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**REPORTING ON HUMAN CAPITAL;  
OBJECTIVES AND TRENDS**

**COUNTRY COVERED:** The paper is not nationally related as such but provides examples from some countries, notably the **UK, DENMARK** and **FINLAND**

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## **ABSTRACT**

The article covers informs about the different levels and stages where reporting on human capital can take place. Further, it provides a stakeholder analysis in order to identify the needs creating the demand for reporting tools on human capital. Generally, the article favours pragmatic approaches which are of instant value to enterprises rather than aiming at ideal reporting frameworks which encounters numerous theoretical and practical deficiencies. Lastly, and still incomplete in this working paper, is the notion that the establishment of a standard framework should be established by public authorities but their unwillingness to commit themselves result in either a more limited approach will be come the standard or, the market will have chaotic number of tools with little comparability and limited reliability.

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## INTRODUCTION

1. Human capital encapsulates individuals' attributes, which are of use at the labour market, while reporting on human capital, on the other hand, is primarily associated with the enterprise level. This apparent paradox is partly due to the fact that the identification of individual's knowledge, competencies and skills as well as its acquisition, maintenance and upgrading, i.e. the input side to human capital, is only rarely related to the output, i.e. human capital, irrespective of the former being the very substance in the latter. This lack of interconnection is primarily due to different traditions where human capital is considered a purely economic terms whereas the individual's acquisition of knowledge is primarily related to the pedagogical, sociological and psychological fields. One reason for this being, of course, that the notion of human capital does originate from within economy and, further, that economists still relate human capital primarily to the enterprise level and/or at macro-economic level while generally neglecting the individual's level.
2. In this paper human capital is defined as "the knowledge, skills, competencies and other attributes embodied in individuals or groups of individuals acquired during their life and used to produce goods, services or ideas in market circumstances."<sup>1</sup>
3. The paper will focus on the enterprise level and primarily with an economic perspective, but, as indicated above, other levels and dimensions will play a significant role throughout the paper. This is particularly the case when it comes to reporting on human capital, and when it comes to an analysis of the interests of the main stakeholders.

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<sup>1</sup> For the discussion of the definition, please refer to the chapter on theoretical and methodological considerations.

## 1. THE SOCIO-ECONOMIC CONTEXT

4. Technological, commercial and organisational developments have changed the labour market. Shorter life cycles of goods and services, increased and globalised competition, the growing importance of intangible assets at all stages in the production cycles and new forms of work organisation have transformed both the work place and the skills required to perform a given task. This requires new qualifications from employees and a new perception of the work force and of the work organisation from employers in that “traditional” instrumental skills are not any longer viewed to be sufficient to maintain competitiveness; flexibility, responsibility and involvement by the work force must be added while also requiring new dimensions to the management and organisation of work.

5. The strict distinction between knowledge workers, skilled workers and unskilled workers is thus diminishing following the more horizontal organisation of work leading to a higher utilisation of the knowledge inherited in all employees at all levels and not necessarily limited to the employees’ core work. The enterprises’ knowledge base is thus not just identified in special units such as the management group, the R&D department or the sales division. Rather, the knowledge base is increasingly being diversified covering the entire work force.

6. Achieving the competitive edge for individuals, enterprises and societies alike is thus increasingly becoming synonymous with the notion of human capital. This is partly justified by the growing importance of intangible assets in enterprises, of which human capital constitutes a major element and by the emphasis from both public and private bodies on human capital as a saviour of competitiveness, reduction of unemployment and expansion of economic wealth.

7. Human capital has therefore become the focal point for theoretical and methodological considerations and analyses as well as for numerous pilot projects initiated by practitioners, researchers and policy-makers alike. Further, and irrespective of its economic origin at enterprise level, human capital is now subject to various levels and dimensions, as illustrated in table 1.<sup>2</sup>

**Table 1. Level and dimensions of human capital**

<i>Level/ Dimension</i>	Politics	Economy	Sociology	psychology
Individual	Increase skills level	Increase earnings	Increase equality	Increase self-esteem
Enterprise	Comply with surrounding society	Increase competitiveness	Improve the enterprise image	Improve work environment
Government	Complement labour market and employment policies	Share the costs related to education and training	Implement the lifelong learning concept	The notion of a dynamic government/ society

Note: Different levels as well as different dimensions may have identical objectives. The examples given must, therefore, be treated as indicative rather than exhaustive examples.

<sup>2</sup> See for instance Coleman 1988, Fukuyama 1995 and Goleman 1996.

8. The levels and especially the dimensions are to a great extent interrelated with many overlaps, which must be kept in mind while working with human capital in general and reporting on it in particular. It is therefore critical to have a clear understanding of the various stakeholders' interests as well as the specific objectives for concrete methods while also keeping in mind related levels and dimensions while exploring possibilities and limitations on the notion of human capital and the reporting of it.

### **1.1 Macro-economy and human capital; the endogenous growth theory**

9. Human capital is related to the economic interaction of the labour market and it is the human knowledge as a production factor, which is of interest as opposed to, for instance, social or cultural interactions<sup>3</sup>. It is thus the human capital's contribution to economic development, which is looked into. As such, human capital is closely related to physical and financial capital though it must be treated differently, both theoretically and in practice due to its intangible nature.

10. Although being acknowledged theoretically, human capital has tended to be hidden under residual factors in economic growth theory<sup>4</sup>, primarily due to the difficulties in the measurement of human capital and other intangible values. However, the exogenous factors, i.e. the growth of (homogeneous) labour, investment and general technical progress has become less and less sufficient as to explain growth, development and productivity, both at micro and at macro level. Mainly because the growth of intangible inputs to the economy has grown and may even have exceeded investments in physical capital<sup>5</sup>.

11. Consequently, endogenous growth theory has gained momentum in recent years by opposing the classical notion of exogenous factors determining growth<sup>6</sup>. Instead, they include explicitly endogenous factors, foremost the accumulation of human capital, in order to explain growth and growth differentials between states<sup>7</sup>. The production of human capital in terms of the allocation of resources to the formation of knowledge in the labour force is thus being internalised rather than just being a "residual" factor.

12. While macro economic theory has begun to include human capital as a decisive, endogenous growth factor, the actual knowledge is still sparse. The most widespread method used for examining the influence of human capital on economic growth, is investment in education relative to national wealth<sup>8</sup>. However, these are very crude measures and do often only refer to school attainment and, thereby, neglect training outside the formal education systems, for instance vocational training not leading to formal qualifications or informal training. Further, they do not include the quality of the output.

13. This perspective conflicts with the demand from governments for international comparisons of national educational achievements, which is preoccupied with the quality of the output. While this perspective is also focusing predominantly on the formal education system and primarily the general

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<sup>3</sup> The notion "Social capital" refers to the influence of the social setting for the development of human capital. As such, social capital can be seen as going beyond the scientifically established boundaries between the social and the economic spheres of life. See Coleman 1994, Fukuyama 1995, Putnam 1995, World Bank 1999.

<sup>4</sup> A classic example is the Solow residual, i.e. the part of growth which is not explained within his growth model that is based on the growth of labour and capital.

<sup>5</sup> See for instance Ernst & Young (1997).

<sup>6</sup> For a discussion of Neo-classical versus endogenous growth analysis, see McCallum 1996.

<sup>7</sup> For the economic models see Lucas 1988, Rebelo 1991 and a review by McCallum 1996.

<sup>8</sup> See OECD's annual publications "Education at a glance", Psacharopoulos and Ariagada 1986, Barro and Lee 1993, Psacharopoulos 1994 and 1995.

education segment, benchmarking has taken place for a long time, for example through surveys by IEA<sup>9</sup>, it is not directly related to the economic growth.

14. As Steedman phrases it: “growth economists are concerned principally with human capital as an *input*, that is, one among a number of independent variables influencing economic growth. Until now, they have had little interest in how (efficiently or inefficiently) those inputs have been produced. Governments and policy makers view stocks of human capital as outputs of educational provision - that is, as a dependant variable - and their questions largely concern relative efficiency in the way resources devoted to education are used<sup>10</sup>.”

15. Bearing in mind also the practical and methodological limitations to both approaches, it is still a long way to go before the creation of human capital outside the formal educational system will affect macro-economic thinking and be visible to the wealth creation at macro level. This is to a certain degree paradoxical to the intense promotion of investments in human capital formation outside the formal systems, notably through the notion of lifelong learning, which has taken place since mid 1990s.

