
Making the Business Case for the Learning Organization Concept

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The problem and the solution. Organizations that embrace strategies consistent with the learning organization literature are thought to achieve improved performance. Yet few empirical studies have examined the relationship between the learning organization concept and firms' financial performance. To assess this association, managerial responses to the Dimensions of the Learning Organization Questionnaire along with objective measures of firms' financial performance were obtained.

Keywords: *learning organization; Dimensions of the Learning Organization Questionnaire (DLOQ); organizational learning; financial performance; performance improvement; learning strategy*

Scholars contend that adopting learning organization strategies should promote individual, team, and organizational learning and that such enhanced learning should yield performance gains (Baker & Sinkula, 1999; Day, 1994; Hunt & Morgan, 1996; Pettigrew & Whipp, 1991; Slater & Narver, 1995). However, few concrete studies exist that clarify how the learning organization concept works to achieve performance improvement (Goh & Richards, 1997; Henderson, 1997; Jacobs, 1995; Kaiser & Holton, 1998). In fact, "evidence is even harder to come by of organizations linking learning to ROI [return on investment] and to the kinds of results that might convince hard-headed business people to risk their money on a learning organization journey" (Smith & Tosey, 1999, p. 70). Without such assessment approaches, "even a preliminary exploration of means to substantiate a business case for a learning organization is precluded" (Smith & Tosey, 1999, p. 70). Therefore, to address this shortcoming in the literature, this study was

designed to assess the relationship between the learning organization concept as articulated by Watkins and Marsick (1993, 1997; see also Marsick & Watkins, 1999) and firms' financial performance using secondary financial data drawn from the *COMPUSTAT* (1998) and the *Stern Stewart Performance 1000* (1998) financial databases.

The Research Context

Logistics managers were selected as key respondents for this study because of the increasing role they are playing in developing and supporting corporate strategies that focus on service for the provision of superior customer value through supply chain management (Christopher & Ryals, 1999; Poirer, 1999; Stank, Daugherty, & Ellinger, 1998). To synchronize superior service and meet customers' divergent and continuously changing needs, logistics managers must continuously interact and be highly conversant with the operations of the other business functions within their organizations (Quinn, 1997). Logistics managers' perceptions present a unique platform on which to examine the dimensions of the learning organization concept and their effect on performance because they possess a broad understanding and familiarity with an entire firm's operations.

Research Design and Implementation

A random sample of 400 logistics managers was drawn from the 2,046 potential candidates on the Council of Logistics Management membership roster. These potential respondents' firms were then screened to determine the availability of secondary data about their firms on the *COMPUSTAT Database* (1998) to ensure that the association between the survey data and objective measures of firms' financial performance could be assessed. Respondent firms were replaced from the initial random sample when the data were not found on the *COMPUSTAT Database* by randomly selecting additional firms from the Council of Logistics Management listing and applying the same screening procedures.

Next, each of the managers was contacted by telephone to solicit his or her participation in the study because prenotification of prospective respondents is believed to increase response rates in survey-based research (Fox, Crask, & Kim, 1988). Of the 400 managers, 262 agreed to participate in the study, and 138 either declined or could not be reached after multiple call attempts. The initial mailing of the questionnaire included prepaid return postage, a personalized letter on university letterhead, and a \$2 bill as an incentive to respond. Nonrespondents were contacted with a follow-up letter 2 weeks after the initial mailing. Respondents returned a total of 208 completed surveys. This response rate represents 52% of the sampling

frame of 400 and 79% of the 262 questionnaires that were mailed out. Demographically, the key respondents in the study represented manufacturing organizations in the electronics/telecommunications, chemicals, retail, automotive parts and supplies, food, and wood/paper industries. Firm sizes ranged from 500 to 50,000 employees, and annual revenues ranged from \$2 million to more than \$1 billion.

