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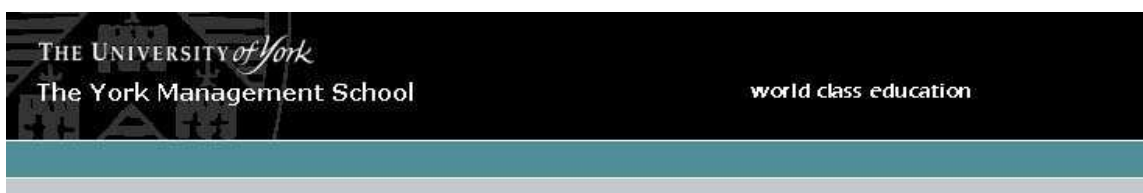
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**Valuing Human Resources: Perceptions and Practices in UK
Organisations**

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This paper is circulated for discussion purposes only and its contents should be considered preliminary.

Abstract

Despite Government and academic interest in valuing human resources, there has been relatively little progress in reflecting the value of human resources in UK organisations. This research uses a survey questionnaire to identify perceptions and practices in the area of valuing human resources in three types of UK organizations; traditional companies, knowledge intensive companies and local authorities. The survey focuses on the importance of valuing human resources, current measurement practices, key barriers to the valuation of human resources and the progress expected in this field over five years in UK organisations. Although the majority of respondents identified that the measurement/valuation of human resources was important to their organization, only little or moderate progress in recognizing the worth of human resources in financial statements was expected. The main reasons for this were identified to be lack of understanding and support of the area by others in the organization, particularly senior management, lack of resources, uncertainty as to what information should be reported and lack of precision and reliability in current human resource measures. The research identified that there is more interest in the area from human resource professionals than accounting professionals and that valuation of human resources should be included in internal reports rather than reported externally. More research is now needed, both on conceptual models for valuing human resources within organizations and empirical research focusing on issues such as gaining commitment to valuing of human resources by senior management, the development of systems of valuing human resources, how systems to value employees, when developed, are implemented in organisations and the consequences, both intended and unintended of how the systems operate in practice.

Keywords: valuing human resources, importance, barriers, future progress

Introduction

Human resources have been identified as one of their main sources of competitive advantage by many organisations in today's economy (DTi, 2003; Mayo, 2003; Verma and Dewe, 2004, Edvissonn and Malone, Stewart, Sveiby). This is true not only of knowledge intensive organisations which are based on services and intangible outputs, but also increasingly of more traditional organisations, both in the private sector and in the public sector. However, human resources are still not recognised in the reporting mechanisms of most United Kingdom organisations, despite an interest dating back to the 1960's in techniques such as human resource accounting and more recently, intellectual capital statements (Fincham and Roslender, 2004; Roslender and Dyson, 1992; Mouritsen, Larsen and Bukh, 2001a,b).

This research focuses on exploring the reasons why measuring human resources is important to organisations in the United Kingdom, identifying current measurement practices, barriers to measurement and the progress expected in this field over the next five years. The term measurement of human resources is used here in its widest sense. It is thought of as a range of techniques that provides a more balanced perspective encouraging as much concern about the long term drivers of financial success as about current performance and value. The use of both financial and non-financial approaches is now a much more common theme when the measurement of human resources is discussed.

Data is obtained using a survey questionnaire. The questionnaire is designed around a range of issues concerned with the measurement of human resources. Questionnaires were sent to both human resource managers and finance/accounting managers in the same organization. Data analysis also extended to exploring differences in perception and practice between three different types of organisations in the United Kingdom; traditional companies (i.e. companies in manufacturing and retail industries) in the private sector, knowledge intensive companies (i.e. companies in hi-tech, research and service industries) in the private sector and local authorities in the public sector. In this article we present a descriptive account of the findings and focus our discussion around the issues that emerge in relation to the measurement of human resources.

Literature Review

Human resource accounting (HRA) has been defined by the American Accounting Association as “the process of identifying and measuring data about human resources and communicating this information to interested parties” (AAA, 1973). Contrary to the dominant image of human resource accounting of "putting people on the balance sheet", the aim of HRA has always been wider than this. In fact, as outlined by Flamholz (1999), HRA had three main roles; to provide organisations with objective information about the cost and value of human resources, to provide a framework to guide human resource decision making and to motivate decision makers to adopt a human resources perspective. It is this wider definition of HRA that is used in this article.

Interest in HRA can be traced back to the 1960's when Hermansson (1964) first raised the issue of reflecting employees, an organisation's most important assets, on the balance sheet. In the 1960's and 1970's, there was growth in HRA research with the derivation of basic HRA concepts and the development and assessment of various human resource cost and measurement models. The human resource cost approach involved measuring and capitalising the cost of employees on the balance sheet with proposals based on historic cost, replacement cost, opportunity cost and, for sportspeople, contract costs. (Brummet, Flamholtz and Pyle, 1968; Flamholtz, 1973; Jaggi, 1974; Morrow, 1996; Flamholtz, 1999). Human resource measurement models also included monetary and non-monetary methods of measuring the worth of an organisation's human resources, both at the individual and group level (Lev and Schwartz, 1971; Flamholtz, 1971; Flamholtz, 1972; Likert and Bowers, 1973; Flamholtz, 1999).

As well as the development of HRA models, research was carried out into the effect of HRA on decision making and the practical implementation of HRA systems in organisations. The research on decision making looked at both internal and external decision making and at the impact of HRA on attitudes and performance. In general, it was shown that the use of HRA data did affect decision making (Flamholtz, 1976; Tomassini, 1977; Oliver and Flamholtz, 1977; Elias, 1972; Hendricks, 1976). There were also a range of studies which looked at the implementation of HRA models in organisations. One of the first studies of HRA systems in practice was carried out at RG Barry by Brummet, Flamholtz and Pyle, (1968) and Pyle (1970). This was followed by other studies in a range of organisations including accounting firms, financial institutions, and local authority organisations (Alexander, 1971; Flamholtz, 1973; Frantzreb, Landau & Lundberg, 1974; Ogan, 1976; Flamholtz and Kaumeyer, 1980; Flamholtz and Geis, 1984; Flamholtz, 1999)

However, following this initial enthusiasm interest in HRA began to fade in the 1980's. A number of reasons appear to account for this. These include:

- most of the relatively easy preliminary research on HRA had been completed with the remaining research being complex and relatively few scholars being available to carry out the research
- the co-operation of organisations willing to serve as research sites for applied research studies was not easily forthcoming.
- the cost of the research was significant with uncertain benefits or benefits which would accrue to the field as a whole and not just to the organisations who participated in the studies.
- concerns over whether it was appropriate to quantify people and treat them in the same way as tangible assets such as plant and machinery
- concerns as to the reliability of some of the findings of the research and much of the HRA work going against the accounting concepts predominant in the 1970's for example questions as to whether people qualified as assets in accounting terms

(Sackman et al, 1989; Flamholtz, 1999; Scarpello and Theeke, 1989; Roslender and Dyson, 1992; Roslender, 1997; Turner, 1996)

Nevertheless despite this 'slow-down' HRA "is not a subject that will willingly disappear" (Roslender and Dyson 1992, p.312) simply because of its potential to significantly influence the management of people (Flamholtz, 1999). Linked to this is the recognition that in today's economy, the greatest source of competitive advantage for many organisations is their workforce. This together with the changing nature of management where managers are now more likely to have to manage by facilitation and the growth and strategic importance of the human resource professional HRA is experiencing "something of a revival" (Dawson 1994, p. 35). HRA is now clearly viewed as something "of much greater importance than simply findings a means of putting people on the balance sheet" (Roslender and Dyson 1992, p. 319).