## **1.2 Micro-economy and human capital; the returns to human capital**

16. As opposed to the macro level, calculating costs and returns on human capital at the micro economic level has a long history which dates back to at least the Roman times and includes calculations on slaves, soldiers and workers. However, it was in the 1960s that the human capital theory in its present meaning was introduced. The theory was originally based on the assumption that investments in human capital does pay off because the correlation between years of schooling or on-the-job training and income demonstrates that there is a positive rate of return.<sup>11</sup> This correlation was soon questioned both from a theoretical perspective as well as from empirical findings, nevertheless, it is the dominant method used to indicate returns on investments in human capital to individuals although being supplemented by screening and signalling theories.<sup>12</sup>

17. Still, the returns to individuals are fairly easily captured through the correlation of education and life earnings at an aggregate level. There are serious limitations, though. The methods do not, generally, provide any indication of the returns to investments on education and training outside the formal education and training structures, such as continuing vocational training, training supplementing initial vocational training, etc. This is particularly important for decisions on further investments by individuals, since the return to such investments may be invisible or even non-existent, especially in money terms. Theoretically, a higher level of human capital embodied in individuals, i.e. the increased level of labour market relevant knowledge obtained through additional training, should be reflected in the income. However, just as an increase in income does not necessarily stem from increased productivity, increased knowledge does not necessarily result in higher income.

18. Above all, the human capital theory does not identify the stock of human capital but merely the correlation between input of education and the return. At enterprise level, this is inadequate since their primary objective is the operational utilisation of human capital; hence, generalisations and abstract correlation between measures are of relative little use.

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<sup>9</sup> the International Association for the Evaluation of Educational Achievement (IEA).

<sup>10</sup> Steedman 1996.

<sup>11</sup> Please refer to Blaug 1985, Flamholtz 1985 and Schultz 1961 for further details about the roots of the human capital theory.

<sup>12</sup> For screening and signalling theories, see Weiss 1995. One serious attempt to expand the human capital theory can be found in OECD 1996, p. 19-23.

19. This leads to the most underdeveloped research area; the meso-economic or the enterprise level, where the same uncertainty regarding returns to investments can be identified. While the input side or the investments in maintaining or upgrading the human capital in enterprises is fairly easy to identify through measuring the direct and indirect costs, little is known about the output side and especially the returns to such investments<sup>13</sup>. Even if this is not a new problem, no reliable evaluation method has been developed so far<sup>14</sup>; human resource accounting, which originated as a response to this “black spot,” has not provided an adequate response so far.

20. More limited approaches, such as utility analyses on the cost and benefits of employment strategies and of health and security policies, have, however, developed into standard practises in many enterprises<sup>15</sup>. Although these elements play important parts in current thinking on reporting or accounting human capital they too do not measure the stock of human capital. However, they do provide an input-output relation at specific areas related to human capital; that is, the costs and benefit of maintaining a good safety and health environment and by outlining the costs and benefits of strategies where enterprises rely on a high staff turnover. This is information, which is of direct relevance for enterprises and although human capital cannot be reduced to a technical issue about cost and benefit alone, it does provide an easily understood and relatively simple method of evaluation.

21. Nevertheless, utility analyses, despite their practicability, do little to capture the maintenance and upgrading nor a specification of the enterprises’ stock of human capital. In other words, equivalent methods for measuring the stock of human capital or the returns to investments in training have not been developed.

22. The increasing use of benchmarking is therefore partly symptomatic to the lack of information on the return side, in that they primarily focus on investments/processes or the input side rather than the output side. Hence, benchmarking will only compare the enterprises’ input to the human capital formation but not how these investments are capitalised. However, benchmarking does provide the tool for providing information on the correlation between, say investments in training and net profits. Hence, some indirect measures as to the returns of investments can be established through benchmarking.

23. Benchmarking does not, however, provide a method for measuring directly the returns to training investments in enterprises.

24. Advocating for increased investments in continuous or lifelong learning by policy-makers, researchers and some practitioners is therefore based on a high level of uncertainty and lack of actual knowledge. This is even more the case when discussing the cost distribution between individuals, enterprises and the public and, further, how to find the additional funding for the perceived need for an increase in the total level of investments in human capital.

25. The lack of reliable and precise information on especially the return side of investments in human capital formation is one of the basic reasons why other than financial indicators are being used to capture the positive returns. This is also the reason why, ultimately, non-financial reporting methods and benchmarking are being utilised as proxy measures.

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<sup>13</sup> See Barrett, Hövels, den Boer and Kraayvanger 1998.

<sup>14</sup> See for instance Kirkpatrick 1959, one of the founding fathers of modern evaluation methods.

<sup>15</sup> For the latter, see the European Agency for Safety and Health at Work 1998.

### 1.3 The abstraction of human capital within economic theory.

26. As mentioned under the introduction, human capital cannot be captured in economic terms alone. Still, that human capital, and especially the acquisition, maintenance and upgrading of it can only be measured indirectly is not satisfactory from economists' point of view. Especially, since the return to investments is captured only indirectly, as exemplified in table 2 below.

**Table 2. Correlation methods at different levels.**

<i>Level</i>	<i>Methods</i>
Society	Investment in education relative to national wealth
Enterprise	Investment in training relative to enterprise performance
Individual	Years of schooling relative to life income

27. The ongoing sophistication of the methods does overcome some of the weaknesses in using proxy indicators. However, in order fully to capture the notion of human capital, a more stringent theoretical and methodological framework must be established and for the enterprise level in particular, standard methods for reporting on human capital must be developed both for the input as well as for the output side.

## 2. THE THEORETICAL AND METHODOLOGICAL CONTEXT

### 2.1 Defining human capital

28. Human capital can be defined strictly within an economic context, i.e. as a production factor, or it can have a more universal meaning. Treating human beings as economic entities in a purely market related context often causes some confusion and opposition since it is viewed as a simplification of human values. It is, however, necessary in order to differentiate between different sets of perspectives and objectives. This can be exemplified with the distinction between general and vocational education: general education provides the individual with knowledge in order to participate in society i.e. the social, cultural, economic, etc. life spheres, whereas vocational education is targeted entirely for the demands at the labour markets, i.e. the economic sphere only.

29. As indicated in chapter 1 human capital will be defined within an economic context; further, human capital is embodied in both individuals and in organisations, and the acquisition of human capital is a process which nevertheless also has a fixed value albeit not necessarily in economic figures.

30. Given these considerations, human capital is defined as “the knowledge, skills, competencies and other attributes embodied in individuals or groups of individuals acquired during their life and used to produce goods, services or ideas in market circumstances.”<sup>16</sup>

31. This is the basic understanding of human capital being formed around the formation and utilisation of knowledge, be it in individuals or in organisations. A third level can also be identified, i.e. the societal level, which in effect is the crude accumulation of individuals’ and organisations’ human capital.<sup>17</sup>

### 2.2 A theoretical framework for reporting on human capital at enterprise level

32. Since human capital at the enterprise level is relatively underdeveloped within economic theory building while at the same time the emphasis for reporting on human capital at enterprise level is growing, it seems necessary to go beyond economic theories in order to explain this development. This can partly be captured by the emerging distinction between managers’ perception of enterprises’ relations with its surrounding world.

33. Three approaches can be identified<sup>18</sup>:

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<sup>16</sup> This definition is based on OECD (1996) and OECD (1998) with two important deviations; collective human capital has been included whereas the non-market relation has been excluded. See also Gröjer and Johanson (1996) and Bullen, Flamholtz and Sackman (1989).

<sup>17</sup> See the discussion in 1.1 above, or refer to Rouhesmaa and Bjurström from the Finnish Ministry of Labour 1996, Serageldin from the World Bank 1996, The European Commission 1996 and OECD 1996.

<sup>18</sup> The following part is primarily based on a consultation document from the Company Law Review Steering Group under the British Department for Trade and Industry 1999.

- The shareholder approach
- The enlightened stakeholder approach
- The stakeholder approach

### **2.2.1 *The shareholder approach***

34. The shareholder approach identifies the traditional identification of the management of a company with the shareholders of an enterprise. The approach follows the logic of enterprises being established and managed for the benefit of shareholders and for the benefit of actual and potential creditors. Following this logic, accounting and disclosures are provided for shareholders to maintain and exercise full control over the enterprise as well as for actual and potential creditors.

35. Given that the shareholders are identified as those having an actual or potential economic interest in the enterprise, disclosures are primarily if not entirely related to the economic performance of the enterprise reported by means of figures.

36. Shareholder values thus reflect that it is the owners (and to a certain degree also the creditors) of an enterprise that exclusively define the objectives of the enterprise within the limits of public regulations and that the ultimate objective is to secure the maximum value for shareholders.

### **2.2.2 *The enlightened shareholder approach***

37. The enlightened shareholder approach also recognises the ultimate objective of an enterprise is to secure the maximum value for shareholders; however, the means to achieve this end differ. This approach emphasises that an exclusive focus on the short-term financial bottom line may result in a sub-optimum result for shareholders since sound long-term investments and, hence, long-term gains will not be sought.

