Exploring the Relationship between Organizational Identification, Leadership Orientation and Management's Peripheral Vision: A Study of Knowledge Workers' Perceptions.

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CERTIFICATE

This is to certify that the thesis titled

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which is submitted for the award of Ph.D. Degree of the Institute, embodies original work done by him under my supervision.

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ABSTRACT

This study explores the implication and the influence of the peripheral vision of an organization on its leadership styles, as perceived by the knowledge workers and the organizational identification exhibited by these knowledge workers, in the current business context. In light of the recent global recessionary trends, peripheral vision for an organization has become a MUST, especially when it is in the knowledge business, driven by knowledge workers. Traditional management methods have limited effectiveness in motivating, reducing attrition or sustaining performance of the knowledge workers. An understanding of the perception of the knowledge workforce that forms the backbone of the businesses, about the peripheral vision of the organization, the perceived leadership styles and their own organizational identification, goes a long way in ensuring high levels of motivation and sustained performance.

Data collected from 244 technology professionals in a knowledge industry was analyzed using stepwise regression, and the exploratory models were tested and modified using path analysis feature in Structure Equation Modeling.

Results indicated the prominent role played by peripheral vision capacity on the astute leadership and the organizational identification patterns of the knowledge workers. Association of astute leadership, as a key skill for managing the knowledge workforce, with the impact it has on their identification with the organization is another key contribution. The emergence of a new validated empirical scale to measure the variables with a promising research direction is another key contribution of this research.

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List of Abbreviations/Symbols

Abbreviation/Symbol	Description
AMOS	Analysis of MOment Structures
ANOVA	Analysis of Variance
Astuteleadership	Mean scores of astute leadership
CEO	Chief Executive Officer
FASPVNndEnvdynamics, PVN-ED, PVN-Envdyn,	Factor scores of environment dynamics of peripheral vision need
FASPVNndBizdynamics, PVN-BD, PVN-Bizdyn,	Factor scores of business dynamics of peripheral vision need
FASPVNndBizmechanics, PVN-BM	
FASPVNndRegultryinfluences, PVC-RI, PVC-Reglinfl	Factor scores of regulatory influences of peripheral vision need
FASPVCndMngrlattitudetwdsperiphery, PVC-MA,	Factor scores of managerial attitude towards periphery of peripheral vision capacity
FASPVCndRsrcdatamgmtcapability, PVC-RD	Factor scores of resource and data management capability of peripheral vision capacity
FASPVCndBizclairvoyance, PVC-BC	Factor scores of business clairvoyance of peripheral vision capacity
FASAstuteleadership, Al, AI	Factor scores of astute leadership
FASDisengdidentfcn, OID-DE	Factor scores of disengaged

	identification of organizational identification
FASPositvdntfcn, OID-PO, OID-PI	Factor scores of positive identification of organizational identification
LISREL, LISREL-8	Software program to run SEM
PVNEnvdynamics	Mean scores of environment dynamics of peripheral vision need
PVNBusinessdynamics	Mean scores of business dynamics of peripheral vision need
PVNRegultoryinfluences	Mean scores of regulatory influences of peripheral vision need
PVCMngrattudtwdperphry	Mean scores of managerial attitude towards periphery of peripheral vision capacity
PVCResndatamgmtcapblty	Mean scores of resource and data management capability of peripheral vision capacity
PVCBizclairvynce	Mean scores of business clairvoyance of peripheral vision capacity
Astuteleadership	Mean scores of astute leadership
OIDdisnegdidntfcn	Mean scores of disengaged identification of organizational identification
OIDpositveidntfcn	Mean scores of positive identification of organizational identification

SEM	Structure Equation Modeling
SPSS, SPSS-16	Statistical Program for Social Sciences
Complx Envr	Complexity of Environment
Voltl Envr	Volatility of Environment
Lead orient/Managerial foresight	Managerial foresight
Strategy Mkg	Strategy Making
Kw. Mgt. Sys	Knowledge Management System
Confg – Str & Incv	Configuration – Structure & Incentives
Cultr – Val/Blf/Bhv	Culture – Value/Belief/Behavior
STRUCTURAL	Structural framework
HUMAN RES.	Human Resource framework
POLITICAL	Political framework
SYMBOLIC	Symbolic framework
POSID	Positive Identification
DISID	Disidentification
AMBVID	Ambivalent identification
NEUTID	Neutral identification
N	Sample Size – N
df	Degrees of freedom
$[\chi^2]$	Model Chi-square
χ^2/df	Normed Chi-square
RMSEA	Root Mean Square Error of Approximation
GFI	Goodness of fit
AGFI	Adjusted GFI
RMR	Root Mean square Residual
NFI	Normed-fit index
CFI	Comparative fit index
PNFI	Parsimony NFI
PGFI	Parsimony GFI

CHAPTER 1

INTRODUCTION

1.1 Peripheral Vision

Business organizations interact with the external environment and can never be isolated from the environment in which they function. According to Selznick (1957), they become the embodiment of the values that relate them to the society in which they are embedded.

In his observation, von Bertalanffy (1950) has tried to formulate a process for the exchange processes between organisms or organizations and the elements of its environment. However, it does not deal with all those processes that are deterministic in nature of the exchange, in the environment they operate.

Emery and Trist (1965) identified the types of lawful relationships that an organization has with the environment it operates in, and the causal nature of the relationship. They further discuss the transactional interdependencies of an organization vis-à-vis its operating environment. Organizations and their environment permeate one another cognitively and relationally (Child, 1997). Averitt (1968) makes a useful distinction between centre firms (those with the power to shape their environment) and periphery firms (those that are only able to respond to the environment rather than influence it), which clearly highlights the relevance of the construct in the management domain.

Miles and Snow (1978) in their study concluded that policies that form a strategic choice perspective, the organizational agents, adopted towards the environment could

be categorized into four types, namely, ‘defender,’ ‘prospector,’, ‘analyzer’ and ‘reactor’. Another typology of the organizational actions vis-à-vis the operating environment by Porter (1985) is based on the aspects of overall ‘cost leadership, ’differentiation’ and ‘focus.’

The environment, defined as anything that is not a part of the organization, can be classified as “first order” and “second-order” environment, based on the kind of interdependencies they have among each other (Miles, 1980). The interdependence of an organization with the second-order environment itself is an interesting subject that requires in-depth study and analysis. Nadkarni and Barr (2008) in their study address an apparent disconnect between two views of strategic action: the ‘economic view,’ which contends that industry structure is the primary influence on strategic action and the ‘cognitive view,’ which argues that managerial cognition drives strategic action.

Thus, the interdependence of an organization on the environment is a subject which is studied and analyzed to a great extent. For an organization to survive in a turbulent environment, it would need to be in a constant interactive mode with the environment in which it operates and re-orient its functioning based on the feedback it receives from this very environment.

According to Bhandarkar and Singh (2002), many Indian companies are today caught on wrong footing and are vulnerable to obsolescence and death. They still live in the past, unwilling and unable to accept the changing realities and re-orient themselves.

The complexity and volatility in the current business environment are greater than ever before. They lead to more extreme and diverse sources of risk (Ramcharan,

2009). For an organization to survive and grow, it must use the information from the environment strategically to make sense of the changes in its environment, to create new knowledge for innovation, and to re-orient its course for future action (Choo, 1996).

Conclusive evidence exists in the realization of the importance of the environmental changes and its relevance to the operation of business and the importance of the signals from the environment. Unfortunately, they are hardly used in making decisions and actions (Feldman and March, 1981). Nonaka and Takeuchi (1995) observe that organizations not only simply process information and innovate to solve their existing problems, but also recreate the problems and their solutions, and their operating environment while doing so. Change, therefore, becomes an integral part of the organizational strategic alignment to face the unpredictable future.

Tsoukas and Chia (2002), in their study on organizational change, highlight the pervasiveness of change in organizations and explore the nature of the organization, to understand whether the change is constitutive of reality. Change, according to them, is the reweaving of the actors' webs of beliefs and habits of action in order to accommodate new experiences that are obtained through interactions.

Miller and Friesen (1977) researched the possibility of environmental scanning capability having an impact on the performance of the organization. They studied 81 organizations that included both successful ones and ones that had failed. They note that the most important and significant factor is the intelligence-rationality factor. One key observation in this study is that the lowest intelligence/rationality score of the

successful archetype is higher than the highest intelligence/rationality score of the failed archetype (Miller & Friesen, 1977).

The positive impact of environmental scanning on organizational performance is further supported by evidence from the food service industry (West, 1988), many Fortune 500 companies (Subramanian, et al., 1993), and the American hospital industry (Subramanian, et al., 1994). The findings of these and comparable studies lead to the irrefutable conclusion that environmental scanning has a positive relationship on organizational performance (Murphy, 1987). The strong positive influence of intensive boundary spanning activity which comprises elements of peripheral vision on the financial performance of the organizations has been established by Dollinger (1984) from his study on82 firms.

However, looking at the current business scenario, most of the organizations are found to lack the capability to respond appropriately to feedback from the second-order environment. A study on competitive blind spots in the background of stakeholder' perception has been brought out by Desmond, et al. (2008) in their study on three key stakeholders in the swine genetic value chain.

According to Day and Schoemaker (2006), most organizations lack the capacity required to detect, interpret and act on critically important, but weak and ambiguous signals from the periphery. It is important to note in this context that the first sign or weak signal appears at the periphery. Since the quarter from which the weak signal would emerge and how it would affect the organization eventually are not certain, the ability to "mind" and "mine" the broad periphery requires attention and action across many areas (Brown, 2004).

In the organizational health model study, organization is viewed as an organic system. It is an evolving entity in close interaction with the environment. The effectiveness of such organization depends upon the extent to which it can maintain itself as well as adapt to the compulsions and varying demands of the environment (Singh & Bhandarkar ,1990).

To do business and survive in the face of constant change, management's approach needs to change from the "make and sell" framework to the "sense and respond" framework (Haeckel, 2004). This, however, requires a change in the mind-set of executives: They need to recognize their responsibility in fostering and exploiting adaptive behavior of their employees (Drucker, 1991). Therefore, it becomes important to invest in expanding the organization's peripheral vision in order to derive meaning out of apparent noise (Haeckel, 2004).

Sull (2005) has an interesting take on how "good" companies go "bad": the same reasons that made the companies good in the first place lead them towards disaster, when they fail to recognize the weak signals and re-orient those aspects of their business that had been strong once and had made the company "good". He describes this as the "dynamics of standstill."

For an organization operating in a complex environment/market, flexibility is the key source of competitive advantage, and the environmental scanning system has to be open to potential discontinuities (Ansoff, 1979). However, Osborne, et al. (2001) firmly believe that the scanning method will produce materials for decision making, which in turn will lead to the creation of competitive advantage, and thus, improve the strategic flexibility of the organization. Ilamola and Kuusi (2006) study the

importance of efficiently monitoring weak signals in the periphery for corporate decision making. Their findings support our argument that peripheral weak signals must be monitored and acted upon for an organization to survive and perform in a complex environment.

Market signals are not always easy to read; they may be weak and ambiguous. Only a systematic and powerful process can decipher market signals early enough to save a firm from the decline (Gilad, 1996). From a perspective of peripheral vision, foresight should not just be about looking forward; rather, it should encompass a wider view of the present position of the organization together with the context in which it functions and operates (Neugarten, 2006).

Scanning has been established as the first step in the chain of activities that ultimately leads to organizational adaptation (Hambrick, 1981). Thomas, et al. (2001) suggest that the scanning, interpretation and action components of sense making rise to strategic relevance when they are guided by the procedural and philosophical underpinnings of strategic learning. In Aldrich's (2007) study, the organizational and environmental variations occupy positions of equal importance in the natural selection model. Environmentally influenced changes imply that the environments as well as the organizations are evolving. Ramcharan (2009) states that the governing committee plays a central role in the scanning. It should help the boards do a careful thinking needed to pinpoint and anticipate future needs, based on how the business and the external environment are changing.

Organizations and individuals in their own interest must learn to cope effectively with the permanently convulsive environment, which is full of shifts in technology, market

environment, social order, meaning and values and basic assumptions (Singh & Bhandarkar, 1990).

Day and Schoemaker (2006) link the leadership aspect with the peripheral vision processes. According to them, an organization with the strongest possible mechanisms and processes for peripheral vision could still find itself limited by the sheer attitude of leadership. It is evident that the leadership at higher levels has a key role to play in the peripheral vision capability of an organization.

A survey conducted by Garg, et al. (2003) on the emphasis placed by Chief Executive Officers (CEOs) on scanning resulted in some interesting observations. They found that for dynamic external environments, the relatively greater amount of attention paid by CEOs to the task sectors of the external environment and to the innovation-related internal functions correlated with high performance. In stable external environments, however, the simultaneously increased scanning of the general sectors in the external environment and the efficiency-related internal functions resulted in higher performance. These relationships were the strongest for the relative scanning emphasis between domains and sales growth (Garg, et al., 2003).

Peripheral vision capabilities not only identify the dangers but also identify new opportunities and growth prospects; moreover, peripheral vision capabilities help in understanding the team dynamics, in addition to foreseeing future dangers (Cunha & Chia, 2007). This relationship remains relatively unexplored and has great scope for future research.

It becomes evident from this literature review that peripheral vision capability, which leads to organizational vigilance, is a core feature with far-reaching implications for the survival of an organization and its dynamics in the current fast-changing and complex business scenario. As the recent literature survey indicates, research in this area would result in greater benefits to the business community than studies on any other managerial or organizational issues, especially at this time of rapidly changing business environment and technological advancement.

1.2 Leadership Orientation

The subject of leadership has probably been studied in detail for decades, if not for centuries; yet, it remains a challenge for society in all spheres, not just in the corporate world. Kim and Maubourgene (1992) consider leadership as the ability to gain confidence and support among the people who need to achieve organizational goals.

Leadership has been defined in many ways. Some of these definitions, taken from Dubrin (2005), are

- Interpersonal influence, directed through communication, towards goal attainment
- Influential increment over and above mechanical compliance with directions and orders
- An act that causes others to act or respond in a shared direction
- The art of influencing people, by persuasion or example, to follow a line of action

- The principle dynamic force that motivates and coordinates the organization in the accomplishment of its objectives.

Metle (2003) presents a novel perspective on the new leadership roles for knowledge workers, which focuses on the delicate balance between motivation and coordination. This study also analyzes the dilemmas of motivation and coordination. Since knowledge work involves quite a lot of interdependence, the findings of this study that relate motivation and coordination are contextually relevant.

Uhl-Bein, et al. (2007) in their study based on the complexity science draw a conceptual framework of three entangled leadership roles namely adaptive, administrative and enabling leadership. This classification further reflects a dynamic relationship between the bureaucratic, administrative functions and emergent, informal dynamics of complex adaptive system in an organization. The leader needs two intellectual abilities that are not academically assessed (Greenleaf & Spears, 2002). He/she needs to have a sense of the unknown and be able to foresee the unforeseen.

Stogdill (1974) postulates that most effective leaders apparently exhibit a certain degree of versatility and flexibility. This enables them to adapt their behavior to the changing and contradictory demands that are made on them. This observation made decades ago by a pioneering researcher is relevant even today. House (1996) discusses about the reformulated theory that is appropriate in the context of knowledge workforce. It specifies leader's behavior that enhances subordinate empowerment, satisfaction and effectiveness.

Though various leadership styles have been identified and propounded by management researchers, no one has succeeded in making a standard recipe for all leadership issues. In this context, the applicability of the four-frame leadership model propounded by Bolman and Deal (2001) to current business situations is a matter of interest.

Singh and Bhandarkar (2011) map the path of seven leaders who reached the crescendo of leadership and eventually became change maestros. These leaders are powerful visionaries. They focused on a greater purpose for the betterment of the organization and society. Incidentally, most of these leaders ran businesses that were knowledge driven and depended on the knowledge workforce of the present economic scenario.

Shear, et al. (2004) investigated the impact of the political skills of leaders on the performance of their teams. Lin (2008) studied the effect of leadership style and organizational culture on organizational commitment in cross-cultural organizations in Taiwan. Chang (2005) studied the relationship between the leadership styles, employee maturity and job performance and organizational commitment in the Taiwanese hotel industry.

Extensive studies have been done in the area of leadership and when it comes to the knowledge work. It will not be out of place to explore the transformational leadership style and the research work done in this area.

In the context of studying various types of leadership styles, an interesting study by Greenleaf and Spears (2002) talks about the Servant leadership. According to them, a

great leader is seen as a servant first and that basic fact is the key to his greatness. This is indeed a new perspective to the approach of leadership and more so in the context of knowledge workforce.

Ilies, et al. (2006) present a model that integrates two related mechanism by which transformational leaders influence followers' motivation. They further explain the role of leader's vision and goal setting in influencing this connection. This is indeed very much relevant to the knowledge workforce.

According to Bass (1990), transformational leadership expects alignment of the interests of the organizations with that of its members. He continues to aver that transformational leadership is more effective than transactional leadership as per his study done in a wide variety of businesses, military, industrial and educational circumstances. In the same note, he reiterates that transformational leadership can be learnt and the characteristics of transformational leadership can be imbibed (Bass 1990). In this context it would be appropriate to highlight that the knowledge workforce perceives leadership more from the knowledge power and technology and that power is useless (Glen 2003).

Another interesting study by Dionne, et al. (2004) contributes to the effect of transformational leadership on the team performance, which is related to organizational commitment.

Transformational leaders create meaning for their followers, which facilitates the followers' commitment and identification with the organization (Singh & Bhandarkar, 1990).

However, no reference to studies in a non-academic context of Bolman and Deal's (2003) leadership framework could be found. This identifies a potential area for research: to explore the viability of studying Bolman and Deal's leadership framework in a corporate set up.

Drucker (2000) states that the single greatest challenge a manager will face over the next few years would be to manage and lead knowledge workers. According to this study, a vast majority of organizations continue to manage their employees as though they still control the means of production. However, in the knowledge industry, the combination of the employee's knowledge and intelligence is the actual "means of production." The employee can take this asset away when he/she leaves, and this cannot be controlled by any organization.

Shirbagi's (2007) study on peripheral vision and leadership frames come close to this research need. Nevertheless, again, Shirbagi's study was conducted in an academic setting in two different countries and did not include knowledge workers.

An interesting study involving high-tech employees found that vision as a leadership trait has a positive relationship with emotion-focused affirmative commitment (Dvir, et al., 2004). This study also established that this trait has no relationship with cognition-focused continuance commitment. With emerging technology and technological development, R&D work continues to be the driving force of the global economy. The extent of physical effort required is reducing, and every activity that can be automated is being automated, leading to expanding knowledge work (Dewett, 2007).

In another fascinating study pertaining to the technical staff, Holey and Gerloff (1999) have identified six conditions within the context of the organization that play an pivotal role in managing technical personnel or knowledge workers in dynamic market conditions. There is no single performance measure for knowledge work. Organizations and leaders need to determine what measures makes sense for each situation (Davenport, 2005). Indeed these measures are momentous observations to be considered while managing the knowledge workforce.

A study by Perryer and Jordan (2005) carried out in an Australian public sector organization address the relationship between the organizational commitment against two dimensions of leadership behavior, namely, supportive behavior and extinction behavior. Their study reveals that supportive behavior as a dimension of leadership trait has a positive relationship on the organizational commitment while the extinction behavior has a negative relationship on the organizational commitment.

Summing up, we observe that the aspect of leadership has a strong theoretical association towards organizational affinity. The significance of association is significant in the context of knowledge based business driven by the knowledge workforce. This attribute could be impacted by or impact the way knowledge workforce perceives the leadership and consequently determine the way they associate themselves with the organization.

1.3 Organizational Identification

From the time humans evolved to live as social animals, they had the urge to be identified as part of a group, in some form or the other. As humankind progressed into

an organized society, their identity became an prominent feature of life. After the industrial revolution, the organizational context of identification became an integral part of work and the workers.

Organizational identification and organizational commitment have been studied by many social scientists in various contexts. Significant work has been done in this area over the last two decades. Organizational commitment which primarily emerged from the expressed identification received significant attention in workplace studies (Shirbagi, 2007).

Organizational commitment has been studied in relation to organizational attrition and employee turnover intention. According to Porter, et al. (1973), organizational commitment measure proved to be a better predictor of turnover intention of employees than the job satisfaction. However, when a group is formed, the primary focus of identification by the members is found to be the work group rather than the organization (Riketta & Van Dick, 2005). The time an employee remains in an organization is greatly influenced by the commitment-related organizational experience of the employee (Buchnan, 1974).

Organizational commitment is considered as a key variable that determines the organizational performance (Angle, 1981; Riketta, 2002) and effectiveness (Laschinger, 2001; Miller, 1978), when it comes to a decentralized organizational environment, members are more likely to identify with those entities, which are immediately visible, compared to the larger organization. Organizational commitment is viewed as the willingness of workers to devote energy and loyalty to an organization (Kanter, 1968). Porter, et al. (1973), however, opine that organizational

commitment is the relative strength of an individual's identification with and involvement in a particular organization. Allen and Meyer (1996) have defined organizational commitment in three basic frameworks: Affective (based on identification and emotional attachment with the organization), Continuance (based on the cost of leaving the organization) and Normative (based on the obligation to the organization). Berson and Avolio (2004) have established that transformational leadership is positively associated with organizational commitment. They have also studied the moderating effects of the structural distance on the relationship between transformational leadership and organizational commitment. Yet another comparative study was done by Walumba, et al. (2005) on the relationship between transformational leadership and organizational commitment and job satisfaction in Kenyan and United States (US) financial firms. They have concluded on the existence of a strong positive effect of transformational leadership on organizational commitment in both cultures.

Clercq and Rius (2007) have carried out a study in small and medium sized firms in Mexico and have concluded that entrepreneurial orientation, position and organizational climate are positively oriented towards organizational commitment. A modified version of this commitment, as corporate identity, has been studied by Ashman and Winstanley. (2007) in relation to the corporate responsibility and moral perspective. They have also studied ethical issues in the areas of organizational commitment.

Various studies have focused on organizational commitment in relation to the leadership styles and forms (Bolman & Deal, 1991; Reichers, 1986). Several studies

report that leadership style and behavior have a significant impact and influence on organizational commitment (Chen & Francesco, 2000; Lok & Crawford, 1999). The conceptual difference between organizational identification and organizational commitment (Gautam, et al., 2004) highlight the overlap that subsists in the existent literature.

Dale and Fox (2008) in their study discuss the direct effects of two leadership styles, i.e., initiating structure and consideration, have on organizational commitment. They bring out the mediating effect of the stress caused by a role stress in this study.

Though organizational identity and organizational commitment are strongly correlated, they are empirically discriminable (Bedein, 2007; Bergami & Borgozzi, 2000; Cole & Bruch, 2006; Gautam, et al., 2004), even though there is considerable overlap between the constructs.

Scott and Lane (2000) studied and developed a model for organization identification that reframes organizational identification within the broader context of stakeholder relationship. In the context of online trust, Shankar et al. (2002) discuss and articulate a comprehensive framework of online trust for the organization and the perception of the stakeholders other than customers. This study and framework thus becomes particularly relevant from the aspect of knowledge workforce perception. It is particularly relevant in the technologically driven business context and that of e-commerce.

The research on organizational identity from the past 20 years shows strong linkages with organizational images, strategic decision making and even many key

organizational variables at the individual level (Corley, et al., 2006). Our search of the literature did not find any empirical study on the expanded model of organizational identification (Kreiner & Ashforth, 2004), in relation to the peripheral vision capabilities, needs and capacity of organizations.

Thus, the relatively unexplored area of organizational identification offers plenty of scope for research. However, in relation to the organizational identification construct, the research of Kreiner and Ashforth, 2004 neither refer to any specific leadership style, in general, nor to Bolman and Deal's (2003) leadership framework, in particular,. Piccolo and Colquitt (2006) support a structural model whereby indirect effects supplement the direct effects of transformational leadership on task performance. They have also explained the effect of organizational citizenship behavior through the mechanism of job characteristics, intrinsic motivation and goal commitment.

Cheng and Wu (2006) have investigated the relationship model among self-efficacy, organizational commitment and job satisfaction through various types of leadership among a population of administrative clerks. However this study too neither mentions any specific leadership style, in general, nor mentions Bolman and Deal's leadership style specifically, in relation to the organizational identification construct model. Moreover, the study by Cheng and Wu (2006) involved clerical staff in an academic setup, but not knowledge workers from a corporate setup.

Some authors have studied the relationship between gender combinations in superior-subordinate relationship and have found to have no impact on leadership styles and

organizational commitment (Moss, et al., 2007; Kennedy, et al., 2005). Here too, the aspect of knowledge work or knowledge workforce is not implied.

The management guru Peter Drucker coined the term "knowledge worker" in 1956. Prior to this, these groups were normally categorized as engineers and scientists. Drucker studied the behavior and psychology of knowledge workers long before the advent of the information technology age. According to Drucker (2006), knowledge workers make up about two-fifths of the total workforce. Though an exact figure could not be found, we surmise the number could have gone high now. This presents a new research opportunity for exploring businesses that rely on the knowledge workforce. Organizational identification has been studied in various situations that overlap significantly with organizational commitment. The first attempt to operationalize organizational identification was made by Cheney (1982) through a 25 item questionnaire. The social identity approach was suggested as an alternative construct for organizational identification (Ashforth & Mael, 1989). Sluss and Ashforth (2008) present a fresh perspective on organizational identity with respect to relational identification. Their study further integrates the levels of identification. One of the key observations presented in this recent study is the applicability of the convergence model to other organizational identification forms (which have been left open for future research).

Therefore, studying the expanded model of organizational identification with respect to an identified leadership orientation and peripheral vision can contribute to the management knowledge domain. Kreiner and Ashforth (2004) have examined

multiple ways in which people can define themselves through their organizational attachment.

We propose to focus on the relationship between the elements of organizational identification from the expanded model of Kreiner and Ashforth (2004), namely, Positive identification, Disidentification, Ambivalent identification and Neutral identification

While positive identification occurs when the members define themselves in terms of what the organization is thought to represent, it is this perception of oneness that distinguishes it from other related constructs like person-organization fit and organization commitment (Ashforth & Mael, 1989). Positive organizational identification has also been argued to help foster a meaning, belongingness and control at work (Ashforth, 2001).

Disidentification occurs when an individual defines himself or herself as not having the same attribute or principles that he or she believes define the organization (Elsbach & Bhattacharya, 2001). Organizations tend to view organizational disidentification as undesirable and research has documented high cost of turnover as well as retention (Hom & Griffeth, 1995).

Ambivalent identification refers to a psychological state where employees simultaneously identify and disidentify with one's organization or aspects of it. In the words of Meyerson and Scully (1995), such individuals are committed to the organization and also to a cause that is at odds with the identity of their organization, called as "tempered radicals."

Neutral identification occurs when one's self-perception may be based on the absence of both identification and disidentification with an organization (Elsbach, 1999).

In the Asian context, Shirbagi (2007) explored organizational commitment and the leadership frames within two cultural settings in an academic setup. This study focused on faculty members of an Indian and Iranian University and the leadership styles of their chairpersons.

Ashforth, et al. (2008) examine organizational identification based on four fundamental questions: (a) What is identification? (b) Why does identification matter? (c) How does identification occur? and (d) Identification: is it one or many? A study involving National Health Services (NHS) employees attempted to re-operationalize organizational identity according to three components: self-categorization and labelling; sharing organizational goals and values; and sense of attachment, belonging, and membership of the organization (Edwards & Peccei, 2007). Another fascinating study on the effects of organizational identification on employees' implicit leadership theories, work attitudes and transformational leadership investigated the relationship between the perception of leadership behavior and the psychological reaction to work (Martin & Epitropaki, 2001).

While loose coupling and the presence of divergent viewpoints are constructive for many organizational issues, disagreement over organizational identity 'is a struggle, not simply over alternative budget proposals, but over the very soul of the institution' (Albert & Whetten, 1985). Again on the organizational identification and the firm's performance from a senior leadership perspective, Voss, et al. (2002) in their study on two senior leaders holding divergent organizational identity, brought out an

interesting and important finding. The leaders' disagreement about organizational identity was related to lower ticket revenues and lower net income, and the organizational performance was lowest when disagreement about identity was highest. Although some of their findings suggest that *minor* identity disagreement among leaders may not hurt organizations, yet results generally support the perspective that leaders should actively promote a single identity.

The leaders' beliefs about organizational identity should agree with, and reflect the types of activities that make the organization valuable and distinctive to stakeholders, and hard to imitate by competitors. In some cases, minor divergences about identity between organizational leaders might be a natural reflection of loose coupling, which may not be damaging to organizational performance. However, most studies suggest that organizational outcomes are maximized when the leaders agree about the organization's core, enduring and distinctive values (Voss, et al., 2002).

