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THE IMPACT OF DEMOGRAPHIC SIMILARITY OF KEY OFFSHORE OUTSOURCING LEADERSHIP DYADS ON PROJECT SUCCESS

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One of the most popular trends in the Information Technology (IT) industry from the late 1990's to date is the use of offshore personnel as cost effective labor to implement IT initiatives for domestic firms. Offshore IT outsourcing has now gained a firm foothold as a tool to control costs and increase corporate agility in a globalized landscape that is more and more dependent on IT initiatives to grow, compete, and innovate. Offshore IT outsourcing is a large part of a greater trend, collectively known as Business Process Outsourcing or BPO, which also includes HR, finance, procurement, accounting, call center, etc. This trend has seen rapid growth over the past decade and the trend appears to be accelerating. According to McKinsey & Co., the total market for BPO outsourcing in general is currently \$12 billion, but is expected to see 65 percent year over year gains and reach \$142 billion by 2008 (Marshall, 2003).

While domestic outsourcing has been heavily researched, offshore outsourcing introduces new problems and complexities. To date, these issues have been given relatively little attention by the scholarly community. One of the most fascinating issues yet to be fully explored is the effect that the cross-cultural relationships might have on the outcome of the outsourced projects.

This paper looks directly at the similarity in demographic makeup of the "leadership team" in an outsourced software development project and tries to draw a correlation between this and the successful outcome of the project. The team of interest in this study is composed of four key inter-organizational dyads comprising the four major components of a software development project: *leadership*, *control*, *functional*, and *technical*. Each dyad consists of the primary stakeholder from both the client and outsourcer organizations. While the actual roles in each organization may differ from project-to-project and organization-to-organization, it is assumed that there will be representation for each component on each project. Some example roles representative of each project component are listed below in table 1. The basic research question examines the similarity in demographic makeup of the four dyads composing the leadership team on the success of an outsourced project.

Table 1. Sample Component to Role Mapping

Component	Client Organization Role	Outsource Organization Role
<i>Leadership</i>	CEO, CIO, VP of Technology	Program Manager, Sales Representative
<i>Control</i>	Project Manager, Resource Manager	Project Manager
<i>Functional</i>	Business Unit Stakeholder, Project Owner	Business Analyst
<i>Technical</i>	CTO, Enterprise Architect, Operations Manager	Systems Architect

Theoretical Background

The study draws upon two streams of research for its theoretical foundations: *relational demography* and *relationship management*.

Relational Demography

The term *relational demography* has surfaced relatively recently in the academic literature, but its theoretical bases have been researched for quite some time. Relational demography derives from the study of the *similarity-attraction paradigm*. Pioneered by Ellen Berscheid, Elaine Walster, and Donn Byrne, the similarity-attraction paradigm hypothesizes a strong

relationship between similarity of individuals in a dyad or group (measured in a wide variety of ways) and attraction. In essence, relational demography seeks to take a subset of the similarity measures, specifically demographic measures such as age, gender, race, educational background, etc., and derive the same relationship to attraction (e.g., Tsui & O'Reilly, 1989). Relational demography scholars have found that people who are demographically similar exhibit greater attraction to one another, which can lead to improved perceptions of performance and an increase in the likelihood of relational bonding.

This study will further augment the traditional demographic variables with aspects of national culture. Geert Hofstede (1984; 1997) has performed extensive research into the similarities and differences among national cultures. He has identified five key factors that help codify cultural differentiation. *Power Distance* measures the extent to which less powerful members of an organization or group will accept unequal power distribution. *Individualism* (vs. *Collectivism*) assesses the propensity of a culture to integrate individuals into groups. *Masculinity* (vs. *Femininity*) gauges the distribution of roles between the genders. *Uncertainty Avoidance* quantifies a particular society's tolerance for uncertainty. These four factors are the most highly analyzed. The fifth, *Long-Term Orientation*, is a relatively new addition and will not be leveraged for the purposes of this study.

