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University of Colorado  

Judy Scott  
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An Exploratory Study of Organizational Impacts on BPO using Coordination Theory

Biswa Ghoosh
The Business School
University of Colorado-Denver
bgosh@yahoo.com

Judy E. Scott
The Business School
University of Colorado-Denver
judy.scott@cudenver.edu

ABSTRACT
Increasingly organizations are outsourcing their business processes to offshore locations. The goals cited include cost savings, supporting the firm’s strategy, supplementing organizational skills and improving process capabilities. Current research indicates that results of Business Process Outsourcing (BPO) are challenging to evaluate and many BPO goals are not measured and/or not fulfilled. Moreover, high technology firms that rely on innovation may face greater adversity when pursuing BPO. This research focuses on such high technology firms and uses Coordination Theory to build a research model to measure the outcome of a BPO on the client using vulnerability, production and coordination costs. Organizational, strategic and process characteristics that impact the success of BPO are explored for high technology organizations that have established offshore BPO. Empirical data is collected to measure strategic profile, organizational profile and process profile along with the BPO costs. The results indicate that for an organization with dynamic processes and a customized market strategy, the BPO outcome will be higher production costs and lower vulnerability and coordination costs. For an organization with a stronger structure, more defined processes and standardized strategy, the impact of a BPO will be higher vulnerability and coordination costs but lower production costs. Long term BPO relationships are recommended for the former organizations and short term contracts for the latter.

Keywords
Business Process Outsourcing, Coordination Theory

INTRODUCTION
The concept of transferring (often offshore) the operational ownership and execution of one or more business processes is referred to as business process outsourcing (BPO). The organization pursuing the outsourcing of its business processes is referred to as the outsourcing client firm. The firm that provides the workers to operationalize the process is referred to as the outsourcing vendor. Examples of BPO are seen in several industries today with both core and support processes in the value chain being outsourced. The offshore BPO market is the fastest growing segment of the overall outsourcing market (Trapper, 2003). Gartner projects that the overall worldwide BPO market will grow 9% per year from $113 billion in 2003 to $176 billion in 2007, with the delivery of 14% of BPO services using offshore facilities. This trend stems from the increasing capabilities and greater sophistication of outsourcing vendors. The relationships that started with clients outsourcing their IT systems and functions have also grown over the years to include business operations as well. As outsourcing vendors grow their capabilities to “move up” the value chain, more and more vendors are packaging BPO services together with their IT infrastructure and management contracts (Gibson, 2005). The BPO business is allowing vendors to leverage services and operations built for one client to serve other clients.

While routine and standardized business processes can be easily transferred to outsourcing vendors, a recent industry trend finds firms outsourcing even critical product research and design functions (Engardio and Arndt, 2006). The study lists the examples of innovative firms like car maker BMW and pharmaceutical company, Eli Lilly, who are successful in performing product design and development in offshore locations.

Several research studies have investigated the outsourcing phenomenon and associated organizational factors (Lacity and Willcocks, 1995, Levina and Ross, 2003, Carmel and Agrawal, 2002). However, an outsourcing research study of BPO organizational factors and the measurement of BPO outcome focused solely on innovative high technology firms has not been attempted. Several researchers are pondering the impact of outsourcing on the high technology industry as college enrollment falls in the US and core research work is transferred overseas (Gereffi and Wadwha, 2005). An important question that has not been studied in IS research is determining what organizational, strategic and process factors are
significant contributors to the BPO outcome for a high technology firm. Additionally, the BPO impact on a client firm needs to be measured using a broader outcome model than simply transaction costs.

Research Goals

The research premise of this paper is that while BPO on the surface may promise to offer substantial cost savings and operational benefits to the client firm, hidden costs to the organization need to be fully evaluated. In fact, Lacity and Willcocks (1998) report that the risks of an outsourcing effort can be significant. Their study reported that only 54% of the outsourcing agreements realized cost savings. Clearly not all organizations and not all processes are good candidates for a BPO. Innovative firms engaged in high technology product development pursue strategies that require quick response to market changes, technology advancements and changing regulatory and consumer demands. These are evident among rapid startup firms in medical manufacturing and in the telecommunications industries, which are seeking to transform their organizational strategy through outsourcing (Linder, 2004).