38. This approach emphasises long-term relationships with employees, sub-contractors, customers and others who may inflict upon the long-term objectives of the enterprise. Further, they will respond proactively to trends and developments in society and to public regulations. Still, it is the shareholders that decide on the objectives of the enterprise.

### **2.2.3 *The stakeholder approach***

39. A contradictory argument, which is summarised as the stakeholder approach, is that the ultimate objective of maximising shareholder value will not achieve maximum prosperity and welfare neither for the shareholders nor for other stakeholders or society as a whole.

40. This approach overrides the notion of shareholders as the sole and ultimate stakeholder of an enterprise. Rather, the interests of other stakeholders such as employees, sub-contractors and perhaps even customers should form an equally relevant input to the formation of the enterprise's objectives and its management. It follows from this that companies cannot be identified through its shareholders alone. Instead enterprises are identified as entities in society with their own ethos which the management of the enterprise must comply with.

41. It follows from the three approaches that it depends on the management perspective on the company, the interests of the company as well as the best means to achieve these objectives, whether non-statutory reports and accounts will be developed and utilised.

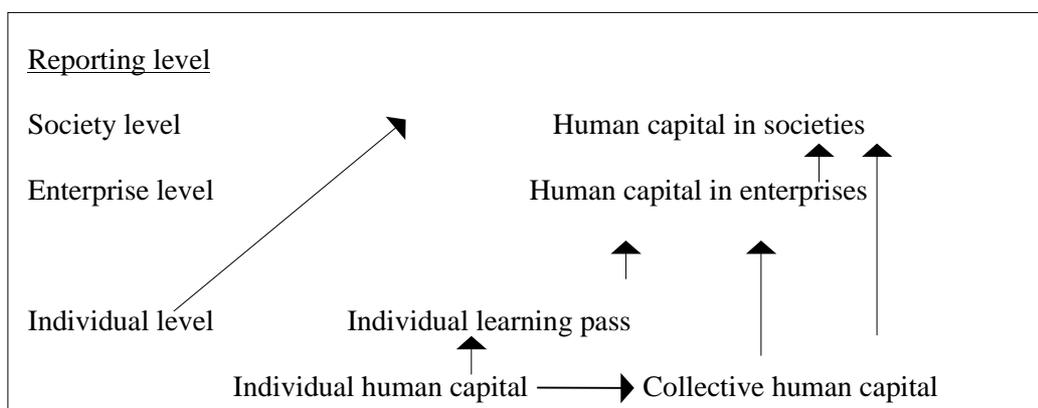
42. The growth in non-compulsory reporting at enterprise level suggests, however, that the traditional shareholder approach is diminishing in importance whereas the enlightened shareholder approach and the

stakeholder approach is growing in importance. This is reflected in many analyses of the enterprises' role in societies as well as in enterprise and government initiated initiatives that focus on the roles of the enterprises outside those of money generation and provider of workplaces.

### 2.3 Reporting on human capital

43. Reporting on human capital is one of the means used by enterprises to address the dual aims of traditional shareholder values while also complying with the interests of the stakeholders. As indicated in figure 1 below, reporting on human capital can take place at three levels.

**Figure 1. Reporting on human capital**



44. However, following the different approaches to enterprises, as discussed in 2.2 above, reporting on human capital is gradually changing its focus. Newly developed approaches link reporting on human capital within broader issues, such as internal management or external information provision, rather than focusing on accounting frameworks. The shift can be illustrated by saying that reporting is now becoming the means rather than the objective. This also implies that the notion “reporting” must be interpreted in its widest meaning, i.e. a systematised disclosure of information rather than being associated with financial statements only.

45. Clear cut demarcations between different approaches cannot be done, since most approaches tend to be overlapping. Nevertheless, even a primitive division of main approaches, as provided in table 3, does provide an indication of the gradual shift of orientation.

**Table 3. Main approaches to reporting on human capital**

<i>Approach</i>	Calculating costs of personnel policies	Human capital accounting	human capital management	Strategic management
<i>period of origin</i>	mid 1960s	early 1960s	late 1970s	early 1990s
<i>Characteristic</i>	Financial utility of personnel selection	Financial value of enterprises' human capital	Learning and dissemination of knowledge as internal management strategy	The combination of financial indicators, human capital, internal business processes, customer relations and innovation
<i>Methods applied</i>	Utility analysis	- human resource accounting, - human resource costing and accounting	- the learning organisation, - knowledge management	the balanced scorecard
<i>Reporting framework</i>	Cost and benefit calculations	Financial statements	non-financial statements (if any)	Generic performance measurements

Note: period of origin indicates when the approach was introduced. The methods mentioned may, therefore, be much younger.

46. This broad overview must be broken down to each level presented in table 1 in order better to understand recent developments.

### **2.2.1 Reporting at the individual level**

47. Reporting on human capital does already take place at the individual level, formally and informally, by means of diplomas, certificates, written statements, curricula vitae, etc. Much work is currently taking place in order to provide even better reporting mechanisms for individuals' knowledge, for instance the European Union's promotion of the cross-national Euro-pass for apprenticeships, of which national equivalents can be found in the British idea on a learning passport and the Swedish ID pass. Other works include the identification, assessment and recognition of non-formal learning currently taking place throughout Europe<sup>19</sup>.

48. Complementary to individual human capital is collective human capital, the latter reflecting knowledge obtained in groups of individuals, be it in organisations or outside, which accumulates in individuals and perhaps also in organisations. Some researchers and practitioners refer to intellectual capital as the totality of human capital, organisational capital and customer capital. They define intellectual capital as follows: "human capital is the knowledge that each individual has and generates; organisational capital is that knowledge that has been captured/institutionalised within the structure, processes and culture of an organisation; and customer capital is the perception of value obtained by a customer from doing business with a supplier of goods and/or services."<sup>20</sup>

49. While organisational capital relates to the enterprise level alone, it does not encompass collective human capital formed outside the organisation. The inclusion of the organisation's culture is, however, interesting and may have connotations to other intangible assets, such as goodwill. Still, it is outside the notion of human capital.

<sup>19</sup> For the latter, see Bjørnåvold 1997.

<sup>20</sup> Edvinsson 1997.

### 2.2.2 Reporting at enterprise level

50. Reporting at enterprise level is, as already stated, gradually moving from accounting principles to management principles and beyond. Three stages are thus observable, as indicated in table 4.

**Table 4. Stages for reporting on human capital at enterprise level**

<i>Stage</i>	<i>Characteristics</i>	<i>Period</i>	<i>methods</i>
stage 1	Human capital within accounting frameworks	From early 1960s	- Human resource accounting - Some utility analyses
stage 2	Human capital within internally oriented management frameworks	From late 1970s	- learning organisation, - knowledge management,
stage 3	Human capital within globally oriented management frameworks	From early 1990s	The balanced scorecard
stage 4	Human capital as audit systems	From early/mid 1990s	Investors in people, Benchmarking measures

Note: Each of the stages is existing, although stage 1 in its purest form is declining, while stage 4 is only just becoming apparent.

51. Originally, the ambition was to put value on human capital within an accounting framework, i.e. to put a value on human capital and include it as an asset in financial statements. While this element is still being debated among scholars, it is largely being deemed unrealistic, simply because the measurement problems seems unlikely to be overcome and, further, even if they were to be overcome, human capital does not generally qualify as an asset within accountancy standards<sup>21</sup>. Though some methods and approaches still consider this to be a viable path, the notion of enlarging financial statements with human capital assets is quickly fading away. The economic dimension still plays a dominant role, though.

52. The first stage is predominantly based on accounting principles, while the second stage is initiated from a management perspective which focus on the optimised use of human capital as a means to gain the competitive edge. The third stage operates with a global perspective, i.e. the enterprises and, consequently its human capital, interacts with the surrounding world. Human capital is a dominant element upon which strategies are formulated and implemented and form a major input to the assessment of enterprises' total value.

53. The fourth stage combines basic information on investments in human capital with human capital strategies and evaluation of returns. At the current standing, this approach is fairly less ambitious than for instance the balanced scorecard and other, advanced management approaches identified at stage 3. On the other hand, the more pragmatic approach seems to gain more momentum in that it can be a useful instrument internally and be used to benchmark enterprises within and across sectors as well as across countries. As such, it seems to be more applicable than other methods and, further, is more readily comparable to quality management systems and other alternative reporting mechanisms.