Many concepts and techniques have been proposed by both academics and practioners alike as a means of measuring human resources. These include return on investment, IC index, Tobins Q, human capital index, the balanced scorecard which incorporate the measurement of human resources and an economic value added component linked to strategic management accounting (Mayo, 2002; Kaplan and Norton, 1996; Fitz-enz, 2000; Roos et al, 1997; Tayles et al, 2002). Other

proposals include the belief that human resources need to be measured in terms of their strategic management potential. This is expressed through such techniques as human worth management and human resource expense models (Cascio, 1998; Roslender, 1997; Fitz-enz, 2000; Mayo, 2001). Other issues such as how human resource measurement systems should be designed, the link between human resources and accounting, the need to provide information to effectively guide and manage behavior and the need for accounting requirements to move away from a purely financial focus (Pfeffer, 1997; Roslender and Dyson 1992; Turner, 1996; Roslender, 1997) have also been mooted.

The Government too has shown interest in the valuation of human resources. In 2003, the Department of Trade and Industry set up an “accounting for people” taskforce to explore the case for encouraging organisations to report on performance in four areas: size and composition of the workforce, employee motivation, staff training and development and remuneration and fair employment. The taskforce reported in November 2003. In their report, they recognised that the skills and commitment of employees are important to value creation in organisations and that HCM reporting was generally supported but also recognised that there were particular concerns that needed to be overcome. These included revealing data to competitors, possible misinterpretation by analysts and unhelpful media reporting, lack of clarity on what and how to report, how to deal with wide industry differences and requirements, concerns against an overly prescriptive approach such that organisations would not be able to reflect their own circumstances and concerns of lack of common definitions and common reporting requirements making comparison difficult. The report concluded by recommending an evolutionary approach leading to balanced and objective reporting with a robust process capable of review by auditors and recommended that employee matters should be incorporated in the operating and financial review (DTi, 2003; Roslender, Stevenson and Fincham, 2004). In 2005, the government issued a statutory regulation (SI2005/1011) to incorporate the requirements for an operating and financial review in the Companies Act 1985 for all financial years ended after April 2005 and introducing details of what should be incorporated in the operating and financial review in schedule 7ZA. In addition, the Accounting Standards Board has published Reporting Standard 1 on operating and financial reviews (ASB, 2005). Both the Companies Act and Reporting Standard 1 require employee matters to be included in the operating and financial review and it remains to be seen what is actually disclosed by those who are required to publish operating and financial reviews.

The measurement of human resources is also a key component of intellectual capital (IC) statements. Definitions of intellectual capital have viewed IC as an organisational level asset

obtained from the knowledge held within organisations, both tacit knowledge held by employees and codified knowledge. Authors continue to debate the concept of IC and explore its different components (Saint Onge, 1996; Sveiby, 1997; Edvinsson and Malone, 1997; Nahapiet and Ghosal, 1998, p 245; Stewart, 1997 p x1, p 66). There seems to be some consensus as to the components of intellectual capital, even though the terminology and definitions are slightly different. The approaches all aim to give a broader picture of an organisation than is given by a purely financial focus. This is done by using a range of financial and non-financial indicators, very much along the lines of a balanced scorecard approach (Kaplan and Norton, 1996). Common to all the approaches, there is the recognition that it is neither possible nor desirable to put an absolute and correct value on intellectual capital. Instead, IC statements enable organisations to focus on stocks and flows of IC over time and to be better able to manage knowledge and IC.

There has been much debate in the management and accounting literature about the measurement of human resources and the techniques that should be used to do so. However, despite this debate the measurement of human resources has not altogether translated into practice. Nevertheless academics and practitioners alike share a common goal; to develop measures that capture the very worth of people and report it in ways that allows for the growth and development of the people themselves and acknowledges in more tangible form the contribution they make to the organization.

In order to extend this common goal, to focus the debate surrounding the measurement of human resources and to encourage researchers and practioners to use these results to consider ways forward this research explores why measuring human resources is seen as important, the barriers to measurement, the types of measures that are currently used and which might be used in the future and the progress expected in this field over the next five years in United Kingdom organisations. The research methodology is presented next, followed by the presentation and discussion of the results and conclusion.

Methodology

This research uses a survey questionnaire to gather data. The questionnaire is based on a questionnaire developed by Toulson and Dewe (2004). The questionnaire was developed to explore a range of issues surrounding the measurement of human resources and the practices used. In this way it provides an opportunity to collect generic descriptive data for considering the state of affairs in relation to human resource measurement. The questionnaire was adapted for this research and

included questions on the importance given to measuring human resources, current measurement practices including what should be measured, if not currently measured and barriers to measurement where these are not made. The final part of the questionnaire explored the expected level of progress that may be made in measuring human resource over the next five years.

Both checklists and open-ended questions were used. In the case of the checklists respondents were asked depending on the issue being measured to consider each statement and indicate on a five point scale the view of their organization. Scale metrics included for example descriptors ranging from "not important to extremely important or very important", from "strongly disagree to strongly agree" and from "no progress to significant progress".

Questionnaires were sent to three groups of organisations, traditional companies i.e. companies in the manufacturing and retail sectors in the private sector, knowledge intensive companies in the private sector and local authorities within the public sector to get a broad view of current practice in, and perceptions of, measuring human resources in UK organisations. The knowledge intensive companies came from a range of industries including accounting and auditing; advertising and media; biotechnology; communications, IT and computing services; legal services; management consultancy and public relations; pharmaceuticals; research and development. In these industries the focus was on service, research and technological innovation and hence it was expected that the main source of competitive advantage within the industries would be the employees and their knowledge in contrast to what may be the case in the more traditional sectors like manufacturing and retail the emphasis may be on more tangible products.

In total 4,938 questionnaires were distributed. 1,000 questionnaires were mailed to human resource professionals in traditional companies, 1,000 to human resource professionals in knowledge intensive companies, 1,000 to accounting professionals in traditional companies, 1,000 to accounting professionals in knowledge intensive companies, 469 questionnaires to human resource professionals in local authorities and 469 questionnaires to accounting professionals in local authorities. The questionnaires were sent to larger organisations with 100 or more employees as the measurement of human resources was expected to be of more interest to these larger organisations.

Of the 4,938 questionnaires sent out in total, 288 responses were received, a response rate of 5.8 %. One question that has to be asked argues Baruch (1999) is what can be described as a 'reasonable and acceptable response rate.' To identify a reasonable response rate Baruch argues that a number of factors must be taken into account. These include for example the trend that over the years there has been a reduction in the level of response rate that may, according to Baruch, be

explained by “a disbelief in the value of the social sciences” (Baruch 1999, p. 427). Other reason for low response rates included for example the type of population, the sector being surveyed and the size of the organization. The necessity and difficulty comes according to Baruch (1999) in explaining a low response rate. While it could be possible to mount an argument that involved issues of sampling, population and sector perhaps the more potent and somewhat disappointing reason may be that those receiving the questionnaire did not find measuring human resources an important enough topic to respond. This in itself may represent a finding. However we do, as researchers have a responsibility to those who have returned questionnaires. These results, if used in a didactic sense as a source of understanding, and if using a descriptive approach to analysis and interpreting our results in a conservative way, it is still possible to inform. It is in this way that the results are presented and the context set for further research, examination and explanation.

