***When Novelty is too much or When Innovations are too Innovative: Effect of Culture on Strategies Chosen by Firm’s Top Players***

*Radical Innovation has been positioned as a key to sustained competitive advantage and superior organizational performance. However, many successful organizations choose to adopt Incremental Innovation strategies and still remain ahead of the competition and maintain consistent position in the marketplace. What factors drive organizational choice of innovative strategy? The paper proposes individuals cultural background as one of the factors that influence overall innovativeness of an organization. Specifically, the paper explores how cultural orientation and cultural values of Senior Management influence strategic choices of organizations and innovative behaviors of employees.*

**Introduction**

Innovation has become a key to achieving sustained competitive advantage and superior financial performance. In order to keep up with on-going environmental pressures, devise solutions to business problems and challenges, develop new products and services firms need to acquire and master innovative capabilities ([Hult, Hurley, & Knight, 2004](#_ENREF_14)). Some view innovation as a primary determinant of company success ([Golder, Shacham, & Mitra, 2009](#_ENREF_11)) and believe it to be among the most important factors that impact business performance ([Hult et al., 2004](#_ENREF_14)).

Innovation is defined as the capacity to introduce new process, product, or idea in the organization ([Damanpour, 1991](#_ENREF_5)). Although innovation has been in the forefront of companies’ strategies, firms’ degree of innovativeness varies considerably. Acknowledging this difference, researchers have distinguished between radical and incremental innovation and identified several factors that influence organizational choices towards one or the other approach. These factors include industry dynamic, organizational size and tenure, availability of slack financial resources and the depth of technical expertise. Some researchers have pointed to possible cross-cultural differences in innovation strategies. In particular it has been suggested that innovation processes are likely to unfold differently across different cultures and culture’s effect on innovation might be quite complex and prominent. ([Anderson, de Drew, & Nijstad, 2004](#_ENREF_1)). For example, the differences in approaches to innovation are illustrated by an example of the developments in the manufacturing sector in the 1960s and 1970. Here, the success of Japanese companies could be in part attributed to the incremental innovations, while American companies succeeded by the introduction of radical innovations ([Damanpour, 1991](#_ENREF_5)). Although there are some clear indication of possible cross-cultural differences in innovation strategies, most of the research has been conducted in the US and was limited to mostly North American samples ([Anderson et al., 2004](#_ENREF_1)) ([Shalley, Zhou, & Oldham, 2004](#_ENREF_18)).

The goal of this paper is to detail the effect of culture on the strategic choices of firms as related to the adoption of various innovative strategies. Integrating Resource-Based View of the Firm, Attention-Based View of the Firm and Upper Echelone perspective, I explore how cultural backgrounds of firm’s key decision makers, CEOs and members of top management teams, influence innovation strategies that their organizations adopt. Specifically, I propose that culture influences firm innovativeness through its effect on the resource allocation decisions made by the dominant coalition and the impact on key priorities that direct organizational attention to support certain innovative behaviors across an organization. Overall I argue that innovative strategies, radical or incremental, are a result of conscious choices made by firm’s leadership to achieve competitive advantage. The paper contributes to the literature by proposing an additional factor, cultural background of upper echelon, as one of the drivers of firm’s innovation strategy and thus offers up potential explanation for the degree of radicalness of innovativeness across firms.

