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Driving Satisfaction with IT Services and Investment in IT through Business-IT Alignment

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ABSTRACT

Research has shown that business-IT alignment is an important issue for organizations that wish to allocate their information technology investments appropriately, but less is known about the impact that business-IT alignment has on the satisfaction and motivation of employees. This study investigates the impact that business-IT alignment has on an organizational leader's satisfaction with the IT services within an organization and the amount of investment allocated for IT. In addition, the study looks at the impact that IT investment has on the motivation of IT leaders. Surveys of both IT leaders and organizational leaders within the same organization were conducted. Findings suggest that business-IT alignment influences organizational leaders' satisfaction with IT which influences their willingness to invest in IT initiatives. However, the job motivation of IT leaders is not influenced by the amount of investment in IT.

Keywords

IT business value, strategic IT management, IT staff management

INTRODUCTION

Even though an organization might seem to have a good climate for innovation, there might be very little innovation happening which can prevent an organization from getting the most benefit from its IT investments (Katz et al. 2004). In an attempt to understand what factors influence the success of IT investments, researchers have focused on business-IT alignment or the relationship between IT and senior management. In some organizations, it is up to IT leaders and managers to bring new IT concepts and capabilities into the knowledge of organizational leaders. As IT professionals seek job satisfaction in their careers while trying to maintain high levels of motivation, it is critical that IT leaders and organizational management maintain a positive working relationship in order to keep the IT leaders positively engaged in their job (Herzberg et al. 1959). As IT professionals and managers go through their careers, simply making good money is not enough to motivate them as they seek out professional development, decision-making authority, autonomy, accountability, and greater responsibility (Smits et al. 1993).

This paper looks at the impact that business-IT alignment has on employees' satisfaction, specifically an organizational leader's satisfaction with IT and the motivation of and satisfaction of IT leaders with the amount of IT investments originating from the organizational leader. This paper posits that higher business-IT alignment will result in great satisfaction with IT among organizational leaders. We expect that their satisfaction with IT will determine the types of IT investment approved by an organizational leader. Finally, the paper hypothesizes that those investments will impact the job motivation of IT leaders.

RELEVANT LITERATURE

Two streams of literature serve as the foundation for this research. The Business-IT Alignment stream of research is important in measuring the success of IT in meeting the needs of an organization. The Motivation-Hygiene stream of research is important in describing the factors that drive employee motivation, specifically the motivation of IT leaders within organizations, and the satisfaction of organizational leaders with IT services.

BUSINESS-IT ALIGNMENT

In a study of IT and non-IT leaders within organizations, Luftman et al. (1999) identified numerous enablers and inhibitors of business-IT alignment. The top enabler for business-IT alignment was the support of IT from non-IT executives. It was

suggested that non-IT leaders need to be knowledgeable about the capabilities of IT and be supportive of IT-driven innovations in order to have good business-IT alignment. The other top enablers were IT involvement in strategy development, IT understanding of the business, partnership between business and IT, well-prioritized IT projects, and demonstrated IT leadership.

Luftman et al. (1999) also found that the inhibitors of business-IT alignment were the lack of close relationships between business and IT, poor prioritization by IT, a failure to meet commitments by IT, a lack of understanding of the business by IT, a lack of senior executive support for IT, and a lack of leadership among IT management. Without the support of non-IT leaders, opportunities may be missed.

Swanson (1994) suggests that business-IT alignment plays a role in determining which types of innovations are adopted in organizations. Type I innovations only apply to IT functions (e.g., changing the database software used on the backend of a Material Requirements Planning system). Type II innovations affect the operations of the organization (e.g., a new electronic file management system being made available to users). Type III innovations include IT-driven innovations that are part of a new product or service provided to customers. Ross and Weill (2002) found that the IT decisions that are basic services to the organization are best left in the hands of IT leaders while getting value from IT-driven innovation requires support and involvement from senior management.

MOTIVATION-HYGIENE THEORY

According to Herzberg's two-factor Motivation-Hygiene Theory (1959), there are two sets of factors that determine employee job satisfaction and motivation: hygiene factors and motivation factors. Employees need hygiene factors fulfilled in order to avoid dissatisfaction with their jobs. The hygiene factors include supervision, company policies, working conditions, relationship with coworkers, job security, and salary. Hygiene factors do not contribute to something positive when they are more abundant, however unfulfilled hygiene factors cause employee dissatisfaction (Herzberg et al. 1959).

