong factor, if a statement measures more than one factor, or if two statements have excessive overlap in their content. Our model is consistently an excellent fit to the data demonstrating that, where problems of the sort just mentioned exist, they are relatively minor.

There are many alternative measures of fit available for CFA. We consider three of the most widely used- the CFI, RMSEA and SRMR[2]. The values of these measures which are usually regarded as demonstrating good fit are CFI > 0.95, RMSEA < 0.06, SRMR < 0.08. For the 2021 survey, we obtained the following values- CFI = 0.986, RMSEA = 0.025, SRMR = 0.026. These values indicate that our eight factor CFA model is an excellent fit to the data.

[2] CFI is Bentler's comparative fit index, it generally runs between 0 and 1 with higher values indicating better fit. RMSEA is Root Mean Square Error of Approximation and SRMR is the standardised root mean residual. For both of the latter smaller values indicate better fit.

CFA, like EFA, provides us with estimates of factor loadings which indicate how well the statement measures the factor. The factor loadings for all the statements assigned to a factor can be combined to estimate the composite reliability with which that factor is measured. These composite reliabilities are a way of quantifying the accuracy with which the statements measure the factor and are expressed as a number between 0 and 1 with values closer to 1 indicating more accurate measurement. The minimum threshold deemed acceptable for composite reliability varies amongst researchers, however, reliability above 0.7 or 0.8 is widely cited as reasonable. The table shows the composite reliabilities of the eight factors based on data from the 2021 survey.

Composite Reliabilities of the Eight Factors

Factor	Composite Reliability
Leadership	0.868
My Company	0.806
Personal Growth	0.809
My Manager	0.790
My Team	0.821
Fair Deal	0.913
Wellbeing	0.798
Giving Something Back	0.704

Although the employee survey is only ever used for comparing group scores on factors, and individual scores are never released, in terms of reliability it meets the more stringent standards that are expected on an instrument intended to give accurate individual scores.

This impressive performance is a result of the careful way in which the survey was originally developed combined with the way we exploit each year's data (consisting of surveys returned by more than 200,000 respondents) to progressively refine it. Each year, we carry out CFA in order to detect statements which are no longer performing as well as we want, or which begin to show excessive overlap with one another. Underperforming statements are replaced with new ones but no new statement is ever introduced to the survey without having previously been tested as an evolution statement. Thus, we can always be confident when we replace a statement that the replacement is an improvement on the original.

As well as improving the survey this process also maintains its currency. Work cultures and the use of language both evolve over time. The consequence is that survey statements which were once effective can become less suitable. Our programme of annual analysis enables us to detect and replace any statements where this is the case.

The Best Companies factor model of employee engagement was created with Exploratory Factor Analysis and then checked and refined with Confirmatory Factor Analysis. Each year, as new data arrives, these analyses are repeated, and new statements checked. Each year we confirm that our factor model is a good fit to the data and look for ways to improve the statement set for more accurate measurement. No model will ever be perfect, the challenge for us is one of constantly refining the survey.

3.4. The Best Companies model of Employee Engagement

Now that we have detailed the processes by which we found and test the factors, we would be remiss if we didn't describe what we found. The results of our analysis consistently, every year, show that the 8 Factor Model provides an excellent fit to the data. As such we are confident that these factors represent the areas which employees' responses reveal as relevant to workplace engagement.

The eight workplace factors determined from this research and that are used as a top-level description of the data are as follows:

- **Leadership** – measures how people feel about the head of their organisation, the senior management team and organisational values.
- **My Company** – focuses on how much people value their organisation, how proud they are to work there, and whether they make a difference.
- **Personal Growth** – examines whether people feel challenged by their job, whether their skills are being utilised and their perceived opportunities for advancement.
- **My Manager** – measures whether people feel supported, trusted and cared for by their immediate manager.
- **My Team** – includes encouraging team spirit, having fun, and feelings of belonging within the group of your direct colleagues.
- **Fair Deal** – includes how well employees feel they are treated and how their pay and benefits compare to similar organisations.
- **Wellbeing** – measures stress, pressure, the balance between work and home life and the impact of these factors on personal health and performance.
- **Giving Something Back** – explores how much people think their organisation puts back into society and whether they believe this effort is driven by profit motives.