Relationship Management

Relationship management behaviors are actions exhibited between parties which are intended to enhance and maintain a close and mutually beneficial relationship. Relationship management has been analyzed in numerous contexts. Due to the buyer/seller relationship involved in an IT outsourcing relationship, this study draws heavily from the sales management literature. Further, according to Smith (1998), relationship management can be dissected in a variety of ways. However, three facets of relationship management appear most relevant: *relationship investments*, *open communications*, and *relationalism*. Smith (1998, p.6) defines these as follows:

Investments are the resources, effort, and attention devoted to a relationship that do not have outside value (Hunt, 1983; Wilson & Mummalaneni, 1991). Open communication is the extent to which buyers and seller communicate openly, sincerely, and substantively with customers, either formally or informally (E. Anderson & Weitz, 1989; L. A. Crosby & Stephens, 1987). Relationalism is the extent to which relators actively and purposefully manage their relationship and promote behaviors to maintain or improve the relationship (Noordewier, John, & Nevin, 1990).

Relationship management has been found to have a positive effect on *relationship quality*, the degree to which a relationship meets the needs of the parties involved. For example, Crosby, Evans and Cowles (1990) found that relationship management behaviors are essential in the development and maintenance of high-quality relationships. Smith (1998) further asserts that there have been numerous other studies that have found empirical evidence of the positive effects of relationship management on relationship quality.

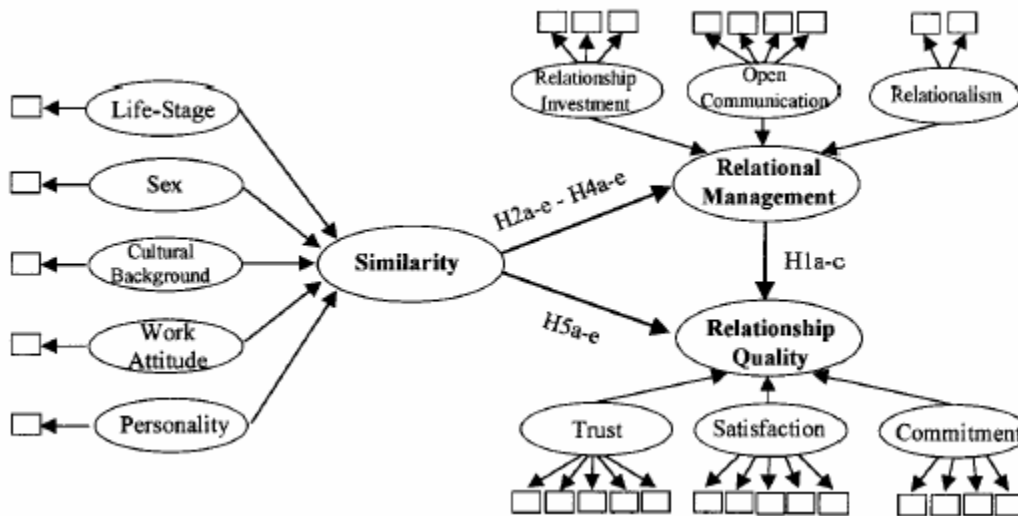
Other buyer-seller and channel relationship studies have linked trust, satisfaction, or commitment to open communications (E. Anderson & Weitz, 1989; J. C. Anderson & Narus, 1990), investments (E. Anderson & Weitz, 1992; Wilson & Mummalaneni, 1991), and relationalism (Heide & John, 1992; Noordewier et al., 1990).

Social Exchange Theory provides the theoretical foundation underlying the positive correlation between relationship management and relationship quality. This theory proposes that social exchanges are motivated by expectations of mutual gain among the parties involved in the exchange, but also that these exchanges are moderated by a number of variables which add or remove risk and uncertainty in the exchange (Homans, 1961). The components of relationship management should serve as moderating variables in the dyadic exchanges and should promote an increase in the quality of the dyadic relationship.