**Background and Theory Development**

**Radical versus Incremental Innovation**

Innovations can be classified into radical and incremental according to the degree of change they introduce. Radical innovations are based on significant advances in technological development, they involve revolutionary departures from existing practices and enable entirely new features and significant improvements in products or costs ([Damanpour, 1991](#_ENREF_5); [Kelley, O‚ÄôConnor, Neck, & Peters, 2011](#_ENREF_15)). In contrast, incremental innovations are characterized by little departures from existing practices and involve minimal changes in the existing products and technologies ([Manimala, Jose, & Thomas, 2005](#_ENREF_16)). The differentiation between radical and incremental innovation strategies is important, as some studies have shown that innovation type can help account for differences in financial returns obtained as a result of innovative efforts. In general, there is a commonly accepted notion that radical innovations are more valuable than incremental ones and that commercialization of radical innovations translates into a firm’s financial practice ([Manimala et al., 2005](#_ENREF_16); [Sorescu, Chandy, & Prabhu, 2003](#_ENREF_19); [Tellis, Prabhu, & Chandy, 2009](#_ENREF_20)). However, some scholars point out that virtually nothing is known about the relationship between radical innovation and firm performance and even suggest that the returns to innovation might be scarce ([Sorescu et al., 2003](#_ENREF_19)). Select researchers propose an opposing view and argue that firm’s ability to introduce incremental innovations is directly related to performance and is a key to firm’s survival in the industry ([Banbury & Mitchell, 1995](#_ENREF_2)). One of the possible reasons for inconsistent findings is the probability that either strategy can potentially have a positive impact on the overall financial performance, but at the same time create different sources of competitive advantage. Firms might realize it and factor it in into their decision as to which strategy to pursue. It has been established that companies differ in terms of the types of innovation strategies that they adopt. There are firms that have been very successful in implementing radical innovations, such as Apple and Google, while there are firms that have been doing well by consistently focusing on incremental strategies, such as Japanese automobile and consumer electronics manufacturers. ([Banbury & Mitchell, 1995](#_ENREF_2)).

Researchers have suggested a number of factors that drive these decisions including industry dynamic, organizational size and tenure, availability of slack resources, depth of technological expertise to name a few. Some scholars pointed to a role of management in driving innovation. Finally, although very little is known about impact of cultural differences on innovation, it has been suggested that radical innovation does vary substantially across different countries ([Tellis et al., 2009](#_ENREF_20)) I propose that in addition to the factors mentioned above, characteristics of top management team, specifically their cultural background, play an important role in types of innovation strategies adopted by firms.

**Role of CEO in Innovation Strategy Development**

Research has established a significant role that management plays in a wide range of corporate decisions, including investment, financial, and organizational practices of firms ([Bertrand & Schoar, 2003](#_ENREF_3)). Leadership has been recognized for driving changes to corporate policies, identifying opportunities and making decisions that affect innovation process ([Bertrand & Schoar, 2003](#_ENREF_3); [Elenkov, Judge, & Wright, 2005](#_ENREF_9)). The Upper Echelon perspective ([Hambrick & Mason, 1984](#_ENREF_12)) provided a theoretical framework that described the central role of strategic leadership and emphasized the role of “dominant coalition” in strategic decision making, and in particular, innovation. Managerial practices have been identified as one of the key enablers of radical innovation in organizations ([Kelley et al., 2011](#_ENREF_15)). In fact, management has a potential to influence a number of factors linked to innovation including managerial attitude to change, formalization, centralization, administrative intensity and overall corporate culture ([Damanpour, 1991](#_ENREF_5); [Tellis et al., 2009](#_ENREF_20))

Overall, management influences innovation strategy in two major ways. First, senior leadership makes resource allocation decisions among projects based on firm’s priorities. Radical and incremental innovations are associated with different resource requirements. Radical innovation typically calls for significant investments and are associated with higher risk but also a possibility of a greater return. Incremental innovation is typically associated with lower level of investment and lower risk. Therefore, the pattern of channeling of resources towards the development of new products and processes creates different sources of competitive advantage.

Second, management plays a key role in the development of organizational policies, procedures and organizational culture that promotes innovative behaviors. All of these factors have been linked to innovativeness of a firm. Organizational policies and procedures influence innovation as a reflection of the degree of formalization and centralization. Formalization refers to emphasis on following rules and procedures, while centralization entails the degree of authority and level of decision-making within an organization. Research has consistently emphasized that formalization is negatively related to innovation and that flexibility and openness to deviate from rules and structure are essential for innovative performance ([Danneels & Kleinschmidt, 2001](#_ENREF_6); [Dougherty, 2004](#_ENREF_8)). Centralization of decision-making is detrimental to innovation as it negatively effects individuals’ empowerment, a key predictor of innovative behavior.

