

Learning Capability, Organization Factors and Firm Performance

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Abstract

This paper is an exploratory study that examines the relationship between the learning capability of organizations and its potential impact on firm performance. Although it is implied in the literature that learning organizations are also high performing organizations, there has been no large scale empirical studies to test this assertion. Based on a developed scale to measure the learning capability of an organization, a survey was carried out to measure the learning capability of a sample of for-profit organizations. Financial and non-financial performance data was also obtained for these companies. Other organization factors such as size and formalization was also measured. Results of the study show that there is no relationship between learning capability and the two financial performance measures, return on equity and return on assets. However, learning capability is strongly related to job satisfaction, a non-financial performance measure. An unexpected finding of a significant positive relationship between formalization and financial performance and its implications is explored. It is argued that formalization in the case of for-profit organizations may have an enabling rather than a coercive impact on the organization. Some limitations of the study are also presented, and potential future research on this issue discussed.

Introduction

The concept of a learning organization continues to be of increasing interest to researchers, consultants and practicing managers as evidenced by the volume of literature devoted to the topic (Argyris & Schon, 1996; Goh & Richards, 1997; Nevis, Dibella & Gould, 1995; Calvert, Mobley & Marshall, 1995). Some possible driving forces for this interest is the growing global competitive environment and also the influence of knowledge as an underpinning for developing competitive advantage (Nonaka, 1994; Prusak, 1997; Kiernan, 1993; Simonin, 1997). Managers and organizations are beginning to realize that how they manage their people resources may be the way to achieving a sustainable competitive advantage (Pfeffer, 1994)

An approach to accomplishing this is through building a learning organization (Garvin, 1993). In his book *The Fifth Discipline*, Senge (1990,1992) elaborates on the characteristics of a learning organization such as a clear vision, shared mental models, teamwork and an experimenting culture as key features that can be found in such organizations. Later, Garvin (1993) takes a more practical, applied approach and also specifies a set of conditions needed to build a learning organization. This growing body of literature attempts to describe the kind of management practices and organizational characteristics that such organizations have (Goh, 1998; Goh & Richards, 1997; McGill, Slocum & Lei, 1993).

Implied in this literature is that a learning organization is a highly effective organization that is competitive, because it has the capability of creating new knowledge, is good at experimentation and therefore innovative and can transfer knowledge to solve problems quickly (Leonard-Barton, 1992; Mills & Freisen, 1992). However, there are very few or no empirical work other than a few in-depth case studies that attempt to link organizational learning to implied performance outcomes (Simonin, 1997). The lack of any large-scale empirical studies is due to the fact that there has been very little attempt to develop measures and metrics on this topic. More recently, Goh and Richards (1997) has developed a scale that attempts to capture the management practices and characteristics of an organization that can be described as being a learning organization. Organizations scoring high on this scale can be considered to have a strong learning capability as indicated by the existence of a set of management practices and organizational characteristics that facilitates and encourages organizational learning.

The objective of this study is to link organizational learning capability as measured by this survey and the performance of an organization. However, before we describe the study, a discussion on the conceptual underpinnings of this survey is appropriate.

An Organizational Learning Capability Perspective

The current literature on organizational learning is very confusing. Distinctions have been made between “organizational learning” and “the learning organization”(Kim, 1993), between “academic” and “applied/practitioner” approaches (Argyris & Schon, 1998), between “normative” and “capability” perspectives (Dibella, 1995) and between “individual learning “ and “organizational learning”(Weick, 1991). This debate although healthy, creates the impression that this concept is not well understood and therefore not very practical in application.

This paper takes a normative perspective to the concept of a learning organization. I have also taken an organizational level analysis. We do not argue that organizations can behave like individuals from a learning perspective, as we will fall into the anthropomorphism debate. However, we argue that organizational learning is related to the experiences and actions of organization members. Organizational learning can be defined “by studying the concrete structural and procedural arrangements through which actions by members that are understood to entail learning are followed by observable changes in the organization’s pattern of activities” (Cook & Yanow, 1993, p.375).