Research Model and Hypotheses

As stated previously, the basic research question is whether demographic similarity in the makeup of the four dyads composing the leadership team will the success on an outsourced project. The present study will examine this question by utilizing and extending Smith's (1998) relational similarity model (see Figure 1) of dyadic relationships between buyers and sellers. In his study, Smith presents a very compelling conceptual model to explain the correlation between similarity, relationship management (which he refers to as *relational management*), and relationship quality. While not a landmark study, it incorporates the findings of many past psychology research and explores the dyadic relationship between buyer and seller. This study will adapt and extend portions of this model to demonstrate a positive correlation between demographic similarity and project success.

Figure 1. Smith's Conceptual Model¹



As shown above, Smith defines “similarity” in terms of *life-stage*², *sex*, *cultural background*, *work attitude*, and *personality*. He hypothesizes a link between similarity and relational management, the tendency to seek and maintain an active and close working relationship. Smith proposes that relational management is composed of *relationship investment*, *open communications*, and *relationalism*. He also hypothesizes a positive correlation between similarity and relationship quality, which is determined by trust, satisfaction, and commitment (see Table 2). Smith further hypothesizes a direct correlation between relational management and relationship quality. Note that Smith also measures two moderating variables not represented in the above model: relationship duration and sales representative expertise, which he links to both relational management and relationship quality.³

Table 2. Smith's (1998, p.5) Determinants of Relationship Quality

Determinant	Definition
<i>Trust</i>	Having confidence in the reliability and integrity of an exchange partner (Morgan & Hunt, 1994) and a willingness to rely on this confidence (Moorman, Deshpande, & Zaltman, 1993)
<i>Satisfaction</i>	The emotional state that occurs in response to an evaluation of interaction experiences in relation to alternatives (Westbrook & Oliver, 1981)
<i>Commitment</i>	An enduring desire to maintain a valued relationship (Moorman, Zaltman, & Deshpande, 1992)

To adapt the model for the cross-cultural IT outsourcing context of the current study, two modifications were necessary. First, Smith's construct of similarity relies on independent variables that are not easily measured from brief encounters or prior knowledge. Life-stage, personality and work attitude can really only be measured by careful study and/or survey

¹ This is Smith's initial conceptual model. The final model used in the evaluation differed slightly. Cultural background was removed from the model because of inadequate response to the survey questions. Additionally, trust and satisfaction were combined due to high cross loading and together formed an antecedent for commitment. For this study, however, it was deemed preferable to base the conceptual model on Smith's original model.

