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Business-IT Alignment Payoff: Financial Factors and Performance Implications

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Abstract

Strategic alignment is the appropriate use of information technology (IT) in the integration and development of business strategies and corporate goals. This study will examine the impact of firm performance given the firm’s current alignment perspective. Seven financial factors were found to have a direct impact on the alignment perspective and industry classification. These provide management with a vehicle for forecasting possible outcomes regarding performance.

The importance of strategic alignment has been documented since the late 1980’s (Brancheau & Wetherbe, 1987; Dixon & John, 1991; Niederman, et al., 1991; Liebs, 1992; Goff, 1993; King, 1995) and continues to be ranked among the most important issues faced by business executives (Rodgers, 1997). In fact, the alignment of information technology (IT) and business strategy to incorporate the capabilities of IT and to transform the business has increased in importance over the past few years as firms strive for competitive advantage in a diverse and changing marketplace (Faltermayer, 1994; Adcock, Helms, & Wen-Jang, 1993; Cardinali, 1992). In light of this, there has been a great deal of research and insight into the linkages between business and IT (Chan & Huff, 1993; Luftman, Lewis, & Oldach, 1993; Henderson, Thomas & Venkatraman, 1992), the role of partnerships between IT and business management (Keen, 1993; Ives, Jarvenpaa, & Mason, 1993) as well as the need to understand the transformation of business strategies resulting from the competitive use of IT (Boynton, Victor, & Pine, 1993; Davidson, 1993). Firms have also been able to change not only their business scope, but their infrastructures as well as a result of innovation with respect to IT (Keen, 1991; Foster, 1986).

Strategic Alignment Model

The strategic alignment model, the framework for this study, is based on the theoretical construct developed at MIT by Henderson and Venkatraman (1990), now with Boston University. This model explores the interrelationship between business and IT, illustrated in the previous figure. Effecting a change in any single domain requires the use of three out of the four domains to assure that both strategic fit and functional integration are properly addressed. A total of twelve perspectives (which encompass three of the four domains) have been identified and described in the literature (Papp, Luftman, & Brier, 1995; Papp, 1995).

Fusion is the combination of two perspectives. In fusion, the pivot and the anchor domain are not adjacent to one another, but rather across from each other on the diagonal. Since there are two "paths" from the anchor to the impacted domain, it is necessary to identify the weaker of the two pivots and carry out this perspective first. Previous research has not only identified and described the above perspectives, but found that a combination of two perspectives—called Fusion—is common (Papp, 1995; Papp & Luftman, 1995). The most common perspective focuses on both Organizational Infrastructure and IT Strategy. This combination results in a fusion of two perspectives, Strategy Execution and Technology Potential, into IT Infrastructure Fusion. The fusion construct can be extended to include all eight of the previously described perspectives, resulting in four distinct types of fusion (Luftman, 1996; Papp, 1995).

Financial Factors and Performance

Given the twelve alignment perspectives, the next step is to determine the impact of financial performance on a firm’s alignment perspective. Specifically, do any of the traditional (and non-traditional) financial measurements affect the alignment perspective? In an attempt to answer this question, eighteen distinct financial measurements are being studied for their effect on a firm’s alignment perspective.

These measurements include Return on Investment (ROI), Return on Sales (ROS), the Current and Quick ratios (which measure short-term liquidity and solvency), Gross profit, pre-tax income, net sales, growth in earnings/share (EPS), income growth, sales growth, earnings/share for 1993 and 1994, and current and long-term debt-to-equity. The firm's reputation, based on the Fortune survey of management executives, and the amount of the overall IT budget are also used. Finally, the market value of equity divided by the book value of debt (M/B Ratio) and Z-score (a composite measure of performance) are used as long-term measures of performance. These measurements were chosen to provide a comprehensive analysis of performance encompassing both present and future factors. Using these financial measurements, a principal component factor analysis (PCA)
performed on these measurements suggests that firm performance was ALIGNED into seven factors as follows: Anticipated performance, Liquidity, Income, Growth, Net profitability, Earnings, and Debt-to-equity. These 7 factors accounted for 83% of the variance.

### Financial Factor Performance by Perspective

<table>
<thead>
<tr>
<th>Financial Factor</th>
<th>SE</th>
<th>TP</th>
<th>CP</th>
<th>SL</th>
<th>OII</th>
<th>IIS</th>
<th>IOI</th>
<th>OIS</th>
<th>OSF</th>
<th>OIF</th>
<th>ISF</th>
<th>IIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated Performance (M/B Ratio &amp; Z-score)</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Liquidity (Current &amp; Quick Ratios)</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Income (Gross Profit, Net Sales, Pre-Tax Income,)</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Growth (Income, EPS &amp; Sales)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Net Profitability (ROI &amp; ROS)</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Earnings (EPS '93 &amp; '94)</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Debt-to-Equity (Current &amp; L/T D-to-E)</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Perspective Abbreviations

<table>
<thead>
<tr>
<th>SE</th>
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<th>CP</th>
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<th>OSF</th>
<th>OIF</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Strategy Execution</td>
<td>Organization IT Infrastructure</td>
<td>Organization Strategy Fusion</td>
<td>IT Infrastructure Strategy</td>
<td>IT Infrastructure Strategy</td>
<td>Org. Infrastructure Strategy</td>
<td>Org. Infrastructure Strategy</td>
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From these financial factors, individual and mean firm performance scores were compared, resulting in the Financial Factor Performance table. The factors were classified as having either below average (denoted by a minus) or above average (denoted by a plus) performance. While this does not provide for specific measurements of performance, it does provide a good general indicator of whether or not the desired financial performance factor is achievable given a firm’s specific alignment perspective. For example, if the goal is to maximize growth, and the performance for the perspective in question (e.g. technology potential) indicates that below average performance is likely, the manager can change plans accordingly by concentrating on a different performance factor or waiting until a favorable perspective is reached (see figure).

These performance criteria are not absolute, however they do provide a strong indication of the likelihood of achieving the desired performance factor using a given alignment perspective. It predicts, in effect, the possible outcomes beforehand, saving valuable time and providing the manager with a powerful vehicle with which to project results. (The specific performance impact of alignment on a firm’s bottom line is currently being researched. Initial findings suggest that certain perspectives may be more appropriate for specific industries given one of the seven performance criteria (Papp, 1995). A performance equation using regression analysis is being conducted on the seven performance criteria).

### Management Strategies for Information Technology Investment

Firm performance was explored, resulting in seven financial factors which have a direct impact on the firms’ alignment perspective and industry classification. These seven factors suggest the likelihood of achieving a specific financial measurement given a specific perspective or industry. They provide management with a vehicle for forecasting possible outcomes regarding financial performance.

Management should follow the steps below to achieve alignment as a means of improving performance and profitability. ALIGN your strategies by:

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-534-
Assessing the firm’s perspective using the alignment model.
Learning to recognize and leverage IT within your firm to maximize efficiency.
Incorporating financial measurements suitable for your particular industry.
Giving everyone in the firm a clear and useful role to facilitate synergy between IT the business.
Never stop assessing alignment. It is a continuous process requiring constant monitoring.

Strategic alignment remains one of the leading areas of focus among business executives. Assessment of firms’ perspectives along with the analysis of the financial performance factors provide management with a vehicle for forecasting possible outcomes regarding financial performance. The importance of cooperation between business and IT to maximize investment in technology remains clear. As IT plays an increasingly strategic role in corporate decision making, its correct application will facilitate both a more competitive and profitable organization. The careful assessment of a firm’s alignment can help ensure IT is being used to appropriately enable the business strategy.

References