



Measuring the mission effect in human intellectual capital

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Abstract *One of the greatest challenges facing advocates of the intellectual capital movement is finding ways to measure and report on its content and effect. Some consider the measurement of human intellectual capital (HIC) to be a daunting exercise. At the same time, mission statements represent the cornerstone of most organizational strategies. While much research has been conducted on what the HIC construct might contain, none has attempted to understand the link between mission statements and their impact on the HIC construct. The tentative results reported in this study begin to fill the void. They show that mission statements may indeed have a valid place in the measurement and reporting of an organization's intellectual capital and they demonstrate the need for more research in this regard.*

An organization is more than the sum of its physical assets and, for years, researchers and managers have struggled to find the concepts and words to explain the gap between an organization's market and book values. For a long time, the notion of good will was the way the world (especially the accounting world) dealt with this phenomenon. However, recently, the various intangibles which make up the difference between market and book value are now being identified, dissected and analyzed. The old notions which were traditionally ascribed to goodwill (e.g. intellectual property rights, such as patents, trademarks and the like) are no longer considered sufficient. What has emerged is a rather robust new concept called intellectual capital which now appears to be challenging (and intent on replacing) the rather monolithic notion of goodwill. By better understanding, measuring and managing an organization's intellectual capital, managers now seem to have a tool which allows them to create, nurture, control and sustain a formidable source of competitive advantage – and one which is not easily replicated by competitors.

While many definitions abound, most experts seem to agree that an organization's intellectual capital is best described in terms of three main components (Bontis, 1999):

- (1) *Human Capital*. The collective knowledge, education, skills, attitudes and experience(s) of a firm's employees.
- (2) *Structural Capital*. The collective (and often proprietary) routines, systems, processes and information within an organization (including its culture) that help – or hinder – employees in their pursuit of organizational performance excellence.

- (3) *Relationship Capital*. The value of relationships with those stakeholders external to the organization, such as customers, suppliers and regulatory agencies.

Much has been written about the need to measure and report on an organization's intellectual capital (Bontis, 1998; 2001). Attempts have also been made to show its connection with various traditional performance measures. For the most part, though, the measurement studies undertaken have tended to argue only about which variables to include (Bontis *et al.*, 1999). Many competing models now appear to exist (Bueno, 2001) and only a few have made some tentative steps towards showing a link with organizational success.

The problem is that measurement is difficult (Bassi and Van Buren, 1999). And, according to Bontis (1999), it is the human capital dimension which is the most difficult to codify. As a result, two camps appear to be emerging. On the one hand there are those, who take the position that there may never be an answer to this dilemma. As Bontis (1999, p. 454) states:

Although its popularity is not disputed, it is important to be skeptical when anyone claims that they have found the magical formula or calculation for intellectual capital. It will never be measured in the traditional dollar values we know. At best we will see a slow proliferation of customized metrics that will be disclosed in traditional financial statements as addendums.

While this may be true, there also appears to be a compelling competing view that over time there will be some convergence in terms of a pool of metrics from which organizations should draw – and even some which must be reported on regardless of the industry, the company or its circumstances. As Bassi and Van Buren (1999, p. 421) state:

... idiosyncratic or company-specific measurement systems developed in isolation from one another will do little to create widely accepted measurement methods that are robust enough to be adopted across the diverse set of organizations moving forward into the knowledge era. We believe that greater strides can be made by collective endeavors on the topic of intellectual capital measurement. (We need) to provide companies with the opportunity to pursue this agenda by working together to create a widely applicable and accessible framework of measures.

To be sure, there is already some signs that this convergence is taking place. In the case of human capital, support appears to be emerging for such measurement metrics as training as a percent of payroll, percentage of employees trained, number of employee suggestions and employee attitudes about (and satisfaction with) the organization – to name but a few.

One of the more notable absences from all recent commentaries on measuring human intellectual capital (HIC), however, appears to be the degree to which employees know, understand and accept their company's strategy, in general, and their mission statement, in particular.

Why mission matters and needs to be measured?