In the era of mergers and acquisitions, organizational identification assumes a completely different dimension, which impacts the very existence of the post-merged entity. In this regard, research on mergers suggests that identification with a pre-merged organization is likely to predict identification positively with the post-merged organization if the latter respects and incorporates the identity of the former. Conversely, a merger that threatens the valued identity of a pre-merged organization is likely to provoke resistance (Bartels, et al., 2006; van Leeuwen, van Knippenberg & Ellemers, 2003).

Higher progressive orientation has been found to influence the intrapreneurship factor of meaning of workplace factors positively. Value of personal growth, self-fulfillment

and community development has explained a large amount of variance in work-life balance and physical ambience (Singh, et al., 2011). This is a noteworthy observation when viewed from the perspective of knowledge workforce.

More literature in this area was surveyed but was found to be wanting. Most of the studies involving Bolman and Deal's (2003) four-frame leadership style were done in an academic context (at university and school levels). No literature was found on this subject, in a corporate context relating to the knowledge workforce.

According to Drucker (1974), people are increasingly making a living by putting their knowledge to use, and society itself is turning into a "knowledge society". Therefore, we feel that a study of Bolman and Deal's (2003) leadership framework in the context of organizational identification, rather than commitment, and peripheral vision perspective in a knowledge industry or in a corporate setup with a large number of knowledge workers, is a relevant research area.

Summing up, we observe that peripheral vision—as an organizational need for the current technology-driven businesses—could influence leadership thinking and business strategies. Therefore, investigating the three constructs (peripheral vision, need and capacity; Bolman and Deal's (2003) leadership orientation; and organizational identification) offers an exciting research opportunity and forms an appropriate context for an empirical study.

Our online search with keywords such as "organizational identification", "peripheral vision", and "Bolman and Deal's leadership framework", resulted in only 229 search results. The search did not turn up any evidence of studies that were done on these

concepts involving knowledge workers in a corporate set up. This supports our proposal to bridge the research gap by studying the relationship existing among these constructs in a corporate setup of knowledge workers, as perceived by them.

CHAPTER 2

RESEARCH CONTEXT AND QUESTION

Organizations have existed in this world, in various forms and for different purposes, since man began to understand the concept of division of labour. As organizations began to become pervasive and dominant, it has become formidably difficult to understand and increasingly tough to manage them (Bolman & Deal, 2003). Management of organizations is getting more and more complex. The leadership skills are undergoing an exceptionally dynamic transformation. Collapse of WorldCom and Enron have brought to the fore the challenges in management practices required for managing an organization in the current business environment. It is increasingly becoming a challenge to manage organizations and the complexities associated with them. Similarly, it is also worthwhile to note that organizations and the attitude of the people too are becoming more complex. Though, in the last five decades, a great lot of management wisdom has been added to the knowledge domain, it is still a fact to be reckoned with that managing people and organizations continues to be a challenge for leaders. The advent of technology has outpaced every aspect of the business environment in the last two decades; the issue has become more complex and confounding. This is despite the fact that the technology has made the quality of life much better now.

The recent incidences of failures of large organizations like Lehman Brothers and Bear Stearns and the associated financial debacle goes to prove the point of complex business environment, as well as the leadership challenges. All the management wisdom and intelligence have not been able to prevent this debacle. These incidents

have impacted a large number of people and national communities across the globe. However, despite all the management wisdom and knowledge, the most surprising aspect of these incidents is that these disasters were not foreseen, leave alone being prevented.

Organizations that survived periods like the great depression are certainly unlikely to fail overnight. These debacles were not accidents or calamities that usually come without any pre-warning. Some questions that are exceedingly pertinent at these points are:

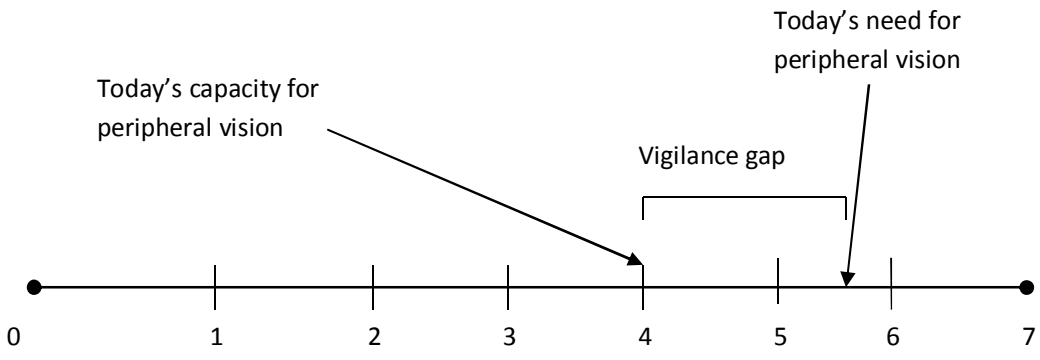
- *Could the debacle have been prevented?*
- *Was it possible to notice the impending danger?*
- *Were the signs in the periphery not noticed when it occurred first or was it noticed but not acted upon?*
- *Were the organizations not capable of noticing the signs of danger when they appeared at the periphery?*
- *Did they have the requisite peripheral vision or have lacked it?*
- *How could organizations have reacted to these kinds of danger and respond to them?*
- *What does the future hold, to meet these challenges?*

An attempt to answer these questions brings us to an extremely significant management feature that is critical in today's competitive business environment. The need, capacity and the ensuing gap of peripheral vision of organizations determine the perpetual alertness that is required by organizations in the current business context. The need for peripheral vision for each organization varies. What is relevant to one

does not necessarily suit the others. Moreover, the need and capacity of peripheral vision changes with the dynamics of changing business and social environment, making them highly contextual. What is relevant today may not turn out to be relevant tomorrow and could turn counterproductive, the day after. A typical example in this area would be the technological changes that have taken place in the music and communication business. The pager technology and video cassette technology have seen their exit in such a short time. Those who invested big in these technologies and could not foresee the impending change, while these technologies were still at a nascent stage.

However, research indicates that 80% of the organizations had badly fared on their peripheral vision capacities when their CEO were interviewed (Day & Schoemaker, 2004). Figure 2(1) illustrates the rising need for vigilance on peripheral vision on a scale of 1 to 7.

Figure 2(1) - Need for vigilance



Source: Strategic eye examination survey of senior managers in the United States and Europe, 2004.

These organizations did not have a dependable system to detect weak signals while they needed them the most (Day & Schoemaker, 2004). This brings us to the moot point, how do organizations improve their peripheral vision capabilities to face the future.

Peripheral vision capability of an organization is dependent upon various factors and cannot be a generalized model for implementation. Top leadership should have faith and conviction in realizing the importance of detecting weak signals. They should be willing to invest in the right talent and the right resources in this endeavor. This, in turn, requires total commitment on the part of the organizational leadership.

Under the above context, it is equally crucial to realize the effect of leadership in closing or bringing the gap to the minimum. Bolman and Deal (2003) define the leadership in four distinct frames, namely structural, human resource, political and symbolic. The frames are windows that bring the sight of the world as well as lens that focuses.

The structural framework addresses organizational issues concerning organizational structures, authority, rules and regulations, policies and control systems. It relies upon the existence of a robust structural framework for addressing the leadership issues. At the same time, having a rigid structural framework could be burdensome, leading to apathy, absenteeism and resistance (Argyris, 1957, 1964). They, however, help an organization in ensuring predictability, uniformity and reliability. As the organization grows over time, the pressure for efficiency and discipline leads to greater formalization and complexity (Greiner, 1972; Quinn & Cameron, 1983).

Human resource framework concentrates on how the characteristics of organizations and employees shape what they do for one another. Employees want to know, "*How well will this place fulfill my needs?*" and organizations universally ask, "*How do we find and retain employees with the skills and attitudes needed to do the work?*"

Political framework views politics as simply a realistic process of making decisions and allocating resources, in the context of scarcity and divergent interests. This actually makes political framework the heart of decision making, which is key in leadership roles. In the organizational life, individuals and groups are interdependent. They need each another with power relationships being multidirectional (Bolman & Deal, 2003). Power is a "daily mechanism of our social existence" (Crozier and Freidberg, 1977). The manager, like a politician, exercises four key skills: agenda setting, mapping the political terrain, networking and forming coalitions and bargaining and negotiating (Bolman & Deal, 2003). Organizations are arenas for internal politics. They are also political agents in larger arenas or "eco-system" (Moore, 1993).

Lastly, the symbolic framework focuses on how humans make sense of the messy, ambiguous world in which they live. Meaning, belief and faith are its central concerns (Bolman & Deal, 2003). Organizational culture is a key factor in the symbolic framework. "*The way we do things around here*" is the definition of culture (Deal & Kennedy, 1982). "In the Feast of Fools," Cox summarizes the importance of symbolism in modern life: our links to yesterday and tomorrow depend also on the aesthetic, emotional and symbolic aspects of human life–on saga, play and

celebration. Without festival and fantasy, man would not really be a historic being at all (Cox, 1969).

All the four frames offer a leadership tool in the hands of the managers. Leadership being highly contextual, there is no standard frame that needs application in managerial situations. Lakshmanan (2007) has attempted in his study to generate a preliminary theory for the role of leaders in the knowledge management through a grounded theory approach. Multiple frames are used in multiple situations by the managers to effectively solve organizational problems (Shirbagi, 2007). While discussing leadership and its impact on the peripheral vision capability of an organization, it is not out of place to mention the characteristics of people that form the core to both these aspects. As an explanation, Amo (2006) proposes a conceptual model of knowledge management and employee innovation behavior, for the leadership.

People in the organizational context play a key role in the success of the organization (Porter, et al., 1973; Miller, 1978; Angel, 1981; Laschinger, 2001; Riketta, 2002). Though many parameters have been studied about the way people relate to an organization, one of the most powerful but not much explored parameters is the way it identify with the organization and the commitment they have towards it. These two parameters have a significant impact on the success of an organization in the long run. Drucker (1970) demonstrates that responsibility is not purchasable and satisfaction measurement is vague when it pertains to knowledge workers. Desikamani (2003) presents an interesting view of leadership crisis and associates it with the attrition rates in the knowledge industry.

However, the literature search indicates that organizational identification has not adequately been studied in such a depth as the organizational commitment in this regard. Specifically, the expanded model of the organizational identification (Kreiner & Ashforth, 2004) is a powerful parameter to understand the four dimensions of this model. In the light of the above literature background, we can relate the four structural orientations of Bolman & Deal Leadership model to the elements of the expanded model of organizational identification.

Some of the ***general focus research questions*** thus originating from the above ideas could be stated as below:

- How are the Bolman and Deal's four frameworks of leadership, impacted by the peripheral vision capability and address the need gap in an organization comprising of knowledge workers?
- What is the impact on the organizational identification due to the peripheral vision capability and need in a knowledge based organization?
- How are the organizational identification factors impacted by the Bolman and Deal's four frames of leadership as a moderating factor, and influenced by the peripheral vision capacity and need, as an antecedent?
- Are the elements of organizational identification and Bolman and Deal's leadership framework associated with an organization of knowledge workforce?
- How can the peripheral vision capability of an organization be improved and aligned in a knowledge-driven organization to influence the leadership styles positively?

- How would the peripheral vision capacity, need and the resultant gap be moderating the four leadership orientations of Bolman & Deal, in the backdrop of the four extended models of organizational identification; namely positive identification, ambivalent identification, neutral identification and disidentification, in a corporate setup of knowledge workers?

However, in a nutshell, the key question, this model attempts to answer, may be stated broadly as below:

THE RESEARCH QUESTION

Under the given situation, in light of the significance of the peripheral vision for the survival of an organization driven by knowledge workforce and its relevance to the leadership styles and the organizational identification, the research question that forms the backbone of this study can be stated as:

What is the Relationship between Organizational Identification, Leadership Orientation and Management's Peripheral Vision, in the Perception of Knowledge Workers?

CHAPTER 3

THEORETICAL MODEL

In the current study, an attempt has been made to explore the impact of peripheral vision need and capacity of an organization on its perceived leadership styles and its impact on the organizational identification, by the knowledge workforce. While these constructs have been independently studied, they have not been studied cohesively in a knowledge industry corporate setup. Most of the studies on these constructs been done independently in an academic setup.

3.1 Conceptualization of the Model

As evident from the literature; the need for peripheral vision in an organization in the current business scenario is something that is a 'must' and is no more a 'preference.' The alignment of the peripheral vision need and capacity of an organization determine how an organization is likely to sustain its business existence. It is also seen that any misalignment leads renders the organization is rendered either 'vulnerable' or 'neurotic'. Unless the organization aligns itself to be either 'vigilant' or 'focused', its survival and business sustenance is uncertain. In this a circumstance, we are trying to explore the antecedents of this key factor, organizationally.

However, the peripheral vision gap is a factor that does not exist in isolation and hence cannot be addressed in isolation, either. The issue being close to the senior management, cannot be expected to be isolated from the impact of leadership styles or behavior. Hence the leadership styles are bound to be impacted by the perceived

peripheral vision gap of an organization, especially if the business is driven by the knowledge workers.

As we have seen earlier, managing knowledge workers using traditional management practices have been broadly ineffective. A knowledge worker, when compared to a non-knowledge worker, is far more aware of the organization, is enlightened to understand and generally is independent in thinking, owing to his professional education. Therefore it becomes extremely crucial for the business leadership to understand how these knowledge workers view the leadership and their management style. Knowledge workers have better understanding of the system and, therefore, traditional management principles are not effective. Kotelnikov (2001) refers this aspect in his findings that the individual effectiveness of a knowledge worker is based on the results and credibility, and perceived reputation and network relationship, rather than on the formal authority, position, or job description in the hierarchy. The current businesses are becoming more and more dependent on the knowledge workforce. So the continuance of the business entity and its growth greatly depends on the continuity of the services of the knowledge workforce. This brings us to the issue of organizational identification, which determines the quality of relationship an employee is supposedly to have with the organization. It then goes on to determine his/her contribution to its growth and his/her very continuance in the organization. Hence we have a strong case here as we see the linkages that are getting built across the peripheral vision gap as derived from the need and the capacity, the leadership orientation of the organization and the organizational identification by the critical component of the business, the knowledge workforce.

No one has captured as succinctly as Ralston (2007) where she has categorized the leadership pitfalls of managing knowledge workers into five deadly sins, one needs to avoid. She also studied the primary role to be played by a leader who intends to lead knowledge workers. Having Dotlich and Cairo's (2003) observation in the background, she makes a compelling correlation of the leadership associated with knowledge work.

This brings us to a moot point, how do we address these three factors in such a way that the organization that is nurtured by knowledge workforce continues to show healthy growth. How do we ensure that these factors are adequately studied and understood to implement policies and practices that ensures best identification patterns, by the knowledge workforce? To answer these questions, an empirical study is required to bring out the relationships clearly so that we could go about identifying the key aspects to focus on them. Availability of information on these aspects and a strong statistical support to vouch for the above-mentioned approach can go a long way in determining the best practices and policies towards the knowledge workforce.

Unfortunately, no such study has ever been done in the recent past as indicated by the extensive literature search done so far. The concept of leadership styles and the organizational identification as an employee retention factor has been studied in various contexts as discussed earlier. Yet, no evidence of such a study is available in the recent past, especially in the knowledge workforce based corporate setup. The very concepts of peripheral vision need and capacity are new to the management domain and the leadership orientation we intend to study, namely, Bolman & Deal, are also fairly recent. Therefore, we can state with a fair amount of confidence that

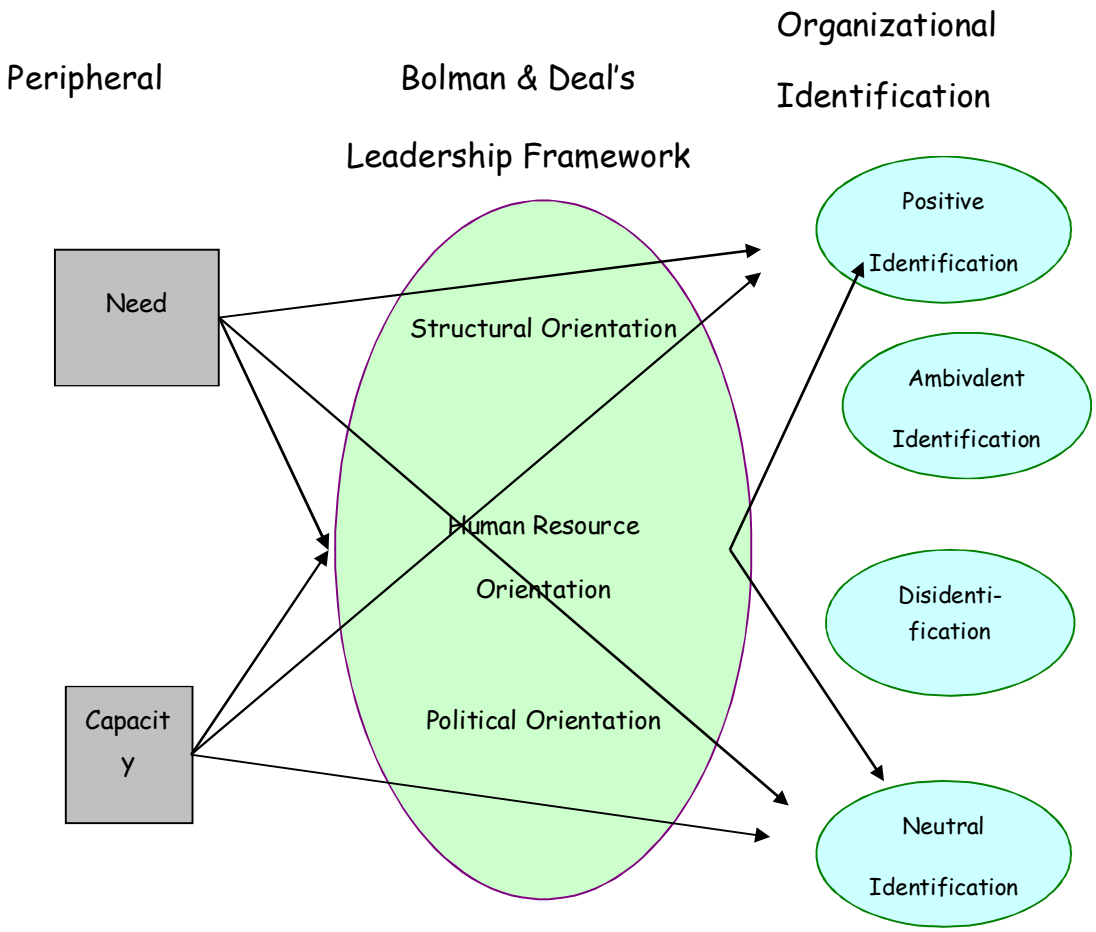
there is no study done or data available in the corporate set up of knowledge based business. We have identified this as a key research gap in the management domain and have tried to address it in a modest way. It has also thrown open a bigger scope for management research, on the challenges facing the current businesses. Thus, our research problem gains significance in the current context of business enterprises and knowledge workforce. We firmly believe that such a study would add useful insights into the management domain, especially the one that deals with the current business challenges of managing the knowledge workforce and business uncertainties of the technological era. While we believe that this study would be of immense help in drafting policies and practices in knowledge industries, it need not be limited to the same. The scope of the study opens up a plethora of options in understanding the relationships between these factors from multiple perspectives. Hence, this study is not an end in itself but actually a beginning to a wider and larger span of management domain. Thus, these discussions form the precise basis of the hypothesized model, which we propose to evaluate and study, in an identified knowledge industry.

Based on the literature search done and our own exploration of the relationship between these constructs, as discussed above, the ***key research ideas*** emanating in the current context could be stated as follows:

- The relationship, its direction and strength, between peripheral vision capability, need and the four frameworks of Bolman and Deal's Leadership model in knowledge work area.
- Peripheral vision gap and need of an organization influencing the role played by Bolman and Deal's leadership framework and the organizational identification.

- The interrelationship among the peripheral vision capability, organizational identification, and Bolman and Deal's leadership framework in knowledge work context Figure 3(1).

Figure 3(1) - Model framework



Now, having these research questions raised, an attempt to state the ***research objectives*** towards a greater specificity has been made:

- To study the effect of peripheral vision need and capability of an organization within the four leadership frameworks of Bolman and Deal and the organizational identification of knowledge workers in an organization.
- To study and establish the relationship between the four leadership frameworks of Bolman and Deal and the peripheral vision need and capacity of an organization with the organizational identification and affective commitment, as perceived by the knowledge workers.
- To develop an exploratory model that associates the elements of peripheral vision, four leadership frameworks of Bolman and Deal with the organizational identification.

While the above-proposed model is broadly exploratory in nature, the model would specifically explore leadership construct as a dependent variable with peripheral vision need and capacity as independent variables. In the next step, the organizational identification as a dependent variable would be studied with peripheral vision need and capability as independent variable and leadership construct as intervening or moderating variable. The strength, direction and significance of these relationships could go a long way in determining our approach to all these aspects in a knowledge based organization.

The study was conducted across different knowledge industries, across knowledge vertical groups at the outset and a survey was designed and participating organization was selected, accordingly.

3.2 Peripheral Vision Need and Bolman and Deal's Leadership Orientation

The construct of peripheral vision need (PVN) refers to those aspects of the business environment that an organization has to cope with while doing business. These factors determine the kind of environment in which the business operates.

PVN involves two key dimensions: complexity and volatility of the environment (Day & Schoemaker, 2004). These variables cannot be controlled and hence, are expected not to be associated with factors that are influenced by the actions of the management; they do determine the course of management's intervention. They influence the orientation that the leadership is likely to adopt in order to run and sustain the business.

When PVN is high, the organization has to pay attention to and constantly scan the second-order environment (Emery & Trist, 1965). In order to make sense of a volatile environment, management has to adopt an organic structure (Burns & Stalker, 1966). In such a fluid milieu that calls for improvisation, there has to be greater emphasis on the political and symbolic leadership orientations. Focusing on structural and human resource orientations will not provide the flexibility needed to cope.

Hence, we hypothesize

H1(a): The greater the complexity of the environment, the greater the orientation towards the structural and political frameworks.

H1(b): The greater the complexity of the environment, the lower the human resource and symbolic orientations of leadership in an organization.

H2(a): The greater the volatility of the environment, the greater the orientation towards the structural and political frameworks.

H2(b): The greater the volatility of the environment, the lower the human resource and symbolic orientations of leadership in an organization.

3.3 Peripheral Vision Capacity and Bolman and Deal's Leadership Orientation

Peripheral vision capacity (PVC) of an organization is that ability of the organization by virtue of which it is able to detect and align its initiatives towards a successful running of business. In nautical terms, this could be compared with 'setting the sail' to suit the prevailing wind conditions. This is a fundamental attribute of the organization that often determines the success and failure of the business.

The PVC of an organization is strongly linked to the leadership of the organization (Day & Schoemaker, 2006). Since this factor is very well within the control of the organization, it is likely to influence and be influenced by every action of the management.

The construct of PVC has five variables: leadership orientation, strategy making, knowledge management systems, configuration of structure and incentives, and the culture of values, beliefs, and behavior. However, the term 'leadership orientation' was found to be confusing in the context of Bolman and Deal's (2003) leadership. After a careful review of the individual items that measure it, we decided to rename this as 'managerial foresight.'

Management that has PVC is more likely to have the ability to see the big picture, without getting lost in administrative minutia. They have the ability to make sense of

the developments occurring in the second-order environment and respond innovatively to position the organization to take advantage of technological, economical and societal developments. Such management does not go by the book, but strives to respond proactively.

Hence, we hypothesize:

H3(a): The greater the managerial foresight, the greater the leadership's adoption of human resource and symbolic orientation.

H3(b): The greater the managerial foresight, the lower the leadership's orientation towards the political and structural frameworks.

H4(a): The better the strategy making, the greater the leadership's orientation towards the structural and political frameworks.

H4(b): The better the strategy making, the lower the leadership's orientation towards human resource and symbolic orientation.

H5(a): The better the knowledge management systems, the greater the structural leadership and symbolic orientation.

H5(b): The better the knowledge management systems, the lower the human resource and political leadership orientation.

H6(a): The better the configuration of structure and incentives, the greater the structural and human resource leadership orientation.

H6(b): The better the configuration of structure and incentives, the greater the political leadership orientation.

H7(a): The better the culture of values, beliefs, and behavior, the greater the human resource and symbolic leadership orientation.

H7(b): The better the culture of values, belief and behavior, the lower the political and structural leadership orientation.

3.4 Bolman and Deal's Leadership Orientation and Organizational Identification

The organizational identification of an individual is often influenced by his/her own experience, perception and interpretation of managerial actions. While the organizational identification of an individual could be contextual and situational, a predominant pattern develops over a period of his/her tenure with the organization. This is influenced by the actions and orientations of senior management and has a direct impact on the attrition levels of an organization, especially the one driven by knowledge workers.

Leadership orientation influences employees' behavior patterns and their consequent identification profiles. Chang (2005) studied the relationship among leadership styles, employee maturity and job performance, and organizational identification in the Taiwanese hotel industry. Other studies have associated leadership styles with organizational identification and commitment (Berson, et al., 2004; Walumba, et al., 2005; Martin & Epitropaki, 2001).

When management adopts a predominantly structural and political leadership orientation, employees are more likely to feel the organization as unresponsive and insensitive to their aspirations, and there is no justice to how they are treated. On the other hand, if the management emphasizes the human resource and symbolic

leadership orientations, the organization is seen as a caring place to work for in which management inspires people.

Hence, we hypothesize

H8(a): The stronger the structural orientation of the leadership, the greater the neutral and ambivalent identification.

H8(b): The stronger the human resource leadership orientation, (a) the greater the positive identification and (b) the lower the neutral identification, ambivalent identification, and disidentification.

H8(c): The stronger the political leadership orientation, (a) the greater the disidentification and ambivalent identification and (b) the lower the positive identification.

H8(d): The stronger the symbolic leadership orientation, (a) the greater the positive identification and (b) the lower the disidentification and neutral identification.

3.5 Peripheral Vision Need and Organizational Identification

An organization that operates in an immensely complex and volatile environment might have employees who always feel anxious about continuing in the organization and their jobs. This, in turn, would influence the way they identify themselves with the organization. However, a management that aligns its capacity to meet this need would instill confidence among its employees and positively influence their identification patterns.

Hence, we hypothesize:

H9(a): The greater the complexity of the environment, the greater the disidentification or neutral identification of the knowledge workforce.

H9(b): The greater the complexity of the environment, the lower the positive identification.

H9(c): The changes in the complexity of the environment have no impact on the ambivalent identification of the knowledge workforce.

H10(a): The greater the volatility of the environment, the greater the disidentification or neutral identification of the knowledge workforce.

H10(b): The greater the volatility of the environment, the lower the positive identification.

H10(c): The changes in the volatility of the environment have no impact on the ambivalent identification of the knowledge workforce.

3.6 Peripheral Vision Capacity and Organizational Identification

Shirbagi (2007) studied peripheral vision and leadership frames in an academic setup and did not include knowledge workers. Voss, et al. (2002) studied the organizational identification of leadership and its impact on the organization. Nonetheless, there are few studies on organizational identification and the leadership traits.

When management is perceived by knowledge workers to have the PVC to deal proactively with a complex, dynamic environment, it assuages their anxieties regarding the business sustenance. A learning organization with the right kind of leadership expects that their knowledge workforce responds to environmental

uncertainties in a way to ensure success (McAdam & McCreedy, 1999). In the same way, knowledge workers perceive the organizational capabilities by their own experience, being in a sound position to assess the leadership capabilities and peripheral vision or foresight of the organization, much better than the regular workers (May & Frenkel, 2002). Therefore, a mutual demonstration of a foresight and vision leads to a positive perception about the organizational leadership, ensuring a trusting relationship which eventually leads to positive organizational identification.

Hence, we hypothesize:

H11(a): The better the managerial foresight, the stronger the positive identification of the knowledge workforce.

H11(b): The better the managerial foresight, the lower the disidentification and ambivalent identification.

H12(a): The better the strategy making, the stronger the positive identification.

H12(b): The better the strategy making, the lower the disidentification and ambivalent identification.

H13(a): The better the knowledge management systems, the stronger the positive identification.

H13(b): The better the knowledge management systems, the lower the disidentification and ambivalent identification.

H14(a): The better the configuration of structure and incentives, the stronger the positive identification.

H14(b): The better the configuration of structure and incentives, the stronger the disidentification, neutral identification and ambivalent identification.

H15(a): The better the culture of values, beliefs and behavior, the stronger the positive identification.

H15(b): The better the culture of values, beliefs and behavior, the lower the disidentification, neutral identification and ambivalent identification.

While the theoretical model was intended to be studied for all possible combinations of the relationships, the scope of the model as well as the survey was kept broad and flexible.

The hypotheses that have been discussed so far have been summarized in Table 3(1), below.

