A Stakeholder Perspective of Enterprise Systems

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Abstract
While the rise of the Internet has received most of the media attention in recent years, the business world’s embrace of enterprise systems may in fact be the most important development in the corporate use of information technology in the 1990s (Davenport 1998). Therefore, it would be prudent for greater attention to be given to the study of enterprise systems per se, so that we may then apply our findings to particular systems (e.g. ERP, CRM, KMS, and SCM). This paper begins with an overview of what constitutes an enterprise system. From there, considering the host of stakeholders that an organization has to deal with in relation to its enterprise system, this paper looks at stakeholder theory and how it can be used to better understand and manage an organization’s stakeholders. The paper then presents a sample model that could be useful in such an analysis, before concluding with a look at four propositions that could serve as potential areas for future research.

Keywords
Enterprise systems, stakeholder theory, power, legitimacy, urgency, salience

Introduction
While the rise of the Internet has received most of the media attention in recent years, the business world’s embrace of enterprise systems may in fact be the most important development in the corporate use of information technology in the 1990s (Davenport 1998). Although the term “Enterprise Systems” was introduced in the 1980s to denote any kind of enterprise-wide integrated system, it only truly began to gain prominence when Davenport (1998) first drew attention to the notion that ERP was too narrow a term to denote Enterprise-wide Integrated Systems and suggested that the term “Enterprise Systems” be used (Rosemann & Watson 2002). Since then, the term “Enterprise Systems” has expanded to include other enterprise-wide integrated systems, like KMS, CRM and SCM systems.

In spite of this, enterprise systems, as a distinct area of interest, remains largely under-researched and absent in Information Management and Information Systems curricula (Rosemann & Watson 2002). This paper thus attempts to contribute to this literature by proposing a stakeholder perspective of enterprise systems. We believe that given the diverse types of enterprise systems currently available and their various benefits, organizations are increasingly more likely to adopt them. However, to effectively do so, organizations need to consider the demands of numerous parties who have a stake in the systems’ operations. We
propose that it would be useful to adopt stakeholder theory to help organizations and researchers better understand how to manage these parties, or stakeholders.

This paper begins with a look at what constitutes an enterprise system. From there, it will look at stakeholder theory and how it can be applied to the study of enterprise systems. Finally, we present four propositions that serve to identify potential areas for future research.

Enterprise Systems

The original 1970s vision of a single integrated information system for the enterprise remained a mirage for the majority of computer-using organizations back then (Markus & Tanis 2000). Instead, organizations added new discrete systems as and when required, creating islands of automation. Then, throughout the 1980s and 1990s, software entrepreneurs developed integrated software packages in which multiple functional applications shared a common database, which became known as enterprise resource planning (ERP) systems (Akkermans & Helden 2002, Newell, Huang, Galliers & Pan 2003, Markus & Tanis 2000, Robey, Ross & Boudreau 2002). Integrated packages, however, made relatively little headway in the largest organizations until the mid-1990s, when vendors began to offer versions for the client/server architecture (Markus & Tanis 2000), which afforded greater benefits as compared to older mainframe systems and applications. Today, vendors of packaged enterprise-wide integrated systems are also developing web-enabled and even object-oriented versions of their software (Markus & Tanis 2000), and rapidly evolving the nature of the systems available to organizations (Rosemann & Watson 2002).

So what exactly are enterprise systems? Enterprise systems (ES) are typically comprehensive, complex, customizable integrated application software that support core business processes and main administrative areas of enterprises in different industries (Rosemann & Watson 2002). They enable integration of transactions-oriented data and business processes throughout an organization (and eventually throughout the entire inter-organizational supply chain) (Markus & Tanis 2000). There are several types of ES, such as ERP packages, sales management, customer relationship management, product configuration, supply chain management, knowledge management, and e-commerce (Davenport 2000, Kraemer & Dedrick 2002, Markus & Tanis 2000).