In recent years, mission statements have come to be viewed as one of the essential components and cornerstones of an organization's strategic planning

activities. Indeed, there is a growing body of literature to support the notion that mission statements do, in fact, really matter in terms of their measurable association with and contribution to an organization's financial success. While mission statements, as an organizational construct, have also attracted more than their fair share of criticism, they continue to be, according to Bain & Company (1998; 1999), one of the most widely used management tools in the world – slipping only recently from the no. 1 ranked management tool position in 1998 (which it held for over ten years) to the no. 2 rank position in 1999 (it was replaced in the top spot by the much broader concept of strategic planning).

The popularity and attraction which mission statements hold in the corporate echelons of the world's leading companies stems from the fact that they seem to help managers achieve those important, yet subtle goals, which are traditionally seen as both necessary and sufficient conditions for long-term survival and market success. Mission statements answer the question: why do we exist as an organization (or what is our purpose) (Bart *et al.*, 2001; Bart, 1996a; 1996b; 1997a; 1997b; 1998a; 1998b; Bart and Baetz, 1998; Byars, 1984; 1987; Campbell, 1989; 1993; Campbell and Yeung, 1991; Daft and Fitzgerald, 1992; David, 1989; 1993; Germain and Cooper, 1990; Ginter *et al.*, 1998; Higgins and Vincze, 1989; Wheelan and Hunger, 1992; Ireland and Hitt, 1992; Klemm *et al.*, 1991; McGinnis, 1981; Medley, 1992; Thompson and Strickland, 1996; Gibson *et al.*, 1990; Bryson, 1995). When properly crafted, they are enduring. They control the behavior of organizational members (by motivating and inspiring them) to pursue common organizational ends (Campbell, 1989; 1993; Collins and Porras, 1991; Daniel, 1992; Germain and Cooper, 1990; Javidan, 1991; Ireland and Hitt, 1992; Klemm *et al.*, 1991; King and Cleland, 1979; El-Namaki, 1992; Wilson, 1992). They guide the resource allocation process in a more focused manner (Ireland and Hitt, 1992; King and Cleland, 1979; Gibson *et al.*, 1990). And they balance the interests of competing stakeholders i.e. customers, employees, suppliers, regulators, and both local community and special interest groups (Klemm *et al.*, 1991). It is no wonder then that, in more recent times, mission statements have come to be seen as central to every firm's strategy and strategic planning processes. Because when the promise of mission is fulfilled, performance benefits should, *ceteris paribus*, follow.

One of the essential keys to mission fulfillment, however, appears to be the degree to which organizational members know, understand and are committed to their organization's mission. After all, when a organization of tens, hundreds or thousands of employees collectively share an awareness, knowledge and understanding of their organization's mission (and passionately support its stated course), they should achieve the missions goals and objectives much more rapidly – and with greater boldness and confidence – than those organizations (especially their competitors) which do not. Why? Because a collective sense of mission drives the organizational ship towards its charted course with greater enthusiasm and precision. It becomes a competitive juggernaut and pity the poor competitor which lacks this focus. On the other

hand, if employees cannot identify and state the mission, if they cannot remember it or if they are not committed to it, then it will be much more difficult (read, impossible) to implement and worthless as a planning document/tool. Consequently, employee knowledge of and commitment to an organization's mission should be considered as an important component of an organization's human intellectual capital – which, if the intellectual capital theorists are right – should lead to enhanced performance.

But how true is this? Very little research exists showing the impact of the degree of mission knowledge on firm success and other performance measures. Does knowledge and understanding of a firm's mission contribute to success? Does the more that everyone shares the values imbedded in the company's mission also make a difference? And does the degree to which individuals are emotionally committed to a mission and energized by it act as yet another factor accelerating the mission effect on performance. These questions formed the basis of the research presented in this paper.

Research method

Sample selection and size

The sample. Data on mission statement practices have been gathered over the past ten years as part of an ongoing research project. To date, 559 organizations have completed our questionnaire thereby creating one of the largest data bases on mission statement practices in the world. This convenience data set formed the basis of the exploratory research investigation reported in this paper.