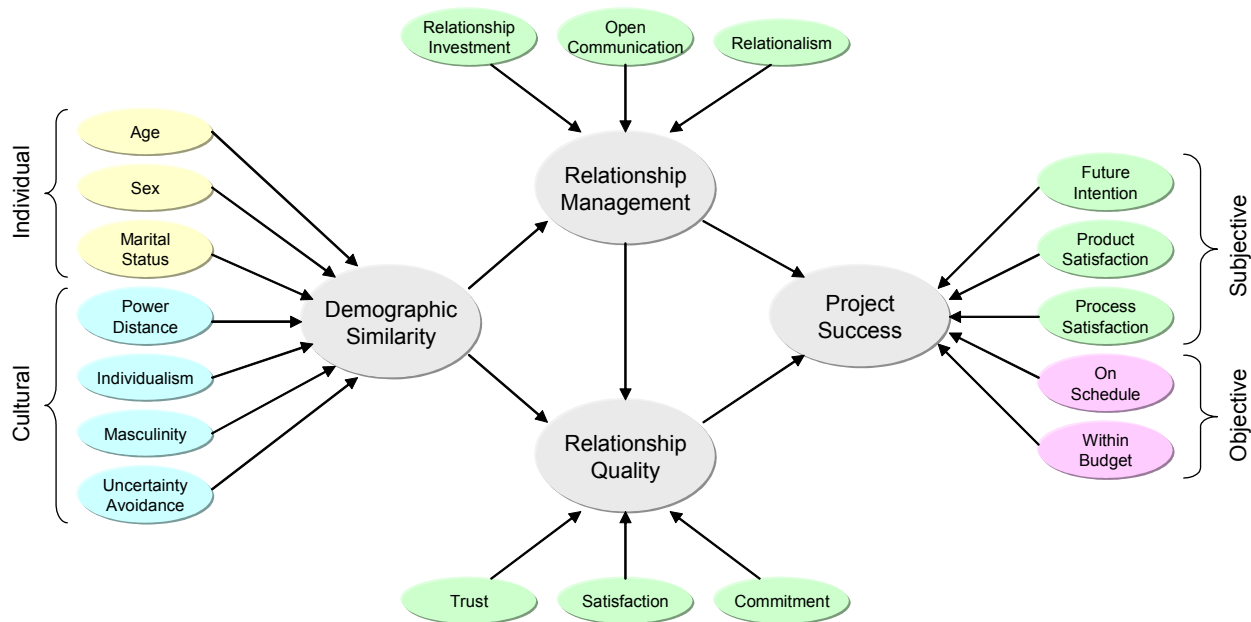
² Smith defines life-stage as "a variable concerned with progression through the human experience and is an assessment of similarity along combined attributes such as age, marital status, and family situation."

³ Smith explains his reasoning behind the inclusion of these mediating variables as follows: "The effects of similarity in life stage, sex, culture, work attitudes, and personality may be influenced by differences in the duration of working relationships and differences in the experience levels and expertise of the parties (Dwyer, Schurr, & Oh, 1987). Crosby et al. (1990), for example, found sales representative expertise to affect sales effectiveness, relationship quality, and relational selling. E. Anderson and Weitz (1989) found that trust and expectations of continuity increase as relationships mature. To account for differences in relationship duration and supplier representative expertise, these constructs are included in the analysis as mediating factors linked to relational management and relationship quality."

methods. As a goal of this research is to determine a set of predictors that can be used by industry stakeholders to create project teams with a demographic mix shown to be conducive to project success, the research model for this study utilizes easily discernable demographic characteristics. Second, the model needed to relate relationship quality to project success, which is the ultimate desired outcome in this study.

The updated conceptual model is shown below in Figure 2. The model removes the three independent variables mentioned above. Age and marital status are added as more objective replacements for the life-stage construct. The model further breaks out culture into the four cultural dimensions proposed by Hofstede: power distance, individualism, masculinity, and uncertainty avoidance. Note that these will not be measured directly. Rather, the national culture of each individual will be captured, and the composite scores for the specific nationality will be used as a proxy for the actual individual's scores. This is desirable because, while the nationality of an individual is easily discernable, individual measures of power distance, individualism, masculinity, and uncertainty avoidance are not.

Figure 2. Conceptual Model for Study



The updated conceptual model also adds project success as a dependent variable. It is logical to believe that both relationship management and relationship quality among the key leadership team dyads will positively impact project success. Among other logical reasons for this correlation, relational management should increase the amount of intra-dyad communication, while relationship quality should increase the effectiveness of the communication. The model specifies five observable measures used to indicate project success. The first three are subjective and the last two are objective. *Future intention* is the intention of the client stakeholders to do business with the outsourcer again in the future. *Product satisfaction* is the client's satisfaction with the product delivered as a result of the project. *Process satisfaction* is the client's satisfaction with the overall software development and delivery process. The final two measures are the standard objective measures of project success: whether it was delivered on time and within budget.

Further, the study model removes Smith's mediating variable of *sales representative expertise*, replacing it with a measure of *project size*. Rather than being a mediator of relationship management and relationship quality, project size will mediate project success. It is logical to believe that the size of a project will have an impact on the degree to which both relationship management and relationship quality will affect project success.⁴ Smith's other mediating variable, relationship duration, will be preserved in this study.