54. However, the methods to be identified with the fourth stage leaves out some of the black spots, which other methods have tried to respond to. Consequently, the fourth stage does not provide a solution to all the relevant information needs related to the growing dominance of intangible inputs to production. The fourth stage must therefore be considered to be a pragmatic but also incomplete solution to the demand for

<sup>21</sup> See International Accounting Standards Committee 1998.

improved information on human capital at enterprise level, seen from the perspective of researchers and policy-makers. However, the growing utilisation of audit systems and participation in benchmark programmes by enterprises indicate that the methods have a practical usability, which overrides theoretical and methodological concerns.

### **2.2.3 Reporting at society level**

55. Estimations on the stock of human capital at society level is primarily done by measuring the educational attainment - the highest level of education completed - of members of the adult population. As mentioned under 1.1, this method will tend to overlook other important inputs to human capital not visible through formal education, such as work experience, non-formal learning, etc. Another more reliable method is to test individuals for certain abilities, this however, being possible only as spot which will be difficult to attribute to society national level.

56. Most reporting on the stock of human capital at society level has been linked with the societal returns to investments in education, i.e. human capital is defined as education or an input factor.<sup>22</sup> Consequently, these surveys do not provide a measure on the totality of the stock of human capital in societies, they merely reflects the societal investment level in formal education.

57. As was the case at enterprise level, incomplete proxy indicators and benchmarking rather than output measures are utilised to estimate and report on the stock of human capital at society level. However, some have started to push forward the need for a more sophisticated human capital account an national level, such as the Federation of Danish Trade Unions<sup>23</sup>. Further, the regional level is being introduced, among others by the World Bank.

## **2.3 Methodological considerations**

58. From the previous sections it has become apparent that many of the weaknesses of the reporting methods originate from the lack of adequate measuring techniques. This relates primarily to the identification of human capital and especially how to measure it.

### **2.3. Identification of human capital**

59. Identification of human capital can be stratified into three elements: First, a consistent framework must be established which captures both the definition of the term itself and the levels and dimensions related to the term, e.g. as it is outlined in table 1. Secondly, the identification of the processes related to the acquisition, maintenance and development of knowledge at the individual level must be established, since it is at the individual level that knowledge is acquired, maintained and developed through learning, be it formal learning, informal or non-formal learning.<sup>24</sup> Thirdly, one must differentiate between individual and collective human capital. Collective human capital encompasses work organisation, work processes, information networks and other forms of intangible, non-visible knowledge which is embedded in a group

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<sup>22</sup> Psacharopoulos 1994 and 1995.

<sup>23</sup> See Federation of Danish Trade Unions 1999.

<sup>24</sup> CEDEFOP 1998a, CEDEFOP 1998b.

of persons rather than in individuals. It can to some degree be defined as the knowledge that will remain in the organisation even if individuals are being replaced.<sup>25</sup>

60. The identification of human capital and the various forms it takes to acquire, maintain and develop it have undergone considerable research in recent years, notably within the informal and non-formal segments of learning. Even though some theoretical and methodological difficulties are still present<sup>26</sup>, it is justifiable to conclude with Hartog that "... the main problem is not so much how to define human capital as how to measure it."<sup>27</sup>

### 2.3.2 *Measuring human capital*

61. The identification of human capital does not in itself imply that it will be measured. Rather, given the intangible nature of human capital and the difficulties in establishing reliable measuring techniques, crude proxy indicators such as market value over booked value<sup>28</sup> or costs of input over output activities at enterprise level have been used rather than actual measurements<sup>29</sup>.

62. Essentially, two different methods can be identified, one used to measure the stock of human capital and one used to measure the costs related to acquire, maintain and develop the stock of capital.

63. *Non-economic measurement methods* can be linked either to formal or to real human capital. Formal human capital will be measured through proxy indicators, such as educational attainment, years of schooling and/or other indicators such as job positions, number of years in job positions, etc. This is primarily related to individual and society level. Real human capital can be measured directly at the individual level by means of interviews, tests and/or examinations.

64. *Economic measurement methods* are related to the costs and benefits of acquiring, maintaining and developing human capital. This is related to all three levels, individual, organisation and society. This includes direct and indirect education and training costs and alternative costs as well as the returns to any given investment, be it time and/or money. Further, it does also include the returns to the existing stock of human capital and the depreciation of it.

65. The inability to establish reliable and verifiable measurement systems is the biggest challenge for reporting on human capital. However, and despite the shortcoming so far in establishing a coherent measurement methodology, less technical hindrances do also add to the reasons why such methods are not better developed, at least when it comes to measuring returns to any given investment in training:

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<sup>25</sup> Scandia, a Swedish insurance company, has been one of the pioneers within organisational intellectual capital and structural capital. For further details, see Edvinsson and Malone (1997). It must be noted that collective and organisational human/intellectual capital is not merging totally, although for simplicity it is presented as such in this paper.

<sup>26</sup> See also CEDEFOP (1994/1996), Bjørnåvold (1997), European Commission (1997), Bjørnåvold and Sellin (1998), CEDEFOP (1998a). It should be noted that the focus on informal and non-formal learning should not be overemphasised given that the dominant feature on the labour market and related to competitiveness at individual, enterprise and society level still is the level of skills as identified through formal learning. Formal learning is thus likely also in the future to be the guiding determinant for competitiveness and job creation as exemplified by Pfeiffer (1997).

<sup>27</sup> Hartog (1999).

<sup>28</sup> See Ernst & Young 1995.

<sup>29</sup> Please also refer to chapter 1 of this paper.

1. The cost-effectiveness of the training may be so obvious that formal evaluation is unnecessary,
2. it may be impossible or prohibitively expensive to obtain the data necessary for a formal evaluation of training<sup>30</sup>,

66. The identification of the stock of human capital may therefore to some degree be sufficient as to identify future needs and demands, be it at individual, organisation or society level. However, this leaves the economic dimension unexposed, and without measuring the economic consequences, over- and under-investments in human capital is less easy to detect as is choosing between alternative strategies related to human capital and, not least, the distribution of costs between different stakeholders.

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<sup>30</sup> Dougherty 1992, p. 551-552.

### 3. POLITICAL CONSIDERATIONS AND THE STAKEHOLDERS

67. There are ultimately two paths for introducing reporting on enterprises' human capital on a large scale; public regulation or market forces. If both fail, i.e. if there is not sufficient political support or not enough market incentives, reporting on human capital will remain a technical exercise at macro-economic level and a description of knowledge, competences and skills at the individual level.

68. In this process, the interests and the dedication of the main stakeholders become vital.

#### 3.1 The stakeholders

69. A stakeholder is defined as an individual, a private organisation or a public body having a direct interest in or being able to influence on the use as well as the widespread of human capital reports. Table 5 provides an overview of the stakeholders at various levels<sup>31</sup>.

**Table 5. The stakeholders at different levels.**

Level	Main Stakeholders	Other stakeholders
Society	International state Organisations	International Organisations
	Governments	Local governments the "political consumer"
Enterprise	Trade Unions	Employers' Associations
	Investors	
Individual	Enterprises	Sub-contractors
	Employees	Potential employees Dependants

##### 3.1.1 International state organisations

70. *International state organisations* are generally very active within the area of human capital. But even though the OECD has promoted investments in and to a certain degree reporting on human capital, it has so far abstained from clear recommendations and has not provided specific frameworks. The European Commission advocates for treating capital investment and investment in training on an equal basis. In this respect, the European Commission proposes that support structures be established at a European level for the measurement of investment in education and training on the one hand and promotion of investment in

<sup>31</sup> See Frederiksen and Westphalen 1998 for an in-depth stakeholder analysis. Table 4 is partly copied from this report, p. 24.

human resources on the other.<sup>32</sup> However, the European Commission, too, has abstained from specific influencing the development, i.e. they have not provided or supported specific frameworks<sup>33</sup>.

### 3.1.2 Governments

71. *Governments'* interests can be summarised as a concern for efficiency of educational provision, for cost sharing on the further development of society's stock of human capital and for internal optimisation of its own stock of human capital. Consequently, they have a self-interest as well as a societal concern for establishing reporting mechanisms on human capital. Governments may, therefore, be a driving force for popularising human capital reports or, ultimately, to install regulation for compulsory reporting at enterprise level. Until now, however, it is primarily the Scandinavian governments, which have supported pilot studies on how to report on human capital, both in private enterprises and in public organisations.