Table 3(1) – Hypothesized directions

S.No	Variables*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Complx Envr															
2	Voltl Envr															
3	Managerial foresight															
4	Strategy Mkg															
5	Kw. Mgt. Sys															
6	Confg – Str & Incv															
7	Cultr –															

	Val/Blf/Bhv															
8	**STRUCTURAL**	+	+	-	+	+	+	+								
9	**HUMAN RES.**	-	-	+	-	-	+	-								
10	**POLITICAL**	+	+	-	+	-	-	-								
11	**SYMBOLIC**	-	-	+	-	+		+								
12	**POSID**	-	-	+	+	+	+	+	@	+	-	+				
13	**DISID**	+	+	-	-	-	-	-	@	-	+	-				
14	**AMBVID**	@	@	-	-	-	-	-	+	-	+	@				
15	**NEUTID**	+	+	@	@	@	-	-	+	-	@	-				

'+' indicates anticipated existence of a positive association.

'-' indicates anticipated existence of a negative association.

'@' indicates no perceived existence of association.

∗ *Refer list of abbreviations/symbols*

CHAPTER 4

RESEARCH METHODOLOGY

This chapter describes the research methodology that consists of the components of research design that was referred in the earlier chapters and focuses on the research design adopted for the study, Operationalization of the variables used in the study, data collection procedures, and plan for analyzing the collected data.

4.1 Research Design

Research design is the basic framework for conducting research in order to answer the research questions. It ensures that the research is done in the right direction so that results are useful, economically obtained and led a way to further studies, in the same or related directions. It also helps in guiding the researcher in addressing the research issues, like data collection technique, sampling methods, costs and time required to conduct research, techniques to be used in the data analysis. For this type of multivariable study that involves interval scales for studying behavioral attributes and attitude measures, the suggested inferential statistics are product moment correlation, t-test, factor analysis, and regression (Tripathi, 2008).

4.2 Optimization and Characterisation of Constructs

The measures for all the variables used in this study have been adopted from scales used in the previous studies. As these scales were reported with a high reliability, they were used with practically no changes in case of Bolman and Deal's (2003) leadership framework, organizational identity (Kreiner & Ashforth, 2004), and affective commitment (Riketta, 2002). However in the case of the peripheral vision need and

capability variables (Day & Schoemaker, 2006), these were slightly modified to improve understanding of the respondents. Moreover, all the variables were measured on a rationalized Likert scale of 1 to 6 to bring in uniformity of approach. Also since the questions pertaining to the peripheral vision section was more qualitative in nature, the same was elaborated in a simpler language without losing meaning. The details of the variables and the corresponding measuring items used are given in Table 4(1).

Table 4(1) – Variables and measuring items (Pilot study)

S.No.	Variables Defined	No of Measurement Items
1	Peripheral vision need – Nature of strategy	4
2	Peripheral vision need – Complexity of environment	8
3	Peripheral vision need – Volatility of environment	12
4	Peripheral vision capacity – Managerial foresight	4
5	Peripheral vision capacity – Strategy marking	6
6	Peripheral vision capacity – Knowledge management system	4
7	Peripheral vision capacity – Configuration – Structure & incentives	3
8	Peripheral vision capacity – Culture, value, belief and behavior	3
9	Bolman & Deal –- Structural	8
10	Bolman & Deal – Human Resource	8
11	Bolman & Deal –- Political	8
12	Bolman & Deal – Symbolic	8
13	Positive identification	4
14	Disidentification	4
15	Ambivalent identification	4
16	Neutral identification	4

Post standardization of the survey instruments for uniform Likert scale of 1 to 6, the questions were typed out in the form of a questionnaire, and multiple copies were made for administering the pilot study (Appendix I). For the purpose of conducting the pilot study, the groups were chosen from the participants of various executive management programs at Indian Institute of Management Bangalore (IIMB). The participants were briefed about the constructs and its relevance to the study. The survey instrument was then pilot tested. The respondents were 71 information technology (IT) software professionals undergoing General Management program and 24 full-time Post Graduate Software Management (PGPSM) students at IIMB. The respondents were divided into two major groups and accounted for a total of 95. The survey was conducted using the paper questionnaire mode and the same was collected after about 2 hours from the respondents. However, there were only 65 usable and completed responses, the rest being incomplete to the extent of non-usability.

The Cronbach's α was checked for all the items and it was found to be well over 0.7, except the variable of Nature of strategy under the peripheral vision need construct.

4.2.1 Review of pilot study

The pilot study data was found lacking in terms of composition and completeness. However an attempt was made to analyze the data available after handling the missing values appropriately to see if any useful lead could be obtained to support the concept. The details of the pilot study data and the analysis is given in the subsequent tables (Tables 4(2) and 4(3)).

Table 4(2) - Sample size details

Sample Population Type	Size Surveyed	Actual Responses Received		
		Male	Female	Total
IT Professionals Undergoing General Management Program at IIMB	80	60	11	71
Students from Post Graduate Program in Software Management at IIMB	30	23	1	24

Table 4(3) - Reliability data of pilot study

S.No	Variables Defined	No of measurement items	Reliability [Cronbach's α]
1	Peripheral Vision Need Nature of Strategy	4	0.67
2	Peripheral Vision Need Complexity of Environment	8	0.69
3	Peripheral Vision Need Volatility of Environment	12	0.80
4	Peripheral Vision Capacity - Leadership Orientation	4	0.75
5	Peripheral Vision Capacity - Strategy Marking	6	0.84
6	Peripheral Vision Capacity - Knowledge Management System	4	0.87
7	Peripheral Vision Capacity – Configuration – Structure & Incentives	3	0.82
8	Peripheral Vision Capacity - Culture, Value, Belief and Behavior	3	0.82
9	Bolman & Deal - Structural	8	0.88
10	Bolman & Deal - Human Resource	8	0.92
11	Bolman & Deal - Political	8	0.87
12	Bolman & Deal - Symbolic	8	0.90
13	Positive Identification	4	0.61
14	Disidentification	4	0.85
15	Ambivalent Identification	4	0.86
16	Neutral Identification	4	0.78

4.2.1.1 Key findings of pilot study

Organizations were classified on a 2 x 2 grid using consolidated scores on elements of need and capacity.

Organizations were also classified on a 3 x 3 grid using mean and standard deviation scores. However, only the extreme quadrants of the grid were used for analysis.

Test statistics indicated a strong correlation among peripheral vision constructs, political frame and symbolic framework of leadership.

The human resource and organizational disidentification showed moderate correlation to peripheral vision constructs.

Structural frameworks are weakly correlated with the peripheral vision need and capacity.

The constructs of positive, ambivalent and neutral organizational identification do not correlate with the peripheral vision need as well as capacity.

In the political framework of leadership, Vigilant and Focused organizations had significant differences.

In the structural and human resource frameworks, Vigilant and Focused organizations had moderately significant difference (Table 4(4)).

Table 4(4) - Test statistics directions

	Constructs	STRUCTURAL ORIENTATION	HUMAN RESOURCE ORIENTATION	POLITICAL ORIENTATION	SYMBOLIC ORIENTATION	POSITIVE IDENTGIFICATION	DISIDENTIFICATION	AMBIVALENT IDENTIFICATION	NEUTRAL IDENTIFICATION
1	Peripheral Vision Need	_	+	++	++	@	+	@	@
2	Peripheral Vision Capacity	_	+	++	++	@	+	@	@

++ Strongly correlated; + Moderately correlated; (-) Weakly correlated; @ Not correlated.

4.2.1.2 Key limitations to the pilot study

The samples sizes and gender break up were not adequate enough to statistically justify the outcomes strongly.

The composition of the sample too was not homogenous as it consisted of participants from multiple businesses and multiple levels of experience, background and education.

The missing values played a significant role in the final useful sample size and also brought in the perceptional differences in the context of the basic business unit while responding. The results were inadequate to conclude strongly on the model conceptualization but were good enough to be interpreted as “encouraging” and

strongly “indicative,” as far as support to the conceptualization of construct was concerned.

Post collection of the responses, a feedback session was held and the feedback observations were noted down. Many expressed a lack of clarity in the peripheral vision part of the survey and suspected that it resulted in multiple interpretations. Another key and predominant feedback was about the length of the questionnaire and raised questions about the interest sustainability towards the end. Poor percentage of usable responses with respect to the total participants was also attributable to a great extent, to the length and the qualitative nature of the survey tool, especially the first construct.

The feedback resulted in certain key changes in the survey questionnaire. The qualitative questions were simplified without the loss of content efficacy and made simpler in terms of the context. The detailing, prior to the start of the survey, was made more elaborate, and contextual reference was clearly explained, as a key reference point of response. The number of research questions was retained as it is as every element of the construct was important and relevant to the study. Again, the encouraging reliability numbers were relied upon to retain the construct, and it was decided to use the instrument with minimal content modification. It was ensured that more straightforward questions pertaining to organizational identification and leadership framework were preceded by the slightly difficult questions of the peripheral vision constructs. The demographic questions were based on the presumption of certain demographic attributes that were expected to influence the variables and also not revealing the identity of the respondents, as these were working

professionals in organizations who did not want to get themselves and their business activities/projects identified. Eight item measurement scale for measuring affective commitment (Allen & Meyer, 1996) was selected to keep the scope of study wide and open, this study being a model exploratory kind. The details of the number of items and the variables (Appendix II) that were eventually identified for the administration of pivotal survey are presented below in Table 4(5).

Table 4(5) – Variables and measuring items (Pivotal study)

S.No.	Variables Defined	No of Measurement Items
0	Demographic details about the participant	15
1	Peripheral vision need – Complexity of environment	8
2	Peripheral vision need – Volatility of environment	12
3	Peripheral vision capacity – Managerial foresight	4
4	Peripheral vision capacity – Strategy marking	6
5	Peripheral vision capacity – Knowledge management system	4
6	Peripheral vision capacity – Configuration – Structure & incentives	3
7	Peripheral vision capacity – Culture, value, belief, and behavior	3
8	Overall peripheral vision – Need	3
9	Overall peripheral vision – Capacity	3
10	Bolman & Deal – Structural	8
11	Bolman & Deal – Human resource	8
12	Bolman & Deal – Political	8
13	Bolman & Deal – Symbolic	8
14	Positive identification	4
15	Disidentification	4
16	Ambivalent identification	4
17	Neutral identification	4
18	Affective commitment	8

4.3 Operationalization of Variables

The measurement items for all the variables have been used from scales used in prior research studies (Bolman & Deal, 2003; Day & Schoemaker, 2006; Kreiner & Ashforth, 2004). As these scales reported high levels of reliability and possessed required validity, they were used without any or minor syntactic changes ensuring that there is no loss of meaning or relevance. The minor changes were only in the peripheral vision constructs as the feedback from the pilot study indicated that due to its subjective nature, there was difficulty in understanding and interpreting the meaning of these questions by the respondents from multiple educational and social backgrounds. Hence the modification was done to make the language simpler with direct sentences.

4.3.1 Peripheral Vision Need and Capacity

Bolman and Deal (2003) have developed the measurement scales for measuring the peripheral vision need and capacity to carry out a strategic eye examination that assesses the peripheral vision gap among the leadership in organizations. These were reported to meet the requirements of construct validity, internal consistency, and external validity. Though the original scales were meant to be scored on a 1 to 7 scale, for the purpose of our study, we designed the responses on a 1 to 6 scale in line with other constructs. Accordingly the mean scores were worked out for classification.

4.3.1.1 Complexity of environment

Complexity of environment refers to factors that are concerned with the industry structure, market access, technologies, governmental dependence, impact of global economy, etc. These were measured using the following scales:

Using the following scale, please circle the number for each item that comes closest to reflecting your opinion about the strategic eye of your business unit, as perceived by you in your current role. Kindly read the description given at the extremes to clearly understand the direction of response. Kindly use the weightages indicated in the parenthesis for each response – 1(100/0); 2(80/20); 3(60/40); 4(40/60; 5(60/40) and 6(0/100).

1. Industry/Business structure	Few easily identifiable competitors	**1**	**2**	**3**	**4**	**5**	**6**	May competitors from unexpected sources
2. Channel structure-meaning the modality of reaching your product/services to the customer/end user	Simple and direct	**1**	**2**	**3**	**4**	**5**	**6**	Long and complex channel mix
3. Market structure-refers to the way your product/services are segmented	Fixed boundaries and simple segmentation	**1**	**2**	**3**	**4**	**5**	**6**	Fuzzy boundaries and complex segmentation
4. Enabling technologies-refers to the complexity and number of technologies directly impacting the business	Few and mature (simple systems)	**1**	**2**	**3**	**4**	**5**	**6**	Many converging (complex systems)
5. Government regulations (Central; State etc.)	Minimal or stable	**1**	**2**	**3**	**4**	**5**	**6**	Many or changing rapidly
6. Public visibility of industry in / by media	Largely ignored	**1**	**2**	**3**	**4**	**5**	**6**	Closely watched but media or special interest groups
7. Dependence on government funding and political access	Low: largely independent of government	**1**	**2**	**3**	**4**	**5**	**6**	High: sensitive to politics and funding climate
8. Dependence on global economy	Low: domestic focused and isolated	**1**	**2**	**3**	**4**	**5**	**6**	High: affected by global conditions

4.3.1.2 Volatility of environment

Volatility of environment pertains to factors associated with uncertainty, market conditions, competitor's behavior, sensitivity to social changes, business rivalry, etc. They were measured as below:

Using the following scale, please circle the number for each item that comes closest to reflecting your opinion about the strategic eye of your business unit, as perceived by you in your current role. Kindly read the description given at the extremes to clearly understand the direction of response. Kindly use the weightages indicated in the parenthesis for each response – 1(100/0); 2(80/20); 3(60/40); 4(40/60; 5(60/40) and 6(0/100.

1. Number of surprises by high impact events in the past three years	None	**1**	**2**	**3**	**4**	**5**	**6**	Three or more
2. Accuracy of past forecasts	High: small deviations from actual	**1**	**2**	**3**	**4**	**5**	**6**	Low: Actual differ greatly from forecasts
3. Market growth pattern	Slow and stable	**1**	**2**	**3**	**4**	**5**	**6**	Rapid and unstable
4. Growth opportunities	Have decreased dramatically in the past three years	**1**	**2**	**3**	**4**	**5**	**6**	Have increased dramatically in the past three years
5. Speed and direction of technological change	Predictable	**1**	**2**	**3**	**4**	**5**	**6**	Unpredictable
6. Behavior of key competitors, suppliers and partners	Very predictable	**1**	**2**	**3**	**4**	**5**	**6**	Highly unpredictable
7. Posture of key rivals	Live and let-live mentality	**1**	**2**	**3**	**4**	**5**	**6**	Hostile (aggressive)
8. Susceptibility to macroeconomic forces	Low sensitivity to price changes;,currencies, business cycles, tariffs, etc.	**1**	**2**	**3**	**4**	**5**	**6**	High sensitivity to price changes, currencies, business cycles,tariffs, etc.
9. Dependence on financial markets	Low	**1**	**2**	**3**	**4**	**5**	**6**	High
10. Customer and channel power refers to the level of influence they can have on your business	Low	**1**	**2**	**3**	**4**	**5**	**6**	High

11. Sensitivity to social changes (fashion, values, etc.)	Low: Mostly gradual change from the past	1	2	3	4	5	6	High: Good chances of major disruptions & changes in business models
12. Potential for major disruptions	Low: Few surprises expected, mostly things we can handle over next five years	1	2	3	4	5	6	High: Several significant business shocks are expected, without our knowing which in particular

4.3.1.3 Managerial foresight

This refers to those aspects of capacity that pertains to the importance of periphery vision in business agenda, managerial attitudes towards periphery vision, etc. The variable as explained earlier was renamed as managerial foresight for simplicity. These were measured as below:

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about the strategic eye of your business unit, as perceived by you in your current role. Kindly read the description given at the extremes to clearly understand the direction of response. Kindly use the weightages indicated in the parenthesis for each response – 1(100/0); 2(80/20); 3(60/40); 4(40/60; 5(60/40) and 6(0/100).

1. Importance of periphery in business leader's agenda	Low priority	1	2	3	4	5	6	High priority
2. Time horizon overall	Emphasis on short term (two years or less)	1	2	3	4	5	6	Emphasis on long term (five years or more)
3. Attitude towards the periphery in the organization	Limited and myopic (few people care)	1	2	3	4	5	6	Active and curious (active mining of periphery)

4. Willingness to test and challenge the basic assumptions	Mostly defensive	1	2	3	4	5	6	Very willing to test key premises or widely held views

4.3.1.4 Strategy making

Strategy making refers to capacity associated with the strategy process, scenario thinking, integration of customer and competitor information, etc. Following scales were used to measure this item:

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about the strategic eye of your business unit, as perceived by you in your current role. Kindly read the description at the extremes to clearly understand the direction of response. Kindly use the weightages indicated in the parenthesis for each response – 1(100/0); 2(80/20); 3(60/40); 4(40/60; 5(60/40) and 6(0/100).

1. Experience with uncertainty reducing strategies (i.e., real options)	Limited	1	2	3	4	5	6	Extensive
2. Use of scenario thinking to guide strategy process	Never	1	2	3	4	5	6	Frequent
3. Number of alliance partners	Few	1	2	3	4	5	6	Many
4. Flexibility of strategy process	Rigid, calendar driven, budgeting	1	2	3	4	5	6	Flexible, issues-oriented processes
5. Resources devoted to scanning the periphery	Negligible	1	2	3	4	5	6	Extensive
6. Integration of customer and competitor information into future technology platform and new product development plans	Poorly and sporadically integrated	1	2	3	4	5	6	Systematically and fully integrated

4.3.1.5 Knowledge management system

Knowledge management system refers to the PVC associated with the sharing of data management, access to data across organization, using of database, etc. The following scales were used to measure this item:

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about the strategic eye of your business unit, as perceived by you in your current role. Kindly read the description given at the extremes to clearly understand the direction of response. Kindly use the weightages indicated in the parenthesis for each response – 1(100/0); 2(80/20); 3(60/40); 4(40/60; 5(60/40) and 6(0/100).

1. Quality of data about events and trends at periphery	Poor: limited coverage and often out-of-date	**1**	**2**	**3**	**4**	**5**	**6**	Excellent: broad coverage and timely
2. Access to data across organizational boundaries	Difficult: limited awareness of what is available	**1**	**2**	**3**	**4**	**5**	**6**	Relatively easy: wide awareness of what is available
3. Use of database for existing business	Limited	**1**	**2**	**3**	**4**	**5**	**6**	Extensive
4. Technologies for posing queries to database	Old and difficult to use	**1**	**2**	**3**	**4**	**5**	**6**	State-of-the-art inquiring systems

4.3.1.6 Configuration of structure and incentives

This refers to the aspects of accountability of sensing weak signals, warning system in the organization, and incentive to encourage reporting such instances. Following scales were used to measure the same:

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about the strategic eye of your business unit, as perceived by you in your current role. Kindly read the description given at the extremes to clearly understand the direction of response. Kindly use the weightages indicated in the parenthesis for each response – 1(100/0); 2(80/20); 3(60/40); 4(40/60; 5(60/40) and 6(0/100).

1. Accountability on sensing and action on weak signals	No one is responsible	**1**	**2**	**3**	**4**	**5**	**6**	Responsibi-lity is clearly assigned to project teams or dedicated groups
2. Early warning systems and procedures	None	**1**	**2**	**3**	**4**	**5**	**6**	Extensive and effective
3. Incentives to encourage and reward wider vision	None	**1**	**2**	**3**	**4**	**5**	**6**	Top manage-ment recognition and direct rewards

4.3.1.7 Culture of values, belief and behavior

This refers to the internal culture and readiness to listen to reports from the scouts, share information across the organization, etc. The scales used to measure this item are as below:

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about the strategic eye of your business unit, as perceived by you in your current role. Kindly read the description given at the extremes to clearly understand the direction of response. Kindly use the weightages indicated in

the parenthesis for each response – 1(100/0); 2(80/20); 3(60/40); 4(40/60; 5(60/40) and 6(0/100)

1. Readiness to listen to reports from scouts from periphery	Closed: listening discouraged	**1**	**2**	**3**	**4**	**5**	**6**	Open: listening encouraged
2. Willingness of customer-contact staff to forward market information	Poor	**1**	**2**	**3**	**4**	**5**	**6**	Excellent
3. Sharing of information about periphery vision across functions	Poor: Information ignored or hoarded	**1**	**2**	**3**	**4**	**5**	**6**	Excellent: Ongoing information sharing at multiple levels

4.3.2 Bolman and Deal's Leadership Orientation

The leadership orientation here refers to the framework, in which each of the management situations can be viewed. These frameworks clearly define the leadership styles adopted at a particular situation to resolve a problem or make a decision. According to Bolman and Deal (2003), every managerial decision-making situation or a managerial conflict can be viewed within any of these four frameworks. While no framework is specifically good all the times, each of them are used based on the context and the appropriateness of the need. Each of them has their own advantages as well as disadvantages. Situational leadership skills, which adopt an appropriate framework to resolve the issue, are the best in the interest of all concerned. In light of the above, this construct assumes its importance in the study.

4.3.2.1 Structural orientation

In the structural orientation of the leadership, the reliance is more on the organizational structure, procedures, and other mechanisms that rely upon 'control' of

the resources. While this orientation offers stability and consistency, it breeds bureaucracy. This is measured using the following items:

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about the leadership style of your business unit's management.

1	2	3	4	5	6
Always	To a large extent	To some extent	To little extent	To very little extent	Never

1. Thinks clearly and logically
2. Strongly emphasizes careful planning and clear timelines
3. Approaches problems through logical analysis and careful thinking
4. Develops and implements clear, logical policies and procedures
5. Approaches problems with facts and logic
6. Sets specific, measurable goals and holds people accountable for the results
7. Applies extraordinary attention to details
8. Believes strongly in clear structure and a chain of command

4.3.2.2 Human resource orientation

In this approach, preference is given for human approach, relies upon caring and nurturing spirit for solving organizational issues. While it encourages employee

identification, it is highly unreliable and 'loose' in offering stability, as the human behavior is highly uncertain. This is measured using the following scales:

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about the leadership style of your business unit's management.

1	2	3	4	5	6
Always	To a large extent	To some extent	To little extent	To very little extent	Never

1. Shows high level of support and concern for others
2. Builds trust through open and collaborative relationships
3. Shows high sensitivity and concern for others needs and feelings
4. Fosters high level of participation and involvement in decisions
5. Is consistently helpful and responsive to others
6. Listens well and is unusually receptive to others ideas and inputs
7. Gives personal recognition for work well done
8. Is a highly participative manager

4.3.2.3 Political orientation

In the political orientation, the organization is viewed as interest groups or political alliances struggling for scarce resources and exhibit 'political' behavior to protect their interests. While this orientation is good to deal with extreme or emergency

situations, it nurtures politics and bad culture. This is measured using the following scales.

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about the leadership style of your business unit's management.

1	2	3	4	5	6
Always	To a large extent	To some extent	To little extent	To very little extent	Never

1. Shows exceptional ability to mobilize people and resources to get things done
2. Is a very skillful and shrewd negotiator
3. Is unusually persuasive and influential
4. Anticipates and deals skillfully with organizational conflict
5. Is very effective in getting support from people with influence and power
6. Is politically very sensitive and skillful
7. Develops alliances to build a strong base of support
8. Succeeds in the face of conflict and opposition

4.3.2.4 Symbolic orientation

This orientation sees the organization from the perspective of 'values,, 'beliefs,' and 'culture.' It believes in people's involvement and relies upon the 'value system.'

While it does promote good employee behavior, it can be painfully slow to respond to opportunities. This is measured using the following scales.

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about the leadership style of your business unit's management.

1	2	3	4	5	6
Always	To a large extent	To some extent	To little extent	To very little extent	Never

1. Inspires others to do their best
2. Is highly charismatic
3. Is an inspiration to others
4. Is highly imaginative and creative
5. Communicates a strong and challenging vision and sense of mission
6. Sees beyond current realities to create exciting new opportunities
7. Generates loyalty and enthusiasm
8. Serves as an influential model of organizational aspirations and values

4.3.3 Organizational Identification

The behavior of an employee towards organization goes a long way in determining his continuance in the organization. Organization commitment and identification have

been two key parameters in assessing these behaviors. When an employee group is formed, it has been found that the primary focus of identification is the work group rather than the organization (Riketta & van Dick, 2005). Though the organizational identity and commitment are strongly correlated they are empirically discriminable (Bedein, 2007; Bergami & Borgozzi, 2000; Cole & Bruch, 2006; Gautam, et al., 2004). In the expanded model of organizational identification, Kreiner and Ashforth (2004) have identified four key types of identification pattern in employees. These are positive identification, disidentification, ambivalent identification, and neutral identification.

4.3.3.1 Positive identification

In this pattern of identification, employee identifies himself positively with the organization and is 'proud' to be a part of the organization. He is interested in showing his association with the organization in all spheres of his life. This is measured using the following scales.

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about your business unit, as perceived by you in your current role.

1	2	3	4	5	6
Agree very much	Agree moderately	Agree slightly	Disagree slightly	Disagree moderately	Disagree very much

1. When someone criticizes my organization, it feels like a personal insult
2. I am very interested in what others think about my organization
3. When someone praises my organization it feels like a personal compliment
4. If a story in the media criticized this organization, I would feel embarrassed

4.3.3.2 Disidentification

In this pattern, the employee is very reluctant to show his association with the organization. He either feels shameful or indifferent or does not want to get associated with the organization for any reasons. This pattern usually leads to eventual separation and does not bring about the best performance. This is measured using the following scales.

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about your business unit, as perceived by you in your current role.

1	2	3	4	5	6
Agree very much	Agree moderately	Agree slightly	Disagree slightly	Disagree moderately	Disagree very much

1. This organization does shameful things

2. I find this organization to be disgraceful

3. I want people to know that I disagree with how this organization behaves

4. I have been ashamed of what goes on in this organization

4.3.3.3 Ambivalent identification

In this pattern of identification, the employee exhibits split identification. While he identifies himself with the organization in certain aspects, he does not do so in others. So, for these employees, every organizational action or issue is identified or dis-identified. This is measured using the following scales.

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about your business unit, as perceived by you in your current role.

1	2	3	4	5	6
Agree very much	Agree moderately	Agree slightly	Disagree slightly	Disagree moderately	Disagree very much

1. I have mixed feelings about my affiliation with this organization

2. I am torn between loving and hating this organization

3. I feel conflicted about being a part of this organization

4. I have contradictory feeling about this organization

4.3.3.4. Neutral identification

In this pattern of identification, the employee is neutral to his approach towards the organization. He is more detached and indifferent to the organizational ethos and has neither positive nor negative opinion about the organization. This is measured using the following scales.

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about your business unit, as perceived by you in your current role.

1	2	3	4	5	6
Agree very much	Agree moderately	Agree slightly	Disagree slightly	Disagree moderately	Disagree very much

1. It really does not matter to me what happens to this organization
2. I give little thought to the concerns of this organization
3. This organization does not have much personal meaning to me
4. I do not concern myself much with this organization's problem

4.3.4 Affective Commitment

Organizational commitment is viewed as the willingness of workers to devote energy and loyalty to an organization (Kanter, 1968; Porter, et al., 1973). Organizational commitment is considered as a key variable that can be the major determinant of organizational performance (Angel, 1981; Riketta, 2002) and effectiveness (Laschinger, 2001; Miller, 1978). As a prospecting approach, the items of affective

commitment too were included in the measurement scale to collect data as it was perceived that inclusion could enrich the study and at the worst can always be excluded for analysis, if the situation warranted so. This is measured using the following items:

Using the following scales, please circle the number for each item that comes closest to reflecting your opinion about your business unit, as perceived by you in your current role.

1	2	3	4	5	6
Agree very much	Agree moderately	Agree slightly	Disagree slightly	Disagree moderately	Disagree very much

1. I would be very happy to spend the rest of my career with this business unit.
2. I enjoy discussing my business unit's with people outside it.
3. I really feel as if this business unit's problems are my own.
4. I think that I could easily become as attached to another business unit in this or another organization as I am to this business unit.
5. I do not feel like 'part of the family' at my business unit.
6. I do not feel 'emotionally attached' to this business unit.
7. This business unit has a great deal of personal meaning for me.
8. I do not feel a strong sense of belonging to my business unit.

In the above scales, item number 5, 6, and 8 are 'reverse scored.'

4.4 Data Collection Method

The conduct of pilot survey brought in a lot of insight into planning the pivotal study by improving the efficacy of the instrument, especially from the participant's perspective. Based on the theoretical considerations and the research objectives, it was necessary to identify the kind of sample population that would be studied before approaching the prospective organization with such a population. As this study intended for research on the knowledge workforce, the first and the foremost criteria of the participants was that they need to be performing "knowledge work" and not a routine or regular tasks. Hence the participation of shopfloor personnel and administrative personnel was completely excluded, while approaching the organizations. The next criterion was on the nature of the survey. As the survey instruments had items that were qualitative and subjective in nature at the constructs level, it was necessary that the participants had a fair idea of the organization and its working culture before they are able to objectively respond to the questions. Hence it was decided that the participants must have spent at least two to three years in the organization to qualify for participation. While this has no scientific support, however heuristically, it is observed that being knowledge workers with a professional qualification, their level of intellect is fairly above a similar person performing a routine task. This gives them an advantage of understanding better about the issues of strategy, management ethos, and organizational culture and leadership styles and makes them qualified to comment and respond on these issues. To a great extent, this opinion of ours was corroborated from the results obtained in the pilot study, which

again comprised only professionally qualified knowledge workers. Now with these criteria clearly defined, various organizations were approached for participation in the survey.