Instrumentation

Watkins and Marsick (1997; see also Marsick & Watkins, 1999) acknowledge that constructing a valid instrument is an ongoing process. Previous Dimensions of the Learning Organization Questionnaire (DLOQ) instrument development and validation studies have used nonrandom samples of 116 and 469 respondents, respectively, from multiple organizations (Watkins, Yang, & Marsick, 1997; Yang, Watkins, & Marsick, 1998, 2002; see also Marsick & Watkins, 1999). Therefore, the current study extends DLOQ instrument research by using a random sampling strategy among U.S.-based manufacturers representing a variety of industries.

Secondary Financial Performance Measures

A database was created consisting of secondary objective measures of financial performance for the respondent organizations with data obtained from the 1998 *COMPUSTAT* and the *Stern Stewart Performance 1000* financial databases. Several different measures of performance were examined because no single measure is able to completely describe all aspects of a firm's condition when attempting to evaluate an organization's financial performance. The use of a combination of traditional accounting measures such as return on equity and today's more popular value-added measures such as market value added (MVA) provides a good overview of the success of a business's operations.

This research used four measures to obtain a comprehensive view of firm financial performance: return on equity (ROE), return on assets (ROA), Tobin's *q*, and MVA. The ROA and ROE measures are from the *COMPUSTAT Database* for the 1998 financial year and are listed for each company under the data items of ROA and ROE. A proxy for Tobin's *q* was calculated using a method suggested by Chung and Pruitt (1994). All of the data necessary to calculate the proxy were obtained from the *COMPUSTAT Database* (1998). The MVA data were obtained from the *Stern Stewart Performance 1000* and is 1998 financial year data for 1,000 firms. MVA data are quoted in a dollar amount for each firm. Because the research here includes

firms with varying sizes, MVA was standardized by total assets, a proxy for firm size.

ROE. The goal of any publicly held firm should be to maximize shareholder wealth (see e.g., Brigham, 1995; Jones, 1992; Peterson, 1994). An accounting measure that examines firm performance in this context is ROE. The ROE ratio indicates the return on shareholder investment that is generated by a firm. ROE is often used as a measure of firm performance because it allows potential investors to compare similar firms and provides shareholders with an indication of their return. ROE is considered to be the most important traditional accounting measure for shareholders and potential investors attempting to evaluate a firm.

ROA. ROA is another return on investment ratio that is used as an indicator of financial performance. ROA is an indication of the return available to shareholders from the investment of all the firm's capital. This includes funds supplied by both owners and creditors of the firm. Similar to ROE, ROA is used to both evaluate the financial performance of a firm over time and also to compare a firm's performance with the performance of other firms in the same industry.

Although ROA and ROE are often used as measures of firm performance, there are several reasons why the use of additional financial measures is desirable. ROE and ROA are both accounting-based performance measures. Both ratios use data that tend to be historical in context and that are sensitive to the choice of accounting methods. Accordingly, the current research used two additional financial performance measures (Tobin's q and MVA) that are regarded as more forward-looking measures of firm performance because they are based on the current market value of a firm.

Tobin's q. Tobin's q (Tobin, 1969) is another performance measure that is frequently used by firms and potential investors to evaluate firm performance. Tobin's q represents the value added by management above the value of the firm's assets. The q measure is equal to the market value of assets divided by the replacement cost of assets and is often used as a proxy for a firm's investment opportunity set (Born & McWilliams, 1997). High-q firms are firms for which the market anticipates a lot of future investment opportunities. In contrast, the market expects low-q firms to have fewer investment opportunities. A q value greater than 1 means that the market believes the assets of a firm can generate cash flows that exceed the liquidation value of those assets. Tobin's q has been shown to have a high correlation with the quality of managers and is often used to represent this qualitative measure. Determining the actual replacement cost of the assets of a firm is difficult, so a proxy for q is usually used. Perfect and Wiles (1994) showed that the proxy for q is similar to Tobin's q.

MVA. MVA is calculated by subtracting the total capital invested in a firm from the sum of the market value of a firm's equity and the book value of its debt. This ratio is forward looking as it represents the difference between the money invested in the firm and the present value of the cash flows expected to be gener-

ated by this capital. Thus, MVA is the premium that the market places on a stock beyond the amount of capital invested by shareholders and creditors. It is the difference between the amount investors put into a firm and the amount available for investors to take out of a firm. A positive MVA suggests an increase in shareholder wealth, and a negative MVA indicates a decline in shareholder wealth.