### 3.1.3 Trade unions

72. Generally, *trade unions* are not deeply involved in reporting on human capital, even though concerns on the approach to human relations at the enterprise level have been raised, for instance by ILO. ILO, which on the basis of the crisis of trade unions world wide has stated that "The inherent risk is one of focusing attention on a purely economic - even econometric - approach to human relations."<sup>34</sup>

73. The exceptions to this observation are, again, to be found in the Scandinavian countries where trade unions have developed policies on reporting on human capital as well as participated in the development of framework models and the testing of them. LO, the Danish Confederation of Trade Unions, has involved themselves in the debate because: "LO has certain reservations about tying employee development too closely to technical principles of accounting; and for that very reason, one of the critical points in the knowledge account will be whether we can manage to include the right things."<sup>35</sup> Further, LO sees reporting on human capital as a means not only to fulfil economic requirements but also to meet social and ethical objectives and, furthermore, see it in connection with lifelong learning and the learning organisation, i.e. as a means to improve the work place.

### 3.1.4 Investors

74. The *investors'* perspective has been the focal point for most of the work initiated by the OECD in this area. The reason for this has been the focus on measuring the real value of enterprises given that financial statements do not fully capture the intangible assets in enterprises, notably the knowledge of employees in high-tech sectors. However, till now investors themselves have shown relatively little interest for such information.

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<sup>32</sup> European Commission, 1995, p. 70-72.

<sup>33</sup> See OECD 196, OECD 1997, OECD 1998a, OECD 1998b and the European Commission 1995.

<sup>34</sup> ILO (1997), pp. 222.

<sup>35</sup> See foreword to LO, 1998. Knowledge account is the name of a human resource accounting system developed by Jan Mouritsen, Professor, for the Agency for the Promotion of Trade and Industry under the Danish Ministry of Commerce.

### 3.1.5 *Enterprises*

75. The reasons for *enterprises* to start reporting on human capital generally come from a belief in management that it will improve the performance of the enterprise. Still, external pressures exerted by investors, trade unions or governments, or internal pressures exerted by trade unions or individuals may also influence the decision. Still, the decision to start reporting on human capital is taken by the management of the enterprise and the ambitions differ accordingly. Skandia, for instance, a Swedish international insurance company, considers new indicators and collects new data for their human capital reports, while the Danish Environmental Protection Agency bases their human capital report on existing human resource data<sup>36</sup>.

76. Most commonly, enterprises introduce reports on human capital in order to obtain:

- External information system in order to attract investors,
- Internal information system on human resource issues,
- Cost-benefit analysis of investments in human resources,
- Improvement in human resource management,

77. However, many pilot projects indicate that other objectives besides the officially stated ones play an increasingly decisive role. These include<sup>37</sup>

- Maintain or improve enterprise image in society
- Indicate social responsibility and ethical values to the outside world
- Improve marketing to present and potential customers
- Benchmark human resource management and development
- Attract qualified labour force
- Retain qualified labour force

### 3.1.6 *Employees*

78. *Employees* are listed as main stakeholders since they are the core element in any reporting mechanism being introduced and, further, reporting on human capital can be viewed as an instrument “to create a new contract between company and employee. The individual takes responsibility for his or her own training. We are trying to create key figures for the new contract. The employee undertakes to seek knowledge and education, while the company undertakes to make the employee suitable for employment..... This can lead to an “every man for himself” attitude.”<sup>38</sup> Still, employees generally are not particularly expressing an interest until after it is being introduced by management.

79. In summing up; generally, the stakeholders are not formulating policies or strategies concerning reporting on enterprises human capital. The exceptions come from relatively few and isolated pilot projects at enterprise level formulated by dedicated management and, notably, from the Scandinavian countries where both social partners and governments are actively involved in the area. However, not even these countries or the otherwise active international organisations have formulated clear policies and most work/support is still dedicated to testing and/or theorising rather than decision making on or active promotion of reporting frameworks.

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<sup>36</sup> Frederiksen and Westphalen 1998, the case studies.

<sup>37</sup> Frederiksen and Westphalen 1998, p.30.

<sup>38</sup> Jan Mouritsen, Professor, Department of Informatics and Financial Management at Handelshøjskolen København, from LO, 1998.

### 3.2 Market forces or public regulation

80. Despite the outspoken interest in reporting on enterprises' human capital, a clear strategy for popularising reporting on a large scale has not yet emerged. The core elements for a wider dissemination are thus related to relevance, applicability and promotion.

81. The *relevance* is not generally being disputed by insiders; most researchers, policy-makers and practitioners see the importance of reporting on human capital as a means to improve overall performance of enterprises. But, as indicated above, the relevance has many faces following the stakeholders' different objectives. Consequently, it remains questionable whether all objectives, insofar as they are being formulated only by a small group of experts, dedicated practitioners or in general political statements, can be captured in one framework.

82. It follows from this, that if the importance of reporting on enterprises' human capital is only captured by insiders and if they are correct in their judgement, then it must be other factors that limit the process from proceeding beyond the testing phase.

83. This leads to the *applicability* of reporting frameworks; i.e. whether applicable reporting tools can be established and, if so, what information to disclose; financial or non-financial indicators or both measures? It can be argued that even if human capital is a powerful analytical notion, only little progress has been made in terms of its practical utility<sup>39</sup>. Many pilot studies have failed when it comes to a wider dissemination, either because the framework has been too limited in scope, deemed unreliable for external use or because they did not seem to be sufficiently value-added compared with other reporting tools.

84. It seems therefore inevitable that a wider dissemination depends on the establishment of a reporting framework, which is deemed both relevant, is relatively easy to apply at enterprise level and can be subject to external audit. Further, reporting must be promoted and become available as well as attractive to a wider range of enterprises than have hitherto shown interest in the matter.

85. Four ways can be identified for the promotion of such reporting framework, as outlined in table 6.

**Table 6. Methods to promote reporting on human capital**

<i>Method</i>	<i>Explanation</i>	<i>Examples</i>
The unstructured voluntary market-based method	Isolated pilot studies are initiated by individual enterprises or consultancy companies/ researchers develop and promote approaches and methods	- social reports, - knowledge accounts, - human resource audit, - holistic balance sheet, - intellectual capital statements
The systematised voluntary rewarding market-based method	Develop a consistent framework which can be operational across sectors and countries and promote this at large scale through the inherent rewards and image gains.	- ISO 9000 standards, - Benchmark programmes
The voluntary rewarding method initiated by public authorities	Develop a consistent framework supported by rewarding mechanisms once it is introduced and approved at	- Investors in People, UK - European Label for - Innovative Projects in

<sup>39</sup> Schuller, 1997.

	enterprise level.	Language Learning, EU
The compulsory method	Identify disclosure on human capital as a public concern and prepare (inter-)national regulations and standards	- Green accounts, Denmark

Note: since there is a lack of examples directly related to human capital, examples related to alternative reporting and quality standards are used.

86. The unstructured, voluntary market-based method has prevailed until now. This could be seen as an experimental phase where different methods and approaches are being tested, however, it seems as if almost 10 years of testing has not brought much clearance. The continuation of pilot tests indicates either that no reliable method has emerged out of the multiple tests, that no consensus can be agreed upon or that stakeholders are reluctant to commit themselves to a given standard.

87. Some would argue that this is also an indication that reporting on human capital will remain an internal management procedure or be part of an enterprise's external promotion catalogue with little neither general interest nor support. However, the Investors in People award programme, which will be discussed in details in chapter 4, as well as the growing use of benchmark programmes suggest that there is widespread interest in reporting on human capital when the framework for doing so is within practical reach at enterprise level.

88. Signals of market preferences for specific methods are thus emerging and a market standard within human capital reporting may be on its way. This contrasts that there is little sign of public authorities, be it at national or international level, which are willing to commit themselves to promotion activities regarding voluntary rewarding mechanisms as is known within other spheres of enterprise issues. It is rather surprising that since the European year of lifelong learning in 1996, governments and international organisations have advocated strongly for increased investments in human capital, but none - with the notable exception of the United Kingdom - have provided an awarding mechanism for reporting on such investments. The European Union<sup>40</sup>, in particular, which has introduced awarding mechanisms or supports such mechanisms within environmental friendly production, quality promotion and, most recently, a European Label for Innovative Projects in Language Learning, should feel an obligation for introducing such a scheme also within reporting on human capital. Especially since it will supplement the policies on lifelong learning, which the European Union reintroduced in 1996.

89. Following from above, it seems unlikely that public authorities in the near future are going to issue any form of regulation. Consequently, it must be concluded that if a standardised framework for reporting on human capital is to emerge on a similar scale as ISO standards or TQM within quality management, it must be market initiated.

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<sup>40</sup> In 1991, the Swedish government proposed a legal obligation for organisations with more than 100 employees to provide an account of personnel costs in the annual report but withdrew it again.