Results and Discussion

Sample

Of those who responded 67.8% were from the human resource function, 22.3% from the accounting function and 9.9 % of the respondents were from other functions. 38% of responses were from traditional companies, 29% from knowledge intensive companies and 33% from local authorities. The analysis is given for the population as a whole where appropriate and broken down between sector groupings and between accounting and human resource respondents as appropriate. The moderate response from those in the finance/accounting function may suggest that measuring human resources is not currently a high priority. On the other hand it may also suggest this group has not been sufficiently involved in this kind of work and one possible outcome from this research would be to call for a closer collaboration between the accounting profession and those working in human resources so that ideas can be shared and different techniques evaluated. The organisations employed on average 5,845 employees with a range of 5 to 123,000. Although, organizations with greater than 100 employees were targeted, nine responses from organisations with less than 100 employees were received. The issue of the role of measuring human resources in smaller organizations is an important one and one may need to be the focus of further research.

The results and discussion are presented in three sections beginning with the importance of measuring human resources followed by identifying barrier to measurement, establishing what is for this sample current measurement practice and future plans.

The Importance of Measuring Human Resources

In this section, respondents were asked to identify how important the measurement of human resources was to their organisation; what factors contributed to the importance of measuring human resources, to whom, in the organisation this was important and why human resources measurements were not undertaken.

Respondents were first asked to indicate (1 = not important to 5 very important) how important measuring human resources was to their organization. 52.1% of respondents stated that the measuring of human resources was very important or extremely important in their organisation. The rest, 47.9% of respondents, stated that the measurement of human resources was not important, somewhat important or of moderate importance. Typically the private sector companies focused on profitability and links to strategy:

Continual pressure on profitability and the need to differentiate from competitors means that people resources will be one of the few sources of competitive advantage. This will inevitably lead to greater focus on measurement/delivery.

In local authorities two drivers for the importance of valuation were identified:

Pressure from central government and the audit commission on public organisations and our own desire to better measure the impact of hr will drive progress. Local authorities are very people based organisations providing services to the public and recruitment and retention of staff is becoming increasingly difficult.

However, against the whole area of valuation and measurement, concerns were raised as to the desirability and perceived benefits of valuation:

... employees do not like being thought of as resources, the further dehumanising of them by treating them as an accounting variable has serious implications for morale and their perception of the way they are regarded by their employer. We already have some measures in place and to spend further time on measures would be counter productive.

Both sides of the argument have support and the concerns against valuation will have to be addressed.

Results in relation to the importance of measuring human resources are presented in table (i).

Take in table (i) - Important reasons for measuring human resources

As shown in the table, there were four reasons for measuring human resources, which had the support of over 70% of all respondents. These indicate that accountability is of prime concern with most of the respondents stating that human resources should be more accountable and this is consistent with the concerns of human resource professionals who agree that the human resource function needs to be more accountable in order to be more influential in organisations as indicated in the qualitative comments. The other thrust is linked very much to the strategy of the organisation. As human resources were identified as being important sources of sustained competitive advantage to organisations, it was expected that the valuation of human resources would help strategic planning and the achievement of these plans. Of the remaining fifteen reasons for measuring human resources, fourteen reasons were given moderate importance, with between 30% to around 70% of respondents stating that they agreed or strongly agreed, with these. The theme coming through here is that measurement of human resources should be helpful in organisational planning and decision-making and in identifying the impact of human resources on financial results. Although not explicitly stated, this may be linked to the view that in order to value and reward human resources, their contribution to the key strategic plans of the organisation and to financial results must somehow be made visible.

Differences between Human Resource Respondents and Accounting Respondents

Two tailed T tests were carried out to investigate differences between human resource respondents and accounting respondents in relation to the reasons they thought important for measuring human resources. Four statistically significant differences were found between the two groups in terms of the importance they placed on measuring human resources and these were:

- by identifying the value added contribution of human resources, the impact of human resources on financial results can be developed,

- to earn credibility and receive needed resources, human resources need to speak in financial terms,
- measurement of human resources gives investors needed information about the value of the business and its potential for future profitability
- measurement of human resources gives management needed information about the people resources in the organisation and if the resources are there to support business strategies

The supporting statistical data is presented in appendix 1.

In all cases, the human resource respondents gave more importance to the above reasons than the accounting respondents, indicating, perhaps, more skepticism by accounting professionals in relation to the financial impact of human resources measures, whether valuation of human resources would indeed provide needed information for investors on future profitability and whether measuring human resources gave needed information for deciding business strategy. No other significant differences were found between human resource and accounting responses in relation to the important reasons for measuring human resources.

Sector Differences

The next step was to investigate, using T tests whether there were statistically significant differences between sector groups (traditional, knowledge intensive industries and local authorities) in terms of the important reasons for measuring human resources. Comparisons between traditional and knowledge intensive companies, traditional companies and local authorities and the knowledge intensive and local authorities were undertaken. Significant differences between the sectors are set in table 2 and supporting statistical data is given in appendix 2

Take in table (ii) - sector differences in reasons for measuring human resources

Comparing the traditional and local authorities, local authorities have less interest in profitability and financial measures, as is to be expected. Comparing the local authorities and knowledge intensive organisations, there seems to be less importance given by knowledge intensive organisations to reasons that concern identifying the value added contribution of human resources and encouraging the alignment of human resource plans with business plans but knowledge

intensive companies saw as significantly more important as a reason for measuring human resources the issue that to earn credibility and receive necessary resources, human resources need to speak in financial terms. Comparing the traditional companies with knowledge intensive companies, again there seems to be less importance given by knowledge intensive organisations to reasons that suggest that measurement helps solve human resource problems, helps strategic planning and helps identify the impact of human resource plans on financial results. More in depth work needs to be done to explore these sector differences and these would need to be addressed in the development of appropriate human resource valuation models.

Barriers to Measuring Human Resources

In order to identify the main barriers to the valuation of human resources, respondents were given a list of frequently mentioned reasons given by organisations as to why they do not measure human resources. Participants were asked to consider each reason and to indicate on a 5-point scale how strongly they agreed with it and the results are presented in table 3.

Take in table (iii) - Reasons preventing the measurement of human resources

Only three reasons had the support of more than 50% of the respondents and these, ranked in order of importance were lack of understanding of the measures by others in the organization, uncertainty as to what information should be reported and that current human resource measures lack precision. These three could be considered to represent the main barriers to the measuring of human resources and each needs to be addressed in order to make progress in practice.

However, in addition, there is some support for most with between 30% and 47% of respondents agreeing or strongly agreeing with each reason. Concerns as to quantifying people as well as the lack of valid, widely accepted measures, which are not overly complex and difficult, come through as important barriers. Time and resources too are identified as important deterrents to progress in the area and this also comes through in the qualitative comments provided by respondents. Whether to use hard or soft measures, who should be involved in the development of appropriate measures and the lack of expertise in measurement by human resource professionals are also indicated as problems. Indeed, the spread of answers indicates that there are no overall factors that can be identified as key inhibitors of valuing human resources. Instead, there are a range of

concerns and barriers, which need to be addressed, and this may contribute to why there has been only limited progress in practice.