Peterson and Peterson (1996) suggested that the best test of a measure of performance for a public firm is the price of the company's stock because the goal of managers should be to maximize shareholders' wealth. They found that MVA measures are statistically significantly correlated with stock returns. Although the measures are not perfectly correlated, Peterson and Peterson concluded that the MVA measures are good proxies for the financial performance of a firm.

Data Analysis and Findings

Data analysis began by performing an analysis of nonresponse bias by comparing early versus late responses. Because no significant differences existed for the variables analyzed, nonresponse bias was not considered a problem. Next, to assess the psychometric properties of the DLOQ, confirmatory factor analysis (CFA) was performed to examine the dimensionality and validity of the DLOQ in a business context. As shown in Table 1, the CFA results for the sample added further credence to the dimensionality proposed by Watkins and Marsick (1993, 1997; see also Marsick & Watkins, 1999). The reliability estimates suggest that the DLOQ measures continue to demonstrate acceptable reliability in a business context. Table 1 provides the results of the CFA and reliability estimates, respectively.

Next, canonical correlations were performed to address the following research question: What is the relationship between the seven dimensions of the DLOQ instrument and objective organizational outcome measures as defined by ROE, ROA, Tobin's q , and MVA? As shown in Table 2, the canonical correlation between the seven dimensions of the learning organization and the four secondary measures of financial performance (ROE, ROA, Tobin's q , and MVA) was statistically significant ($p < .05$). Moreover, different multivariate statistics revealed consistent effect sizes, suggesting that more than 10% of the variance in the four financial performance indicators can be explained by the dimensions of the learning organization measured by the DLOQ.

Discussion and Recommendations

Given the multitude of internal and external factors affecting a firm's financial performance, the fact that the seven dimensions of the learning organization concept as measured by the DLOQ explained 10% of the variance in financial performance is very significant. The positive associations

TABLE 1: Fit Indices for Measurement Models of the Dimensions of the Learning Organization Questionnaire (DLOQ)

| Fit Index | Measurement Models | |
|---|--------------------|-----------------------|
| | 43 Items | 21 Items ^a |
| χ^2 | 3886.576 | 328.544 |
| df | 839 | 157 |
| χ^2/df | 4.632 | 2.093 |
| Root mean square error of approximation | .132 | .073 |
| Root mean square residual | .083 | .053 |
| Goodness of Fit Index | .616 | .870 |
| Adjusted Goodness of Fit Index | .567 | .808 |
| Non-Normed Fit Index | .581 | .914 |
| Comparative Fit Index | .611 | .935 |

Reliability Estimates for the DLOQ Measures

| Subscale | Original 43 Items | | Reduced 21 Items ^a | |
|-----------------------|-------------------|-------------------|-------------------------------|-------------------|
| | Number of Items | Coefficient Alpha | Number of Items | Coefficient Alpha |
| Continuous Learning | 7 | .81 | 3 | .60 |
| Dialogue and Inquiry | 6 | .86 | 3 | .78 |
| Team Learning | 6 | .85 | 3 | .77 |
| Embedded System | 6 | .85 | 3 | .75 |
| System Connection | 6 | .87 | 3 | .80 |
| Empowerment | 6 | .84 | 3 | .72 |
| Provide Leadership | 6 | .89 | 3 | .87 |
| Financial Performance | 6 | .75 | 3 | .68 |
| Knowledge Performance | 6 | .80 | 3 | .71 |

a. Yang, Watkins, and Marsick (2002) also reduced the 43-item scale to a more parsimonious 21-item scale. The 21-item, seven-construct model yields superior fit indices than the original 43-item model.

found between the learning organization concept and firms' financial performance suggest that there is a payoff for organizations that embrace practices and strategies consistent with the learning organization literature. Therefore, these findings offer tentative support for the existence of a business case for the learning organization concept.