The goals of this research are:

1. To perform a focused study of BPO outcome for client firms in the high technology industry.
2. To list the important strategic, organizational and process characteristics that impact BPO results for innovative high technology firms.
3. To develop a model based on coordination theory that can be used to evaluate the outcome of BPO using coordination, production and vulnerability costs to assess the full impact of a BPO on a client firm.
4. Identify which components of a firm’s strategy, organizational factors and process characteristics have statistically significant relationships on the three different types of costs from coordination theory – coordination, production and vulnerability.

High Technology Firms

High technology firms differ from other organizations in that they operate in a more dynamic and innovative environment. Broadly, high technology firms have the following characteristics:

1. More customized strategies that emphasize market differentiation and flexibility.
2. Processes that are organismic and decentralized to maximize innovation and product development for specific markets.
3. Less structured organizations that allow the non-sticky flow of information with a dynamic culture and flexible department structures.

MEASURING BPO RESULTS USING COORDINATION THEORY

A literature review on IS research reveals several important studies that have investigated sourcing arrangement using different theories. Teo, Wei and Benbasat (2003) used institutional theory to study inter-organizational systems. Carmel and Agarwal (2002) used process theory to study elements of outsourcing success. Ang and Straub (1998) used economic theories to study economies of cost and scale for vendor relationships. However, no prior research study was found that used coordination theory to study the impacts of BPO on the client organization. Coordination theory has been used to study the impact of information technology on organizational structure by modeling organizational subunits and their interactions (Malone, et. al., 1999). Such a model sheds light on the effective flow of information and the allocation of resources, both of which are critical components of a BPO (Malone and Crowston, 1994). The impact of strategic decisions on the organizational cost structure can also be modeled. Hence, applying coordination theory to study the BPO interactions between the client and vendor holds promise.

Coordination theory offers a vehicle to study organizations through business processes – referred to in the theory as coordination structures (Malone, 1987). A coordination structure is defined as a pattern of decision-making and communication among a set of actors who perform tasks in order to achieve goals.

There are three kinds of costs.

- **Production costs** include the "transaction" costs of running the outsourced processes and measures any efficiencies or deficiencies introduced. In the BPO scenario, these costs measure the client’s transaction costs.
- **Coordination costs** are the “management” costs to manage the communication between the client and the vendor firms. In the BPO scenario these are evidenced by the client’s management costs.

- **Vulnerability costs** are the “strategic” costs associated with a delayed response to a changed market situation. The client firm in a BPO is further removed from the market/end user resulting in missed market knowledge. This leads to additional vulnerability costs for the client.

**RESEARCH MODEL AND HYPOTHESES**

Figure 1 shows the research model. As evident from the literature review, the strategy and operations of the client have a direct impact on the outcome of the BPO. The characteristics of the processes involved in the BPO can also change the outcome of the BPO. Carmel and Agarwal (2002) note the client’s need to align strategy with the BPO outcome. Risks of misalignment in strategy and operations in a BPO can lead to significant management concern in the future (Willcocks, et al., 1999). An example of such BPO impact could be higher vulnerability costs because of missed/delayed market information and response. The BPO outcome can result in higher coordination costs as greater effort is needed in process management of the candidate process and/or other processes. In general, the vulnerability and management costs tend to be higher while transaction costs can be lowered in some BPO arrangement due to labor arbitrage.

![Figure 1: Research Model](image)

**Strategic Profile and BPO**

Outsourcing decisions almost always have long term impact on the client firm. Hence the client firm’s strategy must be a critical component in the BPO decision. A chosen strategy of cost leadership and/or market differentiation, etc. fuels a different set of IS capabilities. The flexibility required by high technology firms to address specific segments is phenomenal as such firms connect with customers in real time (Halstead and Becherer, 2003). A study by Tamimi, et al. (2003) shows the importance of differentiation in the value chain for high technology online firms. The results found that online sites that offer more customization in their product offers significantly impact the perceptions of their customers. For example, matching cell phone promotions to the needs of individual subscribers positively impacts their perceptions.