ES are found in three main places within the e-network architecture: on the buyer side, seller side, and in the middle of the e-network (Davenport 2000). In these places, ES support three different business domains. The order of domains – internal, supply chain, peer network – follows from the differing ease of implementation and expected investment returns associated with each domain. These domains are (Davenport 2000):

- Internal to the firm
  - These processes can be addressed, either individually or in an integrated manner, within the firm.
- Along the supply chain
  - These processes connect a firm to suppliers and customers.
• Among a set of collaborative peers (i.e. complementing firms not directly linked in the supply chain)
  - These processes connect a firm to complementing firms and potentially to competitors.

Despite the potential benefits of implementing ES, many organizations have not implemented them, implemented and then discarded them, or only implemented selected modules. There are several reasons as to why this occurs (Akkermans & Helden 2002, Davenport 1998, Markus, Petrie & Axline 2000, Markus & Tanis 2000, Robey et al. 2002). One main reason is the technical complexity of ES, requiring large investments of time, money and expertise, prompting resistance to change, and some form of business process reengineering (BPR). Another reason involves the conflict between in-built business rules governing pre-packaged systems, and the organization’s own rules. In fact, the main bulk of reasons deal with a special nature of ES that sets it apart from traditional information systems and that is the fact that they are mostly pre-packaged systems.

Pre-Packaged Nature of Enterprise Systems

Although organizations can still develop their own systems, the scope of these systems is getting more comprehensive and complex. Furthermore, there are vendors who specialize in developing packaged solutions that cater to most, if not all, of an organization’s business process needs (e.g. SAP). So it is no wonder then that organizations are turning to these vendors for their ES needs. There are other reasons too as to why organizations prefer pre-packaged solutions.

Adopting packaged software allows companies to replace aging legacy systems and bring a variety of benefits, including strategic business advantages, improved system architectures, and outsourced software maintenance (Markus et al. 2000). These pre-packaged solutions also provide seamless integration of applications, information flow and business processes throughout the organization (Howcroft & Light 2002, Newell et al. 2003, Markus & Tanis 2000). Furthermore, due to their pre-packaged nature, it is easy to find success stories of other organizations that have used the same package to good effect.

However, there are several reasons as to why pre-packaged ES have not been too popular. Firstly, they come with implicit built-in business rules. These supposed best practices are vendor-defined and although generic enough for several different organizations, they still tend to differ from the way each organization individually does business. Given their complexity, it is difficult to configure these systems to meet individual needs (Davenport 1998, Howcroft & Light 2002, Lee & Lee 2000, Markus & Tanis 2000). Consequently, organizations are forced to modify their business processes to suit the system (Davenport 1998, Howcroft & Light 2002, Markus & Tanis 2000). Simultaneously, by using these pre-packaged solutions, the organization is effectively entering into a long-term relationship with the vendor. Hence, the rapidly evolving nature of these systems makes it necessary for organizations to regularly upgrade their software, thus making it more troublesome and costly (Markus & Tanis 2000, Rosemann & Watson 2002).
General Enterprise System Issues

In addition to the popular pre-packaged nature of ES, several other issues also indicate a need to adopt a stakeholder perspective. One such issue is that of globalization (Davenport 2000). Due to the fall of various regulatory barriers globally over the last few years and the rise of the Internet, many organizations are joining traditional multinational organizations in doing business on a global scale. With globalization, these organizations use ES to not only integrate their businesses across differing local conditions, but also with a host of different people around the world (Rosemann & Watson 2002). As a result, organizations now have to cope with a larger number and more diverse population of stakeholders than ever before.

Another issue is the increased use of rapid “sense and respond” business models (Davenport 2000). In using this model, organizations provide value by learning what an individual customer wants at a particular time, and quickly providing a tailored product or service. To effectively do this, organizations need to maintain a strong relationship with their customers and increase the integration throughout their supply chain so as to increase response time and flexibility in adapting to changing demands and situations. Therefore organizations must know who their key customers are and how best to manage their relationships with them.

A third issue is the growth of virtual organizations (Davenport 2000, Kraemer & Dedrick 2002). Virtual organizations are fluid, flexible combinations of components of one or more businesses that deliver value to a market. Each company in the virtual organization is responsible for a specific aspect of the business, and is dynamically linked to the organization. ES are especially useful in helping to standardize business processes and capabilities for each component company to better integrate them into the virtual organization. Considering this dynamic nature of the relationships the organization has to deal with, it is necessary for the organization to keep abreast of who its key stakeholders are, and how to relate to them.