Two tailed T tests were carried out to investigate whether there were any statistically significant differences between human resource respondents and accounting respondents in terms of the barriers they perceived as preventing the measurement of human resources. The supporting statistics are presented in appendix 3. The statistically significant differences found between the two groups were current human resource measures lack reliability, current human resource measures are too complex, current human resource measures are too difficult, current human resource measures are confusing, human resource people do not have the necessary expertise to measure, uncertainty as to who should be involved in the development of appropriate measures and that existing personnel and company policy do not facilitate the use of human resource measures.

In all cases, the accounting respondents considered the barriers to be more important than the human resource respondents, supporting the view that the accounting profession view valuing human resources to be more problematic than human resource professionals, particularly in relation to the lack of reliability, complexity and difficulty of measures, a lack of expertise in measurement by human resource professionals and uncertainty as to who should be involved in the development of appropriate measures.

Two tailed T tests were also carried out to explore whether there were any statistically significant differences between the three sector groups in terms of the barriers to measuring human resources. Those reasons which showed statistically significant difference between the three groups are given below:

Table (iv) - Differences in barriers to valuation / measurement between sector groupings

The supporting statistical data is given in appendix 4.

Looking first at the differences between the traditional organisational group and local authorities the results suggest that local authorities consider a number of barriers as more problematic than their traditional counterparts. There are fewer statistically differences between the local authorities and knowledge intensive organisations and between traditional and knowledge intensive organisations. Again, these sector differences need to be explored further.

Who Should Drive the Measurement of Human Resources and at the importance of measuring human resources at different levels of the organisation?

When asked to identify who in the organisation should drive the practice of valuing human resources, 50.2% of the respondents stated that the human resource function should drive the practice of measuring human resources with only 2.1% of respondents stating that this should be driven by the accounting function. 35.3% of the respondents stated that a multifunctional team should drive the practice of measuring human resources. Those respondents who identified the human resource function as the most appropriate function to drive valuation practices stated that this was because they had the knowledge, expertise and data to be able to do so. A few respondents also indicated that if the human resource function did not get involved in the valuation of human resources, there might be a threat to the human resource function and the danger that other functions such as accounting would perhaps "take over". Those respondents who stated that a multifunctional team including human resource and accounting professionals should drive the valuation of human resources indicated that this was desirable in order to obtain the expertise of both functions and to improve acceptance and understanding of human resource valuation across the organisation. There were no major differences between the responses of the three sector groupings.

Finally in this section, respondents, were asked about how important they thought measuring human resources was at different levels of the organisation. The results clearly identify that valuation/measurement was important to the human resource function. In addition, the importance of measuring human resources at different levels of the organisation were identified as follows, ranked in order of response:

Take in table (v) - importance of valuing human resources at different levels of the organisation

As well as the human resource function, respondents also considered that measuring human resources was important at senior levels in the organisation, particularly senior management and the CEO. Less importance was given to the accounting function with only 44.4% of respondents stating that it was important or extremely important for the accounting function. However, 32.9% of respondents also stated that the importance of measuring human resource was of moderate importance to the accounting function. This reinforces the view that there is some interest in the accounting function in measuring human resources but perhaps more needs to be done to engage accountants within organisations in the debate on valuing human resources.

Valuation/Measurement Practices

In this section respondents were asked about the human resource measures that were utilized by their organisations. From a list of 33 measures, respondents were asked to identify which ones were used by their organisations and how often these were calculated. Respondents were also asked to identify the measures that were considered to be important measures, irrespective of whether the measures were currently used by their organisations. The measures included both measures, which might predominantly be used by the human resource function in an organisation such as job satisfaction and organisational commitment and measures of wider interest such as economic value added and intellectual capital. The respondents were asked to add to the list if the measures they used were not included.

Absenteeism and accident frequency rate are measures which have to be kept by organisation and hence, not surprisingly, are kept by more than 70% of the respondents. Of the other measures the following are identified as being used by more than 50% of the respondents, ranked in order of use:

Take in table (vi) - measures used most by UK organisations

Apart from client satisfaction surveys, the other measures are internal to the organisation, mostly relevant to the human resource function and are calculated monthly, quarterly or annually as appropriate. None of the measures are calculated on daily or weekly basis.

The measures that are used the least, by less than 30% of the respondents are given below, ranked in order of importance:

Take in table (vii) - measures used least by UK organisations

The other measures, identified below and ranked in order of use, were reported to some extent, with 30% to 50% of respondent stating that these measures were reported, again either monthly, quarterly or annually.

Take in Table (viii) - measures used to moderate extent by UK organisations

Thus there are a range of measure that are not used by many respondents or used by between 30% and 50% of respondents. This supports the view that although an area of interest and importance in organisations, there are relatively few measures actually calculated by organisations in relation to the valuation of human resources. This may also indicate that, in practice, there is little agreement as to what should be measured. There were no major differences in responses between the three sector groupings with all three groupings identifying a variety of measures that are currently calculated.

Finally in this section, respondents were asked to indicate how important the different measures outlined above were for their industry. The following, ranked in order of importance, were considered as important measures with over 70% of respondents indicating that they were important or extremely important.

Take in table (ix) - which measures are deemed most important

The least important measures, with less than 30% of respondents identifying them as very or extremely important were, ranked in order of importance:

Take in table x - which measures are deemed least important

The remaining measures, ranked in order of importance are given below:

Take in Table (xi) - Which measures are given moderate importance

With such a wide range of measures considered important, this lends supports to the proposition that there is only limited consensus as to what should be measured. It may well also indicate that a prescriptive approach is neither feasible nor desirable. Instead, a more flexible approach with organisations being able to use those measures most appropriate to their circumstances may be the way forward. Also, complex measures such as intellectual capital are not identified as being important and this may, in part, be due to the perceived difficulty and complexity in calculating these, lack of agreement on how they should be calculated and concerns about quantifying people.

There were no major differences in the responses of the three sector groupings with all three sector groupings identifying a variety of measures as being important.

Future Progress

In this section, respondents were asked about future plans in relation to valuing human resources. If respondents did have plans they were asked what measures would be reported, why the information was to be collected, who in the organisation the measures would be reported to, whether the information would be reported internally or externally and how often the measures would be reported. Respondents were also asked about the barriers they might face in implementing new measures and asked on a scale from no progress to significant progress, how much progress they thought would be made in valuing human resource and human resource accounting in the next five years.

In relation to future plans, 39.6% of the respondents stated that their organisations had plans to introduce human resource measures in the next year, 22.2% in the next two to five years and 9% in over five years. Those that did have plans were asked to outline these plans. Respondents that did give brief details of plans were generally at the stage of deciding which measures should be used and how often. In all cases, the measures were to be reported internally to senior management. Respondents did not include details of specific measures. A few respondents outlined plans of pilot studies and the acquisition of appropriate software to facilitate the capture of human resource information and a couple of respondents in the private sector stated that they would be using a balanced scorecard type approach, but plans were at an early stage.

The qualitative comments, a wide variety of issues and concerns are raised by the respondents who did provide qualitative comments. There are some issues that are common to all three types of organisations. Support for valuing human resources is indicated by respondents in all three organisations due to the importance of employees to organisations. Private sector respondents indicate that the drive for profits in an increasingly competitive market would be a key driver for the valuation of employees while local authority respondents indicate that the difficulty in recruitment and retention of staff, together with government led requirements would drive employee valuation in the local authorities. However, the view that the valuation of employees was the latest management fad and that measures already used were adequate was also expressed by some respondents indicating that support for the valuation of employees was not universally and unambiguously accepted.