Once the hygiene factors are fulfilled, motivation factors can be fulfilled in order to motivate an employee to higher levels of performance. Motivation factors contribute to a worker's ability for self-actualization. . Unlike hygiene factors, employees will not have reduced motivation if the motivation factors are not present. The motivation factors in Herzberg's theory are achievement, recognition, the work itself, responsibility, advancement, and possibility of growth. Achievement is gained through solving problems, completing a job successfully, seeing results of work done, and having previous positions or beliefs confirmed. Recognition comes through the act of being recognized for work done from supervisors, colleagues, etc. The work itself is described as the actual tasks and duties that an employee must perform as part of their position. The responsibility factor is fulfilled by receiving responsibility for one's own work or the work of others, and can be fulfilled by receiving new responsibility such as new job duties or an expanded job description. Advancement is fulfilled through a new position or a change in title. Finally, the possibility for growth into new responsibilities or new opportunities can be a motivational factor for an employee.

Specific to the IT domain, Mahaney and Lederer (2006) found that, the presence of both intrinsic and extrinsic rewards for IT project workers can motivate teams to perform at higher levels than in the absence of those rewards. While the salary component of hygiene factors in Herzberg's theory has often been questioned, studies have unexpectedly confirmed its validity. One specific to the IT field surveyed IT professionals in their final semester of education and then again after they had graduated (Smits et al. 1993). While salary was a motivation for students entering the workforce, it had become a hygiene factor after they had spent four years in the workforce.

RESEARCH MODEL

The following research model is used to investigate the impact that business-IT alignment has on an organizational leader's satisfaction with an organization's IT services, the types of IT investments being approved within an organization, and whether these investments are motivating IT leaders.

The business-IT alignment construct is defined by the level of agreement between an organization's IT strategy and the organization's IT needs. We classify business-IT alignment as having a business-IT alignment (a positive alignment) or having a negative business-IT alignment (a misalignment). A positive business-IT alignment exists when the IT strategy and implementation initiatives support the IT needs of the organization. One or more of the enablers of business-IT alignment as identified by Luftman et al. (1999) are present. It requires consistent attention and effort from the IT and organizational leaders (Luftman et al 1999). When a misalignment exists, one or more of the inhibitors of business-IT alignment as identified by Luftman et al. (1999) are present. By checking for the presence of the enablers and inhibitors, business-IT alignment can be assessed.

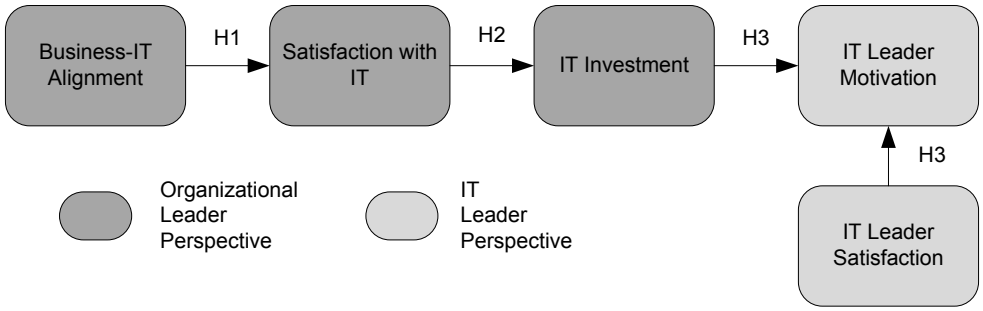

Figure 1. Research Model

The satisfaction with IT construct is defined as the organization leader's level of satisfaction with the IT services that the organization receives. High satisfaction with IT exists when an organization leader (i.e., non-IT manager) is content with the IT services provided by the IT function and the involvement of the IT function as a part of the overall organization. Low satisfaction with IT exists when an organization leader is not content with the IT services provided by the IT function and the involvement of the IT function as a part of the overall organization. Satisfaction with IT is measured by questioning organizational leaders about their role of IT and the state of IT services within their organization, and the performance of the IT leader.

We hypothesize that a relationship exists between business-IT alignment and an organization leader's satisfaction with IT. We expect this relationship because many of the enablers and inhibitors of business-IT alignment revolve around the contributions and expectations of the organization leader (Luftmanet al. 1999).

H1: Business-IT alignment has a direct impact on an organizational leader's satisfaction with the IT function. If there is a positive business-IT alignment an organizational leader will be satisfied with the IT function. If there is a misalignment between business & IT, an organizational leader will not be satisfied with the IT function.