Based on the above model, this study proposes the following hypotheses:

⁴ Actually, a measure of *project complexity* would be a more accurate mediator here. However, complexity is a subjective construct and is difficult to gauge directly. Project size (i.e., total budgeted person-hours to complete the work) is, rather, an objective measure, and is most often known at or near project inception by both client and outsourcer.

- H1** *Demographic similarity between the key dyads of the outsourcing leadership team, as measured by age, sex, and marital status as well as Hofstede's four cultural dimensions, will be positively related to relational management.*
- H2** *Demographic similarity between the key dyads of the outsourcing leadership team, as measured by age, sex, and marital status as well as Hofstede's four cultural dimensions, will be positively related to relationship quality.*
- H3** *Relationship management, as measured by relationship investment, open communication, and relationalism, will be positively related to relationship quality.*
- H4** *Relationship management, as measured by relationship investment, open communication, and relationalism, will be positively related to project success.*
- H5** *Relationship quality, as measured by trust, satisfaction, and commitment, will be positively related to project success.*

Research Methodology

For this study, a survey instrument will be developed to collect the data for each of the constructs discussed above. For the demographic similarity constructs, four simple questions will be presented to determine age, sex, marital status, and national culture. For culture, the question will ask for the nation that the respondent spent the preponderance of his or her first twenty years. As mentioned above, this nationality will be used to determine the scores for the individual Hofstede dimensions, rather than measuring for each of these individually. For relationship management, the instrument used for Smith's study will be adapted to gauge relationship investment, open communication, and relationalism. Likewise for relationship quality, Smith's instrument will be adapted to measure trust, satisfaction, and commitment. A new set of questions will be added (using the same seven-point Likert scale used by Smith) to measure the five aspects of project success: future intention, product satisfaction, process satisfaction, on schedule, and within budget. Project size and relationship duration will both be measured using simple, open-ended survey questions.

The study will target a representative sample of outsourced IT software development projects completed within the past year. A relatively large sample will be required in order to provide statistical significance to the findings. As such, it may be desirable to identify leading outsourcing companies and attempt to gather data from multiple projects within each company. A quota sampling technique will be used to insure that a representative spread of nationalities will be represented in the study. This will insure sufficient variance on the cultural constructs. The surveys must be filled out by 8 individuals for each project, comprised of four matched pairs as discussed in the introduction. If this proves too difficult to attain, the instrument may need to be modified to allow for the data to be collected only from one half of the matched pair (necessarily the client half in this case because of the nature of the subjective project success measures).

After data are collected, the psychometric properties of the scales will be assessed using Cronbach's alpha and LISREL's confirmatory factor analysis. Structural equation modeling will be used to test the research model and hypotheses.

Implications of the Research

This research is the first to apply easily measurable aspects of demography to the makeup of a leadership team in an offshore software development outsourcing relationship to predict project success. It will further be the first to successfully apply a cultural dimension to the demographic measures. This is significant, for if the hypotheses are supported, it could help offshore outsourcing organizations make informed decisions as to the ideal demographic mix to place at a given client for a given project based on the demographic makeup of the client's leadership team.

Perhaps even more important, the data collected will provide an exploratory opportunity to reveal *which* factors play the largest part in determining project success for *each* role in the leadership team. Especially in the case of cultural dimensions, this may help the outsourcing organizations in determining training regimens for its leaders to help offset the negative effects of culture clashes along these specific dimensions. They may also wish to utilize domestic staff to fill specific roles based on the known makeup of the client leadership team.

Finally, client organizations may be able to use the results of this study as a tool in helping them to decide between competing outsourcing organizations for particular projects or for long-term outsourcing relationships. Likewise, the client organizations choosing to pursue outsourcing relationships with certain providers may also wish to pursue training opportunities to increase inter-cultural compatibility in the specific areas identified in this study.

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