Among factors that influence firm’s innovativeness, corporate culture has been identified as one of the strongest predictors of radical innovation([Hult et al., 2004](#_ENREF_14); [Tellis et al., 2009](#_ENREF_20)). Corporate culture is defined as a “core set of attitudes and practices that are shaped by the members of the firm” and can be conceptualized in terms of attitudes and practices ([Tellis et al., 2009](#_ENREF_20)). Elements of corporate culture that have been linked to innovation are tolerance for risk, future orientation, empowerment of product champions, incentives for enterprise, and creation and maintenance of internal markets (market autonomy and market competition). All of these elements can be influenced by firm’s “dominant coalition”. As outlined by the Upper Echelon Perspective, all of these decisions, and organizational outcomes can be viewed as reflections of cognitive bases of powerful players in organizations. In fact, Hambrick & Mason ([1984](#_ENREF_12)) specifically point out that decision-maker’s cognitive base, eventual perception of the situation and his / hers values serve as a foundation for strategic decisions. One of the key characteristics that influences individual’s behavior is cultural background and cultural values.

**Role of Cultural Background**

One of the most influential frameworks describing cultural differences is based on the research of Geert Hofstede ([Hofstede, 2005](#_ENREF_13)) that defines cultural differences across nations and outlines key mechanisms that influence the development of those differences. Hofstede argues that values are the core, the foundation, of culture and develops four (and later five) dimensions that capture cultural values. These dimension include Power Distance, Individualism/Collectivism, Uncertainty Avoidance, Masculinity / Femininity, and Short- and Long-term Orientation. The differences in these dimensions, attributed to the influences of families, school, and day to day life, manifest themselves in variation in practices and behaviors, including those in the workplace.

Power Distance, Individualism/Collectivism and Uncertainty Avoidance appear to be most related to innovative orientation. Power distance refers to the “extent to which a society accepts the fact that power in institutions and organizations is distributed unequally” ([Hofstede, 2005](#_ENREF_13)). Individuals that come from cultures with High Power Distance tend to accept inequality and control of the less powerful and by the more powerful. Thus, in the societies that are high in power distance, the relationship between managers and subordinates are based on compliance and discipline. Societies that are characterized by Low Power Distance, leadership styles promote employee empowerment and autonomy, ownership of responsibility and independent decision-making ([Erez & Nouri, 2010](#_ENREF_10)).

Individualism/Collectivism refers to the degree to which people distinguish between in-groups vs. outgroups and self-direction vs. conformity ([Hofstede, 2005](#_ENREF_13)). Individualism emphasizes independence, autonomy, self-initiative, uniqueness, individual goals, while Collectivism focuses on harmony, consensus, group goals and conformity.

Finally, Uncertainty Avoidance refers to the level of stress experienced by individuals when faced with unknown situation. Uncertainty Avoidance encompasses dimensions of tolerance for risk and ambiguity and the degree of reliance on rules and strict procedures to reduce uncertainty and restrict improvisation and novelty ([Erez & Nouri, 2010](#_ENREF_10)).

Traditionally, research investigated cross-cultural differences utilizing East vs. West dichotomy. Individuals from Eastern societies are generally characterized by high collectivism, high power distance and high uncertainty avoidance, while individuals from western societies tend to be highly individualistic and hold low power distance, and low uncertainty avoidance values. I use the framework of East vs. West for the purposes of present study.