In relation to barriers against implementation of human resource measures, the two main factors identified by most respondents, irrespective of sector, were lack of time and resources. Another common theme against valuation of human resources was the complexity and difficulty in doing this in practice. Other concerns identified by respondents from all industries as barriers

against progress included concerns as to quantifying people, letting accounting take over, professional jealousies, resistance to change and political pressures. In addition, private sector respondents indicate lack of board commitment to the area due to a short-term approach taken by senior management and lack of awareness of the area as key barriers to progress. They also indicate that measures should not be calculated for their own sakes but to improve the business and that it would be difficult to persuade the board of this, due to up front costs and uncertain long term benefits.

The wide range of concerns and views expressed by respondents in all three types of organisations in the qualitative comments highlights some of the problems which will need to be addressed in order to make progress in the future. These include both conceptual issues such as developing appropriate measures or techniques for valuing employees and empirically based issues such as gaining the commitment and interest of business leaders and analysing the implementation of appropriate measures into organisations.

In response to how much progress there was likely to be in the next five years, 19.1 % of the respondents considered that there would be little or no progress in human resource accounting over the next five years, 65.3% of the respondents considered that some or moderate progress would be made in the next five years. Only 13% of the respondents considered that there would be significant progress in the valuation/measurement of human resources in the next five years. Of the ones that did indicate significant progress, most of these come from knowledge intensive companies and this may be for two reasons. The first is that people are the main source of competitive advantage in these companies and the second is that in some of the industries, measurement has never been important in general and hence they will be implementing measures from a lower starting point and hence will see the most progress.

Summary and Conclusions

This research set out to explore current perceptions and practices in the area of valuing human resources focusing on the importance of, and reasons for, valuing human resources, identifying current measures being used, identifying the barriers to valuation of human resources and the progress expected in this field over the next five years

A survey questionnaire was sent to both the finance/accounting function and to the human resource function in three types of organisations, traditional companies in the private sector, knowledge intensive companies in the private sector and local authorities in the public sector.

From the responses, it appears that many regard as important the measuring of human resources to improve the accountability of the human resource function and to facilitate strategic planning by giving information about whether people resources would be available to achieve strategic plans, making the costs of different actions visible and focusing on people as an investment rather than as an expense.

Respondents identified that the valuation of human resources was more important for the human resource function and senior management than for line management and the accounting function. A third of the respondents identified that human resource professionals did not have the necessary expertise to measure or value human resources and that the best way to make progress would be to use multifunctional teams in order to obtain the expertise of both the HR and accounting functions and to improve the acceptance and understanding of human resource measures across the organisation.

Currently, a range of measures relating to human resources were calculated but only seven were used by more than 50% of respondents. These were absenteeism, accident rates, training and educational costs, turnover rate, cost of people, client satisfaction surveys and competencies. Only ten measures were identified as being important by more than 70% of respondents and these were job satisfaction, leadership, absenteeism rates, client satisfaction surveys, turnover rate, competencies, cost of people, learning, organisational commitment and return on training. Measures such as intellectual capital and economic value added were identified as being important by relatively few respondents.

However, there were a wide range of measures considered either of moderate or high importance and this indicates that there is only limited consensus as to what should be measured and may also indicate that a prescriptive approach is neither feasible nor desirable. Instead, a more flexible approach with organisations being able to use those measures most appropriate to their circumstances may be the way forward. Perhaps, underlying these results, is that when deciding on the importance of a measure, respondents also consider the complexity of the measure. This may lead to some measures being described as being less important to the majority of respondents because of the difficulties involved in calculating them, the lack of agreement on how they should be calculated and concerns about quantifying people.

The main barriers to the valuation of human resources were identified to be lack of time and resources to progress the area, lack of understanding of the area by others in the organization, lack of precision in valuation methods and uncertainty as to who the information should be reported to.

Other moderate concerns in relation to the valuation of human resources included lack of reliable and valid measures which are not overly complex and difficult, the lack of widely accepted measures and models, concerns as to quantifying people and lack of expertise by the human resource function in relation to valuation of human resources.

Very few respondents had detailed plans in relation to implementing the valuation of human resources, but most respondents did state that they had plans to introduce some measures in relation to human resources over the next five years. Despite this, only a minority of respondents considered that there would be significant progress, with most identifying little or moderate progress citing the barriers outlined above.

One of the issues that need to be explored further is how the views of those involved in accounting and finance be reconciled with those involved in human resource management. This seems to suggest an interesting paradox. Human resource managers need the support of their accounting colleagues to be able to develop and initiate human resource measures. However to gain this support they need first to be able to convince their accounting colleagues that such measures are important, reliable and valid. In order to do this they need to work with these colleagues to develop such measures. Here lies the rub because those whose help they need are not entirely convinced as to the merits of measurement in the first place. So to make progress human resource managers must gain the support of their accounting colleagues but their accounting colleagues need convincing that measurement is worthwhile. As human resource managers cannot do the latter without help from the very colleagues who appear somewhat unconvinced and this might be a circle that is difficult to square.

Despite the interest in this area, the survey concludes with the view that there will be only moderate progress in the area over the next five years, most likely because of the perceived difficulties confronting those wishing to measure human resources in practice. In order to show greater progress, more needs to be done at both the theoretical and empirical level. More conceptual research is needed into valuation methods and models, the use of a range of measures, including soft measures, how best to deal with concerns over quantifying people, how best to deal with sector differences and differences between the private and the sector and local authorities. As well as developing appropriate measures which would gain acceptance by most organisations, empirical research is also needed into issues such as gaining the commitment to valuing employees by senior management, which will, no doubt, involve persuading management of the benefits of the process compared to the costs involved, how systems to value employees, when developed, are

implemented into organisations and the consequences, both intended and unintended of how the systems operate in practice.

Appendix 1

Important reasons for measuring human resources	Mean response acc	Mean response hr
By identifying the value added contribution of human resources, the impact of human resources on financial results can be developed	3.4894	3.8085
The language of business is dollars. To earn credibility and receive needed resources, human resources need to speak in financial terms	3.0213	3.5704
Measurement of human resources gives investors needed information about the value of the business and its potential for future profitability	2.7174	3.1929
Measurement of human resources gives management needed information about the people resources in the organisation and if the resources are there to support business strategies	3.6170	3.9859

Appendix 2

Important reasons for measuring human resources	Mean response trad co	Mean response public sector
The knowledge and skills of our people is our most important source of sustained competitive advantage	4.0784	3.7955
The language of business is dollars. To earn credibility and receive needed resources, human resources need to speak in financial terms	3.5686	2.9318
Measurement of human resources gives investors needed information about the value of the business and its potential for future profitability	3.1667	2.8434
Important reasons for measuring human resources	Mean response public sector	Mean response KI co
The knowledge and skills of our people is our most important source of sustained competitive advantage	3.7955	4.3846
By identifying the value added contribution of human resources, the impact of human resources on financial results can be developed	3.7386	3.3974
Measurement encourages the alignment of human resource plans with business plans	3.7640	3.3974
The language of business is dollars. To earn credibility and receive needed resources, human resources need to speak in financial terms	2.9318	3.7273
Important reasons for measuring human resources	Mean response trad co	Mean response KI co
The knowledge and skills of our people is our most important source of sustained competitive advantage	4.0784	4.3846
Measurement helps with strategic planning	3.7941	3.5128
Measurement allows people to be seen as an investment to be developed rather than as an expense to be trimmed	3.5980	3.2821
By identifying the value added contribution of human resources, the impact of human resources on financial results can be developed	3.7745	3.3974
Measurement encourages the alignment of human resource plans with business plans	3.6863	3.3974
Measurement helps solve human resources problems	3.1373	2.7436