These organizational learning mechanisms become the foundation to understand what is a learning organization, that is, the structures, strategies and procedures that allow the organization and its members to learn (Popper & Lipshitz, 1998). Learning organizations can therefore be viewed as firms that purposefully adopt structures and strategies to encourage learning (Dodgson, 1993). These concrete observable organizational systems or institutionalized structural and procedural arrangements describe the concept of a learning organization. It can be argued that organizations that adopt or have these organizational structures and procedures have a greater capacity to learn.

This approach requires an identification of what these mechanisms are that organizations use to facilitate learning. That is, what kind of management practices and procedures are linked to being a learning organization? What organization structures support learning? These practices structures and procedures can then define the learning capability of an organization.

To answer some of these questions, we conducted a research project to develop a measurement tool for assessing the learning capability of an organization. The rationale was that organizational learning is really the product of individual and group learning applied to the accomplishment of the organization’s vision and performance goals and that certain management practices and internal conditions can either help or hinder this process (Duncan and Weiss, 1979; Senge, 1990; Garvin, 1993; Mills and Friesen, 1992). Thus, if we can identify and assess the impact of a set of internal organizational conditions and management practices that lead to learning, we could assess an organization’s learning capability. This information could then help managers to focus on specific interventions required to improve organizational learning.

The literature on organizational learning has developed different orientations in how learning can be built. In discussing this issue, DiBella (1995) he has identified what he calls the normative perspective of a learning organization. This perspective best describes the orientation of this approach, that is, learning is a collective activity that takes place under certain conditions or circumstances. Therefore, organizations need to create the necessary conditions to foster and allow learning to take place.

Developing a learning organization is not random chance but a deliberate intervention by leaders to establish the necessary internal conditions for the organization to operate in a learning mode. The implicit assumption is there is an organizational archetype that defines a successful learning organization, which in turn influences the performance, long-term effectiveness and survival of the organization. This normative perspective moves us away from the quandary of the definitions and descriptive literature and confusion about the learning organization. In fact, Garvin (1993) argues that organizations need to actively manage the learning process to ensure that it occurs by design rather than by chance. Distinctive policies and managerial practices are responsible for success and they form the building blocks of learning organizations.

Therefore, we need to identify the managerial practices that facilitate organizational learning or the conditions and enablers that can help an organization to become a learning organization. The assumption is that organizational learning does happen, but the appropriate conditions and managerial practices are needed for effective learning to occur (Ulrich, Jick & Von Glinow, 1993).

The Strategic Building Blocks of a Learning Organization

By analyzing the commonalities among the various descriptions found in an extensive earlier literature review (Goh, 1998; Goh & Richards, 1997), we identified five major underlying organization characteristics and management practices that are key conditions essential for learning to take place in an organization. These five strategic building blocks of a learning organization are as follows:

1. Clarity of Purpose and Mission

The organization as a whole, and each unit within it need to have a clearly articulated purpose. Employees need to understand this purpose and how the work they do contributes to attainment of the mission of the organization. In addition, the organization needs to promote employee commitment to these goals. Senge (1990,1992) and others have stated that “building a shared vision” especially of a future desired state creates tension that leads to learning. Employees understand the gap between the vision and the current state and can better strive to overcome that gap (Mohrman and Morhman Jr., 1995).

2. Leadership Commitment and Empowerment

Leaders need to be committed to the accomplishment of organizational goals and to the goal of learning. Moreover, leaders need to create a climate of egalitarianism and trust where people are approachable and failures are a part of the learning process. Specifically, leaders need to help identify performance gaps and then help set goals that encourage the search for knowledge to narrow and solve these performance gaps.

Leadership is mentioned by virtually all writers as an important element in fostering a learning climate through their behaviors, such as seeking feedback, being open to criticisms, admitting mistakes and empowering their employees to make decisions and take some risks (Garvin, 1993; McGill, Slocum and Lei, 1993).