**Relationship between CEO cultural background and Firm Innovativeness**

Effect of Culture through Resource Allocation

Cultural background and values play an important role in influencing management decision-making and resource allocation practices that in turn get reflected in firm’s innovation strategy.Radical and Incremental innovations are associated with different resource requirements. Radical innovations typically require significant investments, including financial capital and human resources. These types of innovations are also associated with greater risk and uncertainty. In contrast, incremental innovations are less costly and risky. They require smaller investments and they rely on the existing technology and knowledge and thus have more predictable outcomes.

Individuals from Eastern societies will tend to support more incremental initiatives as those have greater synergy with firm’s existing product line and resource availability, are in greater alignment with firm’s on-going strategy and are associated with lower risk and uncertainty and greater practicality and feasibility. Individuals from Western Societies will tend to support more radical initiatives as those may be perceived as providing opportunities to break away from competition and significantly advance existing product offerings. Individuals from Western societies will be less concerned with maintaining synergies with existing strategies and have greater tolerance for risk and uncertainty.

*Proposition 1a: Firms whose CEOs originate from Eastern societies will tend to allocate resources towards incremental innovations*

*Proposition 1b: Firms whose CEOs originate from Western societies will tend to allocate resources towards radical innovations.*

Firm’s CEO has a significant influence on firms’ strategic decisions. However, majority of the decisions are not made in isolation and are in fact done in consultation with top management team. Thus, cultural background of the top management team also influences firms’ innovation strategy. Teams that are comprised of individuals of similar backgrounds with the CEO will strengthen the relationship between CEOs background and firms innovation strategy. However, management teams that consist of individuals with heterogeneous backgrounds will weaken the relationship. Therefore:

*Proposition 2: Cultural background of management teams will moderate the relationship between cultural background of CEOs and firm’s innovation strategy. Firms whose management teams are composed of individuals from heterogeneous cultural backgrounds will tend to adopt a mixed innovation strategy and allocate resources towards a mixture of radical and incremental innovation projects.*

Effect of Culture through Attention Focus of Employees

Cultural background of CEO and the management team has an effect on the innovative behaviors of firm employees. According to Attention-Based View of the firm, decision-makers actions’ are shaped by the organization and its environment and depend on how the organization distributes and controls the allocation of issues, answers and specific firm activities ([Ocasio, 1997](#_ENREF_17)). CEO and the top management team are the key influencers of attention regulation. Innovation research does emphasize the key role of senior leaders in providing support for innovative employee behavior ([Elenkov et al., 2005](#_ENREF_9); [Tellis et al., 2009](#_ENREF_20); [Woodman, Sawyer, & Griffin, 1993](#_ENREF_21)).

The key mechanism through which CEO and top management team influence employees’ innovative behavior is through the design of organizational structure, decision-making practices and effect on corporate culture. Sr. Leaders that come from Eastern backgrounds will tend to deploy a formal and well defined organizational structure and processes, exercise lower level of autonomous decision making and employee empowerment, and promote an organizational culture that emphasized conformity to norm. Thus, employees working in these types of firms will demonstrate lower level of radical innovativeness. Sr. Leaders that come from Western backgrounds will create a less formal and more loosely defined organizational structure, allow for more flexibility in processes and routines, promote autonomous decision making and employee empowerment, and create organizational culture that emphasized openness and experimentation. These characteristics have been established as predictors of radical innovation. Therefore, employees working in these types of firms will demonstrate greater levels of radical innovativeness.

*Proposition 4a: Employees working for firms with CEOs from Eastern backgrounds will produce less radical and more incremental innovations.*

*Proposition 4b: Employees working for firms with CEOs from Western backgrounds will produce more radical and less incremental innovations.*

Effect of Culture on Innovativeness of the Firm

Innovation strategy reflected in the resource allocation decisions of senior management and innovative behaviors of employees will have direct influence on the overall innovativeness of the firm.