Consequently, this study may be useful to senior managers and leaders who are assessing the efficacy of the learning organization concept because the findings provide some tentative evidence linking characteristics of the learning organization to performance improvement. Embarking on the journey to become a learning organization is a time- and resource-intensive

TABLE 2: Multivariate Tests of Significance for Canonical Correlation

| Test Name | Value | Approximate F | Hypothesis df | Error df | Significance of F | Effect Size |
|--|-------|------------------|------------------|-------------|----------------------|----------------|
| Test for two perceptual outcome variables | | | | | | |
| Pillais | .492 | 6.611 | 14 | 284.00 | .000 | .246 |
| Hotellings | .908 | 9.084 | 14 | 280.00 | .000 | .312 |
| Wilks | .519 | 7.827 | 14 | 282.00 | .000 | .280 |
| Roys | .470 | | | | | |
| Test for four secondary financial variables | | | | | | |
| Pillais | .414 | 1.635 | 28 | 396.00 | .024 | .104 |
| Hotellings | .485 | 1.638 | 28 | 378.00 | .023 | .108 |
| Wilks | .639 | 1.641 | 28 | 347.56 | .023 | .106 |
| Roys | .186 | | | | | |

change process, and this evidence suggests that there may be a payoff for implementing learning organization initiatives. Establishing a business case for the learning organization concept may indeed help to convince “hard-headed business people” (Smith & Tosey, 1999, p. 70) to commit sufficient resources to implement strategies consistent with the learning organization concept.

This study may also assist human resource development (HRD) professionals by enabling them to articulate a better business case for the learning organization concept to senior managers and leaders, thereby potentially facilitating a more strategic role for HRD practitioners. These findings may also encourage HRD professionals to consider using the DLOQ as a diagnostic tool to identify appropriate leverage points for implementing change interventions to initiate the learning organization journey within their firms.

Despite the positive associations suggested by this exploratory research, there are some limitations associated with this research that need to be acknowledged. The sample, although randomly drawn, included only firms for which secondary data were available. It is possible that different results may have been obtained if smaller, privately owned firms had also been included in the sample. This study used four well-established secondary measures of financial performance to assess the relationship between the dimensions of the learning organization concept and firms’ financial performance. However, it is always possible that other financial measures may have yielded different results. A further potential limitation is that the perceptions of a single key informant middle manager from each firm were used. Thus, the perceptions of upper-level managers and front-line employ-

ees were not solicited for this study. A larger, more holistic sampling strategy within each firm may have yielded different results.

In summary, scholars have articulated the need to more firmly establish the linkage between learning organization practices and firm performance because the relative absence of such research does little to encourage leaders, managers, and employees to adopt learning organization practices. This exploratory research suggests a positive association between learning organization practices and firms' financial performance. These findings offer tentative support for some of the more normative assertions that are found in the learning organization literature. These findings also lend credence to the existence of a business case for embracing learning organization practices. Future research should further validate these exploratory findings by integrating a wide variety of financial and nonfinancial indicators in different contexts with larger, more inclusive sampling strategies.

References

- Baker, W. E., & Sinkula, J. M. (1999). The synergistic effect of market orientation and learning orientation on organizational performance. *Journal of the Academy of Marketing Science*, 27, 411-427.
- Born, J., & McWilliams, V. (1997). Equity-for-debt exchange offers: Theory, practice, and evidence. *Financial Review*, 32, 273-292.
- Brigham, E. F. (1995). *Fundamentals of financial management*. Fort Worth, TX: Dryden Press.
- Christopher, M., & Ryals, L. (1999). Supply chain strategy: Its impact on shareholder value. *International Journal of Logistics Management*, 10(1), 1-10.
- Chung, K. H., & Pruitt, S. W. (1994). A simple approximation of Tobin's q. *Financial Management*, 20(7), 70-74.
- COMPUSTAT database. (1998). New York: Standard & Poors.
- Day, G. S. (1994, October). The capabilities of market-driven organizations. *Journal of Marketing*, 58, 37-52.
- Fox, R. J., Crask, M. R., & Kim, J. (1988). Mail survey response rate: A meta-analysis of selected techniques for inducing response. *Public Opinion Quarterly*, 52, 467-491.
- Goh, S., & Richards, G. (1997). Benchmarking the learning capability of organizations. *European Management Journal*, 15, 575-583.
- Henderson, S. (1997). Black swans don't fly double loops: The limits of the learning organization? *The Learning Organization*, 4, 99-105.
- Hunt, S. D., & Morgan, R. M. (1996, October). The resource-advantage theory of competition: Dynamics, path dependencies, and evolutionary dimensions. *Journal of Marketing*, 60, 107-114.
- Jacobs, R. (1995). Impressions about the learning organization: Looking to see what is behind the curtain. *Human Resource Development Quarterly*, 6, 119-122.
- Jones, C. P. (1992). *Introduction to financial management*. Burr Ridge, IL: Irwin.

