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A Commentary on: "The role of transaction cost economics in information technology outsourcing research: A meta-analysis of the choice of contract type"

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We thank the Editor-in-Chief of *The Journal of Strategic Information Systems* for inviting us to comment on Shermann et al.'s (2016) article that addresses the question of the appropriateness of Transaction Cost Theory (TCT) for explaining firms' choices about information technology (IT) outsourcing; here the choice of contract type. In brief, the article addresses the question of whether mixed results obtained by IS researchers who have used TCT to explain the choice of contract type are due to a misappropriation of the theory – more precisely the operationalization of task uncertainty – or to the unsuitability of TCT to some aspects of the IT outsourcing phenomenon.

Before we offer our comments, a preamble is necessary. Although we have used TCT – and other theories from the field of Industrial Organization, such as Agency Theory – in our research on IT outsourcing (e.g., Aubert et al., 2012), our aim is not to defend the relevance or appropriateness of TCT. Neither do we aim to discourage researchers from developing theories indigenous to the domain of IT outsourcing. On the contrary! As one of the authors of this commentary has advocated elsewhere, theory development is much needed in the IS field (Rivard, 2014). We deem it essential, however, to warn researchers from rejecting a theory based on mistaken motives.

On theory borrowing

One of the hallmarks of IS research is its theoretical anchoring in its reference disciplines (King et al., 2010). Put simply, this means that IS researchers have traditionally borrowed theories from other fields to explain their phenomena of interest. As revealed by discussions in other management fields, such as Marketing (Murray et al., 1995) and Organization Studies (Whetten et al., 2009), the IS field is not unique in this practice of theory borrowing.

Theory borrowing is deemed important for emerging fields of study, as it helps them "develop credibility as a legitimate form of scholarly inquiry" (Whetten et al., 2009, p. 538) and contributes to developing and enriching the field (Murray et al., 1995). When researchers aim at explaining a phenomenon that resembles phenomena about which strong theory exists in another field, theory borrowing also means avoiding reinventing the wheel and allows researchers to jump-start knowledge production on the phenomenon of interest in the emerging field. It also facilitates conversations with neighboring disciplines. IS researchers have used TCT to study IT outsourcing decisions because these are indeed make-or-buy decisions. Because TCT had been used to study make or buy decisions in many fields, it was deemed a "good candidate" to explain IT outsourcing. Alternate theories, such as Pfeffer's (1981) political model, have also been considered as "good candidates" to explain IT decisions (Lacity and Hirschheim, 1993).

Theory borrowing, however, has been a shun-upon practice when it is a mere application of "high-level reference theory in the form of mid-level abstractions involving generic and atheoretical information technology (IT) components" (Grover and Lyytinen, 2015, p. 271). In the same vein, when researchers are not faithful to assumptions of their borrowed theory, the results they obtain can be misleading (Murray et al., 1995).

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When borrowing a theory, researchers have to be faithful to the underpinning elements of the theory. Usage of TCT in the IS field has not always been faithful to the core elements of the theory (Karimi-Alaghehband et al., 2011), which may explain some of the conflicting results observed. It seems that this pattern is not unique to our field and was observed in other disciplines using TCT (David and Han, 2004). In the papers reviewed by David and Han (2004), results obtained were also conflicting, and several instances of loose interpretation of the theory were observed. These observations make the evaluation of the value of a theory difficult. It is hard to discard a theory if the tests of the theory are not faithful. Also, if additional papers are using previous "unfaithful" papers as a theoretical grounding, this can generate a significant deviation from the original theory, which makes its assessment even more challenging.

Misleading results can also be obtained when researchers do not take into account the nature of the theory they borrow (Karimi-Alaghehband et al., 2011). Indeed, when researchers apply TCT as a predictive theory, they ignore the normative nature of the theory. As mentioned by Williamson (1981), "the transaction cost arguments ... are of a normative kind: what governance structure should be chosen" (Williamson, 1981, p. 560). That is, the theory posits that the organization has to align "transactions with governance structure so as to support a high-performance result" (Williamson, 1998, p. 40). This suggests that to be faithful to the nature of TCT, researchers should test the theory *not* on how well it predicts the outsourcing decisions firms will make, *but* on whether those firms that make outsourcing decisions in accordance with TCT prescriptions outperform the firms that do not follow these prescriptions. Unfortunately, IT outsourcing researchers have not pursued this avenue.