For each core statement in the survey, one of these factors helps to drive the response to that statement. For example, responses to the statement "I have confidence in the leadership skills of the senior management team" are largely driven by their feelings about the company's leadership which also drive answers to the other leadership statements and influence leadership-related aspects of behaviour at work.

3.5. Employee Engagement and the 8 Workplace Factors

The preceding discussion demonstrates how our employee survey was developed to provide a comprehensive and reliable measure of the significant aspects of the way people experience their workplace. However, we have so far neglected to discuss its relationship to employee engagement.

Our reason for postponing this discussion is that the concept of engagement has a complex history and has been used by different authors in significantly different ways. Shuck and Wollard (2010) provide a historical review of these variations in definition and offer a synthesis which aims as far as possible to integrate the different conceptualisations of employee engagement. They propose the following emergent definition- “an individual employee’s cognitive, emotional and behavioural state directed towards desired organizational outcomes.” The following features of this definition and the discussion that leads to it are worth reinforcing.

- Engagement exists at the individual level. It is individual employees who are engaged or disengaged. An engaged organisation is simply the cumulative result of many engaged employees.
- Engagement in an individual arises out of the workplace experiences of that individual. (This is not included in Shuck and Wollard’s definition but is explicit in the discussion leading to it).
- Engagement has emotional, cognitive and behavioural aspects which are mutually reinforcing. It is worth noting that in adopting the notion that engagement has these three components Shuck and Wollard are placing engagement in the domain of attitudes which psychology has long identified as having affective, cognitive and behavioural components.

Although the development of the employee survey pre-dates Shuck and Wollard’s paper, we believe that our conception of engagement and the way we measure it through the employee survey align well with their synthetic definition. The methods described in the preceding sections draw heavily on the methods that psychology has developed for constructing self-report measures of attitudes and this is appropriate given the way Shuck and Wollard’s emergent definition situates engagement.

Some aspects of our approach to measuring engagement arise out of a desire to make our measure as useful as possible. It is probably the behavioural aspect of engagement that most interests employers. However, this is also the aspect that is hardest to measure directly. Whilst observation is potentially the most accurate way of measuring engaged behaviour it is hopelessly impractical on any scale and does not lead to measures which are easily compared across organisations. Self-report measures of engaged behaviours overcome these two problems but rely on the self-awareness of respondents and are heavily susceptible to social desirability bias. (For example, a statement such as ‘During working hours I only ever talk to colleagues about work-related matters’ is unlikely to elicit accurate answers). For this reason, the employee survey focuses on the emotional and cognitive aspects of engagement. Some authors (e.g. Saks, 2006) have tended to regard the emotional and cognitive aspects of engagement as antecedents of the behavioural component. This ignores the possibility that engaged behaviours may increase an individual’s sense of investment in an organisation and hence their emotional engagement. In order to remain agnostic about the way that

the different components of engagement are causally related we prefer to regard the emotional, cognitive and behavioural components simply as different manifestations of an underlying state of being engaged.

Results from the factor analysis of the employee survey make two things clear. The attitude which a person has to their work and their workplace is not unitary. For example, somebody's feelings towards the team of colleagues with whom they work may be more positive than towards their manager. However, their feelings towards different aspects of their work are not independent - people who feel positively about one aspect of their work are more likely to feel positive about other aspects. This is manifested in the fact that scores on the eight factors are (quite strongly) positively correlated with one another. The positive correlations between the factors make it sensible and meaningful to combine the scores on the eight factors into a single overall engagement score (in factor analytic terms overall engagement can be thought of as a higher order factor influencing each of the eight factors).