Two attributes of strategy important for high technology firms developing innovative products are – (1) market offer differentiation and (2) flexibility to address market changes rapidly. Following studies show that high technology firms seek to maintain these strategic characteristics in their BPO contracts as well. Feyer, et. al. (2005) report that in medical outsourcing the client firm seeks strategic benefits in addition to costs savings. These strategic benefits include critical skills
and customized responsiveness from the vendor to match diversity in patient situations. Similar flexibility is sought by international medical manufacturing BPO relationships (VanZwol, 2005), where compliance issues and medical standards can vary across markets and countries. The results indicate that the client has to give up more control in design stages to achieve flexibility in the manufacturing BPO scenario. In another study Greenstein (2005) points out the impact of outsourcing decisions on product positioning and market differentiation in a study of branding. Thus, strategy plays an important role in BPO decisions, the outcome of the BPO and can also have an impact on the client’s results.

In a BPO, the vendor attempts to consolidate processes across industries and provide a “least common factor” approach. As a result, a high technology client will experience greater vulnerability costs since there will be a loss of market information from the process that is involved in the BPO. Moreover the client needs to support all the nuances of addressing each market segment into the single process that is outsourced. The result is higher transaction costs as steps that are not generally needed are bundled into the process. However, by effectively standardizing its strategy and centralizing its process through the BPO adoption, the client can experience lower coordination costs (Crowston, 1997).

H1- Client firms with stronger customized strategies as measured by market differentiation and flexibility will have greater vulnerability costs as a result of a BPO.

H2- Client firms with stronger customized strategies will have lower coordination costs as a result of a BPO.

H3 - Client firms with stronger customized strategies will have greater production costs as a result of a BPO.

Organizational Profile and BPO

A review of the prior research on BPO shows support for the triad of client organizational factors that impact the outsourcing results – the structure, the flow of information and the culture.

Levina and Ross (2003) have used economic theory to suggest that outsourcing relationships are successful in the cases where the client firm maintains proper organizational structures to manage the relationship between the client and vendor. This study has also reported that the information processing requirements for the client organization need to be matched with the level of uncertainty facing the organization in the BPO.

Lacity and Willcocks (1998) studied the allocation of resources. Their study reports that resources must be properly distributed to meet organizational requirements and emphasized vendor selection and relationship management as contributors to outsourcing success. They propose three different models with varying degrees of client-vendor alliance – partnerships, technical supply or pay-per service. Outsourcing relationships are usually set up to have a loose relationship between the firms. Such a loose alliance creates a fragmented internal environment, which can hamper the partnership culture and information flow and cause the BPO client to be vulnerable to market changes. Similar results are reported for loosely coupled environments (Orton and Weick, 1990).

Therefore, the client’s organizational profile with respect to culture, structure and information flow has a significant impact on the BPO outcome. When a business process is outsourced, usually the client firm needs to establish a management function to oversee the vendor firm and create an organizational structure to properly collect and process requirements from multiple business units and feed them to the vendor firm. In a dynamic organization adhoc structures and information flows are created and destroyed as business needs arise (Mintzberg, 1991). However, when a BPO is pursued, additional structures need to be established so that the organization can effectively work within the BPO context (Levina and Ross, 2003). The result will be that formalism is introduced in the organization – through more structure, process definition and centralization. Hence the costs due to a BPO on a highly dynamic client organization will be increased in the areas of vulnerability, coordination and production. The greater the flexibility of an organization, the greater the vulnerability, production and coordination costs after a BPO is established.

H4- Client firms that have more dynamic organizations as measured by structure, culture and information flow will have greater vulnerability costs as a result of a BPO.

H5- Client firms that have more dynamic organizations will have greater coordination costs as a result of a BPO.

H6- Client firms that have more dynamic organizations will have greater production costs as a result of a BPO.