On theoretical contribution

When borrowing theory, researchers are still required to make a theoretical contribution. Showing that a theory that worked in another field works in a new setting (like IS), or showing that it does not work but without explaining why it could be inadequate in such situation, does not constitute a theoretical contribution (Whetten, 1989). Explaining why a theory does not work in a specific context means that we are testing the boundary conditions of the theory. By doing so, we are improving the theoretical apparatus and making a contribution.

In IT outsourcing research, we might have missed opportunities to challenge implicit boundary conditions of TCT. Doing so might contribute to creating an indigenous version of TCT. Consider the role of asset specificity, which led to inconclusive or conflicting results (Karimi-Alaghehband et al., 2011; Lacity et al., 2010). While Karimi-Alaghehband et al.'s (2011) argument of less than faithful use of TCT has value, an alternative explanation is that asset specificity, in the context of IT outsourcing, does not have the same effect as it does in other contexts.

Asset specificity can lead to a hold-up situation (Williamson, 1985). For example, when a supplier holds a specific asset required to provide the service or the product to the client, the client becomes captive. Other suppliers will not be interested in acquiring the asset if it is only usable for one client. Therefore, asset specificity lowers the competition and the vendor holding the asset has a negotiation advantage. The role of asset specificity has been observed in numerous industries and has led to convincing results in several domains. The industries in which asset specificity has been proven influential on the outsourcing decision are varied, including the aluminum (Hennart, 1988), coal (Joskow, 1987), and automobile (Monteverde and Teece, 1982) industries. Interestingly, studies outside IT outsourcing that included asset specificity as an independent variable included very few instances of service industries.

One implicit assumption of TCT on assets is that the assets are contractible. They can be controlled (owned) either by the client or by the supplier. Asset specificity takes many forms. In IT outsourcing, the most likely specific asset is human, more precisely, employee knowledge. When specific knowledge is considered in an industrial setting, it is often used as a proxy to assess the specificity of the production process (David and Han, 2004). In a service industry like IT outsourcing, the specific asset is knowledge, and this knowledge is held by employees. Contrary to most material assets, employees – be they those of the client or the supplier – and their knowledge are not owned. Therefore, we may well have a situation in which neither the client nor the supplier controls the specific assets. Employees can quit, negotiate higher salaries and behave like a supplier to extract the rent associated with the specific knowledge they have. Therefore, this type of uniqueness (knowledge as the only real specific asset) challenges TCT because the asset considered in IT outsourcing has properties that are not considered in traditional applications of TCT. It does not "invalidate" TCT but highlights a boundary condition that is taken for granted in most studies: assets have to be controllable by an organization, which they are not in an IT outsourcing context.

Relaxing such an important boundary condition could lead to providing a theoretical explanation that would be indigenous to IT outsourcing. It could also contribute to expanding the domain of TCT to service industries. Such a contribution is possible if researchers pursue their enquiry beyond the simple conclusion that a result about a variable like asset specificity is inconclusive. By doing so, we could provide additional refinement to the theory. Another suggestion in that spirit was made by Lacity et al. (2010) about the cost of knowledge transfer associated with specific knowledge (which is also a challenge to the contractible nature of knowledge). Such a cost is ignored in most TCT studies because the cost of contracting traditional assets is usually very low.

Works like Shermann et al. (2016) article in this issue are a good step to refining boundary conditions. Such works enable researchers to take stock of extant research and to examine in detail the work done. One striking element in the Shermann et al. (2016) article is the wide variety of operationalizations of uncertainty. Uncertainty has been studied for a long time in IS, notably in IS development and risk management (e.g., Barki et al., 1993). Again, considering the deep understanding the IS

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