For the purpose of persuading the organizations to participate in the survey and support the research initiative, a power point presentation intended for the senior leadership team was prepared (Appendix – III). A formal written request from the guide (Appendix – IV) was presented to each approached organization. Totally, about 16 organizations were approached, of which six expressed their interest to look into the request and expressed their desire to meet and understand the request, while the rest did not respond to the request. These six organizations were approached personally to meet the senior management/human resource leaders, a presentation was made and the scope and depth of the study were elaborated. It was specifically requested and ensured that in this meeting, none of the potential participants attended, to keep the likely survey unbiased.

Out of these six organizations, two were engineering manufacturing organizations with substantial research teams. Three were information technology (IT) organizations working on IT projects for various global customers. One organization was medium sized telecommunication organization. Since the number of qualified survey participants was grossly inadequate in this organization, inability to administer the survey was expressed. Of the remaining five organizations, three organizations put up the proposal to their principals overseas. Two organizations conveyed their willingness to participate and wanted a detailed meeting with their HR functions to work out the modalities. Both these were IT organizations; one being a US based

multinational company and the other, a reputed Indian conglomerate with large business interests and a global presence.

Both these organizations unilaterally expressed the logistic difficulty of physically gathering such a large number of participants, even across an extended time period, due to the nature of the work and the spread of the knowledge workforce. This was a very critical issue and had to be handled to make the survey effective. Moreover these organizations were also reluctant to allow us to meet their participants personally and interact. At a later date the remaining three organizations came back expressing their inability to participate at that point of time, for their own internal reasons.

In order to address the issue of administering the survey on a large number of participants, the option of web administered survey was looked into. After exploring various websites offering such a facility, KwikSurvey.com was shortlisted for the purpose. The key criteria that governed this selection were: the website offered a large flexibility for designing the survey; the services were not charged but it only accepted voluntary contribution, being run by a social organization; there was no limitation in the number of surveys, question items, a sample size that could be used. The site also had customized templates that could be used and had the option of downloading the results in multiple file formats that could be directly used for evaluation, as raw data.

However being a new concept, this approach had to be validated to test its reliability and consistency. Hence a mock survey with ten questions was created on the site with all the proposed features of design and was sent as a web link to selected friends, at various locations and they were requested to participate in this test exercise. The data was then downloaded and verified with the participants to validate the reliability and

consistency. Also their experience on the design consideration on confidentiality, compulsory participation of selected questions, option identification and textual responses were obtained and were found in perfect alignment, to what was intended. As this is beyond the scope of the study, the details have not been included in this dissertation.

The entire survey questions were now entered onto this website and the survey design parameters were customized. All the responses, except few demographic details were made “mandatory” for the survey, to register as data. This was done so that the issue of “missing data” could be completely eliminated. However, this approach carried the risk of a lower participation or abandoned participation. However we felt that the level of participation in such surveys had always been about 40 to 50% and this aspect could hardly make any additional impact. A genuine participant would anyway respond responsibly, irrespective of the fact whether it is compulsory or not and a casual and non-serious participant would any way drop out or give incomplete responses. But the advantage of not having to handle “missing data”, while performing a statistical evaluation at a later date, was a major positive factor to be considered. This in our opinion could lead to a major cleanup of the raw data even before extracting them as a file, though it carried the risk of lower participation levels.

The survey, after being customized as per the organization’s structural setup, on the web platform, was extracted as a link. Since it was not now physically feasible to meet the participants, to brief them about the survey, a power point presentation (Appendix- V) was prepared to introduce them to the survey motives, context and modalities. The web link, that took them to the web platform for taking the survey, was embedded in the last page of the power point presentation, to make things IT

friendly and easy. This presentation then was sent to the organizational contact person, through an email, with a request to launch it internally in their organization. This approach and method were acceptable to the organizations, as all their concerns were addressed and also did not compromise on the dilution of research needs, from our perspective.

Before we proceed to the next process of data collection, a brief description of design customization on the web platform needs a mention here. The introductory part of the survey page was configured with the background and contextual reference for the study. The peripheral vision construct related set of questions were customized as the first part after collecting the demographic data. This was followed by the questions on the leadership constructs and the questions on organizational identification and affective commitment. The rationale was that since the peripheral vision construct had subjective issue-based questions it required concentration and thinking, placing them first would ensure responses with higher veracity due to higher interest in the beginning. When the interest sustenance of participation starts to decrease, one moves over to leadership and organizational identification related questions that are direct, simple and do not require much thinking and could be responded instantly. This would ensure that by and large all the responses are genuine, correct, and reflect the truthful thinking and opinion of the participant. Multiple participation, by same respondent, was prevented by design in the survey, as the web platform had the option of identifying repeat attempts through the internet protocol (IP) address. The option to take the survey in time interval was extended, but with a timeline restriction to retain the effectiveness of the responses.

Once the responses waned and it was evident that no more responses were likely to come, a last communication was sent to the participants indicating a deadline. Post this date, the survey was closed and the results were downloaded in the form of an MS-Excel file that included the IP address of the computer, as the unique number, in addition to a unique identification code given for each response.

Besides ensuring that no missing or incomplete responses were recorded at the outset, the downloaded file was also scrutinized for any potential missing value, and none was found validating the performance of the survey setting. The downloaded Excel file was spruced up to include the item scale reference as headers, along with the headers for the demographic data. This cleaned up raw data file was saved and backed up for all future analysis. The file was also saved in SPSS* and LISREL* format for statistical evaluation. For AMOS* analysis, the file in the SPSS format was used. Appendix VI gives the Kwiksurvey output.

4.5 Formulation of Operationalized Variables for Analysis

The identified latent variables were formulated in the SPSS using both the mean scores and factor scores of measured scales. Also the reliability was estimated using Cronbach's α as has been as explained earlier. Affective commitment as a variable was not found harmonizing with the study and, hence, was not chosen for analysis along with the rest of the variables. One of the reasons could be lack of concentration leading to illogical responses, as some of these items were reverse scored. Hence it was decided to put this variable on suspension and not take up for statistical evaluation.

4.6 Plans for Data Analysis

In this section, we briefly discuss the way the data analysis was carried out.

SPSS-16 was used for statistical data analysis. To analyze path diagrams and Structure Equation Modeling, LISREL as well as AMOS were used.

As the response was made compulsory for all the construct related responses, there was no 'missing data' to be handled in the database. The variables were created using the measuring items and were used for statistical evaluation.

Organizations can be classified into four types, namely, Low capacity and Low need leading to 'Focused', Low capacity and High need leading to 'Vulnerable', High capacity and Low need leading to 'Neurotic,' and High capacity and High need leading to 'Vigilant' organization types (Day & Schoemaker, 2006). On account of these types, four groups were created to study the relationship pattern among these groups and also the complete population.

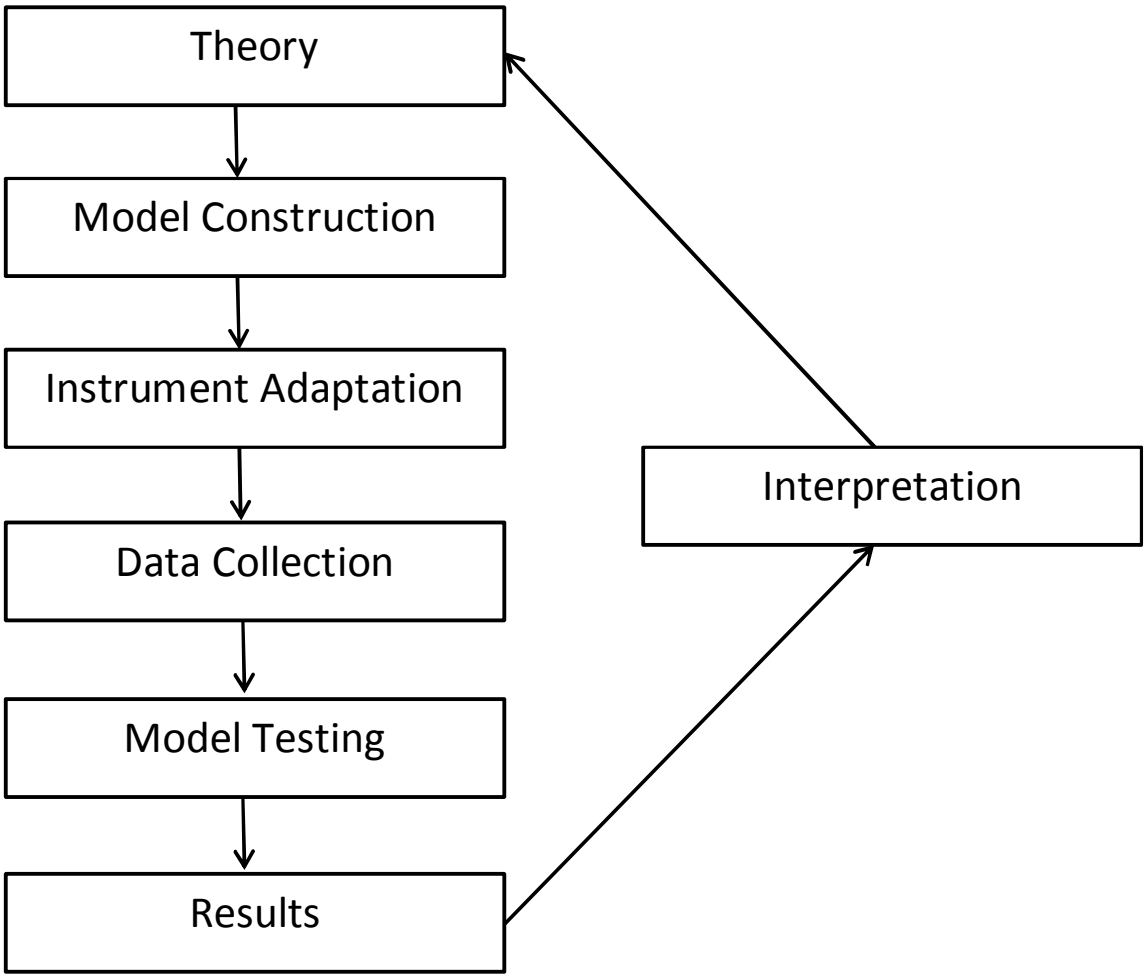
The targeted population was also grouped into middle level management leadership to analyze the specific pattern or trend associated with it.

Regression analysis and ANOVA were conducted to study the strength and direction of the association and explore the multicollinearity that existed among the items before evaluating the structure equation models.

Though there was a broad data plan, the scope of data analysis was not limited to this and was expanded based on the actual response levels, patterns, and the extent. The

overall research methodology with the data analysis plan is graphically mentioned in Figure 4(1).

Figure 4(1) - Plan for research methodology



CHAPTER 5

DATA ANALYSIS

This chapter describes the data analysis carried out for this study. The data was analyzed as broadly explained in the previous chapter. However, during the course of data analysis, certain developments had necessitated one or more course corrections, which were not planned. Appendix VII consists of all the data analysis files; however, the outputs of all the discussed analysis are included in the main text itself.

5.1 Data Preparation

The data that was recorded in the web platform was reviewed for any discrepancy and authenticity by verifying the IP address. Having ensured that the basic raw data is authentic and in order, it was downloaded as an Excel file format. This file was used as the raw data file for all further statistical data evaluation. This file was exported to SPSS-16 as a data file and converted into an appropriate format. Further, the same file was exported into LISREL software for a likely analysis at a later date. As AMOS uses ***.sav*** extension file of SPSS for analysis, no further file export was warranted. Adequate backups were created for these base files at a different digital location like external hard disk and cloud server.

The data file, so imported into the SPSS was further run for the creation of all latent variables, by using mean scores as well as factor scores. The demographic data was cleaned up for future use.

In the earlier chapters, we had expressed the intention of data analysis of potential groups organized on certain criteria. Based on the data, it has been observed that the

response profile of the 244 responses comes from ten different project groups organized under ten middle level leadership. However it is observed that the distributions of these responses were not uniformly spread across the groups, to warrant group-wise comparison. While one project group had 95 responses, the rest varied from as low as 1 to as high as 31.This made group-wise analysis not feasible. It was hence proposed to create two groups as 'large project group' consisting of responses from the large group of 95 responses and the remaining 149 responses under 'small project groups' for the purpose of statistical analysis.

Using the cumulative scores on the items of peripheral vision need and peripheral vision capacity of each response, the classification of each response was determined into the four types, namely low capacity and low need leading to "Focused"; Low Capacity and High Need leading to "Vulnerable"; High Capacity and Low Need leading to "Neurotic;" and High Capacity and High Need, leading to "Vigilant" organization types (Day & Schoemaker, 2006). However, a deeper review of the theory leads us to propose further reclassification of the responses into two key groups as far as the peripheral vision gap was concerned. An organization that is classified as 'vigilant' and 'focused' was deemed to be in complete alignment of its resources in meeting its needs while those classified as 'neurotic' and 'vulnerable' were perceived as misaligned. This led to the creation of two groups namely "Aligned group" and "Misaligned group". Hence the analysis was done keeping these four groups apart from the total population to bring clarity in interpreting the outcomes.

The database file in each format was thus split into four additional files, with respect to these groups for analysis. These database files were used as source files whenever statistical analysis was done on these groups.

5.2 Preliminary Data Analysis

The Cronbach's α was checked for all the items and it was found to be well over 0.7, except the variable of Nature of strategy under the peripheral vision need construct (Tables 5(1A and B).

Table 5(1A) – Reliability data of variables (Pilot study)

S. No.	Variables defined	No. of measure-ment items	Reliability [Cronbach's – α]
1	Peripheral Vision Need – Nature of strategy	4	0.67
2	Peripheral Vision Need – Complexity of environment	8	0.69
3	Peripheral Vision Need – Volatility of environment	12	0.80
4	Peripheral Vision Capacity – Managerial foresight	4	0.75
5	Peripheral Vision Capacity – Strategy marking	6	0.84
6	Peripheral Vision Capacity – Knowledge management system	4	0.87
7	Peripheral Vision Capacity – Configuration, Structure and Incentives	3	0.82
8	Peripheral Vision Capacity – Culture, value, belief and behavior	3	0.82
9	Bolman & Deal – Structural	8	0.88
10	Bolman & Deal – Human resource	8	0.92
11	Bolman & Deal – Political	8	0.87
12	Bolman & Deal – Symbolic	8	0.90
13	Positive identification	4	0.61
14	Disidentification	4	0.85
15	Ambivalent identification	4	0.86
16	Neutral identification	4	0.78

As already discussed, the pivotal study was done with a revised set of measuring items. The item scales with their reliability values are given in Table 5(1B) as below:

Table 5(1B) – Reliability data of variables (Pivotal study)

S. No.	Variables defined	No. of measurement items	Reliability [Cronbach's – α]
1	Peripheral Vision Need - Complexity of environment	8	0.72
2	Peripheral Vision Need - Volatility of environment	12	0.80
3	Peripheral Vision Capacity - Managerial foresight	4	0.71
4	Peripheral Vision Capacity - Strategy marking	6	0.79
5	Peripheral Vision Capacity - Knowledge management system	4	0.85
6	Peripheral Vision Capacity – Configuration – Structure and Incentives	3	0.79
7	Peripheral Vision Capacity - Culture, value, belief, and behavior	3	0.90
8	Bolman & Deal - Structural	8	0.94
9	Bolman & Deal - Human resource	8	0.95
10	Bolman & Deal - Political	8	0.93
11	Bolman & Deal - Symbolic	8	0.96
12	Positive identification	4	0.76
13	Disidentification	4	0.77
14	Ambivalent identification	4	0.81
15	Neutral identification	4	0.78
16	Affective commitment	8	#

- The reliability factor was negative and on investigation, it was found that the reverse scored scales had been responded incoherently by many respondents.

The identified latent variables were formulated in the SPSS using both the mean scores and factor scores of measured scales. Also the reliability was estimated using

Cronbach's α based on the literature as explained earlier. Affective commitment as a variable was not found harmonizing with the study and hence was not chosen for analysis along with the rest of the variables. One of the reasons attributable to this could be that as some of these items were reverse scored, the responses might not have been done with full concentration and this could have led to illogical responses. Hence it was decided to exclude this variable and not take it up for statistical evaluation.

Basic descriptive statistics and product moment correlation study were carried out on these variables. The summary of the results is given in Tables 5(2) and 5(3).

Table 5(2) – Correlation results among study variables (Mean scored variables)

S.No	Variables*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Complx Envr**	**0.72**														
2	**Voltl Envr**	0.63	**0.80**													
3	**Mngl. foresight**	0.42	0.49	**0.71**												
4	**Strategy Mkg**	0.37	0.37	0.62	**0.79**											
5	**Kw. Mgt. Sys**	0.37	0.30	0.56	0.76	**0.85**										
6	**Confg – Str & Incv**	0.24	0.16	0.53	0.58	0.67	**0.79**									
7	**Cultr – Val/Blf/Bhv**	0.26	0.18	0.53	0.59	0.65	0.76	**0.90**								
8	**STRUCTURAL**	0.10	0.03	0.34	0.37	0.39	0.40	0.49	**0.94**							
9	**HUMAN RES.**	0.11	0.06	0.40	0.38	0.41	0.42	0.52	0.94	**0.95**						
10	**POLITICAL**	0.11	0.04	0.34	0.34	0.38	0.41	0.47	0.93	0.92	**0.93**					
11	**SYMBOLIC**	0.08	0.05	0.34	0.37	0.38	0.37	0.46	0.95	0.94	0.91	**0.96**				
12	**POSID**	0.14	0.19	0.07	0.09	0.12	0.06	0.07	0.17	0.16	0.21	0.21	**0.76**			
13	**DISID**	0.07	0.09	-0.17	-0.11	-0.25	-0.27	-0.26	-0.24	-0.28	-0.23	-0.23	0.07	**0.77**		
14	**AMBVID**	0.06	0.07	-0.15	-0.17	-0.26	-0.26	-0.28	-0.38	-0.37	-0.36	-0.36	-0.07	0.66	**0.81**	
15	**NEUTID**	0.01	0.04	-0.09	-0.02	-0.19	-0.17	-0.18	-0.29	-0.26	-0.29	-0.30	-0.32	0.58	0.65	**0.78**

N = 244

∗ *Refer list of abbreviations/symbols*

Coefficients > |0.22| *- Very strongly significant at p ≤ 0.001, Coefficients >* |0.15| *- Strongly significant at p ≤ 0.01; Coefficients >* |0.05| *- Moderately significant at p ≤ 0.05 Numbers in the diagonal boxes represents the Cronbach's α*

Table 5(3) – Correlation results among study variables (Weight scored variables)

S.No	Variables*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Complx Envr**	**0.72**														
2	**Voltl Envr**	0.62	**0.80**													
3	**Mngl. foresight**	0.41	0.49	**0.71**												
4	**Strategy Mkg**	0.35	0.37	0.64	**0.79**											
5	**Kw. Mgt. Sys**	0.36	0.30	0.56	0.76	**0.85**										
6	**Confg – Str & Incv**	0.24	0.17	0.53	0.59	0.67	**0.79**									
7	**Cultr – Val/Blf/Bhv**	0.25	0.17	0.53	0.60	0.66	0.75	**0.90**								
8	**STRUCTURAL**	0.09	0.02	0.34	0.38	0.39	0.39	0.48	**0.94**							
9	**HUMAN RES.**	0.11	0.06	0.40	0.40	0.41	0.42	0.52	0.94	**0.95**						
10	**POLITICAL**	0.10	0.04	0.34	0.36	0.37	0.41	0.47	0.93	0.92	**0.93**					
11	**SYMBOLIC**	0.07	0.05	0.34	0.39	0.38	0.37	0.46	0.95	0.94	0.91	**0.96**				
12	**POSID**	0.14	0.20	0.07	0.11	0.13	0.06	0.07	0.17	0.16	0.21	0.22	**0.76**			
13	**DISID**	0.07	0.08	-0.17	-0.12	-0.26	-0.28	-0.26	-0.24	-0.28	-0.23	-0.23	0.07	**0.77**		
14	**AMBVID**	0.06	0.06	-0.16	-0.18	-0.26	-0.26	-0.28	-0.39	-0.37	-0.36	-0.37	-0.08	0.66	**0.81**	
15	**NEUTID**	0.01	0.02	-0.10	-0.03	-0.20	-0.17	-0.18	-0.29	-0.26	-0.29	-0.30	-0.34	0.58	0.66	**0.78**

N = 244

* *Refer list of abbreviations/symbols*

Coefficients > |0.22| - *Very strongly significant at p ≤ 0.001, Coefficients >* |0.15| - *Strongly significant at p ≤ 0.01: Coefficients >* |0.05| - *Moderately significant at p ≤ 0.05 Numbers in the diagonal boxes represents the Cronbach's α*

The demographic data like age, gender, marital status, qualification and levels in the organization do not seem to be correlated to the variables as indicated by the correlation coefficients.

A close observation of the correlation coefficient revealed that certain variables were very highly correlated leading to the existence of multicollinearity. Tolerance and Variation Inflation Factor (VIF) are two widely used indicators of multicollinearity statistics. Condition Index is yet another measure of multicollinearity. According to Tripathi (2008), a Tolerance < 0.2 or VIF > 5 and condition index > 30 indicates presence of multicollinearity. The summary of the variables exhibiting multicollinearity is given as below in Table 5(4).

Table 5(4)-Variables indicating multicollinearity

S.No	Variables*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Complx Envr															
2	Voltl Envr	0.62														
3	Managerial foresight															
4	Strategy Mkg			0.64												
5	Kw. Mgt. Sys			0.56	0.76											
6	Confg – Str & Incv				0.59	0.67										
7	Cultr – Val/Blf/Bhv				0.60	0.66	0.75									
8	STRUCTURAL															
9	HUMAN RES.								0.94							
10	POLITICAL								0.93	0.92						
11	SYMBOLIC								0.95	0.94	0.91					
12	POSID															
13	DISID															
14	AMBVID													0.66		
15	NEUTID													0.58	0.66	

* *Refer list of abbreviations/symbols*

Owing to the existence of multicollinearity across variables, performance of exploratory factor analysis became necessary to optimize the latent variables, as it stood now. Hence the exploratory factor analysis was performed across the three constructs: Peripheral Vision, Bolman & Deal's leadership framework and Organizational Identification.

The exploratory factor analysis was done using Principal Component Analysis (PCA) as extraction method and Varimax with Kaiser Normalization as rotation method. The

results of the Operationalized variables post exploratory factor analysis in SPSS are summarized and are given as below in Table 5(5) along with those of the initially considered variables.

Table 5(5) – Operationalization of variables post exploratory factor analysis vis-à-vis the earlier ones

Construct	Initial variables [15]	Measuring Items	Cronbach's Alpha	Variables post Factor Analysis [9]	Measuring Items	Cronbach's Alpha
Peripheral Vision Need	PVN Complexity of environment	Mean (PVN1 to PVN 8)	**0.72**	**PVN – Environmental Dynamics**	Mean (PVN6,8,9,14, 15,16,17,18)	**0.82**
	PVN Volatility of environment	Mean (PVN 9 to PVN 20)	**0.80**	**PVN – Business Dynamics**	Mean(PVN1,2, 3,4,11,13)	**0.73**
				PVN – Regulatory Influences	Mean (PVN5,7,19,20)	**0.68**
Peripheral Vision Capacity	PVC-Managerial foresight	Mean (PVC21 to 24)	**0.71**	**PVC - Managerial attitude towards periphery**	Mean(PVC,24, 35,36,37,38,39 ,40)	**0.90**
	Strategy marking	Mean (PVC 25 to 30)	**0.79**			
	Knowledge management systems	Mean (PVC 31 to 34)	**0.85**	**PVC – Resource and data management capability**	Mean (PVC27,30,31, 32,33)	**0.84**
	Configuration – Structure and incentives	Mean (PVC 35 to 37)	**0.79**			
	Culture – Values, Belief and behavior	Mean (PVC 38 to 40)	**0.90**	**PVC – Business clairvoyance**	Mean(PVC21,2 2)	**0.70**

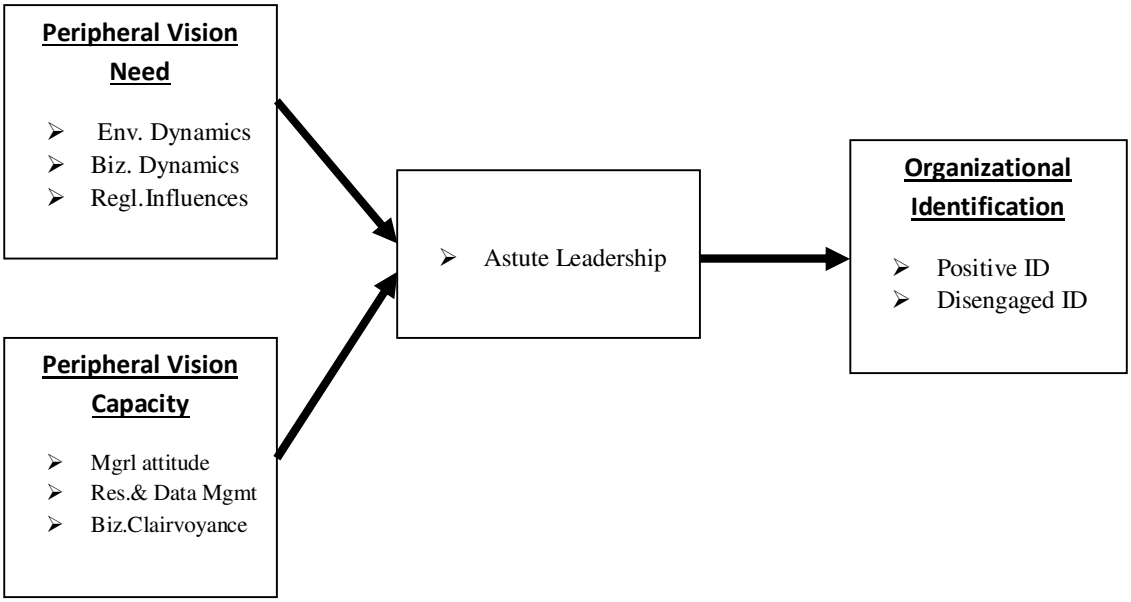
Bolman and Deal's Leadership framework	Structural framework	Mean (BD1, 5,9,13,17,21 ,25,29)	**0.94**	**Astute Leadership**	Mean(BD 1,2,3,11,16,19, 23)	**0.91**
	Human Resource framework	Mean(BD2,6 ,10,14,18,22 ,26,30)	**0.95**			
	Political framework	Mean(BD3,7 ,11,15,19,23 ,27,31)	**0.93**			
	Symbolic framework	Mean(BD4,8 ,12,16,20,24 ,28,32)	**0.96**			
Organizational Identification	Positive identification	Mean(OID1, 5,9,13)	**0.76**	**Disengagement**	Mean (OID3,4,6,7,10 ,11,12,14,15,1 6)	**0.90**
	Disidentification	Mean(OID2, 6,10,14)	**0.77**			
	Ambivalent identification	Mean(OID3, 7,11,15)	**0.81**	**Positive identification**	Mean (OID1,5,9,13)	**0.76**
	Neutral identification	Mean(OID4, 8,12,16)	**0.78**			

These new variables were named after careful evaluation of each of the measurement items and suitably terming them to signify the attribute that is being measured.

Since these optimized variables, when evaluated exhibited a good and robust measurement with a significant reliability and consistency, they were used for all the statistical evaluation and analysis that are explained in the subsequent chapters.

In line with the optimized variables, the model that was proposed for exploration is as given in Figure 5(1):

Figure 5(1)-Proposed model with new variables



Now we restrict ourselves to the detailed analysis of these factor-analyszed variables only, as we have discussed the analysis of the original variable sets, which eventually led to exploratory factor analysis and optimized into nine latent variables from measurement of 53 items.