- Kaiser, S. M., & Holton, E. F. (1998). The learning organization as a performance improvement strategy. In R. Torraco (Ed.), *Proceedings of the 1998 Annual Academy of Human Resource Development Conference* (pp. 75-82). Oak Brook, IL: Academy of Human Resource Development.
- Marsick, V. J., & Watkins, K. E. (1999). *Facilitating learning organizations: Making learning count*. Aldershot, UK: Gower.
- Perfect, S., & Wiles, K. (1994). Alternative constructions of Tobin's q: An empirical comparison. *Journal of Empirical Finance*, 1, 314-341.
- Peterson, P. P. (1994). *Financial management and analysis*. New York: McGraw-Hill.
- Peterson, P. P., & Peterson, D. R. (1996). *Company performance and measures of value added*. Charlottesville, VA: Research Foundation of the Institute of Chartered Financial Analysis, Association for Investment Management and Research.
- Pettigrew, A., & Whipp, R. (1991). *Managing change for competitive success*. Oxford, UK: Basil Blackwell.
- Poirer, C. C. (1999). *Advanced supply chain management: How to build a sustained competitive advantage*. San Francisco: Berrett-Koehler.
- Quinn, F. J. (1997). What's the buzz? *Logistics Management*, 36(2), 43-46.
- Slater, S. F., & Narver, J. C. (1995, July). Market orientation and the learning organization. *Journal of Marketing*, 59, 63-74.
- Smith, P. A. C., & Tosey, P. (1999). Assessing the learning organization: Part I—Theoretical foundations. *The Learning Organization*, 6, 70-75.
- Stank, T. P., Daugherty, P. J., & Ellinger, A. E. (1998). Pulling customers closer through logistics service. *Business Horizons*, 41(5), 74-80.
- Stern Stewart performance 1000*. (1998). New York: Stern Stewart Company.
- Tobin, J. (1969). A general equilibrium approach to monetary theory. *Journal of Money, Credit, and Banking*, 1(1), 15-29.
- Watkins, K. E., & Marsick, V. J. (1993). *Sculpting the learning organization: Lessons in the art and science of systemic change*. San Francisco: Jossey-Bass.
- Watkins, K. E., & Marsick, V. J. (1997). *Dimensions of the Learning Organization Questionnaire* (Survey). Warwick, RI: Partners for the Learning Organization.
- Watkins, K. E., Yang, B., & Marsick, V. J. (1997). Measuring dimensions of the learning organization. In R. Torraco (Ed.), *Proceedings of the 1997 Annual Academy of Human Resource Development Conference* (pp. 543-546). Atlanta, GA: Academy of Human Resource Development.
- Yang, B., Watkins, K. E., & Marsick, V. J. (1998). Examining construct validity of the Dimensions of the Learning Organization Questionnaire. In R. Torraco (Ed.), *Proceedings of the 1998 Annual Academy of Human Resource Development Conference* (pp. 83-90). Oak Brook, IL: Academy of Human Resource Development.
- Yang, B., Watkins, K. E., & Marsick, V. J. (2002). *The construct of learning organization: Dimensions, measurement, and validation*. Unpublished manuscript.

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