3. Experimentation and Rewards

Problems faced by the organization present opportunities for experimentation. The organization's structure and systems need to support this practice. Budgeting systems, for example, can be designed to challenge the need for doing things because "we have always done them", and compensation systems can be designed to reward innovation and risk-taking. This is by far the most consistent managerial practice that is observed in learning organizations. The freedom to experiment with new work methods and innovative processes are encouraged and supported (Senge, 1990; Garvin, 1993, McGill, Slocum and Lei, 1993).

4. Transfer of Knowledge

Communication needs to be clear, fast and focused. Information should cross-functional and sub-unit boundaries within the organization. The type of information acquired and distributed should relate to organizational problems and opportunities. This is again mentioned by the majority of writers, especially the ability of the organization to transfer knowledge across departmental boundaries and to transfer knowledge from the external environment e.g., from suppliers, customers and even from benchmarking of competitors (Garvin, 1993; Shaw and Perkins, 1991).

5. Teamwork and Group Problem Solving

In today's complex world, individuals need to help each other accomplish organizational objectives. Structures and systems in the organization need to encourage teamwork and group problem solving by employees and reduce the dependency on upper management. Teams need to also have the ability to work cross-functionally. By working in teams, knowledge can be shared among organizational members and there is also a better understanding of other individuals, their needs and how they work in different parts of the organization, encouraging knowledge transfer as well (Senge, 1990, 1992; Garvin, 1993).

A survey has been developed to measure these five strategic building blocks. Initial scale development in terms of reliability and validity as been reported in another published paper (see Goh and Richards, 1977). Also, a more detailed discussion of the background

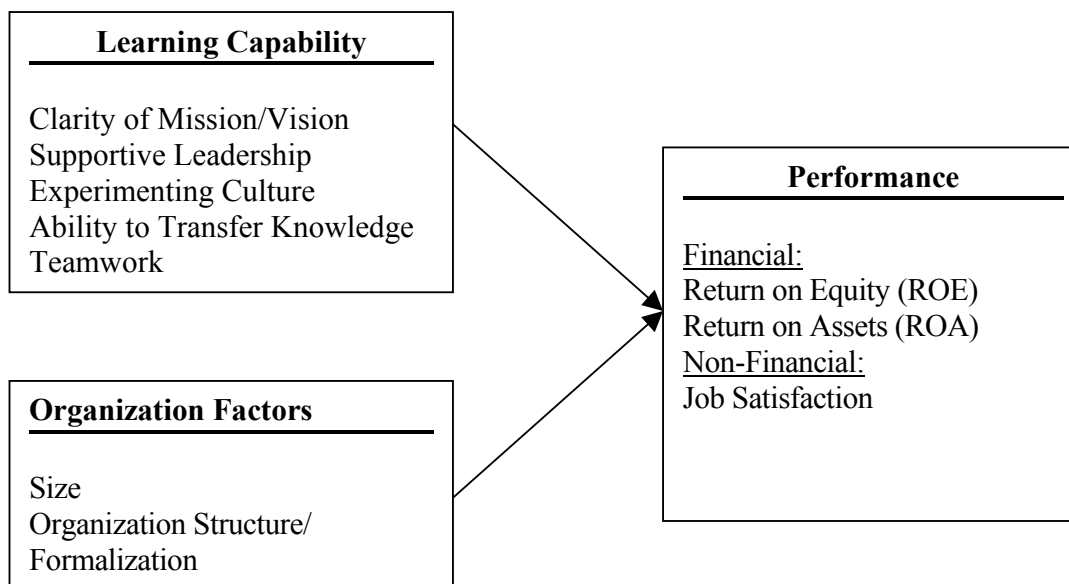
rationale for the model on which the survey is based, can be found in another recently published paper, Goh (1998).

Study Objective

In this research, I will be responding to a need for linking the concept of the learning capability of an organization to firm performance. I will also be examining whether other organizational factors such as size and structure can also impact on firm performance. The basic conceptual model to be tested is shown in Figure 1.