Process Profile and BPO

Two important characteristics of processes are (1) innovation and (2) efficiency (Mintzberg, 1991).
An “innovative” process (also referred to as organismic) refers to a less structured and more dynamic process, which could involve adhoc steps and information exchange. Clearly, an innovative process may be less defined and its execution could depend on the individuals executing the process. An efficient or mechanistic process is well structured, routine and limits judgement by the process executors. A major goal of organizational research is to understand the structures of organizations that best address market situations to achieve specific goals. Organizations can have different structures and characteristics and face different challenges. But the central goal is to allow the organization to respond to uncertainties. High technology organizations have more organismic processes and face more uncertainty and have greater information needs. This is different from organizations that follow mechanistic processes, which have very rigid operations and strongly structured communication channels. They are intended to have less information flow and face less uncertainty than the innovative organizations (Tushman and Nadler, 1977).

It is often seen that larger organizations need to be broken into multiple sub units and managed in discrete parts. This can be arranged functionally or across product lines. The processes that are organized by function are classified as centralized. They can be more efficient in terms of resources, but slow to respond to market changes. The processes that are organized by product lines are classified as decentralized (Malone, 1987). A centralized process serves multiple markets and is functionally oriented. A decentralized process serves each market uniquely and is organized product wise. Thus multiple processes for the same function can be deployed which are specialized for specific market segments.

Outsourcing vendors follow mechanistic processes with limited information flow. This strategic approach is used to counter the high turnover and the need to facilitate the servicing of multiple clients. Therefore, the mechanistic processes of a client firm have a better match and greater success when outsourced (Tushman and Nadler, 1977). The BPO of an organismic process will result in the process becoming more mechanistic, as the information flow and process steps are formalized during the BPO arrangement. Moreover, when a process is outsourced, the effect is usually to make the process centralized. A centralized, mechanistic process is more cost efficient in production costs, but requires more management overview and is slow in responding to market changes (Malone, 1987). This inflexibility is measured in increased vulnerability costs and coordination costs, though production costs are lower.

H7- Client firms that have more dynamic processes as measured in the dimensions of organismicity and decentralization will have greater vulnerability costs as a result of a BPO.

H8- Client firms that have more dynamic processes will have greater coordination costs as a result of a BPO.

H9- Client firms that have more dynamic processes will have lower production costs as a result of a BPO.

RESEARCH METHODOLOGY

The research methodology involved surveying managers responsible for business processes that have been outsourced offshore. A web based questionnaire was made available for 1 week to a random sample of a pool of process managers in the high technology industry, who were identified as having first hand experience with offshore BPO. The sample of managers were all employed in the US in the telecommunications industry. The set of responsibilities for these managers included product development, testing, deployment and services support. Email with a link to the survey was sent to each manager to solicit participation. A total of 30 completed surveys were received from the 73 solicitations for a response rate of 41%.

Independent Variables

The client’s strategic profile (second order latent variable) is measured using two dimensions – differentiation and flexibility. A higher score for strategic profile implies that the client follows a more customized market strategy.

1. Differentiation (Strategy) – Measures the degree to which the client firm seeks to differentiate itself in the marketplace using the referenced process.

2. Flexibility (Strategy) – Measures the degree to which the client firm seeks flexibility in the referenced process so as to quickly customize the process to respond to changes in the marketplace.

The client’s organizational profile (second order latent variable) is measured using three dimensions – culture, structure and information flow. A higher score for organization profile implies that the client has a more dynamic organization with limited formal structure.
3. Culture (Organizational Profile) – Measures the degree of autonomy to which the client firm’s personnel operate in their daily work.

4. Structure (Organizational Profile) – Measures the degree to which the client firm’s personnel adhere to a set of policies and procedures and formal departments established for their work environment.

5. Information Flow (Organizational Profile) - Measures the degree to which the client firm allows the free flow of information among the employees irrespective of departments through formal and informal channels.

The client’s process profile (second order latent variable) is measured using two dimensions – organismicity and centralization. A higher score for process profile implies that the client has more adhoc processes that are more dynamic.

6. Organismic/Mechanismic (Process Profile) – Measures the degree to which processes in the organization require processing and information that are outside a prescribed flow. Such processes are deemed organismic with more adhoc processing.