Respondent titles. Of the respondents making up the data set, 34.5 percent were from the top manager (or CEO) within the organization while the remainder were all senior level executives or managers (i.e. vice-presidents, 14.2 per cent; directors, 13.5 per cent, managers 24 per cent; other 13.8 per cent).

Operationalizing the research variables

Measuring the mission effect in human intellectual capital. This research was aimed first at measuring the effect that mission statements have as part of an organization's HIC and then determining the relationship, if any, that this effect has with performance. To consider the mission effect in HIC does not appear to be at odds with emerging theory since there is a growing consensus that HIC is essentially concerned with the collective knowledge, education, skills, attitudes and experience(s) of a firm's employees. Two important aspects of the knowledge and attitudes subset that could be significant in terms of organizational performance are:

- (1) the extent to which the mission (as a critical strategic planning tool) is known, understood, and widely shared within an organization by its employees; and
- (2) the degree to which it captures the energy and commitment of employees throughout the organization.

To date, no research projects on HIC have examined for this important mission effect. We decided to test for its significance.

To measure the mission effect within HIC, respondents to our survey instrument were asked to rate the extent to which the mission statement of their organization was:

- easily remembered;
- clear, understandable and unambiguous; and
- successful in promoting a sense of shared expectations (values) among all employees.

We also asked them to what extent individuals throughout their organizations were committed to achieving the mission (Bart, 1998b). Each question (with the exception of the question on shared values) was posed using a ten-point scale (0 = not at all; 9 = to the greatest possible extent). The question on shared values was posed with a five point scale (1 = not at all; 5 = to the greatest possible extent). Cronbach's coefficient alpha for the mission effect HIC variables was 0.8388 thereby indicating very high statistical reliability.

Performance outcome measures. Three performance measures were used (based on the prior mission literature research and writings) in order to assess their relationship with an organization's HIC:

- (1) the extent to which the mission statement influences the day-to-day behavior of members throughout the organization (Bart, 1996a; 1996b; 1997a; 1997b; 1998a; 1998b; Bart and Baetz, 1998; Campbell, 1989; 1993; Collins and Porras, 1991; Daniel, 1992; Germain and Cooper, 1990; Javidan, 1991; Ireland and Hitt, 1992; Klemm *et al.*, 1991; King and Cleland, 1979; El-Namaki, 1992; Wilson, 1992; Gibson *et al.*, 1990);
- (2) the extent to which the mission statement is actually being achieved (Bart, 1997b).
- (3) satisfaction with the organization's current financial performance (Bart, 2000).

Managers were asked to rate the first two outcome measures listed above on a ten-point scale (i.e. 0 = not at all, 9 = to the greatest possible extent). The financial performance satisfaction variable was measured on a different ten-point scale (0 = very dissatisfied; 10 = very satisfied). Cronbach's coefficient alpha for the performance outcomes scale was 0.7648 – again indicating a very high level of statistical reliability.

Some might argue that it may have been preferable to use some independently collected quantitative measures of performance, such as, profitability or revenues. But, such traditional indicators are not always considered appropriate measures. Both Souder (1987) and Bart (1991) especially believe that numerical performance measures are open to interpretation and that there are too many other considerations to be accounted for and controlled e.g. time, industry, organization size, overall strategy. Managers' perceptions of

success, on the other hand, generally take many, if not most, of these variables into consideration. After all, it is managers' perceptions which ultimately control their behavior – not simply numbers (Bart, 2000).

Data analysis

With regard to our mission and performance variables, a chi-square analysis was applied to determine the probability that the frequency of responses obtained within each question could have occurred by chance. In all instances, the chi-square statistics indicated that the respondents' intra-item scores were not likely to have occurred by chance. Descriptive statistics (i.e. mean, median, mode, standard deviation and high/low responses) were tabulated for each study variable. Spearman rank correlations were then used to determine if a link existed among the three selected outcome measures and our various HIC mission effect variables.

Findings and discussion

The descriptive statistics pertaining to the study variables are outlined in Table I. Generally speaking, the statistics reveal that a slightly positive trend existed in the responses obtained for each variable. This would suggest that, on average, most of the respondents in the sample view their organization's mission effect (as represented in our selected HIC variables) in somewhat favorable terms. The statistics also disclose that the sample is slightly weighted toward successful firms.