Figure 1

Conceptual Framework of Learning Capability, Organization Factors and Performance



As this was considered an exploratory study, no specific hypotheses were stated. However, the main expectation is to test the model and to determine if there is a positive relationship between learning capability and firm performance.

Methodology

Sample

Data for this study was obtained through a mailed survey to a sample of companies listed on the Toronto Stock Exchange (TSE). A mailing list was obtained for these companies and a

random sample selected from this list. We selected every fifth company on this list for a sample of about 800 companies. The surveys were sent to the CEO or senior Human Resource manager in each organization. Because companies do change as a result of mergers, a move to new offices, or change in CEOs, about 100 surveys were returned because they were undeliverable for those reasons. Approximately 200 refused to respond or returned the surveys. Only 110 surveys were completed and returned, of which only about n=89 were usable. A significant number of companies were in the oil, gas and energy sector.

Measures

Learning Capability was measured using the learning organization survey that measures the five strategic building blocks of a learning organization discussed earlier. The survey has 21 items measuring the five learning building blocks. The overall reliability of this scale was .88 (Cronbach's alpha). Job Satisfaction was measured with a 10- item scale. Reliability of this scale was .83 (Cronbach's alpha). Organization structure was measured with a formalization scale. This scale has 7- items and had a reliability of .63 (Cronbach's alpha). Size was measured as the reported assets of the firm. This was highly correlated with net income and annual revenue. Financial performance data of the firms in the study was obtained through the Compustat Database. Return on Assets (ROA) and Return on Equity (ROE) was obtained for a 3-year period for each firm. These values were averaged for the three time periods 1997, 1998 and 1999.

Results

The data was analyzed using SPSS. Table 1 below shows the correlations among the variables in the study. Learning capability is uncorrelated with ROE or ROA, but positively correlated with job satisfaction and negatively with size. Surprisingly, there was an unexpected positive relationship between formalization and both financial performance measures.

Table 1

Correlations Among Variables

Variables	1.	2.	3.	4.	5.
1. Learning Capability					
2. Formalization	-.05				
3. Size	-.25*	.06			
4. Job Satisfaction	.66***	.05	.05		
5. ROE	-.21	.36**	.08	-.07	
6. ROA	-.16	.26*	.07	-.06	.92***

N= 89

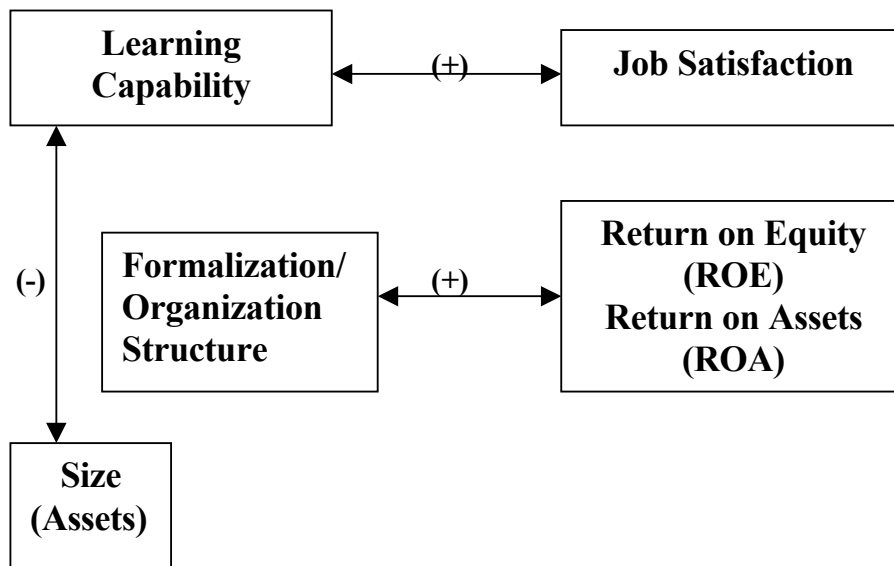
***p<.001, **p<.01, *p<.05

As indicated earlier, the sample was biased towards companies in the natural resources sector. A further analysis was performed with these companies removed from the overall sample. This reduced the sample size to n=56. Overall, the pattern of results did not change, however, the correlations were slightly stronger and more significant. The small sample size restricted any further multivariate analysis.