## 4. CURRENT REPORTING FRAMEWORKS

90. The development of an advanced framework, which can capture the full range of human capital and report on this within reliable reporting mechanisms and be subject to standard auditing control systems, seems currently not to be a realistic option. Instead, current reporting frameworks concentrate on elements of the stock of human capital in enterprises, be it the depreciation, the formation or the utilisation of human capital. Some, if not the majority of these frameworks would not, however, classify themselves as human capital reporting tools. Rather, they are identified as management tools, cost and benefit analyses or quality training standards. This indicates that at the enterprise level, reporting on human capital has to be related to practice, i.e. its usability should be clear for the management. The best way of securing this is either through financial indicators, i.e. showing the relation between a given procedure and the costs and benefits or through improved management, i.e. showing that the policies introduced clearly improve overall performance.

91. Consequently, only one of the reporting methods described below does fully qualify as a human capital reporting scheme. The remaining schemes all comprises elements thereof while providing a standard reporting tool and, not least, they all operate at an international level.

### 4.1 Investors in People, The United Kingdom

92. Investors in People (IiP) is a standard on training investments developed in the United Kingdom which has been in operation since 1991. In early 1999 more than 33,000 organisations (which include enterprises, schools, public and private organisations, etc.) covering 33% of the total workforce in UK were committed to the standard (according to statistics from DfEE). The standard is gradually being introduced in other countries.

93. The standard is a relative simple training needs analysis within a larger framework oriented towards implementing structured training systems. The standard includes four principles (and 24 indicators) within an action line, as described in figure 4.1 below. The standard is based on a common framework but with a high degree of flexibility within each indicator. Further, some of the indicators are policy oriented rather than process oriented, such as management commitment. Of the four principles one is solely devoted to that of commitment of management and awareness of employees.

#### Figure 4.1 IiP model and principles

IiP's four principles: commitment, planning, action and evaluation.

1. Review → 2. Action → 3. Assessment → 4. Achievement → 5. Continuous improvement

94. The relatively broad framework does imply that each IiP plan is highly individualised according to the need and wishes of the individual organisation. From a standardisation point of view this is a weakness but from a usability point of view, i.e. the organisation itself, it is a strength, which optimise the use of the framework.

95. Once an organisation has been rewarded the Investors award, it will have to be renewed on a yearly basis. From year to year between 85 and 95% of awarded organisations want to maintain the award. The reasons are listed in table 4.1 below based on a survey from 1995.

**Table 7. Reasons for maintaining the Investors award.**

	%
Good for image of organisation	38,9
Better management of training	27,9
Improved training processes	26,3
Improve employee morale, motivation, commitment, etc.	20,3
Business benefits	15,5
Other	18,9

Note: multiple responses allowed.

Source: Hillage and Moralee 1996.

96. It is clear from table 4.1 that organisations generally value the award albeit most of the reasons only indirectly relate to overall performance. This highlights the perspectives for new enterprise statements as well as the irrelevance for having such information tied into traditional financial statements; reporting on human capital via the IiP focus on training and training processes is simply operating on another level.

97. This is further underlined by the anticipated benefits realised from organisations involved in IiP, as described in table 4.2 below.

**Table 8. Anticipated benefits realised from organisations involved in IiP.**

	%
Improved staff motivation and morale	68,7
Improved workplace relationships	67,8
Improved skills and quality of workforce	65,3
Increased quality of goods and services	65,1
Improved image	62,5
Improved customer satisfaction	56,5
Improved financial performance	43,1

Note: multiple responses allowed.

Source: Hillage and Moralee 1996.

98. Again, the benefits are highly visible but it will render meaningless to try to present this within the framework of a traditional financial statement. The other problem is then if it can be reported annually at organisational level with a satisfactory degree of comparability and reliability. And whether this is relevant as long as the relevance of using the IiP is obvious for the organisation itself!

## **4.2. The Danish and the Finnish governments reporting projects.**

### **4.2.1 The Danish project on intellectual accounts.**

99. The Danish Ministry for Business and Industry is testing a framework model for intellectual capital accounts. According to the Danish minister, Mr. Jan Trøjborg, in order to “give an overview of the factors that create development within the company: the people working for it, their qualifications and the

way in which they carry out their work.... If things are not in order and are not consistent with the market or the strategy the company is following, this will become apparent in the intellectual accounts.”<sup>41</sup>

100. The Danish ministry stresses the need for a broad interpretation of knowledge and provides some examples of figures which could be included in an intellectual capital account.<sup>42</sup>

- Costs of training
- IT skills
- The seniority value of each employee
- Running-in time for new organisational units
- Employee satisfaction
- Costs per process
- Customer satisfaction

101. The Danish government’s interest in intellectual capital accounts must be seen in the macro perspective of maintaining the competitiveness of Danish enterprises. Further, they also see the testing of a framework for intellectual capital accounts as a means of establishing a common intellectual capital account internationally, thus expressing the role of governments to provide regulation.

102. The Danish project is still in its testing phase so the outcome is not yet available.

#### **4.4.2 The Finnish project on human resource accounting.**

103. Based on a working paper developed by the Finnish government together with the social partners, a HRA system with the following main categories was tested in the public sector:<sup>43</sup>

- knowledge about the development of personnel in numbers and in structure
- usage of working hours
- personnel-related costs
- personnel resources and their development
- state of personnel, both physical and mental well-being
- reward systems
- efficiency and service ability
- value

104. The data gathered provides information on<sup>44</sup>

- how cost-effectively human resources are managed, so that the organisation benefits from its
- human capital as much as possible,
- how the organisation has taken care of its personnel, so that they have both quantitatively and
- qualitatively adequate human resources,
- how the quality of work and working conditions, personnel resources, efficiency and personnel well-being have been taken care of.

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<sup>41</sup> Danish Ministry of Business and Industry, 1998, p.3.

<sup>42</sup> Danish Ministry of Business and Industry, 1998, p.4.

<sup>43</sup> Rouhesmaa and Bjurström, 1996, chapter 4.

<sup>44</sup> Rouhesmaa and Bjurström, 1996, chapter 4.

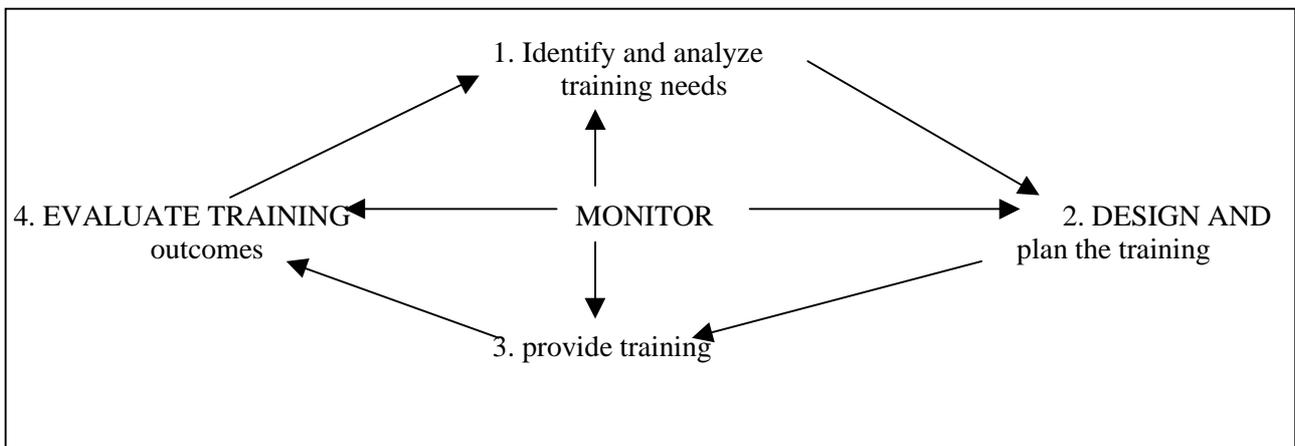
105. The HRA system was tested in public organisations, but could easily be adapted to private organisations, too. The aim of the system is to provide information to the owners of the organisation, management, human resource expert and staff, and personnel.

### 4.3 ISO Quality management – Guidelines for training; ISO/DIS 10015

106. The ISO standard on training is planned to come into force late 1999 and forms part of the standards on quality assurance and quality management. The standard as such is not markedly different from other methods within the area of training needs' analyses but has the advantage of being an international standard. More importantly, it gradually builds up a database of the competencies of the employees in the enterprise having chosen the ISO standard which – eventually - can be easily adopted as a means to report on human capital.

107. Consequently, the interesting aspect of the ISO model, presented in figure 4.3.1 below, is not the model as such but the perspectives for enterprises over time while using the standard. The standard will gradually build up a comprehensive databank in each enterprise; a databank which will provide a detailed overview of the competencies and qualifications of the work force, i.e. the enterprise's human capital.

