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# Can HR professionals generate human capital data that will influence investment decisions?

Conference Paper

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## Summary

This paper outlines the work carried out to develop an instrument that enables a systematic review of the quality of a workforce. It is focused primarily on medium-sized enterprises. The instrument consists of 12 factors, each of which is composed of five to nine descriptors. It can be used in three ways. First, boards of directors can portray the quality of their workforce during due diligence investigations. Second, investors can request its use before deciding whether and how much to invest. Third, both HR and non-HR professionals can use it to plan, or review, a human resource strategy. Initial findings suggest that use of such an instrument could influence investment decisions by up to 50%.

## Introduction

In this paper I outline an approach to assessing the quality of human capital in SMEs, entitled 'Our People Review'. I argue that this approach can be used by both HR and non-HR professionals to produce defensible human capital information that will influence investment decisions.

## Background to the study

According to the Chartered Institute of Management Accountants, intangible assets can generate up to 80% of the value of businesses listed on a stock exchange (Haigh and Tilley 2015). These intangibles are commonly separated into human capital, relationship capital, and organisational capital (Meritum Project 2002, Lentjusenkova and Lapina 2016). As these three intangibles come within an HR professional's remit (Hesketh 2014, CIPD Profession Map<sup>1</sup>), it follows that we should be able to provide a defensible assessment of them in an organisation. The CIPD has invested time and money in addressing this issue through their Valuing your Talent initiative: a collaboration with the Chartered Institute of Management Accountants and the Chartered Management Institute.<sup>2</sup> Here, as a separate piece of research, I focus on an

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<sup>1</sup> <https://www.cipd.co.uk/learn/career/profession-map>

<sup>2</sup> [www.cipd.co.uk/knowledge/strategy/analytics/valuing-talent](http://www.cipd.co.uk/knowledge/strategy/analytics/valuing-talent)

approach that can be implemented quickly and at relatively low cost by medium-sized enterprises.

A range of definitions can be found for these intangibles (Fulmer and Ployhart 2014, McCracken et al 2017), but, in this paper:

- human capital is defined as ‘the combination of know-how, commitment and adaptability that creates value to an organisation’
- external relationship capital is defined as ‘the network of relationships between an organisation and its external stakeholders’
- internal relationship capital is ‘the network of relationships between an organisation and its internal stakeholders’
- organisational capital is ‘the culture, structure, and processes of an organisation which can generate a competitive advantage’. Often included within this concept is ‘intellectual property’, which is a legally protected intangible.

The study described below focuses primarily on human capital because it is this that is thought to influence the development and maintenance of all other intangibles (Andreeva and Garanina 2016). However, I judged it necessary to incorporate both organisational and relationship capital into such an assessment instrument. This is because it is the combination of all three which generates the greatest influence on enterprise outcomes (Inkinen 2015) and, consequently, is likely to be of the most interest to both HR professionals and investors.

Many enterprises are well aware of the value of intangibles, particularly intellectual property. They use well-established approaches to create non-financial performance indicators (for example, Fitz-enz 2000) and describe them in annual strategic reports (Milost 2013, Financial Reporting Council 2014) and corporate social responsibility reports (Karim et al 2015).

However, the approaches can be time-consuming and expensive to implement and maintain (for example, Smith 2000, Sternad et al 2017). I argue, therefore, that there is a scarcity of approaches available to medium-sized enterprises that enables them to portray their human capital in such a way that is comprehensive, quick to implement, relatively inexpensive and, above all, trusted by investors.

It is my view that investors using longer-term ‘relationship building’ or ‘buy and hold’ strategies (Chan et al 2013) are most likely to find of interest the information generated by the proposed instrument. Those using shorter-term/high turnover strategies are more likely to focus on financial indicators such as trends in revenue and profitability.

## Aims of the study

The aims of this study, therefore, have been to develop an instrument that:

- assesses the quality of human capital in medium-sized enterprises
- can be used by both HR and non-HR professionals
- can be implemented quickly at relatively low cost
- enables investors to assess the quality of human capital
- is likely to influence investment decisions.

## Development of the instrument

In order to develop the instrument, I favoured a quantitative approach using structured interviews and survey completion via the Internet. I favoured this approach for two reasons. The first is because I understand that many investment decisions are already based primarily on qualitative approaches such as unstructured or semi-structured interviews. Second, I judged that a quantitative approach will enable an investor to compare more systematically the quality of workforces in different organisations. I used a standard quantitative approach to instrument development, based on Chadha (2009) and Kline (2013). This is described below.

### Stage 1: Literature review

My study started with a literature review that enabled a definition of the three relevant intangibles. I included both organisational capital and relationship capital for reasons explained earlier. I excluded intellectual property because other professionals (accountants and solicitors) already have well-established ways of assessing this (see Global Congress on Intellectual Property 2011).