7. Centralized/Decentralized (Process Profile) – Measures the degree to which processes are organized based on functions (centralized) versus product or market segment (decentralized).

Dependent Variables

The dependent variables in the model come from Coordination Theory:

1. Vulnerability Costs – Measures the difference (higher or lower) in the time needed to respond to market changes with respect to the process that has been outsourced after the BPO has been implemented.

2. Coordination Costs - Measures the difference (higher or lower) in the time needed to manage the process that has been outsourced after the BPO has been implemented.

3. Production Costs - Measures the difference (higher or lower) in the time needed per transaction in the process that has been outsourced after the BPO has been implemented.

4. BPO Outcome (second order latent variable) – Combined measure of BPO outcome derived from the above three costs.

RESULTS

A component based analysis was done using PLS-Graph version 0.3.0 build 1126. This model allowed the analysis of latent (unobserved) variables measured by their indicators or manifest variables. Moreover, the strength of the relationships among these latent variables were also determined using the path coefficients. All manifest variables were modeled as reflective indicators of the latent variables.

Model Validation

The instrument validation was done using the Composite Reliabilities (CR) and Average Variance Extracted (AVE) from the measurement model in PLS (Chin, 1998). To assess reliability and validity of the constructs, the block of indicator’s composite reliabilities (CR) and the square root of average variance extracted (AVE) are calculated. The C.R. measures the reliability of the instrument and all CR’s should be greater than 0.7 to justify using the construct. The AVE measures the variance captured by the indicators relative to measurement error and it should be greater than 0.5 to justify using a construct. Also to demonstrate discriminant validity, the square root of each construct’s AVE must also be greater than the correlation of the construct to other latent variables. The results are shown in Table 1. The results indicate adequate scores in the CR and AVE measures to justify the validity and reliability of the constructs in the model.

The path coefficients and t-statistics of the relationships among the latent variables are shown in Figure 2. A bootstrapping procedure was used to generate t-statistics using re-sampling with replacement with a sample size of 15. The critical values for the student T distribution for 30 degrees of freedom at 5%, 10% and 15% confidence levels are $t_{df=30, 5\%} = 1.69$, $t_{df=30, 10\%} = 1.30$ and $t_{df=30, 15\%} = 1.05$. As seen from Figure 2, the path coefficients have different t-values and confidence levels.
Constructs – Mean, S.D., Composite Reliability, AVE and Correlation of Constructs

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>S.D.</th>
<th>C.R.</th>
<th>AVE</th>
<th>Correlation of Constructs and Square root of AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) FLEX</td>
<td>3.91</td>
<td>0.94</td>
<td>0.92</td>
<td>0.76</td>
<td>.87</td>
</tr>
<tr>
<td>(2) DIFF</td>
<td>3.74</td>
<td>0.92</td>
<td>0.88</td>
<td>0.71</td>
<td>.84</td>
</tr>
<tr>
<td>(3) CUL</td>
<td>4.83</td>
<td>1.46</td>
<td>0.78</td>
<td>0.55</td>
<td>.63</td>
</tr>
<tr>
<td>(4) STRUC</td>
<td>3.91</td>
<td>0.89</td>
<td>0.84</td>
<td>0.64</td>
<td>.56</td>
</tr>
<tr>
<td>(5) FLOW</td>
<td>5.56</td>
<td>1.09</td>
<td>0.86</td>
<td>0.70</td>
<td>.34</td>
</tr>
<tr>
<td>(6) CENTRL</td>
<td>4.64</td>
<td>0.65</td>
<td>0.74</td>
<td>0.51</td>
<td>.14</td>
</tr>
<tr>
<td>(7) ORGAN</td>
<td>4.43</td>
<td>0.69</td>
<td>0.96</td>
<td>0.88</td>
<td>.04</td>
</tr>
<tr>
<td>(8) VULNR</td>
<td>3.65</td>
<td>1.45</td>
<td>0.81</td>
<td>0.64</td>
<td>.27</td>
</tr>
<tr>
<td>(9) COORD</td>
<td>4.98</td>
<td>1.31</td>
<td>0.93</td>
<td>0.83</td>
<td>.66</td>
</tr>
<tr>
<td>(10) PROD</td>
<td>3.66</td>
<td>1.42</td>
<td>0.93</td>
<td>0.81</td>
<td>.58</td>
</tr>
</tbody>
</table>