Figure 4.3.1 ISO's training cycle



108. It is the requirements to systematically identify the competencies needed compared with the existing competence of its personnel. The ISO standard will provide a tool for standardising the information and, hence, the opportunity to store the information for future uses. It is specified that “The organisation should identify the competence needed for each task that affects the quality of products, assess the competence of the employees to perform the task, and develop plans to close any gaps.”<sup>45</sup> This provides the ultimate tool for mapping the present stock of human capital at enterprise level and constantly upgrade this information. Furthermore, if used properly the standard will also provide information on the flow of human capita, both actual stocks and required stock, over time!

<sup>45</sup> ISO 1998: Draft international standard ISO/DIS 10015, p.7.

109. From this perspective, the ISO standard has the potential of becoming a breakthrough concerning reporting on at least one issue, albeit a vital one, of human capital.

110. Furthermore, a Danish project initiated by the Ministry of Business supports that enterprises give a high ranking to human resource development in HRA. Of the 10 Danish and Swedish enterprises included in the project, 9 list human resource development as the main objective in having an HRA. Only 3 enterprises include customers and only 1 enterprise lists investors and external reporting, respectively, in their objectives for HRA.<sup>46</sup>

111. However, when the enterprises estimate the effects of their HRA, the investors' and external stakeholders play a role almost equal to human resource development, productivity effects and the creation of an enterprise spirit. This indicates that a non-stated objective behind much HRA is actually to acquire information directed towards investors and external stakeholders.

112. Finally, it must be underlined that the use of HRA is already widespread in some countries: In a survey of human resource managers in companies located in the Stockholm area and with more than 200 employees, 70% of the respondents said that they were applying HRA in some way; most of the organisations had started to do so at the beginning of the 1990s. An investigation conducted by the Swedish Association of Local Authorities found that 22% of the 276 respondents had decided to use HRA; only from 5% to 15% of the personnel, accounting, and financial managers asserted they were not interested in HRA.<sup>47</sup>

113. In order to secure the most possible influence for its members, LO has developed a participatory strategy, i.e. it has developed information and training material so that the members can influence the development of an HRA system. Still, it is important to note that this approach is based on the common interests of both the enterprise and the employees. The cornerstone of this strategy is that the employees be directly involved in and exert influence on enterprises' training and development programmes through informed discussions of the outcome of such programmes. The outcome is divided into work efficiency, creativity, staff turnover and absenteeism, which reflect both the enterprises' need for profitability and the employees' interest in a good working environment.

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<sup>46</sup> The Danish Trade and Industry Development Council, 1997, p. 25-27.

<sup>47</sup> Johanson, 1996. N.B. Johansson refers to the use of HRCA, which is one specific form of HRA.

## **5. CONCLUSION; RECENT TRENDS AND LIKELY FUTURE OF REPORTING ON HUMAN CAPITAL**

*Please note that this conclusion is still at a very provisional stage.*

### **5.1 Society level.**

114. Reporting on human capital is still surrounded by a high degree of indecisiveness regarding its direction, as indicated in figure 6.1 below. Although human capital is becoming part of mainstream macroeconomics and statistics, it still falls short of being used in a coherent manner. Rather, human capital is replacing the black holes in macro-economic theory, which used to be covered under the notion of externalities or residual factors and, further, within macro-statistics, human capital has become synonymous with education.

115. This is primarily due to methodological problems deriving from the intangible nature of human capital indicating that direct measurement seems unlikely to appear in the near future. Instead, proxy indicators linked to the factors feeding into the creation of human capital will prevail, and proxy measures related to the output will remain on the level of comparisons. This may be in the form of benchmarking or through statistical observations of the correlation between input investments in human capital and output performance of economies, be it at micro or macro level.

116. It must not be neglected, however, that proxy indicators may be satisfactory for a number of purposes, irrespective that it may not provide a complete description. Indeed, the balance between full knowledge and operational measures does inevitable lead to imperfect information provision. But it does also lead to constant improvements and refinements if only the scope changes. The very notion of reporting on human capital can thus be seen as a shift in orientation among economists, statisticians and other research areas on the one hand and policy-makers and other stakeholders on the other. The notion of human capital has resulted in the inclusion of the enterprise level as a focal point for measuring investments in and returns from human capital formation in enterprises, which was for a long time largely neglected by researchers and policy-makers.

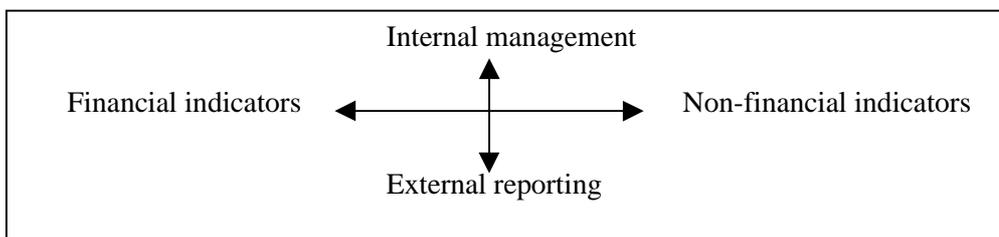
### **5.2 Enterprise level.**

117. Enterprises show a gradually growing interest in reporting tools on human capital. There are a number of reasons for this development. The shift of responsibilities between the private and the public spheres have made enterprises increasingly willing to take on social responsibilities. Further, the emergence of the political consumer will force enterprises to respond to market pressures beyond the actual product being produced (e.g. working conditions, environmental protection and production methods), which has already led to pressure for reporting on human capital in some cases. Furthermore, in the light of a rapidly ageing population, which will make the labour force with the right qualifications scarce, enterprises must find new means to attract and retain labour. Finally, the decentralised and individualised bargaining pattern will contribute to the mobility of the - well-qualified - labour force, thus intensifying the need for policies to retain the work force.

118. Within the area of reporting and management tools at enterprise level certain developments utilising human capital as defined in this paper, have therefore arisen. Although still primarily occupied with the input side, some programmes like Investors in People in the UK and the forthcoming ISO 10015, does evaluate on the return side. As does the benchmark projects, like the one initiated by the American Society for Training and Development, which attempt to capture the investments in enterprises' formation of human capital within a standardised framework.

119. The Investors in People programme, which is spreading rapidly primarily within the UK but gradually becoming a global programme, is slightly more ambitious in that it consists of a standardised framework which is individualised for individual reporting at enterprise level.

**Figure 6.1: The cross-road for reporting on human capital.**



120. Seen in this wider perspective, bridging the gap between traditional accounting and measuring human capital is only one of the objectives of further development. It is equally important to maintain the focus on reporting on human capital as a means of overcoming the rigidities of present-day methods of evaluating human resource investments and investments in other intangibles. , and as a means of overcoming the shortcoming of present-day human resource development tools, which fail to respond adequately to the rapid development in human competences as well as the rapid development of intangible assets in general.

121. Investors in People may not comply with the information needs being required by researchers and may even have little more to offer than a compiled report on enterprises' personnel or training policies. Nevertheless, it is a practical approach formed around a standard format, which has proven its market value within the last 8 years. The coming ISP 10015 is likely to do likewise and this may be the starting point to start investing more attention on the enterprises' needs rather than trying to pursue a distant and not too well justified investors' needs. The Danish and Finnish projects are good examples of this very pragmatic approach.

### **5.3 The future of reporting on human capital.**

*Will reporting on human capital become standardised?*

122. The actual development of a standard reporting framework will depend on whether the stakeholders will start formulating clear policies on the issue of human capital; otherwise, they may find themselves overtaken by consultants and practitioners developing their own brands. Eventually, one or a few of these will become market leaders, such as at the current stage the balanced scorecard or in the UK the investors in people programme.

123. For a further dissemination of reporting tools and for having at least a certain standardisation, the international organisations have, at least until now, been dragging their feet in order to avoid taking a clear standpoint. Some countries like the United Kingdom (the investors in people) and Scandinavian

governments and social partners have begun to position themselves, generally along a broad definition of human capital reporting.

124. In the lack of a political and government led leadership it is likely that the coming ISO 10015 will be the one defining the future international standard in this area irrespective that it is only covering the training issue.

*Should reporting on human capital be compulsory or voluntarily?*

125. This question is not yet answered definitively but, as indicated above, it seems that public authorities generally are reluctant to forcing a reporting method on enterprises. This is, however, not the only way to have reporting on human capital becoming widespread in that market forces may create their own momentum. This has been the case within quality standards, environmental standards, etc. Further, governments and public in general seem willing to provide rewarding mechanisms as well as support to private initiatives, thus supporting the creation of a market demand.