Finally, another issue is that of over-capacity and corporate realignment (Davenport 2000). With globalization and growth, the complexity of having to deal with large global firms becomes increasingly taxing. Thus, organizations look to realign horizontally, spinning off business functions into new firms or outsourcing aspects of their business. As a result, organizations now deal with a host of new stakeholders who handle key parts of their business.

It is evident in looking at these issues that different actors are involved in different phases of the ES experience cycle (Markus & Tanis 2000) and different modules of ES, and they all need to be concurrently managed. This further supports the need for something like the stakeholder theory, which can help us to understand and manage these different actors.

Stakeholder Theory

Organizations that implement ES have to cope with a host of different stakeholders, both within and without the organization, who in one way or another are able to affect the attainment of organizational objectives. Therefore, it would be prudent for an organization to
better understand its multiple stakeholders, and learn how best to manage them. To do so, organizations need to develop good relationship with and between stakeholders, as greater interconnectedness among members of an organizational network enables rapid communication and facilitates information exchange across the network so that norms and expectations diffuse and become institutionalized (Friedman & Miles 2002). Furthermore, such relationships increase stakeholders’ identification with the organization, improving their motivation to reach group goals, and encouraging helpful and supportive behaviors towards fellow in-group members (Scott & Lane 2000). Organizations can then align their stakeholders on a common set of goals, thus improving communication, reducing re-work, and enhancing the possibility of overall organizational success (Hartman & Ashrafi 2002, Klein & Jiang 2001).

Who is a Stakeholder

The term stakeholder refers to a single individual, group of individuals (e.g. employees, customers), or subset of an identifiable group of individuals (e.g. baby boomers, unionized employees) (Scott & Lane 2000), who can affect the value creation of, or be affected by, a particular organization (Greenley & Foxall 1998, Schneider 2002). Primary stakeholders are those who interact directly with ES, and without whose continuing participation, the organization cannot survive (Clarkson 1995, Schneiderman & Rose 1996). Secondary stakeholders are those who interact indirectly with ES, and who influence or affect, or are influenced or affected by, the organization, but are not engaged in transactions with it and are not essential for its survival (Clarkson 1995, Schneiderman & Rose 1996). Hence, a stakeholder can be almost anyone, such as shareholders, employees, competitors, customers, suppliers, government agencies, general public, managers, or even competitors (Berman, Wicks, Kotha & Jones 1999, Clarkson 1995, Greenley & Foxall 1998, Schneider 2002, Schneiderman & Rose 1996).

So, how do we identify an organization’s stakeholders? What makes someone a stakeholder? Stakeholders have expectations of gain from the organization’s successful operation (Scott & Lane 2000). They are groups who have an interest in a CIS development and can affect the success of that development (Coakes & Elliman 1999). Furthermore, they have, or claim, ownership, rights, or interests in a corporation and its activities, past, present or future (Clarkson 1995). Essentially, they are any group or individual who can affect or is affected by the achievement of the organization’s objectives (Freeman 1984). Also, at different stages, different stakeholders become critical for organizational survival. Thus, an organization needs to utilize different strategies to deal with them versus other stakeholder groups (Jawahar & McLaughlin 2001).

Having said that, let us consider the basic anatomy of ES (Davenport 1998) (See Figure 1). Based on this anatomy, the four primary stakeholders of any ES are the managers and shareholders, suppliers, employees, and customers. We add vendors to this list due to the current trend of using pre-packaged ES. Thus, although an organization can count any number of other groups as stakeholders, we believe that these five are the core stakeholders of any ES.
Features of Stakeholder Theory

The main purpose of stakeholder theory is to help organizations better understand their stakeholders and how to strategically manage them. To do so, they first need to answer three general questions about their stakeholders (Frooman 1999, Wolfe & Putler 2002):

- Who are they? (This question concerns their attributes)
- What do they want? (This question concerns their ends)
- How are they going to get it? (This question concerns their means)