Based on this exploratory study, the significant relationship among the variables in the model shown in Figure 1 is as follows:

Figure 2

Relationship Between Learning Capability, Organization Factors and Performance



I have used double-headed arrows in showing the relationships in Figure 2 to indicate that no directional causality is implied.

Conclusion and Discussion

Data from this study show that there is no relationship between learning capability and financial performance of a sample of Canadian companies. However, learning capability was positively related to a non-financial performance measure, job satisfaction. Size of the firm was negatively correlated with learning capability and an unexpected finding that

formalization or bureaucratization had a significant positive relationship to both financial performance measures.

Some tentative conclusions from this study suggest that the relationship between learning capability and ultimate financial performance or payoff is not that evident. But building or having this learning capability can have a positive effect on employee morale such as job satisfaction. This may well have some financial payoffs if it reduces turnover and absenteeism in the organization. However, the payoffs may not be that significant from a purely financial basis. The negative relationship with size may indicate that a strong learning capability may be harder to achieve in larger organizations.

By far the most puzzling result is the positive relationship between formalization or the level of bureaucratization with financial performance. From the perspective of the CEOs in this study, the more they perceive their organization to have strict rules, controls and checks the better the financial performance of these companies as measured by ROE and ROA. This finding may go against the conventional assertion that bureaucracy stifles creativity, fosters dissatisfaction, and demotivate employees (Adler & Borys, 1996).

In a recent paper, Adler and Borys (1996) argue that formalization may have a positive effect on an organization. They suggest that formalization can play either a coercive or enabling role. Formalization under certain circumstances can actually help employees such as reducing role conflict and ambiguity (Nicholson & Goh, 1983), and can even have a positive impact on innovation in an organization. Adler and Borys(1996) cite companies like Toyota, where there is extensive formalization in work procedures, but which enables the company to be flexible in responding to change. Standardized work procedures if developed by workers themselves can also facilitate and clarify work objectives and increase the level of consistency in work output. Such enabling bureaucracy is more likely to be found in for-profit companies than not-for-profit organizations. The latter, tend to use bureaucracy in a coercive way as there is an absence of reality-checks, so it becomes a tool for power and maintaining parochial interests. Since all our companies are for-profit, this can be considered to be a partial test of the Adler& Borys(1996) assertion that formalization in these companies can generally be considered as enabling bureaucracy and therefore have a positive impact on organizational performance.

A conclusion from this study is that learning capability may not be linked directly to financial performance, however, it can have a positive impact on employee job satisfaction and morale. In order to leverage this capability to impact on financial performance, organizations need to pay attention as well to enabling bureaucracy, that is, some degree of formalization to facilitate work procedures that contribute to effective task performance.

Clearly, this study has a number of limitations, Firstly, the sample size is relatively small with a preponderance of resource industry companies. Secondly, only a limited number of performance measures mostly accounting financial measures were used for a short period. Lastly, perceptual measures were used from a single source at a single time period in each firm. This may have resulted in a systematic bias in the measures as they were all CEOs.

Future research of this issue may require larger samples and a longitudinal approach, by measuring learning capability over time and from multiple sources. Broader ranges of performance measures need to be assessed as well such as market share, customer satisfaction and stock returns over a longer period of time. Similar to research on the impact of HR practices on firm performance, this issue of the link between learning capability and firm performance remains a question of importance for both practitioners and researchers. A more complex way of theorizing this issue may also be required, for example, universalistic, contingency and configurational competing models of performance predictions need to be tested.

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