However, the fact that we obtain eight factors rather than just one indicates that treating engagement as a unitary entity is an approximation and that whenever we find it useful to do so it is meaningful to consider the eight factor scores separately. The great advantage of considering the eight factor scores separately is that it provides employers, employees and potential employees with much more information about the strengths and weaknesses of a company and thus more evidence about how engagement might be improved.

It is worth reflecting a little further on why the eight factors correlate. Part of the reason for this lies in the psychology of the respondents. Our emotions are broadly focused and not highly analytic. Thus, respondents do not totally separate out their feelings about different aspects of the workplace. A second reason why the eight factors correlate lies in the way in which different aspects of the workplace objectively influence one another. For example, if we take the My Manager Factor, it is very easy to draw the secondary impacts of a good manager against the other factors:

- **Leadership** – as managers are themselves managed by the senior managers of an organisation, they provide employees with insight into the nature of the Leadership of an organisation. Their management style will also be impacted by their role-models in the senior leadership.
- **My Company** – it can be theorised that a direct line manager colours the lens through which an individual views an organisation; if the manager is inspiring, an employee will feel more positive about the place in which they work – strengthening the connection between company and employee.
- **Personal Growth** – managers have a large impact on personal growth, from coaching and mentoring their reports, through to, in many cases, being the "gatekeeper" for access to learning and development resources and progression in an organisation.

- **My Team** – the manager is the single individual with the biggest power to shape and influence group dynamics, and is the connection between every one of these employees and the rest of the organisation.
- **Fair Deal** – line managers are often those responsible for championing employee's talent and the way in which that talent is rewarded, from pay increases to recognition schemes.
- **Wellbeing** – a manager with a strong ability to care and empathise with their direct reports will enable Wellbeing problems to be mitigated and removed before they start, through coaching, delegation and correct resourcing.
- **Giving Something Back** – the communication of managers of the company initiatives, and "leading from the front" on more localised aspects of giving programmes enables managers to increase employees' perception of the organisation's commitment to their global and local communities.

4. Scoring the Survey

4.1. Statement Scores

The statements asked in the main body of the survey are all scored on a 1 to 7 response scale. However, as many of the statements are negatively phrased, we cannot simply convert every Strongly Agree response to a 7 and every Strongly Disagree response to a 1. Therefore, all statements are encoded so that 7 is the most favourable response (Strongly Agree for positive statements and Strongly Disagree for negative statements), and 1 is the least favourable response (Strongly Disagree for positive statements and Strongly Agree for negative statements).

Once we have collated the responses from an organisation, we need to headcount adjust the scores for each statement. For many years, we have acknowledged that an organisation's size influences employee engagement. We have always been careful to keep organisations of different size bands separate in the Best Companies lists and we understood the importance of allowing for the size banding of an organisation to ensure that our accreditation was consistent and fair to all.

We have now surveyed millions of employees across thousands of organisations and have studied in detail how the size of an organisation (as measured by its headcount) affects the responses of its employees to individual survey items. Due to these findings, in September 2020, we refined our methodology to remove the influence of headcount at statement level, factor level and BCI (Best Companies Index).

We must firstly explain that we can quantify the extent that headcount is influencing the responses to each statement, as on an annual basis we perform regressions on the previous year's datasets to obtain this information. The regressions provide us with an expression that enables us to predict what organisations should be achieving based on their headcount. We refer to this as the predicted score.

Some statements are more sensitive to headcount than others, so the adjustments vary for each statement. For example, the most headcount-sensitive statement is “I believe I can make a valuable contribution to the success of this organisation”. From a practical standpoint, it is relatively easy to understand that within a smaller organisation, it is easier to see how you are contributing to the success of an organisation, whereas within a larger organisation, it might be harder to feel you are making a difference to the success of the organisation. Similarly, for “senior managers here are visible and approachable”, you can imagine seeing the senior manager team on a regular basis at a smaller organisation, whereas in larger organisations, the senior management team might not even be on the same site.