SECOND ORDER Constructs – Mean, S.D., Composite Reliability, AVE and Square Root of AVE

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>S.D.</th>
<th>C.R.</th>
<th>AVE</th>
<th>Correlation of Constructs and Square root of AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy</td>
<td>3.83</td>
<td>0.43</td>
<td>0.89</td>
<td>0.58</td>
<td>.76</td>
</tr>
<tr>
<td>Organization</td>
<td>4.76</td>
<td>0.91</td>
<td>0.87</td>
<td>0.52</td>
<td>.72</td>
</tr>
<tr>
<td>Process</td>
<td>4.53</td>
<td>0.51</td>
<td>0.88</td>
<td>0.61</td>
<td>.78</td>
</tr>
<tr>
<td>BPO</td>
<td>4.16</td>
<td>0.86</td>
<td>0.87</td>
<td>0.50</td>
<td>.71</td>
</tr>
<tr>
<td>Outcome</td>
<td>4.16</td>
<td>0.86</td>
<td>0.87</td>
<td>0.50</td>
<td>.71</td>
</tr>
</tbody>
</table>

Table 1: Means, Standard Deviations, Composite Reliability, AVE and Correlation of Constructs

Figure 2: Relationships between Latent Variables (path coefficient, t-value)

Hypotheses Testing

The results of the hypotheses tests are shown in Table 2.

The results indicate support for 4 of the 9 hypotheses. H2 (a more customized strategic profile implies lower coordination costs after BPO) and H8 (a more dynamic process profile implies higher coordination costs after BPO) are supported at a
confidence level of 10%. H3 (a more customized strategic profile implies higher production costs after BPO) and H9 (a more dynamic process profile implies higher production costs after BPO) are supported at a confidence level of 15%.

Two other hypotheses were supported at a confidence level of 15% but directionally reversed. Reversal of H4 and H5 imply that a more dynamic organization experiences lower vulnerability and coordination costs after BPO. The other three hypotheses – H1, H6 and H7 were not supported.

The results indicate that the strategic profile, organizational profile and the process profile of a firm have a significant impact on the BPO outcome. This supports the notion that firms have to be judicious in choosing what processes they outsource and how the BPO fits in with their strategy and organizational structure.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path Coeff., t-Val</th>
<th>Sig.</th>
<th>Hypothesis</th>
<th>Path Coeff., t-Val</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Profile</td>
<td>H1 Unsupported</td>
<td>.028, t=0.06</td>
<td>No</td>
<td>H2 Supported</td>
<td>-.684, t=1.38</td>
</tr>
<tr>
<td></td>
<td>H3 Supported</td>
<td>.558, t=1.19</td>
<td>15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization Profile</td>
<td>H4 Reversed</td>
<td>-.578, t=1.09</td>
<td>15%</td>
<td>H5 Reversed</td>
<td>-.364, t=1.06</td>
</tr>
<tr>
<td></td>
<td>H6 Unsupported</td>
<td>.249, t=.405</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process Profile</td>
<td>H7 Unsupported</td>
<td>-.337, t=0.88</td>
<td>No</td>
<td>H8 Supported</td>
<td>.402, t=1.35</td>
</tr>
<tr>
<td></td>
<td>H9 Supported</td>
<td>.407, t=1.27</td>
<td>15%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Results of Hypothesis Testing

Limitations
The study was done with a very small sample. The mean values of the latent variables were measured near neutral. It is possible that the sample may not be reflective of the theory and hence some of the hypotheses were not supported. Some of the participants may fall into organizations with more static characteristics. Also, of the supported hypotheses the significance levels were at 10% and 15% only. A larger study with more participants needs to be conducted with the use of a selection criteria to screen participants, who better fit the research profile of high technology organizations. This may result in higher mean scores on the latent variables and stronger support for the hypotheses.