5.3 Assessment of factor analyzed variables

The optimized variables and corresponding measurement items were evaluated using various statistical tools. The peripheral vision need construct was identified with three variables, namely, **Environmental dynamics, Business dynamics,** and **Regulatory influences.** The peripheral vision capacity construct was identified with three variables, namely, **Business clairvoyance, Resource and data management**

capability, and **Managerial attitude towards the periphery.** The respective revised measurement items for these variables are as given in Tables 5(6) and 5(7), respectively, for need and capacity as below:

Table 5(6)-Revised measurement items of peripheral vision need

1. Public visibility of industry in/by media	**PVN-Environmental Dynamics**
2. Dependence on global economy	
3. Number of surprises of high impact events in the past three years	
4. Behavior of key competitors, suppliers and partners	
5. Posture of key rivals	
6. Susceptibility to macroeconomic forces	
7. Dependence on financial markets	
8. Customer and Marketing channel intermediary power (refers to the level of influence they can have on your business.	
1. Industry/Business structure	**PVN-Business Dynamics**
2. Marketing Channel - meaning the modality of reaching your product/services to the customer/end user.	
3. Market structure - refers to the way your product/services are segmented.	
4. Enabling technologies - refers to the complexity and number of technologies directly impacting the business.	
5. Market growth pattern	
6. Speed and direction of technological change	
1. Government regulations (Central; State, etc.)	**PVN-Regulatory influences**
4. Dependence on government policies and political access	
5. Sensitivity to social changes (fashion, values, etc.)	
6.Potential for major disruptions	

Table 5(7)-Revised measurement items of peripheral vision capacity

1. Importance of periphery in business unit leader's agenda	PVC-Business Clairvoyance
2. Time horizon overall of business unit managers.	
1. Number of alliance partners	PVC-Resource & Data Management Capability
2. Integration of customer and competitor information into future technology platform and new product development plans	
3. Quality of data about events and trends at periphery	
4. Access to data across organizational boundaries	
5. Use of database for existing business	
1. Their willingness to test and challenge the basic assumptions	PVC-Managerial attitude towards periphery
2. Accountability in sensing and action on weak signals	
3. Early warning systems and procedures	
4. Incentives to encourage and reward wider vision	
5. Readiness to listen to reports from scouts from the periphery	
6. Willingness of customer-contact people to forward market information	
7. Sharing of information about periphery across functions	

The Bolman & Deal's leadership framework resulted in a single variable suitably named as Astute Leadership and the measurement items are given in Table 5(8):

Table 5(8)-Revised measurement items of Astute Leadership

1. Thinks clearly and logically	**Astute Leadership**
2. Shows high levels of support and concern for others	
3. Shows exceptional ability to mobilize people and resources to get things done	
4. Is unusually persuasive and influential	
5. Is highly imaginative and creative	
6. Is very effective in getting support from people with influence and power	
7. Is politically very sensitive and skillful	

The Organizational identification construct resulted in two variables and were suitably named as Organizational Identification: Positive Identification and Organizational Identification: Disengaged Identification. The measurement items are given in Table 5(9):

Table 5(9)-Revised measurement items of organizational identification

1. This business unit does shameful things to powerless stakeholders.	**Disengagement**
2. It really doesn't matter to me what happens to this business unit.	
3. I' am torn between loving and hating this business unit.	
4. I find this business unit to be disgraceful in placating powerful stakeholders.	
5. I feel conflicted about being a part of this business unit.	
6. I want people to know that I disagree with how this business unit behaves.	
7. This business unit doesn't have much personal meaning to me	
8. I have contradictory feeling about this business unit.	
9. I have been ashamed of what goes on in this business unit.	
10. I don't concern myself much with this business unit's problem.	
1. When someone criticizes the business unit, it feels like a personal insult	**Positive Identification**
2. I am very interested in what others think about my business unit.	
3. When someone praises this business unit, it feels like a personal compliment	
4. If a story in the media criticized this organization or my business unit, I would feel embarrassed	

5.4 Literature Survey on Revised Variable of Astute Leadership

The creation of new variable 'Astute Leadership', as an outcome of exploratory factor analysis during the statistical data analysis necessitated a fresh literature survey into this variable to understand the research work done earlier. A detailed literature survey was therefore undertaken to explore the research work done in the past 15 year period. A peek into the earlier work done in the area of astute leadership returned about 254 results in the Google scholar search. Some of the key references were identified and the respective literatures were studied.

According to Hitt and Duane (2002), navigating effectively in the twenty-first century's dynamic, complex uncertain competition, environment requires astute leadership. Boxall (1996) found that firms with astute leadership at the top, that combine this strength with deep employee involvement in strategic decision making, appear to be more effective. However for those organizations that still are struggling to survive, the adrenaline response is not atypical. It is a way of life. This advantage could be leveraged by astute leadership (Bonnstetter, 2000). Astute leadership has been associated with mainly the political leadership, though there are many references in other areas too. In the political arena, it is considered important to be clever and intelligent to retain one's leadership position. Political leadership has always been critically associated with decision making, and adaptive management is not a substitute for astute leadership and decision making (Menjel, 2006). China's resurgence as a major force in the global economy is a recent event that has a lot to do with its current political leadership. China's astute leadership is already making

strategic investments in taking the country to the next level of the global economy (Altmann, 2009).

The specific need for dynamic and astute leadership in the department has been expressed by Dikshit (2007) in the field of medical pharmacology and nursing.

We are in an era when astute leadership in exploiting information technology will create a competitive edge in the market place (Boxali, et al., 2000). A cursory look into the last 15 years indicates a paucity of studies in the area of astute leadershipwith reference to the peripheral vision and organizational identity in the context of knowledge workforce. Where the workforce is more and more composed of knowledge workers and information handlers, the leverage of astute leadership is even greater (Gerrity & Rockhart, 1984).

Identifying core leadership competencies aligned to the requirements of the emerging business, further focused leaders focus on long term results and has high levels of peripheral vision and sensory activity (Brien'O & Robertson, 2009). However according to Titus Jr. et al. (2010), explicitly planned strategy not aligned to the organizational objectives, can act as blinders, designed to focus directions and block out peripheral vision. Bessant, et al. (2008) opines that weak ties and peripheral vision are important to balance two diametrically opposed organizational qualities – adaptability and alignment. According to Schwarz, et al. (2006), vision acts as an alignment device that includes peripheral vision as one key aspect. According to Winter, et al. (2010), the best leadership practices develop engaged employees who in turn have strong feeling of collective and individual efficacy. Engaged employees

were observed to have much higher commitment and alignment with the organization's values and work practices leading to higher performance outcomes.

Absence of astute leadership that lead to poor leadership, appears to be maximizing the disengagement, when levels of trust between managers and subordinates are low (Pech & Slade, 2006). Banai and Reisel (2007) have examined the relationship between supportive leadership and worker alienation in six countries viz. Cuba, Germany, Hungary, Israel, Russia, and USA. Supportive leadership, here, could be presumed to be associated with the astute leadership. Another aspect of disengagement, low motivation, and quitting, especially during turbulent times requires leadership skills and better communication of the "unknown" (Collins, 2010). Sosik (2005) has tried to study the role of personal values of charismatic leadership of corporate managers and the organizational citizenship behavior of the subordinates. These attributes do have an association to astute leadership and vision and alignment.

Ryde (2008) in his study found that, more often than not, the consequences of a poor thought leadership leaves people feeling demoralized and disengaged which is often ignored at some cost. However, employee engagement requires leadership commitment from the top through establishing clear mission, vision, and values Markos and Sridevi (2010). The study done in a quick service restaurant indicates that employee alienation was not necessarily caused by technology employed or nature of job, but by the managerial and leadership styles and practices.

It is evident from the above that even in the recent past, there has been lots of studies done on the leadership attributes, remotely connected to astute leadership, as defined in our study, in relation to attributes associated with organizational engagement,

employee alienation, and organizational vision. However, a specific studyin the knowledge work space continues to be a major gap and requires attention. This study attempts to bridge this gap.

5.5 Data Analysis – Basic

The operationalized variables consisted of nine latent variables with 53 measuring items, selected from the raw data from the survey. The descriptive information on the data is given in Table 5(10).

Table 5(10) - Descriptive information

Gender

	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	164	67.2	67.2	67.2
	Female	80	32.8	32.8	100.0
	Total	244	100.0	100.0	

Organizational classification

N	Valid	244.00	**Peripheral Vision Classification Profile**					
	Missing	.00		Classification	Frequency	Percent	Valid Percent	Cumulative Percent
	Mean	2.49	1	Vulnerable	54	22.1	22.1	22.1
	Std. Deviation	1.00	2	Vigilant	55	22.5	22.5	44.7
	Minimum	1.00	3	Focused	97	39.8	39.8	84.4

N	Valid	244.00	**Peripheral Vision Classification Profile**					
	Missing	.00		Classification	Frequency	Percent	Valid Percent	Cumulative Percent
	Mean	2.49	1	Vulnerable	54	22.1	22.1	22.1
	Std. Deviation	1.00	2	Vigilant	55	22.5	22.5	44.7
	Minimum	1.00	3	Focused	97	39.8	39.8	84.4
	Maximum	4.00	4	Neurotic	38	15.6	15.6	100.0
244				Total	244	100.0	100.0	

The latent variables were created by factor scored measurement items and various statistical analyzes were carried out. The correlation coefficients along with the reliability scores (Cronbach's α) are given for both mean scored variables and factor scored variables in Tables 5(11) and 5(12).

Table 5(11)-Correlation results among optimized mean scored variables

S.No	Variables	1	2	3	4	5	6	7	8	9
1	Peripheral Vision Need – Environmental dynamics	**0.82**								
2	Peripheral Vision Need – Business dynamics	0.43**	**0.73**							
3	Peripheral Vision Need – Regulatory influences	0.48**	0.41**	**0.68**						
4	Peripheral Vision capacity – Managerial attitude towards periphery	0.26**	0.16*	0.15**	**0.90**					
5	Peripheral vision capacity – Resource and data management capability	0.35**	0.29**	0.26**	0.64**	**0.84**				
6	Peripheral Vision capacity – Business clairvoyance	0.55**	0.37**	0.32**	0.34**	0.38**	**0.70**			
7	Astute Leadership	0.12	- 0.01	0.06	0.51**	0.36**	0.16*	**0.91**		
8	Organizational Identification - Disengaged identification	- 0.08	0.12	0.22**	- 0.29**	- 0.22**	- 0.09	- 0.37**	**0.90**	
9	Organizational Identification – Positive identification	0.26**	0.11	0.03	0.05	0.13*	0.16*	0.20**	- 0.16*	**0.76**

Coefficients > |0.20| - ** Very strongly significant at $p \leq 0.001$; Coefficients > |0.12| - * strongly significant at $p \leq 0.01$

Coefficients > |0.05| - Moderately significant at $p \leq 0.05$: Numbers in the diagonal boxes represents the Cronbach's α

Table 5(12)-Correlation results among optimized weight scored variables

S.No	Variables	1	2	3	4	5	6	7	8	9
1	Peripheral Vision Need – Environmental dynamics	**0.82**								
2	Peripheral Vision Need – Business dynamics	0.00	**0.73**							
3	Peripheral Vision Need – Regulatory influences	0.00	0.00	**0.68**						
4	Peripheral Vision capacity – Managerial attitude towards periphery	0.11	0.03	- 0.09	**0.90**					
5	Peripheral vision capacity – Resource and data management capability	0.21	0.15	0.08	0.00	**0.84**				
6	Peripheral Vision capacity – Business clairvoyance	0.36	0.25	0.28	0.00	0.00	**0.70**			
7	Astute Leadership	0.14	- 0.01	- 0.03	0.47	0.20	0.13	**0.91**		
8	Organizational Identification - Disengaged identification	- 0.14	0.09	0.26	- 0.27	- 0.11	- 0.02	- 0.35	**0.90**	
9	Organizational Identification – Positive identification	0.25	0.04	0.00	- 0.06	0.11	0.07	0.15	0.00	**0.76**

Coefficients > |*0.20*| - ** Very strongly significant at $p \leq 0.001$; Coefficients > |*0.12*| - * strongly significant at $p \leq 0.01$

Coefficients > |*0.05*| - Moderately significant at $p \leq 0.05$: Numbers in the diagonal boxes represents the Cronbach's α

5.6 Multivariate Data Analysis

Multivariate analytical techniques describe simultaneous relationships among two or more study variables. Multivariate analysis concentrates on the degree of relationships, among the variables, while univariate analysis restricts its focus on the levels or averages and distribution or variance.

This chapter explains the results of the multivariate analysis performed on the collected data, such as multiple regressions, correlation, and Structure Equation Modeling techniques, post optimization of the variables using exploratory factor analysis as explained in the earlier chapters.

5.6.1 Correlation Analysis

Correlation scores are parameters that describe the degree (strength) and direction of relationships between two variables. However correlation does not imply causation.

Since the exploratory factor analysis is performed on the initially identified measurement items, the correlations in the resulting optimized measurement items and variables do not indicate multicollinearity. The results of the correlations among the optimized variables are given in Tables 5(13) and 5(14). The numbers in BOLD, across the diagonals, are the Cronbach's α that indicates the reliability of these optimized variables. The least being 0.68 for peripheral vision need-regulatory influences and the highest being 0.91 for astute leadership. The scales used for research purpose should have a minimum reliability of 0.60 (Nunnally, 1978). These exhibit a significantly better reliability score for our studies.

Table 5(13)-Multiple regression – [with mean scored variables]

Dependent Variable* (Model summary)	Independent Variable(s)*	Coefficient Beta (β)	Significance (p)
Astuteleadership (R Square: 0.28; Adjusted R Square: 0.26; Sig. : 0.000; F value:11.45)	Gender	**-0.117**	**0.046**
	Marital Status	-0.022	0.705
	PVNEnvdynamics	0.008	0.906
	PVNBusinessdynamics	**-0.116**	**0.080**
	PVNRegultoryinfluences	-0.015	0.813
	PVCMngrattudtwdperphry	**0.469**	**0.000**
	PVCResndatamgmtcapblty	0.101	0.189
	PVCBizclairvynce	0.000	0.996
OIDdisnegdidntfcn (R Square: 0.268; Adjusted R Square: 0.23; Sig. : 0.000; F value: 9.05)	Gender	**- 0.119**	**0.048**
	Marital Status	-0.007	0.906
	Astuteleadership	**-0.293**	**0.000**
	PVNEnvdynamics	**-0.125**	**0.086**
	PVNBusinessdynamics	-0.100	0.138
	PVNRegultoryinfluences	**0.277**	**0.000**
	PVCMngrattudtwdperphry	-0.077	0.344
	PVCResndatamgmtcapblty	-0.094	0.229
	PVCBizclairvynce	-0.047	0.507
OIDpositveidntfcn (R Square: 0.12; Adjusted R Square: 0.09; Sig. : 0.000; F value: 3.65)	Gender	0.069	0.291
	Marital Status	-0.028	0.661
	Astuteleadership	**0.246**	**0.001**
	PVNEnvdynamics	**0.269**	**0.001**
	PVNBusinessdynamics	0.037	0.613
	PVNRegultoryinfluences	-0.086	0.222
	PVCMngrattudtwdperphry	**-0.195**	**0.028**
	PVCResndatamgmtcapblty	0.050	0.554
	PVCBizclairvynce	0.035	0.647

* *Refer list of abbreviations/symbols*

Table 5(14)-Multi ple regression – [with factor scored variables]

Dependent Variable* (Model summary)	Independent Variable(s)*	Coefficient Beta (β)	Significance (p)
FASAstuteleadership (R Square: 0.30; Adjusted R Square: 0.27; Sig. : 0.000; F value:12.43)	Gender	**-0.110**	**0.060**
	Marital Status	-0.047	0.404
	FASPVNndEnvdynamics	-0.031	0.625
	FASPVNndBizdynamics	**-0.116**	**0.052**
	FASPVNndRegultryinfluences	-0.067	0.253
	FASPVCndMngrlattitudetwdsperiphery	**0.475**	**0.000**
	FASPVCndRsrcdatamgmtcapability	**0.239**	**0.000**
	FASPVCndBizclairvoyance	**0.181**	**0.006**
FASDisengdidentfcn (R Square: 0.23; Adjusted R Square: 0.20; Sig. : 0.000; F value: 7.70)	Gender	**-0.102**	**0.098**
	Marital Status	-0.013	0.823
	FASPVNndEnvdynamics	-0.056	0.394
	FASPVNndBizdynamics	0.101	0.107
	FASPVNndRegultryinfluences	**0.252**	**0.000**
	FASPVCndMngrlattitudetwdsperiphery	**-0.116**	**0.084**
	FASPVCndRsrcdatamgmtcapability	-0.073	0.254
	FASPVCndBizclairvoyance	-0.065	0.348
	FASAstuteleadership	**-0.260**	**0.000**
FASPositvdntfcn (R Square: 0.11; Adjusted R Square: 0.08; Sig. : 0.000; F value:3.23)	Gender	0.068	0.305
	Marital Status	-0.032	0.616
	FASPVNndEnvdynamics	**0.276**	**0.000**
	FASPVNndBizdynamics	0.077	0.254
	FASPVNndRegultryinfluences	0.016	0.805
	FASPVCndMngrlattitudetwdsperiphery	**-0.198**	**0.006**
	FASPVCndRsrcdatamgmtcapability	-0.014	0.842
	FASPVCndBizclairvoyance	-0.076	0.305
	FASAstuteleadership	**0.217**	**0.003**

∗ *Refer list of abbreviations/symbols*

The results indicate that none of the variables exhibit correlation coefficient over 0.50 thereby proving the effectiveness of the exploratory factor analysis. However, six coefficients reflected a very strongly significant relationship among the study variables. These are astute leadership, peripheral vision capacity-resource and data management capability, peripheral vision capacity-business clairvoyance, positive organizational identification, and disengaged organizational identification with other

study variables. Peripheral need variables, by and large, seems to be exhibiting low to absence of relationships with other study variables.

5.6.2 Multiple Regression Analysis

Multiple regressions study the statistical relationship between a dependent variable and two or more independent variables. The coefficient tells about the unique effect size for each variable, while the R Square or coefficient of multiple determination measures the strength of the association. Standardization of the data by assuming a zero intercept produces regression coefficients that are also know as beta weights. However, the significance of the overall regression equation is tested by the overall F test. R Values are the numbers representing the correlation between the observed values and the predicted values, based on the regression equation obtained. They are used to find out how well an independent variable is able to predict the dependent variable. R Square of 0.10-0.20 is generally acceptable in the social science research (Tripathi, 2008). When there are many independent variables, adjusted R square is used, as it takes care of the existence of multiple independent variables.

In this study, the initial regression exercise was performed with 15 variables. The results led to a situation requiring an exploratory factor analysis, due to incidence of high multicollinearity. These have been explained already in Chapter 4.

There were nine optimized variables resulting from exploratory factor analysis. The variables were formed using mean scores of the identified individual measurement items and also using factor scores of these items. Regression analysis was performed on these nine variables using ENTER method. In the ENTER option, all the independent variables were forcibly entered into the equation together for regression.

The other method of multiple regression is SEQUENTIAL or HIERARCHIAL multiple regression, wherein the independent variables were entered sequentially by the researcher; the sequence being governed by strong theoretical basis.

Yet another method of multiple regressions is STATISTICAL or STEPWISE regression, wherein the independent variables were entered purely on the statistical criteria basis. This method is widely controversial, it cannot be used unless it is supported by strong theoretical reasons. However this method can give an insight into the effect size of each predictor variable which along with the theoretical considerations can lead to a robust model.

This study is an exploratory model study. The regression was performed initially with enter method with all variables and subsequently with the variables having significant effects.

Though, demographic data was collected from the respondents during the survey, the review of the results indicated that except for the demographic data of marital status and gender, the other details were widely incoherent and incomplete to rely upon them for any statistical analysis and substantive conclusions. Hence these were excluded from further study.

In this study, regression exercise was carried out in two stages. First the Astute Leadership was used as the dependent variable with the peripheral vision capacity, peripheral vision need, gender, and marital status as independent variables. In the second level, the disengaged organizational identification and positive organizational identification were used as the dependent variables with peripheral vision need, peripheral vision capacity, astute leadership, gender and marital status as independent variables.

The summary of the results of the regression study (Tables 5(13) and 5(14)) were compared, and it was found that the factor scored variables reflected more extensive effect by the independent variables than the mean scored variables.

According to Morris and Guertin (1977), shrinkages are found to be lesser for factor scores than those for the data level variable. The actual correlation describing the accuracy of prediction was higher for factor scores than for data level variables, when common factor scores were compared to unfactored data level variables as predictors in terms of the correlation of a criterion with the predicted value in a multiple regression equations. Therefore in the second level regression analysis with selected independent variables based on the first regression, only factor scores variables were used. Outcomes are also discussed only on these regression values.

5.6.2.1 Multiple regression of astute leadership variable

This subsection analyzes the results of regression analysis of astute leadership as dependent variable and peripheral vision capacity: managerial attitude towards the periphery, resource and data management capability, and business clairvoyance as dependent variables.

Managerial attitude towards the periphery (β=0.47) and resource and data management capability (β=0.20) of the peripheral vision capacity exhibited a very strong relationship (p=0.000) with the variable astute leadership. Business clairvoyance (β = 0.13) of the peripheral vision capacity had a strong relationship (p=0.02) with the astute leadership. The three variables collectively explain about 26% of the variance of astute leadership. These results are presented in Table 5(15).

Table 5(15)-Multivariate analysis outputs-Astute Leadership

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.522[a]	.272	.263	.85844315	.272	29.916	3	240	.000	1.978

a. Predictors: (Constant), FASPVCndBizclairvoyance, FASPVCndRsrcdatamgmtcapability, FASPVCndMngrlattitudetwdsperiphery

b. Dependent Variable: FASAstuteleadership

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	66.138	3	22.046	29.916	.000[a]
	Residual	176.862	240	.737		
	Total	243.000	243			

a. Predictors: (Constant), FASPVCndBizclairvoyance, FASPVCndRsrcdatamgmtcapability, FASPVCndMngrlattitudetwdsperiphery

b. Dependent Variable: FASAstuteleadership

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-1.333E-17	.055		.000	1.000
FASPVCndMngrlattitudetwdsperiphery	.465	.055	.465	8.444	.000
FASPVCndRsrcdatamgmtcapability	.197	.055	.197	3.570	.000
FASPVCndBizclairvoyance	.131	.055	.131	2.387	.018

a. Dependent Variable: FASAstuteleadership

5.6.2.2 Multiple regressions of organizational identification variables

This subsection analyzes the results of the two regression analyzes involving disengaged organizational identification and positive organizational identification as predictor variables with peripheral vision variables and astute leadership as independent variables.

Disengaged organizational identification

The gender (β=-0.14) was found to be negatively related to the disengaged identification moderately (p=0.20). But the variables regulatory influences of the peripheral vision need construct (β=0.23) was strongly related (p=0.000) and astute leadership variable (β=-0.35) exhibited a strong negative relationship (p=0.000) to the disengaged identification. The three variables together explain about 19% of the variance in the disengaged organizational identification. The results are exhibited in Table 5(16).

Table 5(16)- Multivariate analysis outputs-Disengaged OID

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.448[a]	.201	.191	.89948851	.201	20.114	3	240	.000	2.067

a. Predictors: (Constant), FASAstuteleadership, FASPVNndRegultryinfluences, Gender

b. Dependent Variable: FASDisengdidentfcn

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.821	3	16.274	20.114	.000[a]
	Residual	194.179	240	.809		
	Total	243.000	243			

a. Predictors: (Constant), FASAstuteleadership, FASPVNndRegultryinfluences, Gender

b. Dependent Variable: FASDisengdidentfcn

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.386	.174		2.220	.027
	Gender	-.291	.124	-.137	-2.352	.019
	FASPVNndRegultryinfluences	.231	.058	.231	3.965	.000
	FASAstuteleadership	-.346	.058	-.346	-5.986	.000

a. Dependent Variable: FASDisengdidentfcn

Positive organizational identification

In the case of positive organizational identification, the only variable that seems to be associated with is the environmental dynamics of the peripheral vision need construct. None of the other variables exhibited any strong or even moderate association. The environmental dynamics (β=0.25) exhibited a very strong positive relationship (p-0.000) with positive organizational identification. The results are given in Table 5(17).

Table 5(17)- Multivariate analysis outputs-Positive OID

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.249[a]	.062	.058	.97047997	.062	16.008	1	242	.000	2.050

a. Predictors: (Constant), FASPVNndEnvdynamics

b. Dependent Variable:
FASPositivdentfcn

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.077	1	15.077	16.008	.000[a]
	Residual	227.923	242	.942		
	Total	243.000	243			

a. Predictors: (Constant), FASPVNndEnvdynamics

b. Dependent Variable: FASPositivdentfcn

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.893E-17	.062		.000	1.000
	FASPVNndEnvdynamics	.249	.062	.249	4.001	.000

a. Dependent Variable: FASPositivdentfcn

5.7. Model Testing Using Structural Equation Modeling

Structural equation modeling (SEM) is a series of statistical methods, which allow studying complex relationships between one or more independent variables with one

or more dependent variables (Byrne, 1998). In a way we could say that SEM allows one to perform some type of multilevel regression/ANOVA on factors.

A **structural model** is a part of the entire structural equation model diagram, which is used to relate all of the variables (both latent and manifest) needed to account for in the model.

A **measurement model** is a part of the entire structural equation model diagram, which is essential, if there are latent variables in the model. This part of the diagram is analogous to factor analysis and includes all individual items, variables, or observations that "load" onto the latent variable, their relationships, variances, and errors.

Together, the structural model and the measurement model form the entire **structural equation model**. This model includes everything that has been measured, observed, or, otherwise, manipulated in the set of variables examined. A **recursive** structural equation model is a model in which causation is directed in one single direction. A **non-recursive** structural equation model has causation which flows in both directions, at some parts of the model.

The primary goal of SEM is to determine and validate a proposed causal process and/or model. Therefore, SEM is a confirmatory technique. (Notes on SEM, 2010) SEM is an extension of the general linear model that enables a researcher to test a set of regression equations simultaneously. In SEM, a model can never be accepted; they can only **fail to be rejected**. A regression analysis has some limitations like multiple dependent or outcome variables are not permitted, mediating variables cannot be included in the same single model as predictors, each predictor is assumed to be

measured without error and multicollinearity among the predictors may hinder result interpretation. However SEM using AMOS can fit models that are not subject to these limitations (SEM AMOS, 2002).

When it comes to the use of SEM for studying the relationship, various fit indices are used by the researchers and there are always multiple views on '*what indices would indicate a good model fit?*' To date, there is no agreement on this aspect. No single index is considered indicative of the best fit and there are no '*widely agreed*' threshold value, accepted to distinguish between a "correct" and an "incorrect" model (Di Natale, 2002).

According to Hu and Beutler (1999), Root Mean Square Error of Approximation (RMSEA) values below 0.06 and Tucker Lewi's Index (TLI) values of 0.95 or higher, indicate good model fit. However Brown and Cudeck (1993) differ and opine that values of 0.08 or smaller indicate an acceptable model fit. But Chan (2005), based on his study, advocates that a χ^2 value close to zero with $p > 0.05$ indicates a good fit. He also asserts that a comparative fit index (CFI) of at least > 0.90 is an acceptable model fit. According to his studies, RMSEA < 0.06 is an acceptable model fit.

In the recent years, the area of fit indices has come under severe scrutiny with some authors calling for their complete abolishment (Barrett, 2007). With the abundance of fit indices available to the researcher and the wide disparity in agreement on not only which indices to report but also what the cutoffs for various indices actually are, available information is overwhelming for the researcher (Hooper, et al., 2008).

Barrett (2007) has been very strongly vocal on the appropriate usage of fit indices. He advocates SEM analyzes, based on samples of less than 200 should be rejected outright for publication, unless the population from which a sample is hypothesized to

be drawn, is itself small or restricted in size, like in medical research. According to him, model fit cannot be claimed via recourse to any published "threshold-level recommendation." In the words of Reise et al. (1993, p. 554) "….. *no Confirmatory Factor Analysis (CFA) model should be accepted on statistical grounds alone; theory, judgment, and persuasive argument should play a key role in defining the adequacy of any estimated CFA model…*" Barrett (2007) concluded his study stating that SEM is a modeling tool and not a tool for "descriptive" analysis. If it is used, then model fit testing and assessment are paramount.

SEM is seen as a marriage of path analysis and factor analysis by Keller (2006) who also points out that they have all the weaknesses of the two combined parent techniques. They rest on many assumptions, some testable and some not. According to him, they are not seen too often outside the academics press, as they would require quite a bit of audience education.

While fit indices are a useful guide, a structural model should also be examined with respect to substantive theory. Allowing model fit to drive the research process, defeats the original theory testing purpose of Structure Equation Modeling (Hooper, et al., 2008).

In the myriad of available fit indices with equally multiple and often conflicting opinions on the adequacy of using these indices, selecting appropriate indices for reporting becomes a challenge. But we have relied upon Hooper, et al. (2008) for the purpose of reporting fit indices, based on the rationale they have considered, wherein they conclude that it is sensible to include the Chi-square statistics, its degrees of freedom and p value; the RMSEA and its associated confidence interval; the SRMR, the CFI and one parsimony fit index such as the PNFI. These have been found to be

the most insensitive to sample size, model misspecification, and parameter estimates, when compared to other indices. We have therefore considered using SEM from an exploratory perspective to find out any interesting observation between the studied variables, which could probably give lead to further intensive research.