The IT Investment construct is defined as an organization's IT budget allocation that is intended for new services, new products, or new staff.

We hypothesize that a relationship exists between an organization leader's satisfaction with IT and the organization's IT investment.

H2: An organization leader's level of satisfaction with the IT function impacts the amount of investment that is allocated to the IT function. More specifically, an organizational leader who is satisfied with the performance of the IT function will be more inclined to approve IT investments into new technologies, staff, and services (H2a), while an organizational leader who is not satisfied with the performance of the IT function will be inclined to approve IT investments into improving existing technologies and services (H2b).

The IT Leader Satisfaction construct is defined as the presence of hygiene factors, as identified by Herzberg (1959), for the IT leader within the organization. If the hygiene factors are present, an IT leader within the organization will be satisfied. If the hygiene factors are not present, an IT leader within the organization will not be satisfied. An IT leader's motivation and job satisfaction can be measured using a survey instrument similar to Herzberg et al. (1959).

The IT Leader Motivation construct is defined as the presence of motivation factors as identified by Herzberg et al. (1959) for the IT leader within the organization. An IT Leader who is motivated would have these factors present, while an IT leader who is not motivated would not have these factors present.

We hypothesize that the level of IT investment of an organization will influence the level of motivation of an IT Leader. New investment may result in new responsibilities, recognition or achievement, all of which may be motivation factors for IT leaders. Consistent with Herzberg's research, we expect that the satisfaction of the IT leader is a necessary requirement to drive the motivation of the IT Leader.

H3: A satisfied IT leader will be motivated by an organization's amount of IT investment.

METHODOLOGY

Survey recipients were 88 organizational leaders and 84 IT leaders of units, departments, and colleges within a large PhD-granting research institution in the Midwestern United States. The institution has a largely decentralized IT organization. The

survey sent to organizational leaders consisted of 12 Likert-scale questions aimed to measure business-IT alignment, satisfaction with IT, and IT investment. Organizational leaders were also asked to complete a grid of eight areas of IT investment indicated how many investments were approved, rejected, or not requested at all within their organization. The survey sent to IT leaders consisted of 19 Likert-scale questions aimed to measure business-IT alignment, job satisfaction, and job motivation.

Thirty of the 84 IT leaders completed the online survey hosted at surveymonkey.com for a response rate of 35.7%. Fifteen of the 88 organizational leaders completed their survey for a response rate of 17.9%. Of all the respondents, twelve of them were matched pairs of organizational and IT leaders from the same department, unit, or college. The response rate was 15.6% for the matched pairs where both leaders received the survey.

RESULTS & CONCLUSIONS

SPSS was used to analyze the data received. The following table summarizes the findings of the hypotheses and provides an interpretation of the conclusion.

Hypothesis	Analysis	Significance (p-value)	Result	Conclusion
H1	F = 3.909	.049	Supported	An organization's level of business-IT alignment impacts an organizational leader's satisfaction with IT services
H2(a)	ρ = .643	.010	Supported	Organizational leaders who were satisfied with IT services approved IT investments for new technologies, staff, and services
H2(b)	ρ = .416	.123	Not Supported	Organizational leaders who were dissatisfied with IT services were inclined to approve IT investments that improved existing technologies and services
H3	F = .807	.377	Not supported	Satisfied IT leaders did not view IT investments as a motivating source of recognition, responsibility or achievement.

Table 1 - Results & Conclusions

Based on the findings of this research, business-IT alignment can enhance an organizational leader's satisfaction with IT and this satisfaction influences the type of IT investment within the organization. Higher satisfaction with information technology services within an organization will result in investment in new systems, technology, staff, and services. We can conclude that an organizational leader that sees results from their past IT investment decisions are more likely to make new IT investments in the future.

Interestingly, however, is the finding that increases in IT investments are not motivators for IT leaders. This counters the research of Herzberg (1959) that suggests that an increase in responsibility, or recognition and achievement can enhance an employee's motivation. Contrarily, IT investment may behave more like a hygiene factor - a lack of IT investment may cause dissatisfaction while IT investment may have no influence on IT leader motivation.

There are some limitations to this interpretation. Despite multiple attempts to increase the number of matched pairings of IT and organizational leaders, only a small sample of pairings were received. Likewise, the surveys were limited to leaders within a single university, although the IT function is decentralized. Expanding the research to other companies may result in stronger response rates and differences in the relationships that are realized.

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