To headcount adjust scores, we take an average of a group score (company overall, employment group, etc.) for a particular statement. Next, we transform the scores to range from a scale of minus infinity to plus infinity. This ensures it is impossible for the headcount adjusted score to produce an out-of-range value of the 1-7 scale. We then remove the influence of headcount by subtracting the predicted score from the actual score that group has obtained. The resulting score determines how well an organisation has performed independent of their headcount. A positive score indicates that the organisation is performing better than expected for an organisation of that headcount, and a negative score indicates they are performing worse. However, at this point in the calculation the spread of scores is different dependent on the headcount of an organisation. Larger organisations have a greater probability of achieving more central scores as they have a smaller spread in the data, whereas smaller companies have a greater spread and thus are more likely to achieve a more extreme rating (not accredited or 3 star). For this reason, we apply an additional calculation to ensure the distribution is fair to all organisations and that all organisations regardless of headcount have an equal opportunity of achieving the range of scores. To do this, we increase the spread of scores for larger organisations by increasing the above-average scores whilst reducing scores which are below average, and vice-versa for smaller organisations where we reduce the spread of scores. Finally, our last step is to transform the score back to the 1-7 scale. This is what is known as the headcount adjusted score.

Sometimes, the results will be presented as a percentage, especially when showing the differences year-on-year or with benchmarks. This percentage is of the maximum possible score that can be achieved (an average of exactly 7); and is calculated using the following formula:

$$\boldsymbol{Percentage\ Score} = \frac{\boldsymbol{Score - 1}}{\boldsymbol{6}} \times \boldsymbol{100}$$

The minimum statement score of 1 thus translates to zero on the percentage scale.

4.2. Factor Scores

As described earlier, the core statements have been selected because they provide a good measure of one of the eight factors. Each factor has several statements assigned to it, but the number of statements varies from one factor to another. Twenty-four statements contribute to the factor scores

and consequently BCI. The remaining statements are used to provide feedback to companies on specific issues, and some items are evolution statements as explained previously.

The fact that there are different numbers of statements in different factors means that the amount of influence an individual statement has on the final score is not obvious. Each statement in a factor which has a larger number of statements will have less influence on the final score than each statement in a factor with few statements. This is normal in measuring psychological constructs. For example, we would consider a much wider range of issues when judging the qualities of people than when judging the qualities of a pay packet; a survey with exactly the same number of statements on each factor would be biased away from the psychological truth.

To calculate a factor score, we take the average of all of the headcount adjusted statements that contribute to the factor. We repeat this process for each of the factors. Similar to statement scores, factor scores can also be converted to the percentage scale using the above formula.

4.3. Best Companies Index (BCI score)

To create an engagement score, the factor scores are weighted so that each factor has an equal influence on the final score. We do this because there is a lot of variation in the spread of scores between companies for different factors, and we want to ensure no single factor dominates the overall engagement score. We then rescale the score to a scale that runs from approximately 0-1,000.