## LITERATURE

- Argyris, C. and Schön, D** (1978): *Organizational learning. A Theory of Action Perspective*. Massachusetts.
- Barrett, A., Hövels, B., den Boer, P. and Kraayvanger, G.** (1998): Exploring the returns to continuing vocational training in enterprises; a review, CEDEFOP, Thessaloniki.
- Barro, R.J. and Lee, J.W.** (1993): *International Comparisons of Educational Attainment*, National Bureau of Economic Research Working Paper, No. 4349.
- Bjørnåvold, Jens** (1997): *Identification and Validation of Prior and non-formal learning*. CEDEFOP, Thessaloniki
- Bjørnåvold, Jens and Sellin, Burkart** (1998): *Recognition and transparency of vocational qualifications; The way forward*. CEDEFOP, Thessaloniki
- The British Department for Trade and Industry** (1999): *Modern Company Law, For a Competitive Economy; the Strategic Framework*. A consultation document from The Company Law Review Steering Group, London
- Brummet, R.L., Flamholtz, E.G. and Pyle, W.C.** (1968): Human Resource Measurement: a challenge for accountants, in *The accounting Review*, 43.
- Bullen, M., Flamholtz, E. and Sackman, S.** (1989): Human Resource Accounting: A State-of-the-Art Review, *Journal of Accounting Literature*, Vol. 8.
- Coleman, James** (1988): Social Capital in the Creation of Human Capital, in *American Journal of Sociology*, Vol 94 supplement S 95-120.
- Cronbach, L.J. and Gloeser, G.C.** (1965): *Psychological Tests and Personnel Decisions*. Illinois.
- Edvinsson, L.** (1997): Developing intellectual capital at Skandia, in *Long Range Planning*, vol. 30, no. 3.
- the Danish Trade and Industry Development Council** (1997): *Intellectual Capital Accounts*, Copenhagen.
- Deiaco, e., Hörnell, E. and Vickery, G (eds.)** 1992: *Technology and Investment: Crucial issues for the 1990s*, London.
- Dougherty, C.** (1992): Evaluation of the economic labour market effects of continuing education and training: practice and policy issues, *International Journal of Educational Research*, Vol. 17.

- Ducharme, Louis-Marc** (1998): Introduction: Main Theories and Concepts, in *Measuring Intangible Investment*, OECD.
- Ekstedt, Eskil** (1988): Humankapital i brytningstid, Stockholm.
- Ernst & Young and OECD** (1997): Enterprise Value in the Knowledge Economy, Cambridge MA.
- European Agency for Safety and Health at Work** (1998): Economic Impact of Occupational Safety and Health in the Member States of the European Union, Bilbao.
- European Commission** (1995): Teaching and learning: towards the learning society, Luxembourg.
- European Commission** (1996): The economic dimension of education and training in the Member States of the European Union. Luxembourg.
- European Commission** (1997): Transparency and recognition of qualifications: situation and outlook. DGXXII, Bruxelles.
- Federation of Danish Trade Unions** (1999): The national Human Capital Accounts, Copenhagen.
- Flamholtz, E.** (1985): Human Resource Accounting, Jossey-Bass Publishers, Los Angeles.
- Frederiksen, Jens V. and Westphalen, Sven-Åge** (1998): Human resource accounting: Interests and conflicts, CEDEFOP, Thessaloniki.
- Fukuyama, Francis** (1995): Trust: the social virtues and the creation of prosperity, London.
- Goleman, Daniel** (1996): Emotional Intelligence: Why It Can Matter More Than IQ, Bloomsbury Publishing.
- Gröjer, Jan-Erik and Johanson, Ulf** (1996): Human resource costing and accounting, Stockholm
- Guest, D.E.** (1997): Human resource management and performance: a review and a research agenda. *International Journal of Human Resource Management*, 8(3), p. 263-276.
- Hartog, Joop** (1999): Behind the veil of human capital, in *OECD Observer*, No. 215 - Jan/Feb 1999.
- Hillage, J. and Moralee, J.** (1996): The Return on Investors, ies report 314, Brighton, the United Kingdom.
- Hodgson, Allan, Okunev, John and Willett, Roger** (1993): Accounting for Intangibles: A Theoretical Perspective, in *Accounting and Business Research*, vol. 23 no. 90, p. 138-150.
- International Accounting Standards Committee** (1998): IAS 38, Intangible Assets, London.
- International Labour Organisation** (1997): World Labour Report 1997-98: Industrial Relations, Democracy and Social Stability, Geneva.
- ISO** (1998): Draft international standard ISO/DIS 10015, Geneva.

- Johanson, Ulf, Eklöv, Gunilla, Holmgren, Michael and Mårtensson, Maria** (1998): Human resource costing and accounting versus the balanced scorecard. OECD, Paris.
- Kaplan, R. and Norton, D.** (1992): The Balanced Scorecard - Measures that drive performance, in *Harvard Business Review*, vol. 70, no 1.
- Kirkpatrick, D.L.** (1994): Evaluating training programs. The four levels, San Francisco.
- Kämäräinen, Pekka and Streumer, Jan** (1998): Curriculum Development, New learning Environments and Transfer of Innovations in Europe, in Vocational education and training - the European research field, Background report, CEDEFOP, Thessaloniki.
- LO** (1998): Your knowledge – can you book it?, Copenhagen.
- Lucas, Robert E.** (1988): On the Mechanics of Economic Development, in *Journal of Monetary Economics*, vol. 22 p. 3-42.
- Mandag morgen, Strategisk Forum** (1999): Kompetencerådets rapport 1998, Copenhagen.
- McCallum, Bennett T.** (1996): Neoclassical vs. Endogenous Growth Analysis: An Overview, in Federal Reserve Bank of Richmond *Economic Quarterly*, Volume 82/4.
- McGregor, Douglas** (1960): The human Side of Enterprise, McGraw-Hill.
- Mincer, Jacob** (1993): Studies in Human Capital, Edwar Elgar England.
- Mårtensson, Maria** (1997): Knowledge management - a literature review and a case study. Stockholm.
- Mårtensson, Maria** (1998): Translation of knowledge. Stockholm.
- OECD** (annually): Education at a glance, Paris.
- OECD** (1996): Measuring what people know, Paris.
- OECD** (1998): Human Capital Investment, Paris.
- Patterson, Malcolm G, West, Michael A, Lawthorn, Rebecca and Nickell, Stephen** (1997): Impact of People Management Practices on Business Performance. University of Sheffield and London School of Economics, London.
- Pfeiffer, Friedhelm** (1997): Human capital and innovation in East and West German manufacturing firms, Discussion paper No. 97-08 E from Zentrum für Europäische Wirtschaftsforschung GmbH, Mannheim.
- Psacharopoulos, G.** (1995): The profitability of investment in education: concepts and methods, working paper, the World Bank.
- Psacharopoulos, G.** (1994): Returns to Investment in Education: A Global Update. World Development, September.

- Psacharopoulos, G. and Ariagada, A.M.** (1986): The Educational Attainment of the Labour Force: an International Comparison, Report No. EDT 38, Education and Training Department, The World Bank.
- Putman, Robert** (1995): Tuning In, Tuning Out: The Strange Disappearance of Social Capital in America, in *Political Science & Politics*, 28:4, p. 664-683.
- Rebello, Sergio** (1991): Long-Run Policy Analysis and Long-Run Growth, in *Journal of Political Economy*, vol. 99 p.500-521.
- Rouhesmaa, Heikki and Bjurström, Lars-Mikael** (1996): Human Resource Accounting in Finnish Enterprises, working paper from the Finnish Ministry of Labour.
- Schuller, T.** (1997): Social Capital: A necessary environment for Human Capital. Paper presented at the OECD seminar on “The role of comparative international indicators of human capital investment in public policy.”
- Schultz, T.** (1961): Investment in human capital, *The American Economic Review*, p. 1-7.
- Senge, P.M.** (1990): The fifth discipline? New York.
- Serageldin, Ismail** (1996): Sustainability and the Wealth of Nations : First Steps in an Ongoing Journey, the World Bank, New York.
- Steelman, H.** (1996): Measuring the quality of education outputs: some unresolved problems, discussion paper no. 302, Centre for Economic Performance at London School of Economics and Political Science.
- Subbarao, A. V. and Zèghal, D.** (1997): Human Resources Information Disclosure in Annual Reports: An International Comparison, *Journal of Human Resource Costing and Accounting*, vol. 2 No 2.
- Weiss, Andrew** (1995): Human Capital vs. Signalling Explanations of Wages, *The Journal of Economic Perspectives*, vol. 9,4.
- World Bank** (1999): Social Capital Database, [www.worldbank.org](http://www.worldbank.org)