This paints a comprehensive picture of their stakeholders and provides some insight into how they can be efficiently managed. Realistically, organizations have to deal with multiple stakeholders simultaneously. Addressing their diverse range of interests may be problematic, especially when there are conflicting interests, and when there is a scarcity of resources (Greenley & Foxall 1998, Scott & Lane 2000). Stakeholder theory thus attempts to identify which groups of stakeholders are deserving of requiring management attention, and which are not (Mitchell, Agle & Wood 1997)? Organizations should then try to address the needs of as many, if not all, of their deserving stakeholders as possible (Boatright 2002, Donaldson & Preston 1995, Greenley & Foxall 1998, Schneiderman & Rose, 1996). Ultimately, organizations must be able to strike a balance between the diverse needs of their stakeholders and the organization’s own needs and values (Greenley & Foxall 1998).
Furthermore, according to stakeholder theory, stakeholders are inter-related. As such, the interests of any one group of stakeholders cannot be considered in isolation from those of other groups. In other words, organizations need to be able to respond to not just each stakeholder individually, but to the interaction of multiple influences from the entire stakeholder set (Greenley & Foxall 1998, Rowley 1997).

Finally, it should be noted that organization/stakeholder relationships are constantly in a state of flux. These changes can occur for any number of reasons, and in any direction (Friedman & Miles 2002). This constant motion means that organizations need to maintain a close watch on their relationships with stakeholders, to swiftly respond in the event of a change in any of these relationships. Unfortunately, the extent to which organization/stakeholder relations can change over time, together with an analysis of how and why such changes occur, has generally been neglected thus far (Friedman & Miles 2002).

**Proposed Model**

Now that we have a better understanding of ES and stakeholder theory, let us consider the stakeholder theory model of Mitchell et al. (1997), who proposed that different classes of stakeholders can be identified by their possession or attributed possession of one, two or all three of the following attributes:

- The stakeholder’s power to influence the firm.
- The legitimacy of the stakeholder’s relationship with the firm.
- The urgency of the stakeholder’s claim on the firm.

A stakeholder’s degree of salience is then based on the degree to which he/she possesses these attributes. These four attributes of power, legitimacy, urgency, and salience are defined as follows (Agle, Mitchell & Sonnenfeld 1999, Mitchell et al. 1997, Scott & Lane 2000)

- **Power**
  - Stakeholders have power when managers perceive them to have the ability to impose their will on the organization.

- **Legitimacy**
  - Stakeholder legitimacy is a perception or assumption that the actions of a stakeholder are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.

- **Urgency**
  - Stakeholders have urgency when their claims for organizational attention are both time-sensitive and critical to them, and any delay in paying attention to them is unacceptable.

- **Salience**
  - Stakeholder salience is the degree to which managers give priority to competing stakeholder claims.
There are several points that should be noted regarding these attributes (Friedman & Miles 2002, Mitchell et al. 1997). Each attribute is dynamic, and can change for any particular stakeholder or stakeholder-organization relationship. Also, the degree of existence of each attribute is a matter of multiple perceptions and is a constructed reality rather than an objective one. Finally, a particular stakeholder may not know he/she possesses a particular attribute or even if conscious of it, may not wish to act on it.

With that in mind, let us examine the model itself (See Figure 2). Before using the model, a list needs to be drawn up as to who all the stakeholders are. Next, we need to ascertain for each stakeholder whether he possesses any of the three attributes of power, legitimacy and urgency.

![Figure 2. Diagram representing proposed stakeholder theory model (Mitchell et al. 1997).](image)

<table>
<thead>
<tr>
<th>Class</th>
<th>Name</th>
<th>Power</th>
<th>Legitimacy</th>
<th>Urgency</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dormant stakeholder</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Because of their potential to acquire a second attribute, management should remain cognizant of such stakeholders.</td>
</tr>
<tr>
<td>2</td>
<td>Discretionary stakeholder</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>There is absolutely no pressure on managers to engage in an active relationship with such a stakeholder, although managers can choose to do so.</td>
</tr>
</tbody>
</table>
3 Demanding stakeholder  | No | No | Yes | They are irksome but not dangerous, bothersome but not warranting more than passing management attention, if any at all.

4 Dominant stakeholder  | Yes | Yes | No | They will have some formal mechanism in place that acknowledges the importance of their relationship with the firm as they “matter” to organizations.