The findings from the correlation analysis are shown in Table II. The central proposition of this research endeavor was that the effects of mission statements on HIC were capable of being measured and that these effects would make a difference in terms of an organization's performance. Based on the results reported in Table II, it would appear that the main research proposition has been confirmed. Significant correlations were found (at the 0.000 level) between each of the four mission effect variables and the three performance outcome measures. The results show that mission statements (through the effect that they hold over an organization's HIC) can have either a positive or negative impact on performance depending on whether the mission is remembered or not; understood or not; engenders commitment or not; and, either promotes shared values or not.

To the extent that a mission statement has a positive effect on an organization's HIC, the evidence is unequivocal in its conclusion that positive performance consequences will follow. Now, this is a provocative finding because critics have claimed that just because employees know their organization's mission statement and/or understand what it means, this is no guarantee that they (or their organizations) will be influenced by it. While in some circumstances, this may be true, it is also hard to imagine any large organization achieving its stated mission when either no employees – or only a few – know anything about it. Consequently, we interpret our findings as suggesting that while knowing and understanding one's mission statement

Table I.
Descriptive statistics
for the study's
variables

Statistics	Extent to which mission influences the behavior of others	Extent to which mission is being achieved	Satisfaction with current financial performance	Extent to which mission is easily remembered	Extent to which mission is clear and understandable	Extent to which mission is successful in promoting shared values	Extent to which all employees are committed to the mission
Mean	5.49	6.23	6.07	5.60	6.55	3.39	5.92
Median	6.00	7.00	7.00	6.00	7.00	4.00	6.00
Mode	7	7	7	7	7	4	7
Std. deviation	2.09	1.81	2.11	2.47	1.86	1.08	2.02
Minimum	0	0	0	0	0	1	0
Maximum	9	9	9	9	9	5	9

Mission effect HIC variables	Extent to which mission influences personal behavior	Performance outcomes Extent to which the mission is being achieved	Satisfaction with current financial performance
Extent to which the mission is clear and understood	0.582 ^a	0.568 ^a	0.499 ^a
Extent to which the mission is easily remembered	0.654 ^a	0.495 ^a	0.339 ^a
Extent to which the mission is successful in promoting a set of shared values throughout the organization	0.689 ^a	0.490 ^a	0.343 ^a
Extent to which all employees are committed to the mission	0.731 ^a	0.634 ^a	0.421 ^a

Note: ^aSpearman rank correlation coefficients (significance at 0.000)

Table II.
Spearman rank correlations between A mission effect \cong HIC variables and performance outcome

may not be a sufficient condition for organizational success, it is most likely a necessary one – much in the same way that other HIC variables are. Mission, therefore, appears to matter insofar as measuring and managing an organization's HIC is concerned and the effect that it has on HIC should not be ignored by decision makers when considering what to include in any intellectual capital management/measurement initiatives. Indeed, by utilizing our mission effect variables, we now have an additional important set of measures which can help decision makers assess the effectiveness of alternative HIC management activities and initiatives (e.g. mission training and communication programs).

Our findings also help continue to underscore the role that a properly formulated and executed mission can play in an organization. In some concurrent research, Bart *et al.* (2001) show how various characteristics and components of a mission statement (i.e. mission rationale, mission development process, mission content, and degree of mission-organizational alignment (tm)) influence organizational performance. While the results presented in this paper are only preliminary and exploratory, and the sample is one of convenience, they support and extend Bart *et al.*'s (2001) results by pointing out some additional variables that might suitably be taken into account when assessing the quality of a mission statement.

Another interesting observation from the results obtained in this study is that they clearly highlight the (often under-appreciated) role that attitudes and perceptions play in the HIC domain. Most previous commentaries on the measurement and management of HIC have tended to emphasize only

knowledge and skill aspects e.g. number and type of educational degrees, hours of continuing education, etc. This has most likely occurred because these variables are among the easiest to measure. Attitudes about one's organization and one's own job, on the other hand, are not so simple to capture in numerical form. But they are no less important if an organization is going to achieve its stated objectives. To the extent that organizational members support their organization's mission with fervent conviction, this should make it more likely to be achieved and less a situation of mission impossible. The current study shows the benefits accruing from measuring just some of the employee attitudes related to mission and they demonstrate the need for not forsaking this elusive – yet vitally important – attitudinal component of HIC just because it is difficult to calibrate and assess.