*Proposition 5a: Firms with CEOs from Eastern Background will produce primarily incremental innovations, while Firms with CEOs from Western backgrounds will produce primarily radical innovations.*

*Proposition 5b: Firms whose dominant coalition consists of individuals with heterogeneous cultural backgrounds will deploy innovation strategy that is both less incremental and less radical.*

**Empirical Considerations**

In order to test proposed effects a careful consideration needs to be given to the sampling strategy and adoption of appropriate measures, especially as relates to appropriate sample selection and operationalization of radical and innovative strategies. The sample of companies identified for the inclusion in the study must include companies with CEOs with heterogeneous cultural backgrounds, however considering that majority of CEOs of successful companies have US or Western background, identifying a sufficient sample of the companies will require additional effort. Although innovation literature has a long standing tradition of distinguishing between radical and incremental innovations, measurement of those two constructs has presented an on-going challenge ([Dahlin & Behrens, 2005](#_ENREF_4)). Two most frequently techniques used by researchers are surveys and retrospective coding, but both of these methodologies are subject to potential self-report or memory and retrospection bias ([Sorescu et al., 2003](#_ENREF_19)). To minimize these limitations, empirical study may use objective measures that include a combination of patent data as well as firm’s financial data. For example, in order to measure Radical and Incremental innovation it may be useful to adopt an approach developed by Dahlin & Behrens ([2005](#_ENREF_4)) that uses three prone measure of raidicalness that captures dissimilarity from prior inventions, dissimilarity from current inventions and impact on the content of future inventions. In order to track these attributes, Dahline & Behrens ([2005](#_ENREF_4)) developed a three prone measure based on the pattern of patent backward citation. Degree of radicalness is determined by citation count to determine magnitude of dissimilarities with prior and current inventions as well as the impact on future inventions (based on the citation count in the consequent inventions). Patent data can potentially be obtained from U.S. Patent and Trademark Office database. Employee innovation behavior may also be measured based on patent data as an estimate of a number of patent counts per each employee granted a patent.

Radical and Incremental resource allocation strategy can be measured by a modified measure of strategic change utilized by Zhang et al. ([Zhang & Rajagopalan, 2010](#_ENREF_22)) that includes R&D intensity (R%D / Sales) and plant and equipment newness (net P&E/gross P&E). Innovation research has established a positive relationship between R&D spend and the degree of innovativeness. Thus, higher R&D intensity will be associated with resource allocation strategy in support of radical innovation, while lower R&D spent will signal resource allocation strategy in support of incremental innovation. Implementation of Radical Innovation entails departure of existing technology and therefore implies development or acquiring of new technological equipment. Thus greater spent on new equipment will be a reflection of radical innovation.

Measurement of independent variables, cultural background of senior leaders, will be potentially less challenging as there are established measures of cultural orientation that have been widely utilized in cross-cultural research.

**Conclusion**

Innovation has been positioned as a dynamic capability that enables organization to bring about chance ([Kelley et al., 2011](#_ENREF_15)). Decisions related to new product and service development along with choices of internal processes to support them have become key components of organizational strategy. Additionally, due to the significant financial and non-financial resource requirements and potential benefits innovation should be treated as potential sources of competitive advantage. According to Resource-Based View firms derive competitive advantage from allocating resources towards certain types of innovations as those enable them to respond to the demands of continuously changing environment and competitive pressures ([Hult et al., 2004](#_ENREF_14)). Therefore, understanding factors that influence firm’s choice of innovation strategy provides additional knowledge of strategies adapted by firms to create competitive advantage. This paper contributes to innovation literature by 1) presenting an argument that radicalness of innovation strategy is a result of strategic choices made by an organization, 2) introducing social factors such as culture and cultural background as one of the factors that influence firm’s innovative strategy and 2) by proposing specific mechanisms of the effect of culture through its influence on the decision making processes of organization’s dominant coalition and its consequent impact on the behavior of the rest of the organization. By exploring the effect of culture on the decision making process of organization’s dominant coalition and its consequent impact on the behavior of the rest of the organization, this paper makes a meaningful contribution to our understanding of factors underlying degree of firms’ innovation.

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