4.4. Lists

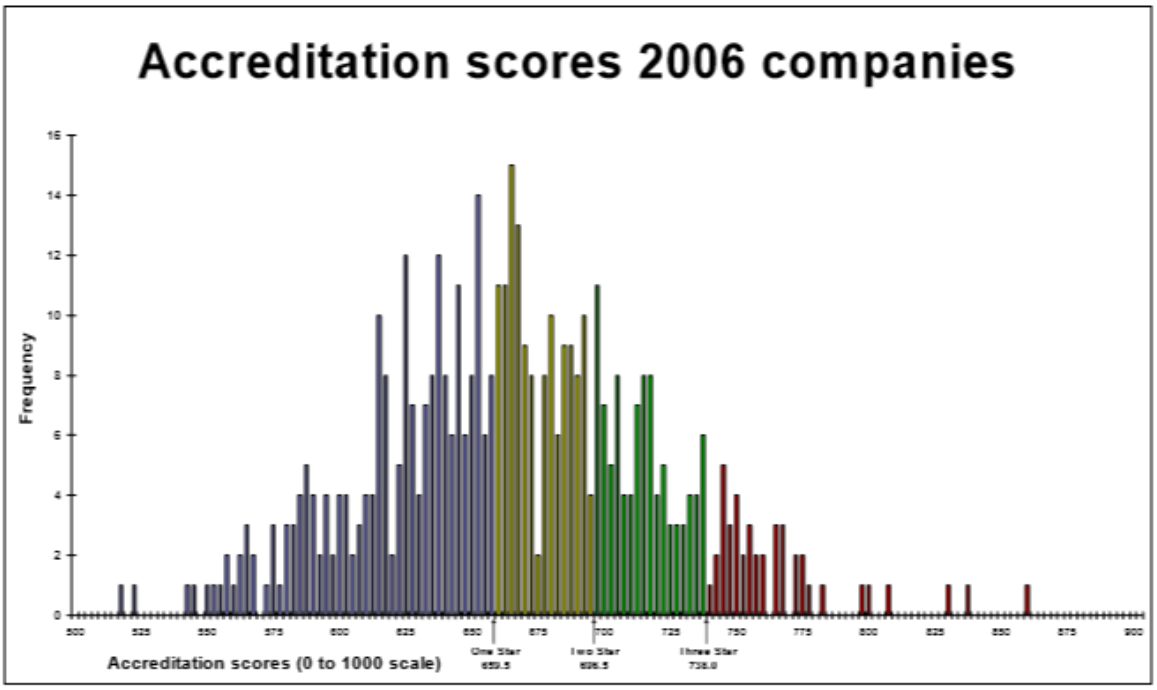
BCI is the only information used when assigning places on the Best Companies Lists. The companies that compete are ranked in accordance to their BCI score with the highest score gaining the highest ranking. There are four National lists (Small, Mid-Sized, Large and Big), 15 Regional lists (London - one list per size category, East of England, North East, North West, East Midlands, West Midlands, Northern Ireland, Scotland, Wales, South East, South West, and Yorkshire and the Humber), and 24 Sector Lists (Accountancy, Agency, Architects & Surveyors, Automotive, Business Services, Charity, Construction & Engineering, Consultancy, Education/Training, Financial Services, Food & Drink, Health & Social Care, Housing Association, Insurance, Law, Leisure & Hospitality, Manufacturing, Not for Profit Body, Recruitment, Retail, Technology, Telecom, Utilities, and Property).

4.5. Accreditation

The purpose of Accreditation is to produce a set of thresholds for organisations which reflect their achievements in employee engagement.

The figure below shows the distribution of scores for the Best Companies Accreditation index for all organisations completing the survey process in 2006 (the year the accreditation standard was set). The figure shows how the thresholds for 3 Star (shown in red), 2 Star (shown in green) and 1 Star (shown in yellow) performance were set with reference to the score distribution seen in 2006. It should be borne in mind that the sample of companies represented in the figure are the high

performing organisations who chose to apply for accreditation in 2006. It can be seen, for example, that even amongst these, there were relatively few organisations that exceeded the 3 Star threshold. Thus, this threshold has been set so that only the best of the best are awarded 3 Stars.



Since these high standards were set by companies taking part in the survey in 2006, they have remained fixed as a target of attainment for all UK organisations.

The accreditation thresholds are:

- Above 738.0 BCI – Three Star
- Above 696.5 BCI – Two Star
- Above 659.5 BCI – One Star

- We recognise organisations above 600 as progressing towards an accreditation rating. We describe these organisations as “Ones to Watch.

5. Data Collection

So far, this document has explained how we developed the employee survey and the 8-factor model of Employee Engagement. We have also explained how the survey is maintained, and how we calculate statement scores, factor scores and BCI. We have briefly outlined how these scores generate accreditation ratings and list positions. We shall now detail our requirements for sampling, and response rates, before explaining how we protect the integrity of our data, and how we ensure the anonymity of the respondents.

5.1. The role of the employee survey, organisation questionnaire, and site visits

Accreditation of organisations and Best Companies list position are both entirely determined by the responses of employees to the “b-Heard” survey. Unlike other companies, who may use subjective judgements of information provided by the organisation to determine whether it is a good place to work, our model listens to the people who actually work there.