Finally, at the Fourth World Congress on the Management of Intellectual Capital (held at McMaster University, Canada, January 2001), one of the greatest impediments to the progress and adoption of the intellectual capital paradigm was identified as the lack of support among senior managers for it – particularly at the level of the CEO and board of directors. A knowledge café session devoted to discussing this problem generated dozens of possible solutions. Among the problems most frequently mentioned, however, was the need to educate senior managers and directors with evidence showing the benefits accruing to their organizations from embracing this new perspective.

Not surprisingly, case studies were the most popular method proposed for heightening awareness. A significant number of the delegates, however, argued about the need to conduct and find more solid research evidence showing the connection between the effective management of an organization's intellectual capital and high performance. The results of the current study represent one such tentative effort which might hopefully contribute to the arsenal of knowledge that will one day see the IC movement go from evolution to revolution. The oft-maligned mission statement and its mission effect on HIC appears to have an important role to play in this regard.

References

- Bain & Company (1998), *Management Tools and Techniques: An Executive Guide*, Bain & Company, Boston, MA.
- Bain & Company (1999), *Management Tools and Techniques: An Executive Guide*, Bain & Company, Boston, MA.
- Bart, C.K. (1991), "Controlling new products: a presidential perspective", *Journal of Product Innovation Management*, Vol. 8 No. 1, March, pp. 4-17.
- Bart, C.K. (1996a), The impact of mission statements on firm innovativeness. *International Journal of Technology Management*, Vol. 11 Nos 3/4, pp. 479-93.
- Bart, C.K. (1996b), "High tech firms: Does mission matter?" *The Journal of High Technology Management Research*, Vol. 7 No. 2, pp. 209-25.
- Bart, C.K. (1997a), "Industrial firms and the power of mission", *Industrial Marketing Management*, Vol. 26, pp. 371-83.
- Bart, C.K. (1997b), "Sex, lies and mission statements", *Business Horizons*, Nov-Dec, pp. 9-18.