As well as identifying gaps and weaknesses in the literature, the review enabled the generation of a long-list of 78 human/organisation/relationship capital issues.

### Stage 2: Identification of items

This long-list of issues was used to create a survey completed by ten subject matter experts and 108 investors.

The subject matter experts ranged from those with experience of academic research to those with experience of 'front line' HR management. An example of the former is the head of an organisation behaviour department in a university. An example of the latter is a managing partner at an international professional services organisation.

The investors attended an investment conference in London. Those responding to the survey were 75% private and 25% professional investors. I found it particularly difficult to obtain the views of professional/institutional investors, but the CIPD has commissioned ongoing research into this issue (Houghton et al 2017).

The surveys established a short-list of items judged to be a valid representation of human/organisational/relationship capital and of interest to investors. The items were

used to create a draft assessment instrument. This consists of both ‘factors’ and ‘descriptors’, examples of which are found in Table 1.

**Table 1: Example factors and descriptors**

<b>Example factors</b>	<b>Example descriptors</b>
External relationships	Ensuring effective relationships with investors/funders
Internal relationships	Ensuring ease of communication from members of our workforce to the senior management team
Organisational integration	Ensuring business processes run smoothly between different organisational units
Workforce adaptability	Encouraging members of our workforce to work under a policy of continuous improvement

### Stage 3: Instrument design

Instrument design involved drafting an introduction; confirmation of confidentiality; instructions for completion; two Likert-style scales; the range of factors and descriptors; and a scoring mechanism.

The scoring mechanism consists of combining two judgements, typically made by a board of directors or senior management team, using the Likert scales. The first judgement requires a rating of the level of influence a descriptor has on the achievement of organisational objectives. The second requires an assessment of the state of development within the organisation of any given descriptor. An example is shown in Table 2.

**Table 2: Scoring mechanism for descriptors**

Influence on the achievement of organisational objectives. Range: 0 = not relevant in this context, to 5 = a critical issue		The state of development within the organisation being assessed. Range: 0 = not relevant in this context, to 5 = leading edge
Example board of directors’ rating = 4	Members of our workforce work under a policy and expectation of continuous improvement	Example board of directors’ rating = 3

The 'influence' rating is combined with the 'state of development' rating to form a score for each descriptor. These are totalled to form individual factor scores and an overall score, both of which can be compared with benchmarks.

To improve trust in the ratings, it is recommended they are supported by associated documentation, for example board-level minutes or training records.

To improve flexibility, users can rate any descriptor as 'zero' to indicate it is irrelevant to their organisation. For example, during the piloting of the instrument, one not-for-profit organisation rated variable pay as not relevant in their circumstances.

There is also a facility to add a descriptor in circumstances where reviewers have an approach that they judge to be missing and which should be included.

### Stage 4: Instrument piloting

The instrument was piloted using structured interviews in two commercial organisations and two not-for-profit organisations. The pilots resulted in a confirmation of the instrument's instructions together with an improvement of descriptor wording. The scoring mechanism was confirmed.

### Stage 5: Instrument development

Once the required edits had been made, the next stage was to demonstrate the finalised instrument's attributes (validity, reliability, interpretability, and generalisability). In order to do this I calculated that a sample of at least 200 completions was required (Comrey and Lee 2013). During this stage the draft instrument was completed by 240 senior executives, 209 remotely via the Internet and 31 face-to-face. Data collected was transferred to the Statistical Package for Social Science for analysis.

For those who are not interested in the technical development of such an instrument, I suggest you 'skip' these latter stages and progress directly to stage 8, the finalised instrument. For those more technically minded, I outline the steps taken to establish defensible attributes.

## The instrument's attributes

### Stage 6: Data preparation

Data collected from the subject matter experts, investors and enterprise executives was used to assess the instrument's attributes. Before analysis the responses were checked for organisation size, missing values, outliers, and normal distributions. Where necessary, action was taken to improve data quality (for example log<sup>10</sup> transformation).

## Stage 7: Demonstrating reliability, validity, interpretability, and generalisability

These attributes – reliability, validity, interpretability, and generalisability – were identified as necessary when developing such an instrument by 43 experts in the fields of psychology, epidemiology, statistics and clinical medicine who participated in an international Delphi study (Mokkink et al 2010).

### Reliability

Reliability refers to the consistency or repeatability of instrument results. Three aspects of reliability are described below.

First, it is important to establish that all descriptors listed under a factor are likely to measure the same thing. This is called internal consistency and was found to be high (Cronbach's alpha results ranged from 0.76 to 0.89).

It is also critical that different assessors come to the same conclusion using the same information at the same time. This inter-rater reliability was also demonstrated (intraclass correlation results:  $n=31$ ,  $ICC=0.81$ ,  $p<0.001$ ).