Appendix 3

Reasons preventing the measurement of human resources	Mean response acc	Mean response hr
Current human resource measures lack reliability	3.5333	3.1064
Current human resource measures are too complex	3.8913	2.9858
Current human resource measures are too difficult	3.2609	2.8440
Current human resource measures are confusing	3.3696	2.9577
Human resource people do not have the necessary expertise to measure	3.1957	2.5957
Existing personnel and company policy do not facilitate the use of human resource measures	3.4000	2.9714
Uncertainty as to who should be involved in the development of appropriate measures	3.0870	2.7429

Appendix 4

Reasons preventing the measurement of human resources	Mean response trad co	Mean response public sector
Current human resource measures are confusing	3.000	3.3218
There are not enough financial resources available to measure human resources	3.0490	3.4070
Lack of understanding of the measures by others in the organisation	3.2871	3.7471
Concerns as to quantifying people	3.0990	3.4353
Uncertainty as to whom in the organisation the information should be reported to	2.6436	2.9651
Reasons preventing the measurement of human resources	Mean response public sector	Mean response KI co
Current human resource measures are confusing	3.3218	3.0132
concerns as to how human resource information will affect decision making in the organisation	3.0706	2.7368
Reasons preventing the measurement of human resources	Mean response trad co	Mean response KI co
Lack of understanding of the measures by others in the organisation	3.2871	3.5789

References and Bibliography

Accounting Standards Board, 2005, Reporting Standard 1, The Operating and Financial Review

Alexander, M.O., 1971, "An Accountants View of the Human Resource", The Personnel Administrator, Nov/Dec, pp9-13

American Accounting Association, 1973, "Report of the Committee on Human Resource Accounting", The Accounting Review, Supplement to Vol 48, pp169-185

Bank, D., 1996, "Technology – Know It Alls – Chief Knowledge Officers Have a Crucial Job, Putting the Collective Knowledge of a Company at Every Worker's Fingertips", Wall Street Journal, Eastern Edition, November, 19, p28

Blacker, F., 1995, "Knowledge, Knowledge Work and Organisations: An Overview and Interpretation", Organisation Studies, Vol 16, Nos 6, pp16-36

Bontis, N., 2002, "Intellectual Capital, An Exploratory Study That Explores Measures and Models", in Choo, C.W. and Bontis, N. (Eds) in The Strategic Management of Intellectual Capital and Organisational Knowledge,, New York, Oxford University Press

Boudreau, J.W., and Ramstad, P.M., 1997, "Measuring Intellectual Capital: Learning From Financial History", Human Resource Management, Vol 36(3), pp343-356

Brooking, A., 1997, Intellectual Capital: Core Assets for the Third Millennium Enterprise, Berkshire House, Thompson Business Press

Brummet R.L., Flamholtz, E and Pyle, W.C., 1968, "Human Resource Management: A Challenge for Accountants", The Accounting Review, April, pp217-224

Brummet, R.L., 1974, "Accounting for Human Resources", CMA Bulletin, Vol 11, pp9-23

Cascio, W.F., (1998), "The Future World of Work: Implications for Human Resource Costing and Accounting", Journal of Human Resource Costing and Accounting, Vol 3, pp9-19

Castells, M., 1996, "The Rise of the Network Society", Blackwell, Oxford

Cohen, D., 1998, "Toward a Knowledge Context", California Management Review, Vol 40, Nos 3, spring, pp22-39

Cyert, R.M., Kumer, P.K., and Williams, J.R., 1993, "Information Market Imperfections and Strategy", Strategic Management Journal, Vol 14 (winter special issue) pp47-58

Davenport, T.H., and Prusak, L., 1997, Working Knowledge: How Organisations Manage What they Know, Harvard Business School Press, Boston

Drucker, P., 1993, Post capitalist Society, Butterworth, Heinemann, London

DTI, 2003, Accounting for People, DTI report

Edvinsson, L. and Malone, M., 1997, Intellectual Capital, Piatkus, London

Edvinsson, L., 1997, "Developing Intellectual Capital at Skandia", Long Range Planning, Vol 30(3), pp366-373

Elias, N., 1972, "The Effects of Human Asset Statements on the Investment Decision: An Experiment", Empirical Research in Accounting; Selected Studies, pp215-233

Fahey, L. and Prusak, L., 1998, "The Eleven Deadliest Sins of Knowledge Management", California Management Review, Vol 40, Nos 3, spring, pp265-276

Fitz-Enz, J., 2000, The ROI of Human Capital, Amacom, New York

Flamholtz E., 1976, "The Impact of Human Resource Valuation on Management Decisions: A Laboratory Experiment", Accounting, Organisations and Society, pp153-165

Flamholtz, E. and Kaumeyer, R.A., 1980, "Human Resource Replacement Cost Information and Personnel Decisions: A Field Study", Human Resource Planning, fall, pp111-138

Flamholtz, E.G., 1971, "A Model for Human Resource Valuation: A Stochastic Process With Service Rewards", *The Accounting Review*, April, pp666-678

Flamholtz, E.G., 1972, "Towards a Theory of Human Resource Value in Organisations", *The Accounting Review*, Vol 47, pp666-678

Flamholtz, E., 1973, "Human Resource Accounting: Measuring Positional Replacement Cost", *Human Resource Measurement*, spring, pp8-16

Flamholtz, E., and Geis, G., 1984, "The Development and Implementation of a Replacement Cost Model for Measuring Human Capital: A Field Study", *Personnel Review (UK)*, Vol 13, Nos 2, pp25-35

Flamholtz, E.G., 1999, "Human Resource Accounting, Advances in Concepts, Methods, and Applications", 3rd Ed, Kluwer Academic Publishers, Massachusetts

Frantzreb, R.B., Landau, L.L.T., and Lundberg, D.P., 1974, "The Valuation of Human Resources", *Business Horizons*, June, pp73-80

Glazer, R., 1998, "Measuring the Knower: Towards a Theory of Knowledge Equity", *California Management Review*, Vol 40, Nos 3, spring 1998, pp175-194

Guthrie, J. and Petty, R., 2001, "Intellectual Capital: Australian Annual Reporting Practices", *Journal of Intellectual Capital*, Vol 1, 3, pp241-251

Guthrie, J., 2001, "The Management, Measurement and the Reporting of Intellectual Capital", *Journal of Intellectual Capital*, Vol 2, 1, pp27-41

Guthrie, J., Petty, R. and Johanson, U., 2001, "Sunrise in the Knowledge Economy, Managing, Measuring and Reporting Intellectual Capital", *Accounting, Auditing and Accountability Journal*, Vol 14, 4, pp365-384

Hendricks, J., 1976, "The Impact of Human Resource Accounting Information on Stock Investment Decisions; An Empirical Study", *The Accounting Review*, April, pp292-305

Holthouse, D., 1998, "Knowledge Research Issues", *California Management Review*, Vol 40, Nos 3, spring, pp276-280