Another popular incremental fit indices that are parsimony fit indices, also known as 'information criteria' indices, widely used for non-nested and non-hierarchical models estimated with the same data that indicates to the researcher which of the models is Akaike Information Criterion (AIC) and Consistent version of AIC (CAIC) which adjusts for sample size (Akaike, 1974). As there is no identified cutoff suggested, the smaller values suggest good fitting Hooper, et al. (2008). However their use is much more reliable when the sample size is at least 200 (Diamantopoulos and Siguaw, 2000).

After reviewing the available literature and going through the nature of our exploratory study and types of variables, we have identified the following indices (Table 5(18)) to be selected for discussion, based on the recommended limits by Hooper, et al. (2008) and Werner (2010). While the entire outputs of the SEM analysis is voluminous, we would restrict our research discussion to only these fit indices.

Table 5(18) -List of fit indices selected and their thresholds

FIT INDEX	GOOD FIT	ACCEPTABLE FIT
Normed Chi-square [χ^2/df]	**$0 \leq \chi^2/df \leq 2.0$**	**$2.0 \leq \chi^2/df \leq 3.0$**
RMSEA	**$0 \leq RMSEA \leq 0.05$**	**$0.05 \leq RMSEA \leq 0.08$**
Adjusted Goodness-of-Fit Index (AGFI)	**$0.90 \leq AGFI \leq 1.0$**	**$0.80 \leq AGFI \leq 0.90$**
Root Mean square Residual (RMR)	**$0 \leq RMR \leq 0.05$**	**$0.05 \leq RMR \leq 0.10$**
Normed-Fit Index (NFI)	**$0.95 \leq NFI \leq 1.0$**	**$0.90 \leq NFI \leq 0.95$**
CFI	**$0.97 \leq CFI \leq 1.0$**	**$0.95 \leq CFI \leq 0.97$**
AIC	**≤ saturated AIC, OR smaller than AIC for comparison model**	**smaller than AIC for comparison model**
Consistent AIC (CAIC)	**smaller than CAIC for comparison model**	**smaller than AIC for comparison model**

5.7.1 SEM Analysis

Firstly, the measurement model of the optimized variable was studied. While there are many statistical software available for carrying out SEM, the widely used ones are LISREL, AMOS, SAS, and EQUS. AMOS-16 statistical software was selected and used for testing the structure equation model throughout this study.

According to a study carried out by Clayton and Pett (2008), using both LISREL and AMOS with the same data sets, despite minor differences, the final solutions could be replicated accurately in each program. Hence they advocate that researchers should select an SEM program based on their programming knowledge, ease of use and the research questions being addressed. Regardless of the program selected, the researcher can have confidence in the comparability of results.

Based on the observation of Small waters LISREL vs. AMOS (2010), most structural equation models can be set up and estimated with either AMOS or LISREL. Which program to use is often a matter of price, software support, and personal preference.

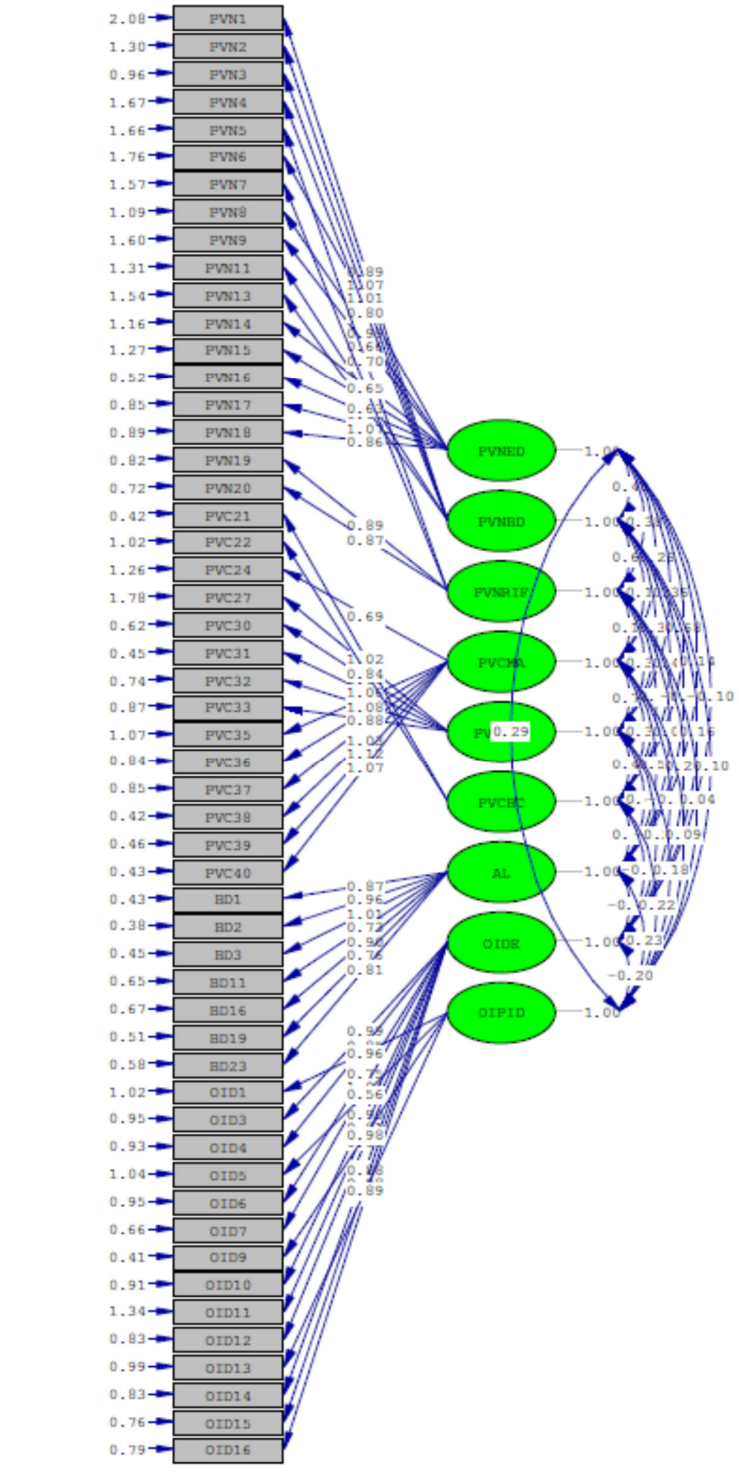
Some of the specific technical differences between AMOS and LISREL are listed below:

1. AMOS is written with teaching and consulting applications in mind. Fully-interactive path diagram input and display options make it easy to discuss and evaluate models with applied researchers and students. The interface is object oriented and follows the MS Windows standard guidelines for graphical user interfaces.
2. In AMOS, **the path diagram is the model,** and the user does not have to manipulate sets of equations or matrices with Greek names. Thus, modeling with AMOS is a complete change from the traditional ways of doing SEM that requires programming skills.
3. AMOS reads its model specifications, only in the form of equations or path diagrams. Even complex models can be drawn out as path diagrams, and at the press of a button (literally) AMOS goes ahead and calculates the estimates. The graphics are always in publication quality.
4. By the same token, and in contrast to LISREL, AMOS does not support model specifications in matrix notation.
5. Mean models and multi-group models, can be specified with either of the program. However, it can be done very easily with AMOS.
6. LISREL also features instrumental variables (IV) and two-stage least-squares (TSLS) as estimation methods, albeit in non-standard implementations. AMOS does not provide any IV or TSLS estimation methods.

Hence the choice of AMOS over LISREL is mainly on account of the above aspects with no specific preference or bias of one over the other.

The latent variables were tested in LISREL and the output of indices along with the path diagram is given in Figure 5(2). Also the measurement model was tested using AMOS software and the key results were compared. The output of indices along with the path diagram of the measurement model in AMOS is given in Figure 5(3).

Figure 5(2) - Measurement model in LISREL with outputs

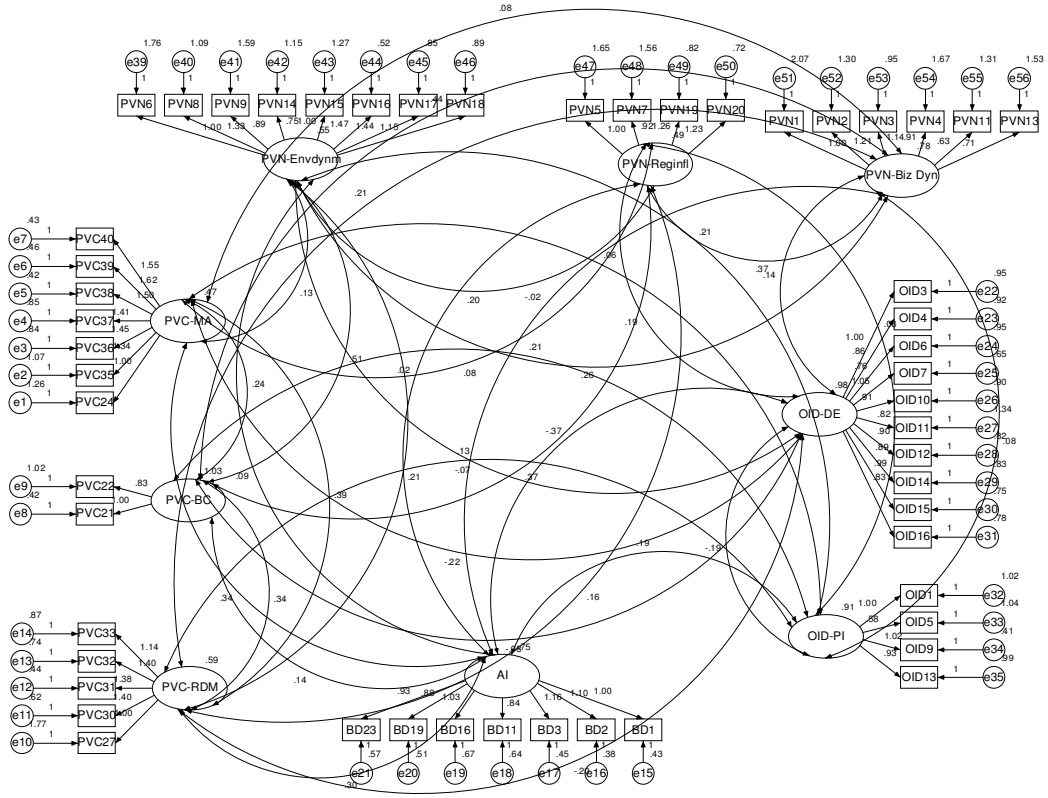


Chi-Square=2522.25, df=1289, P-value=0.00000, RMSEA=0.063

Figure 5(2) – cont'd [LISREL OUTPUTS [Truncated] - (Measurement Model)]

Degrees of Freedom = 1289	**Model AIC = 2806.25**
Minimum Fit Function Chi-square = 2551.67 (P = 0.0)	**Saturated AIC = 2862.00**
Normal Theory Weighted Least-Squares Chi-square = 2522.25 (P = 0.0)	Independence CAIC = 18811.62
Estimated Non-centrality Parameter (NCP) = 1233.25	**Model CAIC = 3444.85**
90 Percent Confidence Interval for NCP = (1094.53 ; 1379.72)	**Saturated CAIC = 9297.45**
Minimum Fit Function Value = 10.50	**Normed-Fit Index (NFI) = 0.86**
Population Discrepancy Function Value (F0) = 5.08	**Non-Normed-Fit Index (NNFI) = 0.92**
90 Percent Confidence Interval for F0 = (4.50 ; 5.68)	**Parsimony Normed-Fit Index (PNFI) = 0.81**
RMSEA = 0.063	**CFI = 0.93**
90 Percent Confidence Interval for RMSEA = (0.059 ; 0.066)	Incremental Fit Index (IFI) = 0.93
P Value for Test of Close Fit (RMSEA < 0.05) = 0.00	Relative Fit Index (RFI) = 0.85
Expected Cross-Validation Index (ECVI) = 11.55	Critical N (CN) = 135.28
90 Percent Confidence Interval for ECVI = (10.98 ; 12.15)	**Root Mean Square Residual (RMR) = 0.14**
ECVI for Saturated Model = 11.78	**Standardized RMR = 0.077**
ECVI for Independence Model = 76.43	**Goodness-of-Fit Index (GFI) = 0.72**
Chi-Square for Independence Model with 1378 Degrees of Freedom = 18467.27	**AGFI = 0.69**
Independence AIC = 18573.27	**Parsimony Goodness-of-Fit Index (PGFI) = 0.65**

Figure 5(3)-Measurement model in AMOS with outputs



Chi-Square – 2551.62; df – 1289; P value – 0.000; RMSEA – 0.063

AMOS OUTPUTS [Truncated] - (Measurement Model)

Model Fit Summary

CMIN

Model	NPAR	**CMIN**	**DF**	P	CMIN/DF
Default model	142	**2551.623**	**1289**	.000	1.980
Saturated model	1431	.000	0		
Independence model	53	7800.532	1378	.000	5.661

RMR, GFI

Model	**RMR**	**GFI**	**AGFI**	**PGFI**
Default model	**.137**	**.719**	**.688**	**.647**
Saturated model	.000	1.000		
Independence model	.390	.259	.230	.249

Baseline comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	**.673**	.650	.806	.790	**.803**
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony - Adjusted measures

Model	PRATIO	**PNFI**	PCFI
Default model	.935	**.629**	.752
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	1262.623	1122.792	1410.196
Saturated model	.000	.000	.000
Independence model	6422.532	6148.459	6703.280

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	10.501	5.196	4.621	5.803
Saturated model	.000	.000	.000	.000
Independence model	32.101	26.430	25.302	27.586

RMSEA

Model	**RMSEA**	LO 90	HI 90	PCLOSE
Default model	**.063**	.060	.067	.000
Independence model	.138	.136	.141	.000

AIC

Model	**AIC**	BCC	BIC	**CAIC**
Default model	**2835.623**	2916.766	3332.221	**3474.221**
Saturated model	**2862.000**	3679.714	7866.448	**9297.448**
Independence model	7906.532	7936.817	8091.881	8144.881

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	11.669	11.094	12.277	12.003
Saturated model	11.778	11.778	11.778	15.143
Independence model	32.537	31.409	33.693	32.662

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	131	135
Independence model	46	47

Minimization:	.219
Miscellaneous:	1.278
Bootstrap:	.000
Total:	1.497

From the above, it is clearly evident that the values for the indices from both the software are close, thereby justifying the claims of Clayton and Pett (2008). Hence our decision to carry out SEM preferring AMOS over LISREL, based on the above rationale stands validated, as far as methods were concerned.

Based on the theoretical considerations, the latent variables were studied. These were also evaluated based on the regression studies, and it was assessed that the variable peripheral vision need concerns an attribute that describes the perception of the knowledge workers about the external conditions that directly or indirectly impact the businesses, they are employed with. This is a measure of an attribute or condition

outside the control of individuals or organizations. They were unlikely to relate to any behavioral attributes like leadership skills or organization identification.

Hence for the purpose of studying models under SEM, they were excluded. Also one of the measures that were determined from the peripheral vision items was the classification of an organization as the one with "aligned vision" and misaligned vision" based on aggregate scores of the individual items. This exercise was done as below:

It can be observed that an organization is safely placed from a business perspective, when it is either "Vigilant" or "Focused" in which case it has recognized its peripheral vision needs and it has succeeded in matching its peripheral vision capacity, to address this need. However in cases where there is a misalignment on these factors, either the organization becomes "Vulnerable," thereby threatening its very survival or turns "Neurotic," where it overreacts to its environment and ends up wasting precious and rare resources, thereby rendering itself uncompetitive in the business. The peripheral vision need is a factor determined by the external conditions, depending on the nature of business and the environment it operates (quite beyond organization's control). Peripheral vision capacity is an attribute that renders an organization to ready itself to meet this challenge (well within its control) We have therefore categorized the organizations that are "Vigilant" and "Focused" as "**Aligned**" and those that are "Vulnerable" and Neurotic" as "**Misaligned",** for the purpose of our research.

However, a further comparative study was not done in SEM for misaligned group, since the aligned group was anticipated to give stronger insights of the association. Hence the models were studied for the aligned group and complete group to assess if

there were differences. The key objective of this exercise was to study if any differences existed in the perceptions of the knowledge workers, between the groups that perceived their organization as aligned and those that perceive otherwise from a peripheral vision perspective. The details of model fit indices are given in Table 5(19).

Table 5(19)-Fit indices of various models tested

MODEL Ref.→ Fit Parameter ↓	**MODEL 1**	**MODEL 2**	**MODEL 3**	**MODEL 4**	**MODEL 5**	**MODEL 6**
Group	Composite	Aligned PV	Aligned PV	Aligned PV	Aligned PV	Composite
Sample Size – N	244	152	152	152	152	244
Model Chi-square [χ^2]	1183.64	1132.70	1152.46	1145.67	1166.793	1278.308
Normed Chi-square - χ^2/df	2.140	2.045	2.08	2.087	2.121	2.31
RMSEA	0.069	0.083	0.085	0.085	0.086	0.073
Goodness-of-fit statistics – GFI	0.773	0.706	0.704	0.708	0.705	0.764
Adjusted GFI – A GFI	0.741	0.666	0.664	0.665	0.662	0.732
Root Mean square Residual – RMR	0.108	0.195	0.248	0.253	0.265	0.155
NFI	0.773	0.696	0.690	0.692	0.686	0.755
CFI	0.863	0.815	0.809	0.809	0.803	0.843
Parsimony NFI	0.718	0.648	0.643	0.639	0.634	0.703
Parsimony GFI	0.679	0.759	0.753	0.747	0.742	0.672

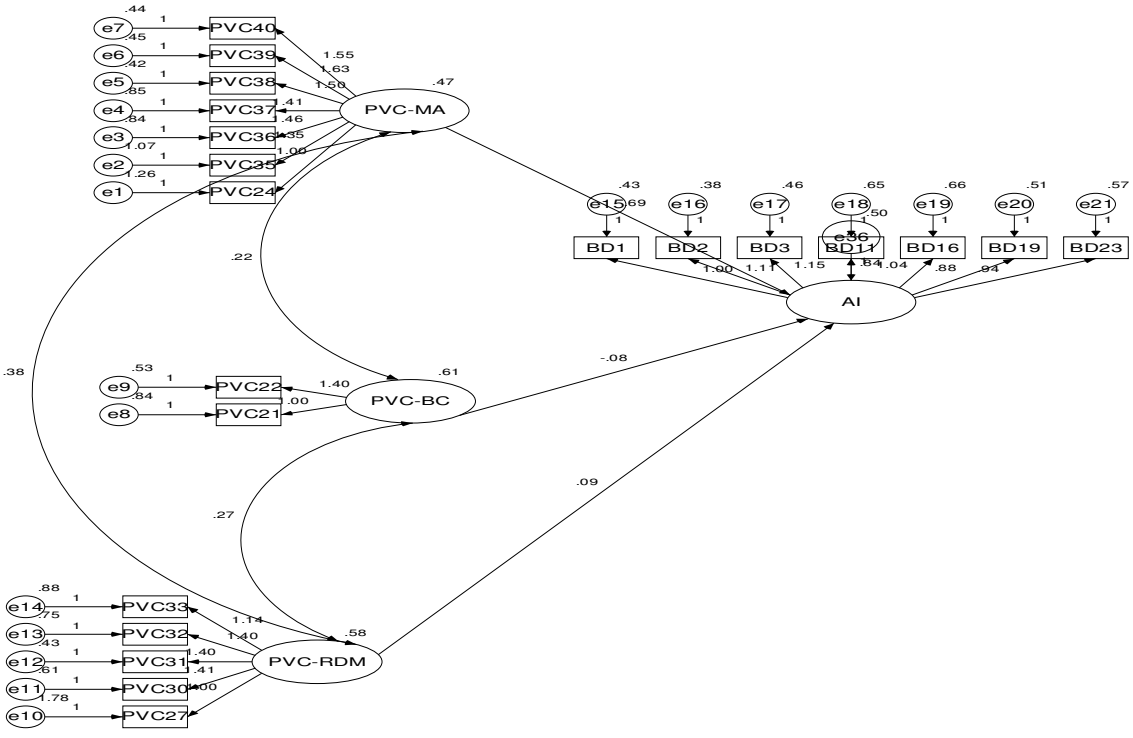
MODEL Ref.→ Fit Parameter ↓	**MODEL 7**	**MODEL 8**	**MODEL 9**	**MODEL 10**	**MODEL 11**
Group	Composite	Composite	Composite	Composite	Composite
Sample Size – N	244	244	244	244	244
Model Chi-square [χ^2]	1320.87	1321.49	1346.68	1203.24	1176.13
Normed Chi-square – χ^2/df	2.384	2.407	2.449	2.196	2.150
RMSEA	0.075	0.076	0.077	0.070	0.069
Goodness-of-fit statistics – GFI	0.761	0.762	0.759	0.771	0.775
Adjusted GFI – A GFI	0.727	0.727	0.724	0.737	0.741
Root Mean square Residual – RMR	0.221	0.228	0.232	0.123	0.103
NFI	0.746	0.746	0.741	0.769	0.774
CFI	0.834	0.833	0.827	0.858	0.864
Parsimony NFI	0.695	0.689	0.685	0.708	0.712
Parsimony GFI	0.669	0.664	0.662	0.671	0.673

It is clear from the explored models that by and large none of these models exhibited even an acceptable level of "fit."

Based on the leads obtained from regression exercise and also the previously tested models, two more models were proposed for further 'fit' testing in SEM.

The first model with peripheral vision capacity variables as independent variables and astute leadership as the dependent variable was tested for acceptable fit indices using AMOS-16 software. The path diagram with the extract of the text output of the testing are given below in Figure 5(4).

Figure 5(4)-Path diagram with AMOS output – AL with PVC



Model fit summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	48	**510.324**	**183**	**.000**	**2.789**
Saturated model	231	.000	0		
Independence model	21	3218.884	210	.000	15.328

∗ *Refer list of abbreviations/symbols*

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	**.094**	.827	**.782**	.655
Saturated model	.000	1.000		
Independence model	.592	.245	.169	.222

Baseline comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	**.841**	.818	.892	.875	**.891**
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony – adjusted measures

Model	PRATIO	PNFI	PCFI
Default model	.871	**.733**	.777
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	**.086**	.077	.095	.000
Independence model	.243	.235	.250	.000

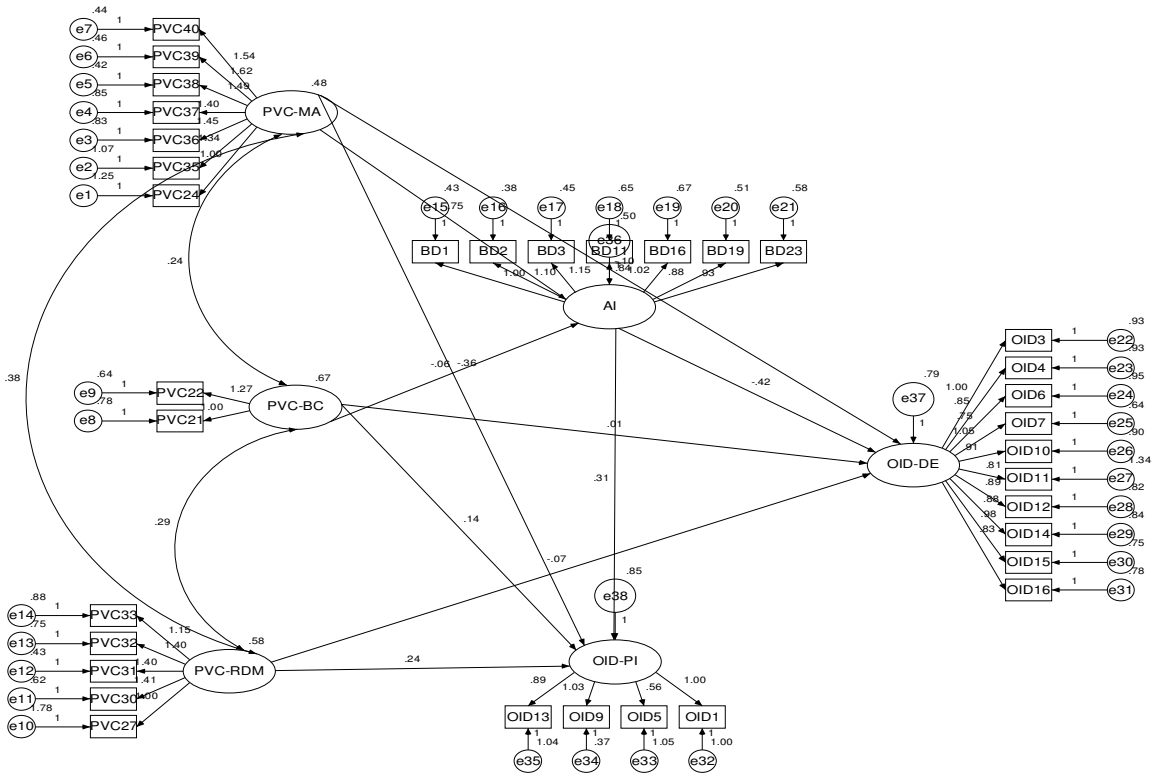
AIC

Model	AIC	BCC	BIC	CAIC
Default model	**606.324**	615.880	774.188	822.188
Saturated model	462.000	507.991	1269.846	1500.846
Independence model	3260.884	3265.065	3334.325	3355.325

Resulting Fit indices indicated an unacceptable model fit with a significant χ^2 value of 510.32 with 183 degrees of freedom. Results also indicated a RMSEA value of 0.086 that is beyond the acceptable value of less than 0.08. The other fit indices too were equally non-supportive of the model (χ^2 /df = 2.79, NFI = 0.84, RMR = 0.09, CFI = 0.89, PNFI = 0.73, AGFI = 0.78, AIC = 606.32).

Similarly, the second model with peripheral vision capacity variables and astute leadership variables as independent variables and disengaged and positive organizational identification variables as the dependent variable was tested for acceptable fit indices using AMOS-16 software. The path diagram and the extracted text output are given below in Figure 5(5).

Figure 5(5)-Path diagram with AMOS output – OID/AL/PVC



Model fit summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	83	**1176.134**	**547**	**.000**	**2.150**
Saturated model	630	.000	0		
Independence model	35	5207.666	595	.000	8.752

∗ *Refer list of abbreviations/symbols*

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	**.103**	.775	**.741**	.673
Saturated model	.000	1.000		
Independence model	.463	.250	.206	.236

Baseline comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	**.774**	.754	.865	.852	**.864**
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony – adjusted measures

Model	PRATIO	PNFI	PCFI
Default model	.919	**.712**	.794
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	**.069**	.063	.074	.000
Independence model	.179	.174	.183	.000

AIC

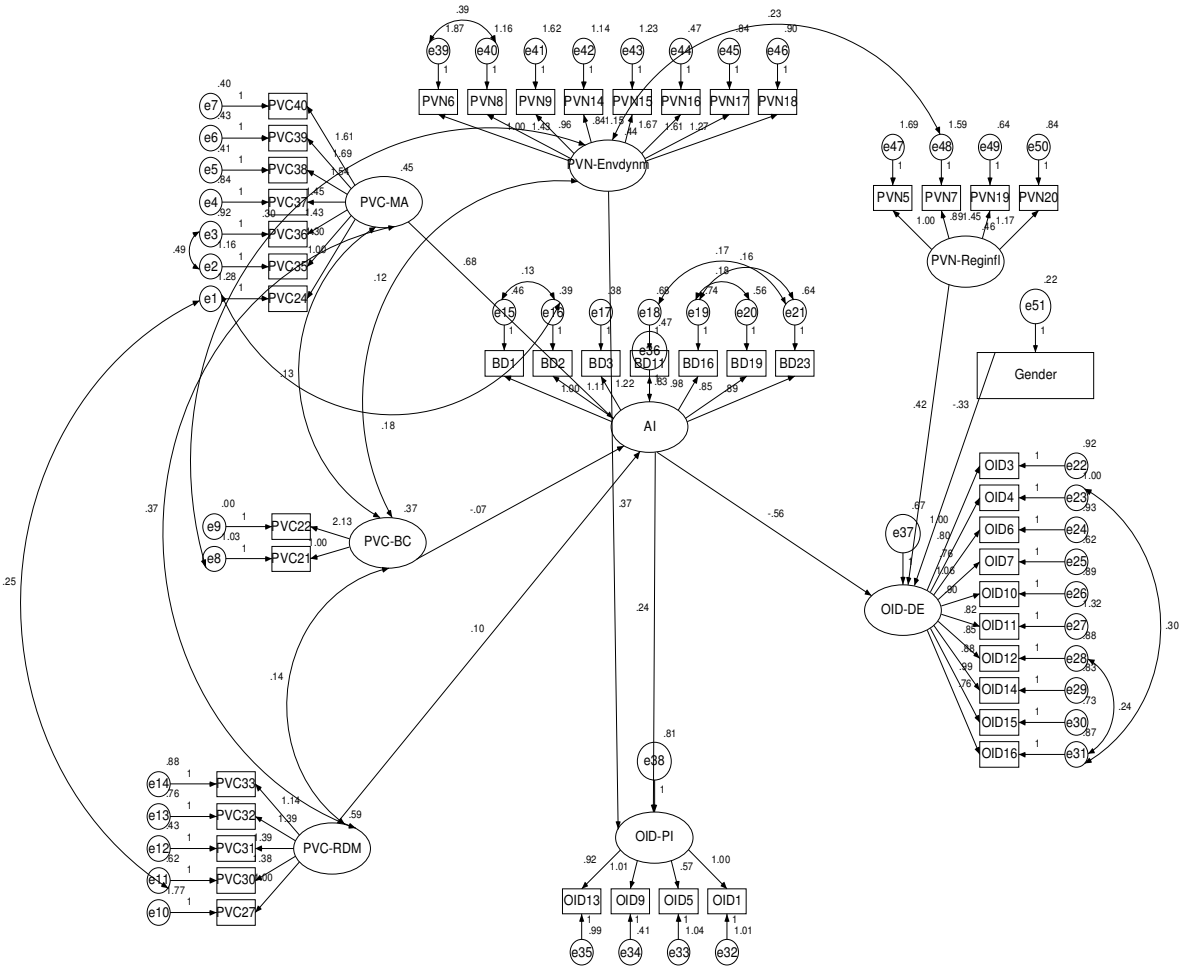
Model	AIC	BCC	BIC	CAIC
Default model	**1342.134**	1371.003	1632.399	1715.399
Saturated model	1260.000	1479.130	3463.216	4093.216
Independence model	5277.666	5289.840	5400.067	5435.067

Resulting Fit indices, though better than the rest, still did not turn out to be a "good or acceptable model fit" with a significant χ^2 value of 1176.13 with 547 degrees of freedom. Results indicated a RMSEA value of 0.07 that was in the "acceptable fit" range, of being less than 0.08. The other fit indices too were equally marginal on supporting the model fit (χ^2 /df = 2.15, NFI = 0.77, RMR = 0.10, CFI = 0.86, PNFI = 0.71, AGFI = 0.74, AIC = 1342.13).