Lastly, it is necessary for the same assessors using an instrument at two different times to obtain similar results, assuming no change in that being assessed. A high level of test-retest reliability was found between a first assessment and a second assessment carried out in the same week (Pearson correlation results:  $n=152$ ,  $r=0.879$ ,  $p<0.01$ ).

### Validity

An instrument is deemed to be valid if it can be shown to measure what it claims to measure. Four aspects of validity are described below.

'Content (face) validity' is important because few professionals would use an instrument that does not look the part. The subject matter experts, investors and executives participating in the pilot sessions all judged the factors and descriptors to be an accurate reflection of human/organisational/relationship capital.

Where an instrument has been developed on a theoretical basis (for example as a result of a literature review), it is necessary to check the model makes sense using real-life data. This is termed 'construct validity'. The instrument has been subjected to two statistical analyses (exploratory factor analysis and confirmatory factor analysis) which confirm that the structure of the instrument does make sense.

One further consideration is whether the content of any given instrument corresponds to those of similar instruments (preferably the results should correspond). This 'concurrent validity' was analysed by comparing the instrument content with that of three others which I judged to have been well researched. These are Mayo's Human Capital Monitor

(2001), the Investor in People standard (2017) and the European Foundation for Quality Management Excellence Model (2017). Content was found to correspond.

Lastly, as with other studies (for example Crook et al 2011), I found that information generated by the instrument did not correlate strongly with organisation 'financials' such as revenue and profit. As such, I argue that the instrument offers 'leading indicators' in addition to the 'financials' commonly used by investors.

### Interpretability

Interpretability was demonstrated during the pilot sessions. Reports based on the board-level ratings were sent to the participants, who were able to identify strengths and opportunities for improvement.

### Generalisability

Generalisability was demonstrated by successful completion of the Instrument by 240 executives from 14 of the 21 UK industry sectors (Office for National Statistics 2007).

### Stage 8: The finalised instrument

The finalised instrument, Our People Review, consists of an introduction, instructions for completion and guarantee of confidentiality; 12 factors, each of which has five to nine descriptors; a scoring mechanism and comparison data. Based on the pilot sessions, once data has been assembled, it takes a board of directors or senior management team approximately four hours to establish consensus on all 12 factors. These are:

- **strategic agility:** placing an organisation and its workforce in context of the market(s) in which it operates
- **external relationships:** initiating and maintaining good relationships with external stakeholders
- **organisation integration:** how an organisation is structured and operated in order to maximise the contribution of its people
- **workforce investments:** levels of investment in people
- **workforce composition:** overall headcount and levels of diversity
- **workforce know-how:** the knowledge and skill required for the organisation to survive and compete
- **workforce relationships:** initiating and maintaining good relationships between internal stakeholders
- **workforce experience:** the average number years' service of people in the workforce
- **workforce stability:** the lack of disruption due to lost working hours
- **workforce adaptability:** the level of willingness and ability to learn new ways of doing things

- **workforce impetus:** the level of willingness to work towards meeting organisation goals
- **workforce risks:** employment issues that could cause financial or public relations distress.

### Answering the question

In answering the question, so far I can only refer to the results of the investor survey (stage 2). Ninety-three per cent of investors who responded indicated that, if they were in possession of reliable and valid data as described above, they would vary their investment by between 10% and 50%. I found this result to be statistically significant (Kolmogorov Smirnov one sample test,  $n=96$ ,  $D=0.20$ ,  $p<0.001$ ). As such, it goes some way to demonstrating that human capital data is likely to influence investor decisions.

### Opportunities for improvement

There are three main opportunities for improvement that are currently under way. The first is to attract the attention of institutional investors in order to confirm or otherwise the results of my investor survey. In particular, I need to generate case studies where the instrument is used by investors or analysts to influence investment decisions. The second is to generate more data from SMEs in order to establish comparison data for specific industries. The third is to transfer the finalised instrument from spreadsheet to website where it can be accessed remotely.

### Potential applications

I see Our People Review being used by boards of directors/senior management teams as an agenda for establishing or reviewing their people strategy. In particular this would be of interest to those scaling up from 40+ employees.

Second, the approach provides HR and non-HR professionals with a systematic and comprehensive way of portraying the quality of a workforce in the context of due diligence.

Lastly, I envisage investors/analysts asking for information based on the instrument before deciding on whether, and how much, to invest in medium-sized organisations.

### Conclusion

The instrument – Our People Review – can be used by both HR and non-HR professionals in order to portray the quality of human capital (and associated intangibles) to potential investors. I anticipate that professionals implementing due diligence before merger or acquisition and investors using the strategies ‘relationship building’ and ‘buy and hold’ are likely to use that information to decide whether and how much to invest.

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