Jaggi, B.L., 1974, "Valuation of Human Resources in a Firm", *The Chartered Accountant*, March, pp467-470

Johanson, U., Martensson and Skoog, M., 2001, "Mobilizing Change Through the Management of Intangibles", *Accounting, Organisations and Society*, Vol 26, 7-8, pp715-733

Kaplan, R.S. and Norton, D., (1996), *The Balanced Scorecard*, Harvard Business School Press, Boston

Lev, B., and Schwartz, A., 1971, "On the Use of the Economic Concept of Human Capital Financial Statements", *The Accounting Review*, January, pp103-112

Likert, R., 1971, "Human Organisational Measurements: Key to Financial Success", *Michigan Business Review*, May, pp1-5

Likert, R., and Bowers, D.G., 1973, "Improving the Accuracy of P/L Reports by Estimating the Change in Dollar Value of the Human Organisation", *Michigan Business Review*, March, pp15-24

Marshall, L., 1997, "Facilitating Knowledge Management and Knowledge Sharing: New Opportunities for Information Professionals", *Online*, Vol 21, Nos 5, pp92-8

Mayo, A., *The Human Value of the Enterprise*, 2001, Nicolas Brearley Publishing, London

McDermott, R., 1998, "Why Information Technology Inspired But Cannot Deliver Knowledge Management", *California Management Review*, Vol 40, Nos 4, summer 1999, pp103-117

Meer-Kooistra, J., and Zijlstra S.M., 2001, "Reporting on Intellectual Capital", *Accounting, Auditing and Accountability Journal*, Vol 14, 4, pp456-476

Morrow, S., 1996, "Football Players as Human Assets. Measurement as the Critical Factor in Asset Recognition: A Case Study Investigation", *Journal of Human Resource costing and Accounting*", Vol 1, Nos 1, spring, pp75-87

Mourtisen, J., Larsen, H.T. and Bukh, P.N., 2001, "Intellectual Capital and the 'Capable Firm': Narrating, Visualising and Numbering for Managing Knowledge", *Accounting, Organisations and Society*, Vol 26, 7-8, pp735-762

Mourtisen, J., Larsen, H.T. and Bukh, P.N., 2001, "Valuing the Future: Intellectual Capital Supplements at Skandia", *Accounting, Auditing and Accountability Journal*, Vol 14, 4, pp399-422

Nahapiet, J. and Ghosal, S., 1998, "Social Capital, Intellectual Capital and the Organisational Advantage", *Academy of Management Review*, Vol 23, pp242-266

Nelson, R.R., 1991, "Why Do Firms Differ, and How Does It Matter", *Strategic Management Journal*, Vol 12 (winter special issue), pp61-74

Nonaka, I, and Takeuchi H., 1995, *The Knowledge Creating Company*, Oxford University Press, New York

Nonaka, I., 1991, *The Knowledge Creating Company*, *Harvard Business Review*, November-December, pp96-104

Nonaka, I., Toyama, R., and Nagata, A., 2000, "A Firm As a Knowledge-Creating Entity: A New Perspective on the Theory of the Firm", *Industrial and Corporate Change*, Vol 9, Nos 1, March, pp1-20

Ogan, P., 1976, "A Human Resource Value Model for Professional Service Organisations", *The Accounting Review*, April, pp306-320

Oliver, J. and Flamholtz, E.G., 1978, "Human Resource Replacement Cost Numbers, Cognitive Information Processing and Personnel Decisions: A Laboratory Experiment, Journal of Business and Finance & Accounting, Vol 5, 2, pp137-157

Petty, R. and Guthrie, J., 1999, "Managing Intellectual Capital from theory to Practice," Australian CPA, August, pp18-21

Pfeffer, J., "Pitfalls on the Road to Measurement: The Dangerous liasion of Human Resources with the Ideas of Accounting and Finance", Human Resource Managment, Vol 36, pp357-365

Prahalad, C.K., and Hamel, G., 1990, "The Core Competence of the Corporation", Harvard Business Review, Vol 68(3), pp79-91

Pyle, W.C., 1970, "Monitoring Human Resources – On Line", Michigan Business Review, July, pp19-32

Quintas, J.B., Anderson, P. and Finklestein, S., 1996, "Managing Professional Intellect: Making the most of the best"" Harvard Business Review, Vol 74, March-April, pp71-80

Roos, G., Roos, G, Edvinsson, L. and Dragonetti, N.C., 1997, Intellectual Capital: Navigating in the New Business Landscape, Macmillan Business, Houndsmill

Roslender, R and Dyson, J.R., 1992, "Accounting for the Worth of Employees: A New Look at an Old Problem", British Accounting Review, Vol 24, Nos 4, pp322-329

Roslender, R., 1997, "Accounting for the Worth of Employees: Is the Discipline Ready to Respond to the Challenge?" Journal of Human Resource Costing and Accounting, Vol 2, Nos 1, pp9-26

Roslender, R., Stevenson, J. and Fincham,R., "The UK Human Capital Management Initiative: A Review of the Accounting for People Report", Journal of Human Resource Costing and Accounting, Vol 8, Nos 1, pp7-19

Ruggles, R., 1998, "The state of the Notion, Knowledge Management in Practice", California Management Review, Vol 40, Nos 3, spring, pp80-89

Sackmann, S.A., Flamholtz, E.G., and Bullen, M.L., 1989, "Human Resource Accounting, A State of the Art Review", Journal of Accounting literature, Vol 8, pp235-264

Saint Onge, H., (1996), "Tacit Knowledge: The Key to the Strategic Alignment of Intellectual Capital", Strategy and Leadership, April

Scarborough, H., 1999, "Knowledge as Work: Conflicts in the Management of Knowledge Workers", Technology Analysis & Strategic Management, Vol 11, Nos 1, pp579-590

Scarpello, V., and Theeke, H.A., 1989, "Human Resource Accounting: A Measured Critique", Journal of Accounting Literature, Vol 8, pp265-280

Statutory Instrument, 2005, SI 2005/1011, HMSO

Stewart, T.A., 1997, "Intellectual Capital", Nicolas Brearly Publishing, London

Sullivan, P.H., 1998, "Profiting from Intellectual Capital: Extracting Value from Innovation", John Wiley, New York

Sveiby, K., 1997, "The New Organisational Wealth: Managing and Measuring Knowledge Based Assets", Berret-Koehler, San francisco

Swan, J., Newell, S., Scarborough, H., and Hislop, D., 1999, "Knowledge Management and Innovation: Networks and Networking", Journal of Knowledge management, Vol 3, Nos 4, pp262-275

Teece, D., 1998, "Research Directions for Knowledge Management", California Management Review, Vol 40, Nos 3, spring, pp289-292

Teece, D.J., 2000, Managing Intellectual Capital, Oxford University Press, New York

Tomassini, L.A., 1977, "Assessing the Impact of Human Resource Accounting: An Experimental Study of Managerial Decision Preferences", *The Accounting Review*, March, pp1-17

Toulson, P.K., and Dewe. P., 2004, HR accounting as a measurement tool, *Human Resource Managment Journal*, Vol 14, No 2, pp75-90

Turner, G., 1996, "Human Resource Accounting – Whim or Wisdom?", *Journal of Human Resource Costing and Accounting*, Vol 1, Nos 1, pp63-73