- Bart, C.K. (1998a), "A comparison of mission statements and their rationales in innovative and non-innovative firms", *International Journal of Technology Management*, Vol. 16 No. 1/2/3, pp. 64-77.
- Bart, C.K. (1998b), "Mission statement rationales and organizational alignment in the not-for-profit health care sector", *Health Care Management Review*, Vol. 23 No. 4, pp. 56-71.
- Bart, C.K. (2000), "Mission statements in Canadian not-for-profit hospitals: does process matter?", *Health Care Management Review*, Vol. 25 No. 2, Spring, pp. 45-63.
- Bart, C.K. and Baetz, M.C. (1998), "The relationship between mission statements and firm performance: an exploratory study", *The Journal of Management Studies*, Vol. 36 No. 26, November, pp. 823-53.
- Bart, C., Bontis, N. and Taggar, S. (2001), "A model of mission statements and firm performance", *Management Decision*, Vol. 39 No. 1, pp. 19-35.
- Bassi, L.J. and Van Buren, M.E. (1999), "Valuing investments in intellectual capital", *International Journal of Technology Management*, Vol. 18 No. 5/6/7/8, pp. 414-32.
- Bontis, N. (1998), "Intellectual capital: an exploratory study that develops measures and models", *Management Decision*, Vol. 36 No. 2, pp. 63-76.
- Bontis, N. (1999), "Managing organizational knowledge by diagnosing intellectual capital: framing and advancing the state of the field", *International Journal of Technology Management*, Vol. 18 No. 5/6/7/8, pp. 433-62.
- Bontis, N. (2001), "Assessing knowledge assets: a review of the models used to measure intellectual capital", *International Journal of Management Reviews*, Vol. 3 No. 1, pp. 41-60.
- Bontis, N., Dragonetti, N., Jacobsen, K. and Roos, G. (1999), "The knowledge toolbox: a review of the tools available to measure and manage intangible resources", *European Management Journal*, Vol. 17 No. 4, pp. 391-402.
- Bryson, J.M. (1995), *Strategic Planning for Public and Nonprofit Organizations: A guide to strengthening and sustaining organizational achievement*, Jossey-Bass Publishers, San Francisco, CA.
- Bueno, E. (2001), "Significance and measurement of intellectual capital", *Proceedings, Fourth World Congress on the Management of Intellectual Capital*, McMaster University, Hamilton, Ontario.
- Byars, L.L. (1984), *Strategic Management: Planning and Implementation*. Harper and Row, New York, NY.
- Byars, L.L. (1987), "Organizational philosophy and mission statements", *Planning Review*, Vol. 15 No. 4, pp. 32-6.
- Campbell, A. (1989), "Does your organization need a mission?", *Leadership and Organization Development*, Vol. 3.
- Campbell, A. (1993), "The power of mission: aligning strategy and culture", *Planning Review*, Special Issue.
- Campbell, A. and Yeung, S. (1991), "Creating a sense of mission", *Long Range Planning*, Vol. 24 No. 4, pp. 10-20.
- Collins, J.C. and Porras, J.I. (1991), "Organizational vision and visionary organizations", *California Management Review*, Fall.
- Daft, R.L. and Fitzgerald, P.A. (1992), *Management*, Dryden Canada, Toronto.
- Daniel, A.L. (1992), "Strategic Planning - The role of the chief executive", *Long Range Planning*, Vol. 25, April.
- David, F.R. (1989), "How companies define their mission", *Long Range Planning*, Vol. 22 No. 1, pp. 90-97.
- David, F.R. (1993), *Strategic Management*, 4th ed., Macmillan, New York, NY.

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- El-Namaki, M.S.S. (1992), "Creating a corporate vision", *Long Range Planning*, Vol. 25, December.
- Germain, R. and Cooper, M.B. (1990), "How a customer mission statement affects company performance," *Industrial Marketing Management*, Vol. 19.
- Gibson, C.K., Newton, D.J., and Cochran, D.S. (1990), An empirical investigation of the nature hospital mission statements, *Health Care Management Review*, Vol. 15 No. 3, pp. 35-40.
- Ginter, P.M., Swayne, L.M. and Duncan, W.J. (1998), *Strategic Management of Health Care Organizations*, 3rd ed., Blackwell Business, Malden, MA.
- Higgins, J.W. and Vincze, J.W. (1989), *Strategic Management-Text and Cases*, The Dryden Press, New York, NY.
- Ireland, R.D. and Hitt, M.A. (1992), "Mission statements: importance, challenge and recommendations for development", *Business Horizons*, Vol. 35 No. 3, May-June, pp. 34-42.
- Javidan, M. (1991), "Leading a high-commitment high-performance organization", *Long Range Planning*, Vol. 24.
- King, W.R. and Cleland, D.I. (1979), *Strategic planning and policy*, van Nostrand Reinhold, New York, NY.
- Klemm, M., Sanderson, S. and Luffman, G. (1991), "Mission statements: selling corporate values to employees", *Long Range Planning*, Vol. 24 No. 3, pp. 73-78.
- McGinnis, V.J. (1981), "The mission statement: A key step in strategic planning", *Business*, November-December, pp. 39-43.
- Medley, G.J. (1992), "WWF UK creates a new mission", *Long Range Planning*, Vol. 25, April, pp. 63-68.
- Souder, W.E. (1987), *Managing New Product Innovations*, Lexington Books, Lexington, MA.
- Thompson, A.A. and Strickland, A.J. (1996), *Strategic Management: Concept and Cases*, 9th ed., Irwin.
- Wheelan, T.J. and Hunger, J.D. (1992), *Strategic Management and Business Policy*, 4th ed., Addison-Wesley, New York, NY.
- Wilson, I. (1992), "Realizing the power of strategic vision", *Long Range Planning*, Vol. 25 No. 5, pp. 18-28.