The information from the Cultural Insight is used for research and content purposes to better understand what other organisations are doing to drive engagement. This enables us to share best practice from organisations that are particularly high performing in certain areas. It also gives us the opportunity to recognise outstanding initiatives that are deserving of our Special Awards. If accredited, the information provided also determines what benefits will appear on your profile on our website, such as whether the organisation offers excellent holiday provisions, generous maternity pay, fair gender representation in senior management roles and support for non-work-related qualifications.

5.2. Sampling Employees

The method of sampling employees is critical to ensure that an organisations’ scores are accurate. When possible, as with smaller organisations, we will survey the whole workforce; but where this is not possible, we will employ random sampling to ensure we have a representative view of the organisation.

Random sampling is the process which is the most commonly used to sample employees. We select an employee by assigning a random number between 1 and the total number of employees to all employees. We then generate a random number and select the employee assigned to the randomly generated number. For example, if we generate the number 6, we will select the 6th person in the list and mark them as selected for survey. We then go back and regenerate the list of all employees and regenerate a random number until we have the number of employees required for sample.

Random sampling is important because it is the best way to ensure a representative sample is selected (for further reasoning please see D. De Vaus’ “Surveys in Social Research” (2002)).

5.3. Sample Sizes

When selecting an appropriate sample for a large company, the accuracy of the data is determined not by the overall proportion of headcount selected, but instead the number of people selected to form the sample. As long as the number sampled is small in comparison with the company’s total headcount only the number selected, and not the proportion of the headcount is relevant. Where the size of the sample represents a substantial proportion of the total workforce, the number sampled and the proportion of the workforce this represents combine to determine accuracy until the point is reached where the sample becomes the entire workforce (and sampling error disappears).

Sampling for organisations is closely monitored by Best Companies. For smaller organisations where using a sample might cause accuracy issues, we survey the whole organisation.

The minimum surveying limits are set out in the following table. Essentially, we will survey everyone in organisations with fewer than 251 employees. For organisations that are larger than 250 employees, the sample size would be calculated by 250 + (50% of any additional employees up to 2,500) + (25% of any additional employees up to 5,000) + 10% of any additional employees over 5,000).

Band	Min. Employees	Max. Employees	Percentage Receiving Surveys
A	50	250	100
B	251	2,500	50
C	2,501	5,000	25
D	5,001	(Total headcount)	10

5.4. Necessary Response Rates

The higher the response rate, the more confident that we can be that the results are representative of the opinions of all employees. We would therefore encourage anybody using our survey to strive for the highest possible response rate. The response rates necessary to complete both Best Companies Accreditation and the Best Companies to Work For competition entry are as follows:

Headcount	Responses Required
25 – 49	75% (or 20 surveys if greater)
50 – 74	60%
75 – 249	50%
250+	40%

Where an organisation's employees return fewer than the number, or proportion, of surveys required the organisation will not be evaluated for Accreditation or Best Companies Lists.

When an organisation registers for Lists at registration, they effectively enrol onto our regional and sector lists too. An organisation will be considered across all regions and the relevant sector, but they cannot select which individual lists they would like to enter.

The organisation is required to meet the eligibility criteria in order to be in with a chance of achieving a place on one of the regional lists. The minimum response rate required per region depend on the overall size of the organisation. The organisation must obtain the response rate percentage per region based on their national headcount. For example, if an organisation had 3,000 employees nationally, they would need 40% response rate to be eligible for the national list (1,200 responses). For a

regional list, the organisation would still need 40% of responses from whatever the headcount within that region is. If the headcount is 400 within a region, to be eligible an organisation would need 160 responses (40% return rate).

If an organisation achieves a regional response rate that meets the above thresholds, then they are eligible to go forward for a regional list. As minimum, there must be more than 20 responses from one region and the Regional Best Companies Index (RBCI) must be at least 600 to be in with a chance of appearing on one of the lists. Please note, an organisation is NOT required to reach a minimum BCI score or response rate nationally to enter regionally.