CONTRIBUTIONS
The contributions of this study include: (1) a validated research model which evaluates BPO outcome using coordination theory and (2) the evaluation of the impact of strategy, organizational and process characteristics on the BPO results.

The results indicate that for a high technology organization with dynamic processes and a customized market strategy, the BPO outcome will be higher production costs and lower vulnerability and coordination costs. This also implies that this type of client firm should seek more long term partnership type BPO arrangements over pay-per service type arrangements. However, if the above organization selects their mechanistic processes to pursue a BPO, then the results of this study suggest that all three costs will be lower. This may be an optimal BPO scenario for dynamic high technology organizations.

In the alternate scenario of a more static organization with a strong structure, more defined processes and following a cost-focused strategy, the impact of a BPO will be higher vulnerability and coordination costs but lower production costs. Hence, such organizations will see an immediate benefit from the lower transaction costs in a BPO. However, long term impact on even these organizations remain bleak with greater market vulnerability and management expense. Such organizations would be better suited to follow short term BPO arrangements such as pay-per service contracts, which can be easily retracted if the firm sees its management costs rise or market response become sluggish.

Future research should conduct a larger study that includes different types of organizations with better screening of participants to highlight their profiles.
REFERENCES
### SURVEY INSTRUMENT

All items are measured on a 7 point Likert Scale (1-7) from Strongly Disagree, Disagree, Somewhat Disagree, Neutral, Somewhat Agree, Agree, Strongly Agree.

<table>
<thead>
<tr>
<th>My organization (FLEXIBILITY)</th>
<th>In my organization: (CULTURE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has the ability to change its processes to adapt to market conditions</td>
<td>1. Employees are valued for their individual opinions</td>
</tr>
<tr>
<td>2. Can respond quickly to market changes</td>
<td>2. Emphasizes long term stability over short term response</td>
</tr>
<tr>
<td>3. Requires consultation with a lot of decision makers to respond to a market change (reversed)</td>
<td>3. I am encouraged to explore and experiment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>My organization (DIFFERENTIATION)</th>
<th>My Organization (STRUCTURE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Encourages having common processes over many markets/customers (Reversed)</td>
<td>1. Strictly enforces its work policies (Reversed)</td>
</tr>
<tr>
<td>2. Encourages customization of processes to address different markets/customers</td>
<td>2. Encourages me to interact with whomsoever I need for my work</td>
</tr>
<tr>
<td>3. Designs processes so they can serve multiple markets/customers (Reversed)</td>
<td>3. Structure of departments inhibits interaction (Reversed)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CENTRALIZATION</th>
<th>My Organization (INFORMATION FLOW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This process handles more than one product.market</td>
<td>1. I am encouraged to discuss my work with employees in other workgroups</td>
</tr>
<tr>
<td>2. Resources on this process are organized by function</td>
<td>2. Benefits of sharing knowledge in my organization outweigh the costs</td>
</tr>
<tr>
<td>3. Resources on this process are organized by product (Reversed)</td>
<td>3. Organizational information is freely exchanged freely through email, presentations, newsletters, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ORGANISMIC</th>
<th>PRODUCTION COSTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Activities in this process are static and routine (Reversed)</td>
<td>1. Transaction costs related to these business processes are lower (Reversed)</td>
</tr>
<tr>
<td>2. Information needs to be collected outside the documented process flow to complete the process</td>
<td>2. We can serve our customers more effectively now (Reversed)</td>
</tr>
<tr>
<td>3. Flow of work on this process is ad hoc based on information collected.</td>
<td>3. Less resources are required to operate these processes (Reversed)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VULNERABILITY COSTS:</th>
<th>COORDINATION COSTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My org adapts quickly to unanticipated changes (Reversed)</td>
<td>1. Increased resources are needed to support our process</td>
</tr>
<tr>
<td>2. My org can react quickly to new market info (Reversed)</td>
<td>2. Increased number of managerial contacts are needed to support our process</td>
</tr>
<tr>
<td>3. My org's response to market changes involves a lengthy process</td>
<td>3. More time is required to get status and updates</td>
</tr>
</tbody>
</table>