5 Dependent stakeholder  | Yes | No | Yes | They depend upon others (other stakeholders or the firm’s managers) for the power necessary to carry out their will so organizations should keep an eye on them until they acquire the necessary power.

6 Dangerous stakeholder  | No | Yes | Yes | Failure to identify them would result in missed opportunities for mitigating the dangers and lowering levels of preparedness, as their actions are not only potentially outside the bounds of legitimacy but are dangerous, both to the stakeholder-manager relationship and to the individuals and entities involved.

7 Definitive stakeholder  | Yes | Yes | Yes | Managers have a clear and immediate mandate to attend to and give topmost priority to this stakeholder’s claim.

8 Non-stakeholder / Potential stakeholder  | No | No | No | Nothing, They have no salience in the organization.

Table 1. Stakeholder classification and action plan (Mitchell et al. 1997).

Future Areas of Research

Having seen what constitutes ES and outlined the stakeholder theory, let us now see how this theory, and the proposed model in particular, can be applied to the study of ES. We shall
consider four key issues in adopting a stakeholder perspective of the implementation and management of ES:

- The relationship between power, legitimacy and urgency, and salience.
- The relationship between salience and stakeholder management.
- How these attributes vary throughout the enterprise systems life cycle stages.
- How these attributes vary depending on which aspect of enterprise systems is being studied.

**Relationship between Power, Legitimacy, Urgency, and Salience**

A broad concept of stakeholder management must be defined to serve the narrower interests of legitimate stakeholders. Otherwise, influencing groups with power in the organization can easily disrupt operations (Mitchell et al. 1997). Therefore, according to the proposed model (See Figure 2), the degree to which a stakeholder possesses not just power, but also legitimacy and urgency influences his degree of salience in the organization (Friedman & Miles 2002, Mitchell et al. 1997). Power and legitimacy are the core attributes that are expected to affect stakeholder salience (Agle et al. 1999). It is a common misconception that they refer to the same thing, but this is not necessarily true. Legitimate stakeholders are not necessarily powerful (e.g. minority stockholders in a closely held company), and powerful stakeholders are not necessarily legitimate (e.g. corporate raiders in the eyes of current managers) (Mitchell et al. 1997). As for urgency, its inclusion adds a catalytic/dynamic component to the process whereby stakeholders attain salience in the minds of managers (Agle et al. 1999). Together, they identify which stakeholders have greater salience than others. Based on this argument, we propose the following:

*Proposition 1: A stakeholder’s degree of power, legitimacy and urgency is associated with his salience during the implementation and management of enterprise systems.*

To better explain this proposition let us consider the example of an organization which is planning to purchase a pre-packaged enterprise-wide knowledge management system (KMS) to facilitate their role as a learning organization. In making this purchase, it is probable that of the five stakeholders (See Figure 1), managers, employees and vendors all have legitimate claims to what kind of KMS they would like to employ since the first two groups will be using the system and the vendors are the ones supplying it. However, ultimately, of the three, employees probably have the least power to affect the final decision. Therefore, it would seem that the views of managers and vendors should be given priority over those of employees in purchasing the KMS.

**Relationship between Salience and Stakeholder Management**

Based on the classification included in the proposed stakeholder theory, it was suggested that organizations take certain steps in dealing with each stakeholder (Mitchell et al. 1997). The next question then is what steps should be taken. Ultimately, effective leaders want to lean toward cooperative stakeholder relationships, to maximize their potential benefits (Schneider 2002) and closely and successfully align corporate policies and actions with stakeholder needs (Wolfe & Putler 2002). However, it is difficult to build the same highly intensive
relationship with each and every stakeholder. Thus, a solution would be to base the decision of how to manage a stakeholder on his degree of salience in the organization. As seen in the classification scheme in the proposed model (See Table 1), Mitchell et al. (1997) offered several steps in dealing with stakeholders of different salience. Based on this argument, we propose the following:

Proposition 2: A stakeholder’s degree of salience dictates how he should be handled during the implementation and management of enterprise systems.