5.5. Fraud Checks

We devote a great deal of effort to ensuring that the lists and the results of accreditation are based on the honest opinions of employees given freely.

There are a number of checks and tests instituted in the Best Companies methodology to prevent or identify fraudulent behaviour. Although we would like to be completely open and transparent, it would only be in the interest of those who might want to cheat, to publish the precise detail of all these checks.

Statistical tests are performed on returned data to look for anomalies, unusual and improbable patterns within surveys, demographics, and organisations in their entirety. Respondents are also invited to contact Best Companies if they have concerns about the survey process and the way it has been handled by their organisation.

Surveys are constructed in ways which make systematic attempts to manipulate results more challenging and various opportunities are provided to employees to highlight potential issues.

Best Companies also reserves the right to use site visits to check the details of any issues which may have arisen in the checking process and to disqualify companies from the lists or accreditation where there is evidence that returned surveys do not represent the honest opinions of employees or there is any concern over the validity of the process.

5.6. Anonymity

Another important aspect of the surveying of employees, and of reporting the data to companies, is anonymity. There is a wealth of academic research showing that any possibility (real or imagined) of individual data not being anonymous will seriously bias people's responses (Sudman and Bradburn, 1974, Response Effects in Surveys). There is evidence that survey respondents often do not trust promises of confidentiality. We take great care to try to ensure respondents are confident that their individual responses will not be disclosed. Individual survey responses are held anonymously and are not seen by anybody outside Best Companies at any stage of the process.

For this reason, when the survey is carried out online, the survey itself is not emailed. Instead, employees are either emailed directly from Best Companies with a code to log on to our server, or the code is provided to them in a sealed envelope. If they then choose to complete and submit the survey

this process is completed entirely on our server via an encrypted HTTPS link and not through email. Additionally, employees may complete their survey from any computer. The survey does not ask for an employee's name.

For paper-based surveying, blank surveys are sent to an internal project manager who then distributes them to the pre-selected sample of employees. Each survey is distributed with a letter addressed to the employee and a reply-paid and addressed return envelope. It is then the employee's responsibility to place the completed survey in the Best Companies collection box (where available) or mail the completed survey directly to Best Companies. Thus, the project manager will only ever handle blank surveys. Completed paper surveys do not contain names. In addition, the paper surveys each contain a code allowing any recipient to complete the survey on-line if they prefer. Once completed on-line the paper survey will automatically be cancelled, duplication of responses is therefore not possible.

Other than the free-text comments, where we make it clear to respondents that they may be made available anonymously to be viewed by their employer, we never, under any circumstances, release data containing individual responses. We also take precautions to prevent the answers of individual respondents being discovered from demographic breakdowns which we do release. Hence, the Workplace Insight Tool does not report the scores of a demographic group when either of the following two circumstances applies:

- If there are fewer than 5 responses within the demographic group.
- There is a single group in the demographic breakdown with only one response, no groups will be visible.

References and useful further reading

Child, Dennis. (1995) The essentials of Factor Analysis (2nd edition). Cassell Educational Ltd.

Fowler, F.J. Jnr. (1995) Improving survey statements; design and evaluation. Sage; Applied social research methods series.

Kline, Paul (1994) An easy guide to factor analysis. Routledge.

Ong, A. D., & Weiss, D. J. (2000) The impact of anonymity on responses to "sensitive" statements. Journal of Applied Psychology, 30, 1691-1708.

Ray, J.J. (1990) Acquiescence and problems with forced-choice scales. Journal of Social Psychology, 130(3), 397-399.

Saks, A.M. (2006) Antecedents and consequences of employee engagement. Journal of Managerial Psychology, 21, 600-619.

Shuck, B. and Wollard, K. (2010) Employee engagement and HRD: A seminal review of the foundations. Human Resource Development Review, 9, 89-110.

Sudman, S. and Bradburn, N.M. (1974) Response effects in surveys. Aldine Publishing.

Torgenson, W. S. (1958) Theory and Methods of Scaling. J. Wiley and Sons Inc., New York.