After careful scrutiny of every suggested modification index with the theory in the backdrop, certain additional paths were introduced that were theoretically co-varying.

This included the error factors too associated with the measurement items. Accordingly, a refined model was proposed for testing in AMOS-16. However, not all modification index suggestions could be logically supported by the theory. Hence, no modification index suggestion was incorporated in the model, unless the modification index was theoretically and logically supported. Suggestions purely driven by statistical reasons were ignored and excluded. This refined model was tested by running AMOS-16, and the path diagram with the extracted text outputs are given below in Figure 5(6).

Figure 5(6)-Path diagram with AMOS output of refined model



Notes for Group (Group number 1)

The model is recursive.
Sample size = 244

Computation of degrees of freedom (Default model)

Number of distinct sample moments:	1176
Number of distinct parameters to be estimated:	119
Degrees of freedom (1176 - 119):	1057

Result (Default model)

Minimum was achieved
Chi-square = 1905.142
Degrees of freedom = 1057
Probability level = .000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	119	1905.142	1057	.000	**1.802**
Saturated model	1176	.000	0		
Independence model	48	7008.113	1128	.000	6.213

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	**.169**	.764	**.737**	.686
Saturated model	.000	1.000		
Independence model	.399	.258	.226	.247

Baseline comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	**.728**	.710	.857	.846	**.856**
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony – adjusted measures

Model	PRATIO	PNFI	PCFI
Default model	.937	.682	.802
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	848.142	729.956	974.138
Saturated model	.000	.000	.000
Independence model	5880.113	5619.362	6147.504

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	7.840	3.490	3.004	4.009
Saturated model	.000	.000	.000	.000
Independence model	28.840	24.198	23.125	25.298

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	**.057**	.053	.062	.002
Independence model	.146	.143	.150	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	**2143.142**	2203.255	2559.305	**2678.305**
Saturated model	2352.000	2946.062	6464.670	7640.670
Independence model	7104.113	7128.361	7271.977	7319.977

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	8.820	8.333	9.338	9.067
Saturated model	9.679	9.679	9.679	12.124
Independence model	29.235	28.162	30.335	29.335

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	145	149
Independence model	42	44

The summarized results of the above-tested model is given below in Table 5(20).

Table 5(20)-Model fit indices of refined model

Fit Index	Observed Values	Fit Indication	Good Fit*	Acceptable Fit*
Normed Chi-square [χ^2/df]	**1.80**	**GOOD FIT**	$0 \leq \chi^2/df \leq 2.0$	$2.0 \leq \chi^2/df \leq 3.0$
RMSEA	**0.057**	**ACCP.FIT** (***closer to 'Good-Fit'***)	$0 \leq$ RMSEA $\leq$ 0.05	0.05 $\leq$ RMSEA $\leq$ 0.08
AGFI	**0.74**	**NO FIT**	0.90 $\leq$ AGFI $\leq$ 1.0	0.80 $\leq$ AGFI $\leq$ 0.90
Root Mean Square Residual (RMR)	**0.17**	**NO FIT**	$0 \leq$ RMR $\leq$ 0.05	0.05 $\leq$ RMR $\leq$ 0.10
NFI	**0.73**	**NO FIT**	0.95 $\leq$ NFI $\leq$ 1.0	0.90 $\leq$ NFI $\leq$ 0.95
CFI	**0.86**	**NO FIT**	0.97 $\leq$ CFI $\leq$ 1.0	0.95 $\leq$ CFI $\leq$ 0.97
AIC	**2143.14**	**GOOD FIT**	$\leq$ saturated AIC, **OR** smaller than AIC for comparison model	smaller than AIC for comparison model
Consistent AIC (CAIC)	**2678.31**	**GOOD FIT**	smaller than CAIC for comparison model	smaller than AIC for comparison model

According to Barrett (2007), four recent papers that have cast doubt upon the continued utility of using indicative thresholds for approximate fit indices, essentially removed the notion that a single threshold value can be applied to any particular approximate fir index under all measurement and data conditions (Beauducel & Wittmann 2005); Fan & Sivo (2005); Marsh, et al. (2004); Yuan (2005).

Hence, relying upon the above argument and keeping the exploratory nature of this study, the overall assessment of the model could safely be considered to be close to an acceptable level of model fit or the least it could be viewed as indicative, moving towards an acceptable level of model fit and could be perceived as an indication that the study is directed rightly.

The detailed discussion on the path diagram and the coefficients of this model was expected to bring in more clarity and rationale.

5.8 Significant Results from the Comprehensive Model

Comparison of standardized coefficients of the multiple regression and Structure Equation Modeling is given below in Table 5(21). While the standard coefficients do exhibit differences in values, it would be interesting to explore the underlying reasons for this difference, from a theoretical perspective. A larger sample size could have improved the differences, but there still could be other factors, which could have contributed to this gap. Even though the weights of these coefficients are different, the direction of the association exhibited in the same orientation. One interesting observation here is the relationship between the astute leadership and business clairvoyance. There seems to be a causal relationship that is opposite to what is being

explored. While we are trying to explore if astute leadership causes business clairvoyance, the data indicate that actually the business clairvoyance is leading to astute leadership. This is something that could be explored further.

Table 5(21)-Comparison of coefficients from regression and SEM (refined model)

Dependent Variable	Independent Variable	Std. Coefficients from Regression	Std. Coefficients from SEM
Astute Leadership	PVC-Managerial attitude towards periphery	**0.47*** **	**0.68*** **
Astute Leadership	PVC-Resource & data Management	**-**	**0.10***
Astute Leadership	PVC-Business Clairvoyance	**-**	**-**
Disengaged OID	Astute Leadership **[Mod. Variable]**	**(- 0.35)*** **	**(-0.56)*** **
Disengaged OID	PVN-Regulatory Influences	**0.23*** **	**0.42*** **
Disengaged OID	Gender	**-**	**(-0.33)***
Positive OID	Astute Leadership **[Mod. Variable]**	**-**	**0.24****
Positive OID	PVN-Environmental Dynamics	**0.25****	**0.37****

*** - Very strongly significant ($p < 0.001$): ** - Strongly significant ($p < 0.01$):

*- Moderately significant ($p < 0.05$): '-' - Not significant

While the above table did bring in some amount of 'close-in' for a fitting model; nevertheless, it still left a lot to be explored. Though Gender was found to be having association to the organizational identification, it was weak and theoretically this could not find support; hence it was decided to exclude this from the path diagram.

The sample data was sub-grouped as "aligned group;" wherein the peripheral vision need and capacity were perceived to be in line, thereby the organization being perceived as either "vigilant' or 'focused.' The other sub-group was named 'misaligned,' wherein the organization was perceived to be having a higher peripheral vision need and a lower capacity making it 'vulnerable' or it being perceived to have a peripheral vision need lower than its peripheral vision capacity thereby making it 'neurotic' in nature.

Secondly, when the sample data was reviewed, it was observed that there were 95 respondents from a single project team, while the rest were from nine different project teams. So, keeping the sample size in perspective, two broad sub-groups were identified, namely "**Large Project Group**" and "**Small Project Group.**" The key objective of this grouping was to explore the impact of group level leadership, if there existed any. While clubbing the rest of the population into a single group does not exhibit group-related responses but is a closer representative of the entire population. The large project group, nevertheless, could throw an insight into the perceptional features of the group level leadership. The **Comprehensive Model** that emerged from the above observations was tested on all these four groups, in addition to the entire

population. The path diagram of the Comprehensive Model thus tested is given in Figure 5(7), and the summarized results are depicted in the Table 5(22).

Figure 5(7)- Comprehensive Model – Path diagram

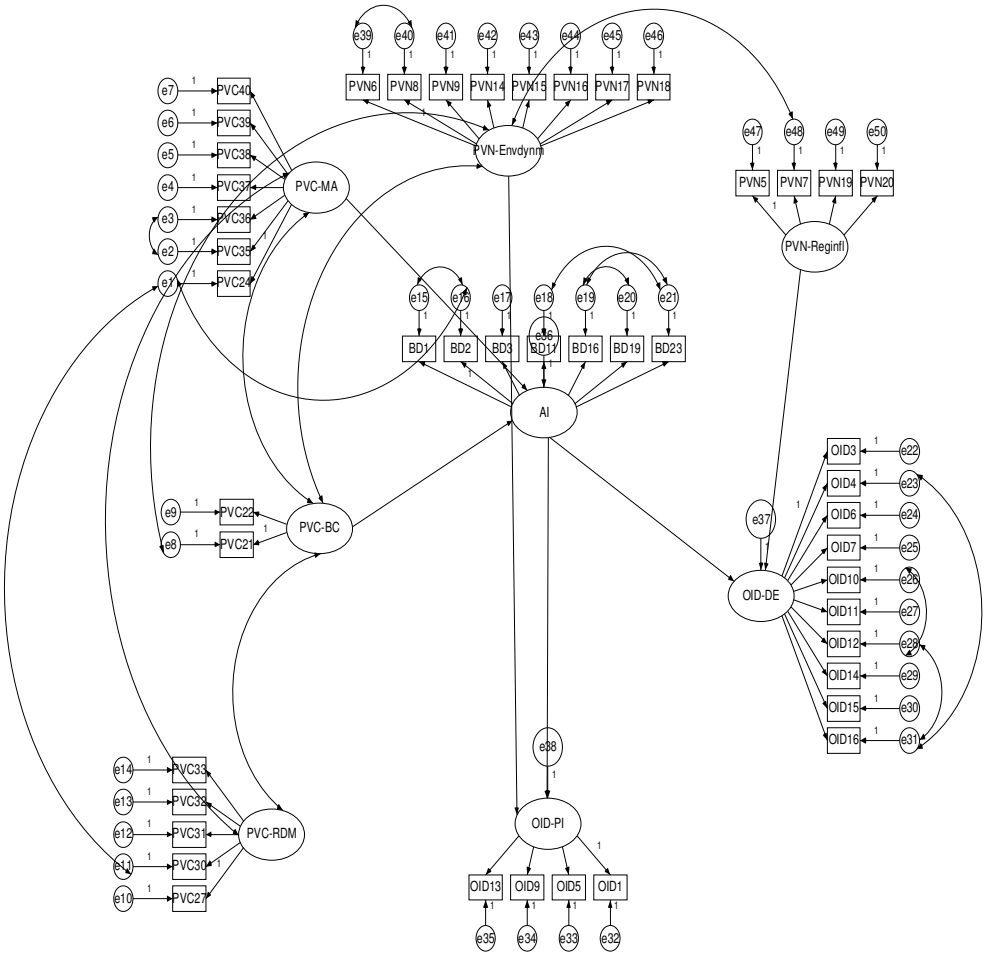


Table 5(22) – Summary results of the groups (Comprehensive Model)

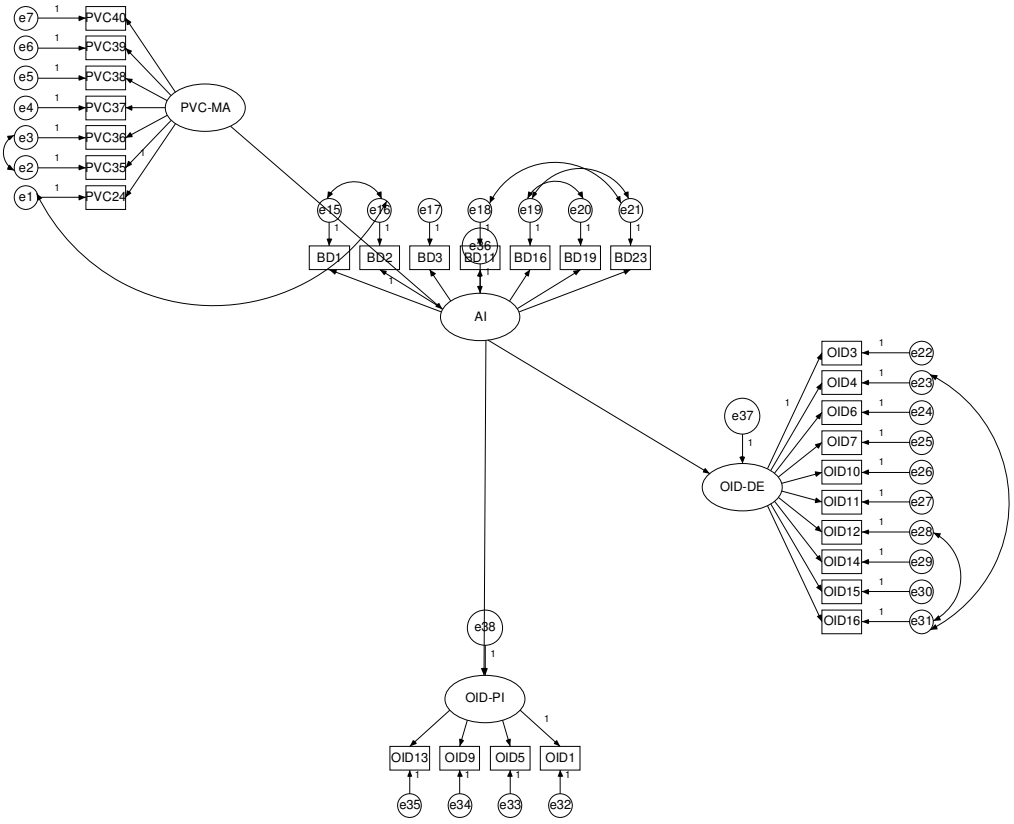
Fit Index	Full sample N - 244	Aligned group N - 152	Misaligned group N - 92	Large project group N - 95	Small project groups N - 149	Good fit*	Acceptable fit*
Chi-square – χ^2	1822.6	1719.26	2013.5	1888.4	1758.2		
DF	1011	1011	1011	1011	1011		
Normed Chi-square [χ^2/df]	1.80	1.70	1.99	1.87	1.74	**$0 \leq \chi^2/df \leq 2.0$**	**$2.0 \leq \chi^2/df \leq 3.0$**
RMSEA	0.06	0.07	0.10	0.09	0.07	$0 \leq$ RMSEA ≤ 0.05	$0.05 \leq$ RMSEA ≤ 0.08
AGFI	0.74	0.67	0.53	0.55	0.66	$0.90 \leq$ AGFI ≤ 1.0	$0.80 \leq$ AGFI ≤ 0.90
Root Mean Square Residual (RMR)	0.17	0.29	0.23	0.19	0.20	$0 \leq$ RMR ≤ 0.05	$0.05 \leq$ RMR ≤ 0.10
NFI	0.74	0.67	0.46	0.53	0.64	$0.95 \leq$ NFI ≤ 1.0	$0.90 \leq$ NFI ≤ 0.95
CFI	0.86	0.83	0.62	0.70	0.80	$0.97 \leq$ CFI ≤ 1.0	$0.95 \leq$ CFI ≤ 0.97
AIC	2056.6 [2256]	1953.26 [2256]	2247.5 [2256]	2212.37 [2256]	1992.2 [2256]	$\leq$ saturated AIC/ comparison model	smaller than AIC for comparison model
Consistent AIC (CAIC)	2582.8 [7328.8]	2424 [6975]	2659.5 [6228.6]	2538.17 [6264.8]	2460.67 [6772.45]	smaller than CAIC for comparison model	smaller than AIC for comparison model
PVC-MA→AL coeff.	0.77***	0.52 ***	1.47 ***	0.51 **	0.86 ***		
PVC-BC→AL coeff.	-	-	-	-	-		
AL→OID-DE coeff.	-0.56***	-0.59***	-0.42***	-0.71***	-0.50***		
AL→OID-PI coeff.	0.23 **	0.27 *	-	-	0.26 **		
PVNRI→OID-DE coeff.	0.47 ***	0.51 **	0.30 *	0.82 **	-		
PVNED→OID-PI coeff.	0.38 **	0.35 **	-	0.35 *	0.31 *		

*** - Very strongly significant ($p < 0.001$); ** - Strongly significant ($p < 0.01$);

*- Moderately significant ($p < 0.05$); '-' - Not significant

From the above results, the model was further studied for improved 'fitment' and regression estimates to propose alternative robust models for testing. Hence keeping the fit indices in view and the regression coefficients with their corresponding levels of significance, the following path diagram was proposed for testing as "**Parsimonious Model**" in AMOS, on all the four groups and composite groups. This path diagram/model is shown in Figure 5(8).

Figure 5(8)-Parsimonious Model – Path diagram



The 'fit indices' and the regression coefficients, along with their significance levels, are given in Table 5(23).

Table 5(23)-Summary of indices and standard coefficients (Parsimonious Model)

FIT INDEX	Full sample N - 244	Aligned group N - 152	Misaligned group N - 92	Large Project group N - 95	Small project groups N - 149	GOOD FIT*	ACCEPTABLE FIT*
Chi-square - χ^2	**668.76**	**574.5**	**587.9**	**598.4**	**580.7**		
DF	**339**	**339**	**339**	**339**	**339**		
Normed Chi-square [χ^2/df]	**1.97**	**1.69**	**1.73**	**1.76**	**1.71**	**$0 \leq \chi^2/df \leq 2.0$**	**$2.0 \leq \chi^2/df \leq 3.0$**
RMSEA	**0.06**	**0.07**	**0.09**	**0.09**	**0.07**	$0 \leq$ RMSEA ≤ 0.05	$0.05 \leq$ RMSEA ≤ 0.08
AGFI	**0.81**	**0.75**	**0.64**	**0.66**	**0.80**	$0.90 \leq$ AGFI ≤ 1.0	$0.80 \leq$ AGFI ≤ 0.90
Root Mean Square Residual (RMR)	**0.11**	**0.12**	**0.14**	**0.14**	**0.12**	$0 \leq$ RMR ≤ 0.05	$0.05 \leq$ RMR ≤ 0.10
NFI	**0.84**	**0.80**	**0.68**	**0.71**	**0.78**	$0.95 \leq$ NFI ≤ 1.0	$0.90 \leq$ NFI ≤ 0.95
CFI	**0.91**	**0.90**	**0.83**	**0.85**	**0.89**	$0.97 \leq$ CFI ≤ 1.0	$0.95 \leq$ CFI ≤ 0.97
AIC	**802.76 [812]**	**708.5 [812]**	**721.90 [812]**	**732.4 [812]**	**714.7 [812]**	$\leq$ saturated AIC/ comparison model	smaller than AIC for comparison model
Consistent AIC (CAIC)	**1104 [2637.8]**	**978.1 [2445.7]**	**957.9 [2241.9]**	**970.5 [2254.9]**	**983.0 [2437.6]**	smaller than CAIC for comparison model	smaller than AIC for comparison model
PVC-MA →AL coeff.	**0.78*** **	**0.51*** **	**1.58** **	**0.58** **	**0.87*** **		
AL →OID-DE coeff.	**-0.55*** **	**-0.53*** **	**-0.47*** **	**-0.65*** **	**-0.48*** **		
AL →OID-PI coeff.	**0.27** **	**0.41*** **	**-**	**-**	**0.21 ** **		

*** - Very Strongly significant ($p < 0.001$): ** - Strongly Significant ($p < 0.01$):

*- Moderately significant ($p < 0.05$): '-' - Not significant

A review of the estimates and the "fit" indices showed improvement. Therefore it was proposed to split this parsimonious model into two parts, construct-wise, to study it further. The Model A is the path diagram showing the association of peripheral vision capacity – managerial attitudes with the astute leadership variable. Model B is the path diagram depicting the association of astute leadership with the organizational identification variables of positive identification and disengaged identification. The Models are shown below in Figures 5(9) and 5(10), and the indices are shown in Tables 5(24) and 5(25).

Figure 5(9) – Path diagram with AMOS output-discrete Model A

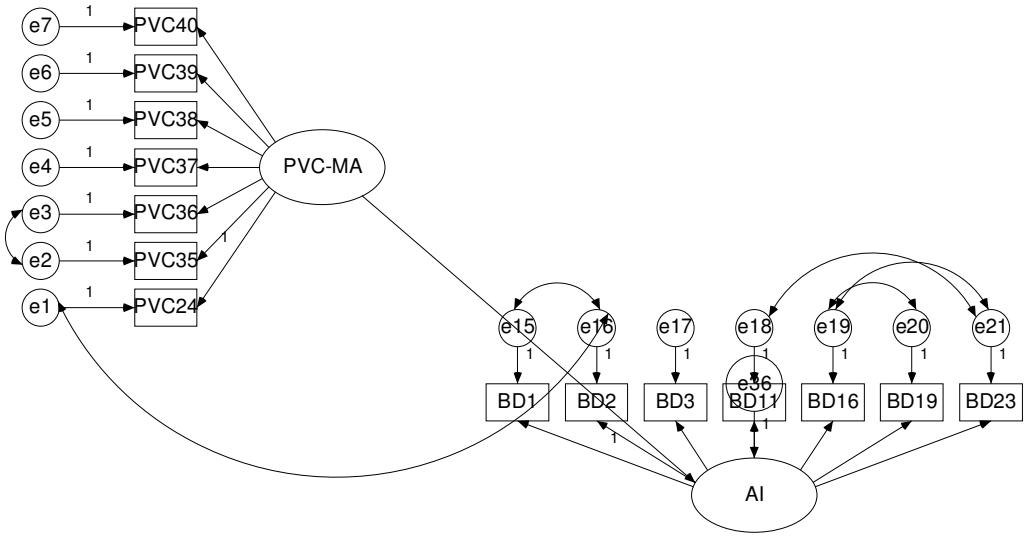


Table 5(24)-Summary of indices and standard coefficients (Discrete Model A)

FIT INDEX	Full sample N - 244	Aligned group N - 152	Misaligned group N - 92	Large Project group N - 95	Small project groups N - 149	GOOD FIT*	ACCEPTABLE FIT*
Chi-square - χ^2	143.53	133.6	130.9	150	94.5		
DF	70	70	70	70	70		
Normed Chi-square [χ^2/df]	2.05	1.90	1.87	2.14	1.35	$0 \leq \chi^2/df \leq 2.0$	$2.0 \leq \chi^2/df \leq 3.0$
RMSEA	0.07	0.08	0.098	0.11	0.05	$0 \leq$ RMSEA ≤ 0.05	$0.05 \leq$ RMSEA ≤ 0.08
AGFI	0.89	0.84	0.77	0.72	0.88	$0.90 \leq$ AGFI ≤ 1.0	$0.80 \leq$ AGFI ≤ 0.90
Root Mean Square Residual (RMR)	0.07	0.09	0.10	0.11	0.07	$0 \leq$ RMR ≤ 0.05	$0.05 \leq$ RMR ≤ 0.10
NFI	0.94	0.91	0.87	0.85	0.93	$0.95 \leq$ NFI ≤ 1.0	$0.90 \leq$ NFI ≤ 0.95
CFI	0.97	0.95	0.93	0.91	0.98	$0.97 \leq$ CFI ≤ 1.0	$0.95 \leq$ CFI ≤ 0.97
(AIC [Satd. model]	213.5 [210]	203.6 [210]	200.9 [210]	220 [210]	164.5 [210]	$\leq$ saturated AIC/ comparison model	smaller than AIC for comparison model
(CAIC)-Consistent AIC [Satd. model]						smaller than CAIC for comparison model	smaller than AIC for comparison model
PVC-MA →AL coeff.	0.78***	0.51***	1.59***	0.53***	0.87***		

*** - Very Strongly significant ($p < 0.001$): ** - Strongly Significant ($p < 0.01$):

*- Moderately significant ($p < 0.05$): '-' - Not significant

Figure 5(10) Path diagram with AMOS output-discrete Model B

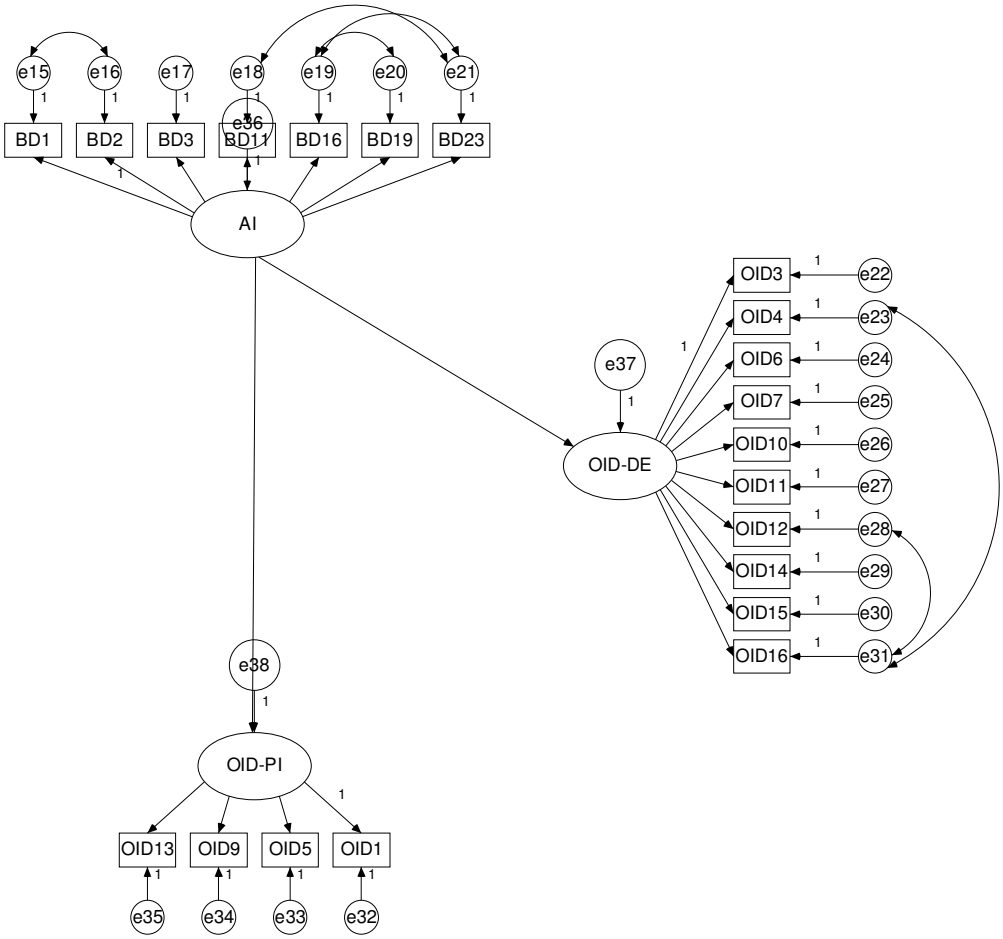


Table 5(25)-Summary of indices and standard coefficients (Discrete Model B)

FIT INDEX	Full sample N - 244	Aligned group N - 152	Misaligned group N - 92	Large Project group N - 95	Small project groups N - 149	GOOD FIT*	ACCEPTABLE FIT*
Chi-square - χ^2	410.3	348.3	334.2	353.9	346.1		
DF	181	181	181	181	181		
Normed Chi-square [χ^2/df]	**2.27**	**1.92**	**1.85**	**1.96**	**1.91**	**$0 \leq \chi^2/df \leq 2.0$**	**$2.0 \leq \chi^2/df \leq 3.0$**
RMSEA	0.07	0.08	0.10	0.10	0.08	$0 \leq$ RMSEA ≤ 0.05	$0.05 \leq$ RMSEA ≤ 0.08
AGFI	0.82	0.77	0.68	0.69	0.76	$0.90 \leq$ AGFI ≤ 1.0	$0.80 \leq$ AGFI ≤ 0.90
Root Mean Square Residual (RMR)	0.11	0.12	0.14	0.15	0.12	$0 \leq$ RMR ≤ 0.05	$0.05 \leq$ RMR ≤ 0.10
NFI	0.85	0.82	0.71	0.74	0.80	$0.95 \leq$ NFI ≤ 1.0	$0.90 \leq$ NFI ≤ 0.95
CFI	0.91	0.90	0.84	0.85	0.90	$0.97 \leq$ CFI ≤ 1.0	$0.95 \leq$ CFI ≤ 0.97
(AIC [Satd. model]	510.3 [462]	448.3 [462]	434.2 [462]	453.9 [462]	446.1 [462]	$\leq$ saturated AIC/ comparison model	smaller than AIC for comparison model
(CAIC)-Consistent AIC [Satd. model]	735.1 [1500.8]	649.5 [1391.5]	610.3 [1275.5]	631.6 [1282.9]	646.3 [1386.9]	smaller than CAIC for comparison model	smaller than AIC for comparison model
Std coeff AL → OID-DE	-0.54***	-0.51***	-0.48***	-0.65***	-0.47***		
Std coeff AL → OID-PI	0.27**	0.42***	-	-	0.28**		

*** - Very Strongly significant ($p < 0.001$): ** - Strongly Significant ($p < 0.01$):

*- Moderately significant ($p < 0.05$): '-' - Not significant

The results of the model fitments for all these tested models, i.e., Comprehensive Model, Parsimonious Model and Discrete Models A and B are depicted in Table 5(26).