Verma S. and Michie J. (1999), "Is Paul Ince an asset or a Liability? Accounting Football and Governance Issues in Football" in: Hamil, S., Michie, J. and Oughton C., (eds), *A Game of Two Halves? The Business of Football*, Mainstream, Edinburgh

Verma, S., and Dewe, P., 2004, "Valuing human resources", ACCA Report

Weick, K., and Roberts, K., 1993, "Collective Minds in Organisations: Heedful Interrelating on Flight Decks", *Administrative Science Quarterly*, Vol 38, pp357-81

Table (i) - important reasons for measuring human resources

Important reasons for measuring human resources	% agreed or strongly agreed
Human resources should be accountable, just like any other function	94.1
The knowledge and skills of our people is our most important source of sustained competitive advantage	79.4
Measurement of human resources gives management needed information about the people resources in the organisation and if the resources are there to support business strategies	75.1
Measurement helps with strategic planning	70.2
Understanding the value of our people focuses on our future human resource needs, which is crucial for both setting long term strategies and achieving them	68.8
By identifying the value added contribution of human resources, the impact of human resources on financial results can be developed	65.6
Through measuring the effectiveness of a particular programme and the impact it will have on the level of knowledge within the organisation, management can make better decisions	65.5
Measurement encourages the alignment of human resource plans with business plans	63.4
Measurement increases the preparedness of management to take action	59.6
Measurement encourages human resource to adopt a strategic perspective	56.4
Measurement allows people to be seen as an investment to be developed rather than as an expense to be trimmed	55.3
The language of business is dollars. To earn credibility and receive needed resources, human resources need to speak in financial terms	54
Measuring human resources facilitates decision making by making the costs of different actions visible	51.1
To be able to manage knowledge we need to be able to measure it	50.9
Measurement of the knowledge and skills of employees is an important indicator of future profitability	34.5
Measurement helps solve human resource problems	32.5
Measurement of human resources gives investors needed information about the value of the business and its potential for future profitability	32.0
Human resources should be mandated and have as one of their priorities the development of HRM accounting procedures and practices.	30.4
Through being able to demonstrate the value and importance of the organisation's human resources, human resources becomes a strategic partner.	16.0

Table (ii) - industry differences in reasons for measuring human resources

Between traditional and public sector	Between public sector and knowledge intensive	Between traditional and knowledge intensive
The knowledge and skills of our people is our most important source of sustained competitive advantage	The knowledge and skills of our people is our most important source of sustained competitive advantage	The knowledge and skills of our people is our most important source of sustained competitive advantage
The language of business is dollars. To earn credibility and receive needed resources, human resources need to speak in financial terms	The language of business is dollars. To earn credibility and receive needed resources, human resources need to speak in financial terms	By identifying the value added contribution of human resources, the impact of human resources on financial results can be developed
Measurement of human resources gives investors needed information about the value of the business and its potential for future profitability	By identifying the value added contribution of human resources, the impact of human resources on financial results can be developed	Measurement allows people to be seen as an investment to be developed rather than as an expense to be trimmed
	Measurement encourages the alignment of human resource plans with business plans	Measurement encourages the alignment of human resource plans with business plans
		Measurement helps with strategic planning
		Measurement helps solve human resources problems

Table (iii) - Reasons preventing the valuation/ measurement of human resources

Reasons preventing the measurement of human resources	% Agreeing or strongly agreeing
Lack of understanding of the measures by others in the organization	58.8
Uncertainty as to what information should be reported	58.8
Current human resource measures lack of precision	57.7
Current human resource measures are not widely accepted	47.2
Current human resource measures lack reliability	47.0
Concerns as to quantifying people	44.7
Current human resource measures lack validity	44.4
There are not enough financial resources available to measure human resources	44.4
There is not enough time to develop appropriate human resource measures	44.1
Current human resource measures are confusing	40.0
Existing personnel and company policy do not facilitate the use of human resource measures	38.9
Uncertainty as to who should be involved in the development of appropriate measures	38.0
Current human resource measures are too complex	36.9
Uncertainty as to the appropriateness of using hard financial measures or softer non financial measures	36.2
Current human resource measures are too difficult	34.4
Human resource people do not have the necessary expertise to measure	31.2

Table (iv) - Differences in barriers to valuation between industry groupings

Between traditional companies and the public sector	Between the public sector and knowledge intensive companies	Between trad and knowledge intensive companies
Lack of understanding of the measures by others in the organisation		Lack of understanding of the measures by others in the organisation
Current human resource measures are confusing	Current human resource measures are confusing	
There are not enough financial resources available to measure human resources	concerns as to how human resource information will affect decision making in the organization	
Concerns as to quantifying people		
Uncertainty as to whom in the organisation the information should be reported to		

Table (v) - importance of valuing human resources at different levels of the organization

Level in the Organisation	% Very important or extremely important	% Moderate importance	Total very important, extremely important and moderate importance
Human resource management	84.0	11.3	95.3
Senior management	63.6	23.8	87.4
CEO	63.3	18.6	81.9
Board of directors	54.7	14.0	68.7
Line management	49.5	26.9	76.4
Financial and management accounting	44.9	32.9	77.8

Table (vi) - measures used most by UK organizations

Which measures are used most by UK organisations	% Used
Training and educational costs	68.8
Turnover rate	67.0
Cost of people	65.3
Client satisfaction surveys	60.4
Competencies	50.5

Table (vii) - Measures used least by UK organisations

Which measures are used least by UK organisations	% Used
HR ratio	28.8
Tenure	25.7
Learning	25.3
Return on investment	24.7
Leadership	22.9
Organisational commitment	19.1
Return on training	18.8
Seniority	18.1
Training lost	16.0
Cost-benefit analysis	14.2
Total shareholder return	12.2
Innovation	9.0
Economic value added	8.0
Value added per employee	7.6
Return on investment in human capital	6.9
Intellectual capital	2.8

Table (viii) - Measures used to moderate extent by UK organisations

Which measures are used to some extent by UK organisations	% Used
Average age	46.5
Healthcare cost per employee	40.3
Job satisfaction	38.5
Revenue per employee	37.5
Cost per hire	36.5
HR cost/investment	36.8
Experience	34.4
Time to fill jobs	33.7
Educational level	33.3
Turnover cost	31.9

Table (ix) - Which measures are deemed most important

The importance of particular measures	% Indicating very or extremely important
Job satisfaction	85.2
Leadership	84.1
Absenteeism rate	84.0
Client satisfaction surveys	83.7
Turnover rate	79.1
Competencies	77.1
Cost of people	74.8
Learning	74.7
Organisational commitment	71.6
Return on training	71.2

Table (x) - Which measures are deemed least important

The importance of particular measures	% Indicating very or extremely important
Tenure	23.0
Healthcare cost per employee	20.7
Average age	17.7
Seniority	16.1

Table (xi) - which measures are given moderate importance

The importance of particular measures	% very or extremely important
Turnover cost	69.3
Accident frequency rate	68.4
Training and educational costs	64.8
Experience	57.1
Return on investment	55.2
Value added per employee	54.4
human resource cost/investment	53.9
Revenue per employee	53.9
Return on investment in human capital	52.9
Cost per hire	52.5
Innovation	52.1
Time to fill jobs	51.2
Cost-benefit analysis	46.7
Training lost	42.0
Total shareholder return	39.8
human resource ratio	39.2
Educational level	32.8
Intellectual capital	32.8
Economic value added	31.8