To better explain this proposition let us consider the example of an organization implementing a marketing department driven customer relationship management (CRM) based feedback system. In this case, the marketing manager is probably the one championing the system, having both the power and legitimate desire for it, while maybe not the urgency as he sees it as merely one of several things he handles. As a dominant stakeholder, there should thus already be some formal mechanism within the organization for his views to be heard and addressed. In comparison, customers who may be tired of the old defective feedback system may have legitimate and urgent concerns, but lack the power to push their ideas through. They pose a problem to the organization as their possible options to get their concerns met could be potentially dangerous (e.g. strikes or riots). Thus, the organization should keep a close eye on them and be prepared to act if and when necessary.

How Attributes Vary Throughout the Enterprise Systems Life Cycle

As highlighted above, organization/stakeholder relationships are constantly in a state of flux. These changes can occur for any number of reasons, and in any direction (Friedman & Miles 2002). In addition, each of the three attributes of power, legitimacy and urgency is a variable and can change as part of any stakeholder-organization relationship (Mitchell et al. 1997). One reason for such changes is the stage at which the organization is currently at along the ES life cycle, with the main three stages being planning, implementation and management. Each stage poses different requirements and depending on whom the critical stakeholders are at each stage, an organization needs to utilize different strategies to deal with them versus other stakeholder groups (Jawahar & McLaughlin 2001). Based on this argument, we propose the following:

Proposition 3: A stakeholder’s degree of power, legitimacy and urgency varies according to the stage of implementation and management of enterprise systems.

To better explain this proposition let us consider the example of an organization that has installed a pre-packaged enterprise resource planning (ERP) system. During the planning and implementation stage, the power of vendors could be greater than that of the organization’s IT department, as they are the experts and system developers. Thus, their salience would be greater. However, once the system is in place, all control could be handed over to the IT department. Now, baring any significant need to upgrade the system, it is the IT department which has all the power and whose salience is higher, as they now control the system.
How Attributes Vary Depending on Which Aspect of Enterprise Systems is Being Analysed

By now, it is clear that to achieve certain ends, organizations need to pay certain kinds of attention to certain kinds of stakeholders (Mitchell et al. 1997). What attention should be given is based on the degree of salience of that stakeholder in the organization, and the current stage in which the organization is in. On top of this, there is one more factor that should be considered in applying stakeholder theory to the study of ES, and that is, which aspect of the system is being analysed (e.g. customer satisfaction, organizational efficiency or knowledge creation). Focusing on a particular aspect allows us to further tighten our study and more accurately identify the degree for each stakeholder’s attributes. Based on this argument, we propose the following:

Proposition 4: A stakeholder’s degree of power, legitimacy and urgency varies according to the specific aspect of the implementation and management of enterprise systems being focused on.

To better explain this proposition, let us consider the example of an organization that, together with its suppliers, distributors and customers, has installed a new cross-functional supply chain management (SCM) system. So, if we wish to focus on the efficiency of inventory management throughout the supply chain, we may find that supervisors, rather than front-end employees, have greater power as they are the ones overseeing the flow of inventory through the supply chain. In comparison, if we wish to zoom in on knowledge creation, the organization could require its entire staff to regularly contribute to the general knowledge pool. In this case, both supervisors and employees could have equal power in creating knowledge for the organization.

Conclusion

In examining ES, we identified several issues which seem to indicate that organizations looking to implement ES face the prospect of having to subsequently deal with a host of new and diverse groups of people, or stakeholders, ranging from global customers to external IT vendors. Each of these stakeholders have their own interests and it is up to the organization to try and figure out the best way to cater to as many of these diverse, and sometimes conflicting, interests as possible.

To facilitate this, we suggest the use of stakeholder theory. We offered a brief look at this theory, and one proposed model in particular, to showcase what this theory has to offer in helping organizations to not only better understand their stakeholders, but more importantly, better manage the diverse needs of their multiple stakeholders. We went on to develop four propositions that not only provide further insight into how stakeholder theory can be used to analyze ES, but also opened up several new avenues for research into this area of study.

The next step is to apply this proposed model to actual cases of ES implementation, identifying not just the key stakeholders in organizations and how they differ in salience to organizations, but also how they differ in their management by the organization. We should
also consider how their salience differs under different circumstances, such as the life cycle stage or specific area of interests. This will provide us with some valuable insight into the role of stakeholders in affecting the implementation of ES, and how they should be managed.

References


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