Table 5(26) – Group-wise model fit summary

MODEL	Full sample N - 244	Aligned group N - 152	Misaligned group N - 92	Large Project group N - 95	Small project groups N - 149
COMPREHENSIVE MODEL	Poor Fit closer to Acceptable Fit	Poor Fit	Poor Fit	Poor Fit	Poor Fit
PARSIMONIOUS MODEL	Acceptable Fit	Acceptable Fit	Poor Fit	Poor Fit	Acceptable Fit
DISCRETE – MODEL A (PVC-MA → AL)	Acceptable Fit to Good Fit	Acceptable Fit to Good Fit	Poor Fit	Poor Fit	Acceptable Fit to Good Fit
DISCRETE – MODEL B (AL → OID-DE & OID-PI)	Poor Fit to Acceptable Fit	Poor Fit to Acceptable Fit	Poor Fit to Acceptable Fit	Poor Fit to Acceptable Fit	Poor Fit to Acceptable Fit

CHAPTER 6

DISCUSSION OF STUDY RESULTS

This chapter discusses the study results, reported in the previous chapters, in detail to assess the effect and implication of each result.

6.1 Correlation of Original Variables

6.1.1 Variables of Peripheral Vision Need

- The correlation coefficients of perceived peripheral vision need variables did not show any significant association with the Bolman and Deal's leadership frameworks. The complexity of the environment variables of peripheral vision need showed a correlation of 0.10 with structural framework, 0.11 with the human resource framework, 0.11 with political framework, and 0.08 with symbolic framework. The volatility of environment variables of peripheral vision need showed a correlation of 0.03 with structural framework, 0.06 with human resource framework, 0.04 with political framework and 0.05 with symbolic framework.
- They also showed a moderate association with the organizational identification variables. The complexity of the environment variables of peripheral vision need showed a correlation of 0.14 with positive identification, 0.07 with disidentification, 0.06 with ambivalent identification, and 0.01 with neutral identification. The volatility of environment showed a correlation of 0.19 with positive identification, 0.09 with disidentification, 0.07 with ambivalent identification, and 0.04 with neutral identification.

6.1.2 Variables of Peripheral Vision Capacity

- All the five variables of peripheral vision capacity showed correlation coefficients that are strong with the four leadership frameworks of Bolman & Deal with a strong significance. The coefficients for managerial foresight were 0.34 for structural framework, 0.40 for human resource framework, and 0.34 for both symbolic and political framework. The coefficients for strategy making were 0.37 for structural framework, 0.38 for human resource framework, 0.34 for political framework, and 0.37 for symbolic framework. The coefficients for knowledge management system were 0.39 for structural framework, 0.41 for human resource framework, 0.38 for political framework, and symbolic framework. The coefficients for Configuration-Structures and Incentives were 0.40 for structural framework, 0.42 for human resource framework, 0.41 for political framework, and 0.37 symbolic framework. The coefficients for culture-Values, Beliefs, Behavior were 0.49 for structural framework, 0.52 for human resource framework, 0.47 for political framework, and 0.46 symbolic framework.
- The variable managerial foresight showed a coefficient of correlation that is negatively associated with disidentification -0.17, ambivalent identification -0.15, and neutral identification -0.09 with moderate to strong significance. It showed a correlation of 0.07 with positive identification. The variable strategy making showed a coefficient of correlation that is negatively associated with disidentification (-0.11), ambivalent identification (-0.17), and neutral identification (-0.02) with moderate to strong significance. It showed a correlation of 0.09 with positive identification. The variable knowledge

management system showed coefficient of correlation that is negatively associated with disidentification (-0.25), ambivalent identification (-0.26), and neutral identification (-0.19) with strong significance. It showed a correlation of 0.12 with positive identification. The variable Configuration – Structure and Incentives – showed coefficient of correlation that is negatively associated with disidentification (-0.27), ambivalent identification (-0.26), and neutral identification (-0.17) with strong significance. It showed a correlation of 0.06 with positive identification. The variable culture –Values, Beliefs, Behavior – showed coefficient of correlation that is negatively associated with disidentification (-0.26), ambivalent identification (-0.28), and neutral identification (-0.18) with strong significance. It showed a correlation of 0.07 with positive identification.

6.1.3 Variables of Bolman and Deal's Leadership Framework and Organizational Identification

- Between the leadership framework and the organizational identity variables, they showed a negative association with disidentification, ambivalent identification, and neutral identification while positive identification showed a positive association.
- The variable structural framework showed coefficient of correlation that is negatively associated with disidentification (-0.24), ambivalent identification (-0.38) and neutral identification (-0.29) with moderate to strong significance. It showed a correlation of 0.17 with positive identification. The variable human resource framework showed coefficient of correlation that is negatively

associated with disidentification (-0.28), ambivalent identification (-0.37), and neutral identification (-0.26) with moderate to strong significance. It showed a correlation of 0.16 with positive identification. The variable political framework showed coefficient of correlation that is negatively associated with disidentification (-0.23), ambivalent identification (-0.36), and neutral identification (-0.29) with moderate to strong significance. It showed a correlation of 0.21 with positive identification. The variable symbolic framework showed coefficient of correlation that is negatively associated with disidentification (-0.23), ambivalent identification (-0.36), and neutral identification (-0.30) with moderate to strong significance. It showed a correlation of 0.21 with positive identification.

Due to the high inter-item correlation, the existence of multicollinearity could not be ruled out. Exploratory factor analysis (EFA) was, therefore, carried out on these variables. The EFA was done using PCA as extraction method and Varimax with Kaiser Normalization as rotation method.

6.2 Exploratory Factor Analysis

The EFA on the data revealed that the three latent variables of peripheral vision need explained 46% of variance, the three peripheral vision capacity variables explained 60% of variance, while astute leadership, the only latent factor emerging from Bolman & Deal's leadership framework explained 65% of variance, and organizational identification variables explained 53% of variance. This effectively resulted in the selection of nine optimized variables for the purpose of further analysis. These optimized variables exhibited a very high level of reliability, the

Cronbach's α for these ranging from 0.70 to 0.91, which is considered to be good for a social science research.

6.3 Correlation Analysis of Optimized Variables

The optimized variables, post EFA resulted in a total of three variables under peripheral vision need, three variables under peripheral vision capacity, single variable under Bolman and Deal's leadership framework, and two variables under organizational identification constructs. They were reviewed item by item and were re-nomenclated to identify new variables for analysis. The results of the correlations existing among these variables are discussed as follows:

6.3.1 Variables of Peripheral Vision Need

The environmental dynamics variable of peripheral vision need is associated with astute leadership (0.14) and positive identification (0.25) with very strong significance, while it is negatively associated with the disengaged identification (-0.14) with strong significance. The Business dynamics variable however is not associated with astute leadership (-0.01), moderately associated with disengaged identification (0.09), and positive identification (0.04). The regulatory influences variable is not associated with astute leadership (-0.03) and positive identification (0.00), while it is positively associated with disengaged identification (0.26) with very strong significance.

6.3.2 Variables of Peripheral Vision Capacity

The managerial attitude towards periphery variable of peripheral vision capacity is associated with astute leadership (0.47) with very strong significance and not

associated with positive identification (-0.06) while it is negatively associated with the disengaged identification (-0.27) with very strong significance. The resource and data management capability variable, however, is associated with astute leadership (0.20) with strong significance, disengaged identification (-0.11), and positive identification (0.11) with strong significance. The business clairvoyance variable is strongly associated with astute leadership (0.13) and not significantly associated with positive identification (0.07) and disengaged identification (-0.02).

6.3.3 Variable Astute Leadership

It is observed that astute leadership variable is negatively associated with disengaged identification (-0.35) with very strong significance while it is positively associated with positive identification (0.15) with strong significance.

6.4 Multiple Regression

Multiple regression was done in two stages, first with all the variables and secondly after optimizing the contributing variables only. The level of significance in the regression equation denotes the probability of making an error and lower the value, the better. For determining the level of significance, following yardsticks were applied (Table 6(1)) based on the various literature references and specifically Tripathi (2008).

Table 6(1) – Rule of thumb criteria for level of significance

P Value or significance levels	Degree of strength	Notation
$P \leq 0.001$	Very strongly significant	***
$P \leq 0.01$	Strongly significant	**
$P \leq 0.05$	Moderately significant	*

Regression with astute leadership as dependent variable and peripheral vision need and capacity as independent variables as proposed in the revised model was done. Multiple regression was also carried out with variables of disengaged organizational identification and positive organizational identification as dependent variables and peripheral vision need and capacity as independent variables and astute leadership also as an independent moderating variable.

6.4.1. Astute Leadership with Peripheral Vision Need and Capacity

From among all the independent variables, only peripheral vision capacity variables showed strong association of significance, while the gender and business dynamic variables of peripheral vision need showed moderate significance. The beta coefficient that indicates the weights of the independent variables were ($\beta = 0.48$ and $p=0.000$) for managerial attitude towards the periphery, ($\beta = 0.24$ and $p=0.000$) for resource and data management capability and ($\beta = 0.18$ and $p=0.006$) for business clairvoyance. The beta's for gender was ($\beta = -0.11$ and $p= 0.06$) and for business dynamics being ($\beta = -0.12$ and 0.05), both showing negative association. All the other

independent variables did not exhibit any significant association. The adjusted R-square value (0.26) explains 26.3 percent of variation by the independent variables in the regression equation.

6.4.2 Disengaged Identification with the Peripheral Vision Need, Capacity and Astute Leadership

Regression of disengaged identification showed only four noteworthy associations, namely gender (β= -0.10 and p=0.098), managerial attitude towards the periphery (β = -0.12 and p=0.08), and astute leadership (β = -0.26 and p=0.000), all showing negative association with very strong to moderate significance, while regulatory influences (β = 0.25 and p=0.000) showed a positive association with strong significance. The adjusted R-square value (0.19) explains the 19 percent variation by the independent variables in the regression equation.

6.4.3 Positive Identification with Peripheral Vision Need and Capacity and Astute Leadership

Regression of positive identification showed only three significant associations, namely, environmental dynamics (β= 0.28 and p=0.000) with very strong significance, managerial attitude towards the periphery (β = -0.20 and p=0.006), and astute leadership (β = -0.22 and p=0.003), both strongly significant. The adjusted R-square value (0.06) explains 5.8% variation by the independent variables in the regression equation.

6.5 Structure Equation Modeling (SEM)

While regression is a good statistical tool for estimating the correlation and association strengths, they do not indicate causative relationships. Therefore,to evaluate the causative relationship among the latent variables, Structure Equation Modeling evaluation was carried out and the path diagrams were studied with the corresponding fit indices and significance of the weights of coefficient.

6.5.1 SEM Testing on Exploratory Models

SEM of various models was tested on various criteria and grouping, to arrive at the one with the best fit. The total sample was bifurcated into those knowledge workers who perceived the organization with aligned peripheral vision and those who perceived it as misaligned, as already explained in the previous Chapter 5. The bifurcation resulted in a sample size of 152 for the 'aligned vision' group and 92 for the 'misaligned vision' group. However when the data was analyed for these groups, the result turned out ERROR for the 'misaligned vision' group stating inadequate sample size. Hence it was decided to leave out this group for these model testing.

Similarly, when the variables were evaluated, the variables pertaining to the peripheral vision need consists of items that assess responses pertaining to aspects like industry visibility, dependence on the global economy, competitor behavior, vulnerability to macroeconomic forces, etc. collectively termed as 'environment dynamics' under which the business operates. Similarly, the aspects related to market forces, industry structure, market growth pattern, and technological impact on the business collectively grouped as 'business dynamics,' under which the business

operates. Those factors like government policies, regulations, likely disruptions, sensitivity to social changes, etc. were grouped as 'regulatory influences.'

We observed that all the above aspects are external in nature and have nothing to do with the capability of the business, leadership or its employee constitution. They may be equated to the sea condition in which a business ship has to sail. While it was possible to measure and identify its existence, it was not possible to control or regulate it.

But all the other factors, under the peripheral vision capacity, leadership and organizational identification constructs are those, which could be influenced by the stakeholders and are in the "manageable or controllable" ambit of the organizational entity. Therefore, the models were tested excluding the peripheral vision need variables. The path diagrams of the models that were tested are pictorially given below in Figures 6(1) to 6(7).

Figure 6(1)

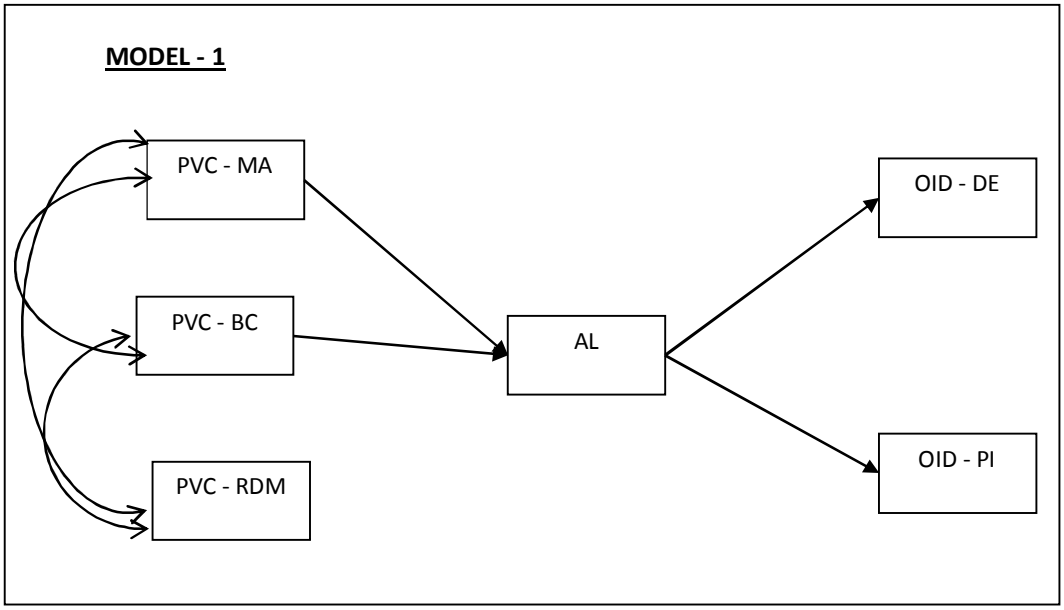


Figure 6(2)

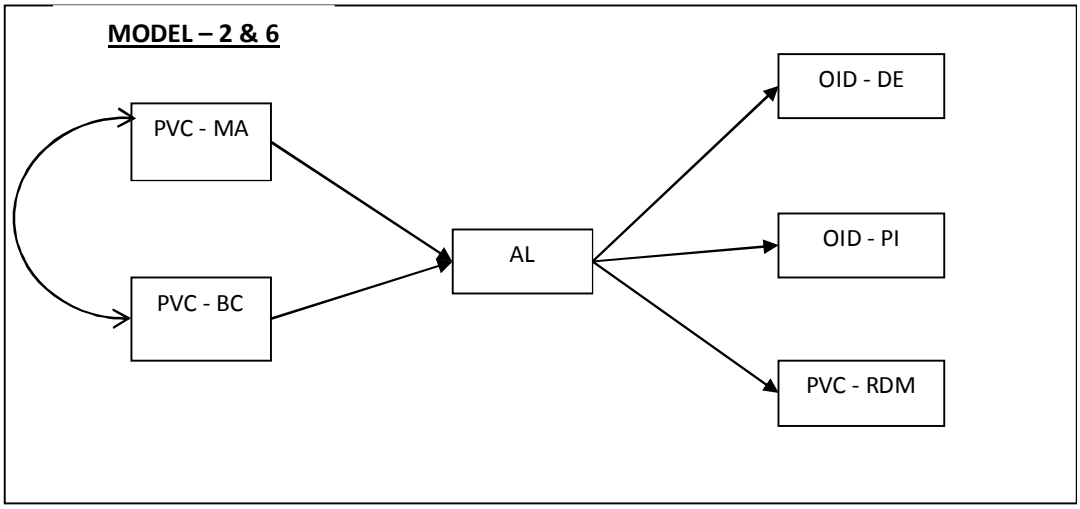


Figure 6(3)

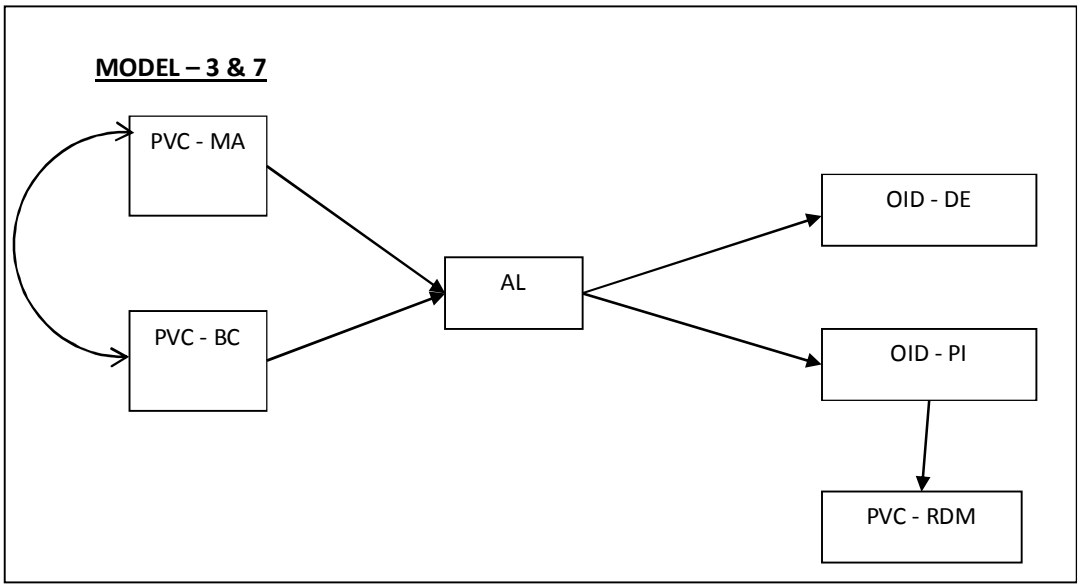


Figure 6(4)

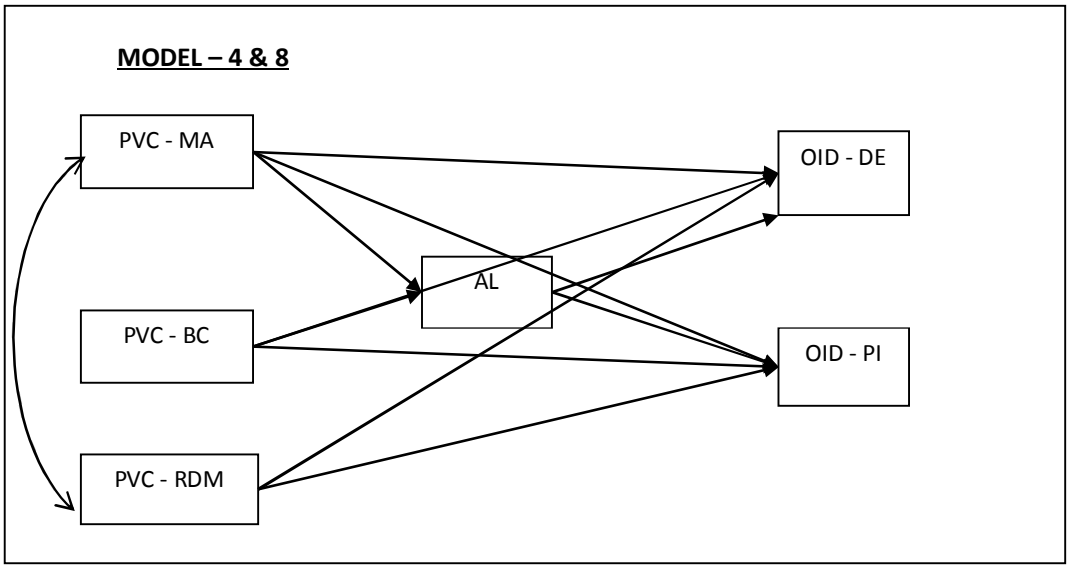


Figure 6(5)

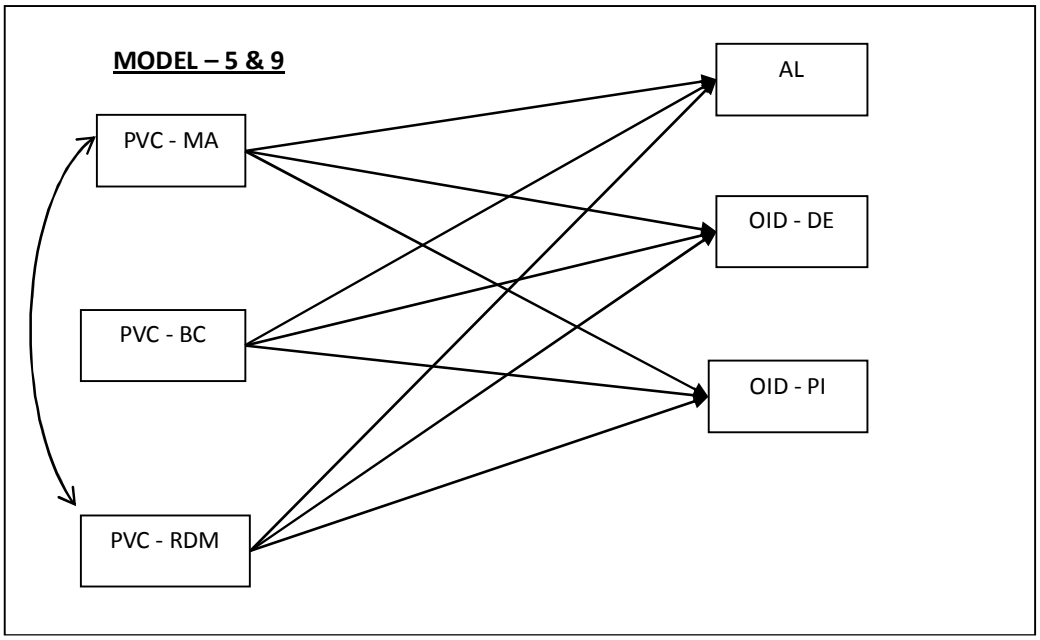


Figure 6(6)

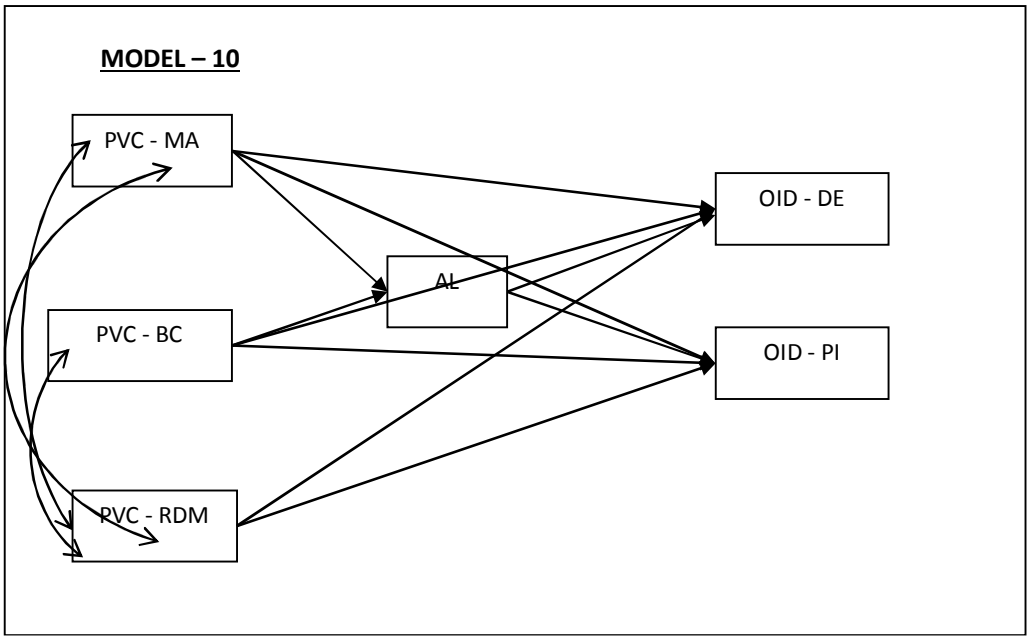
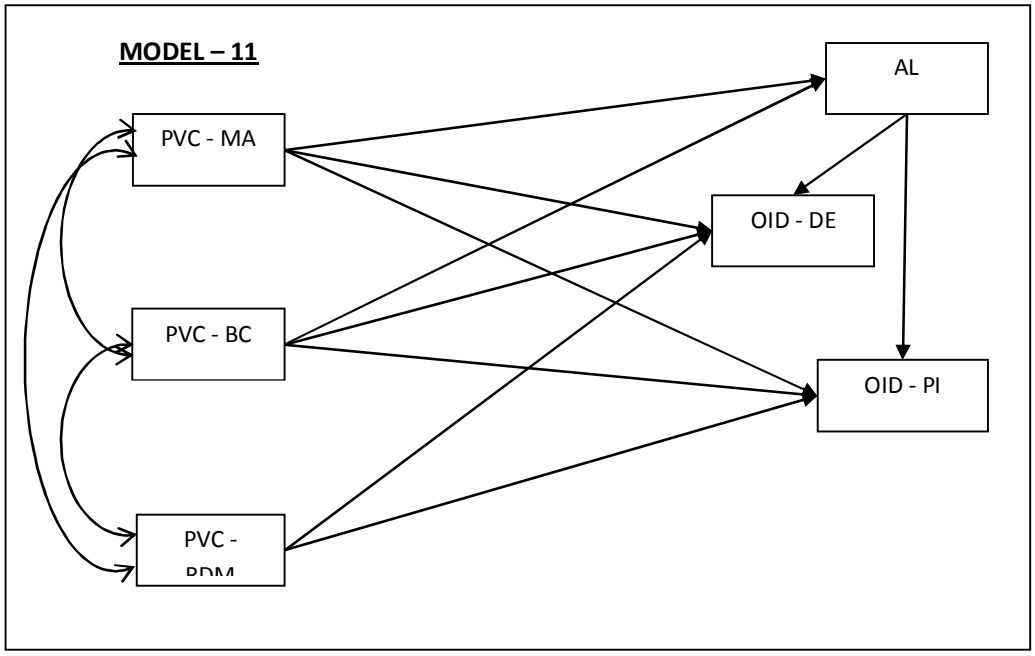


Figure 6(7)



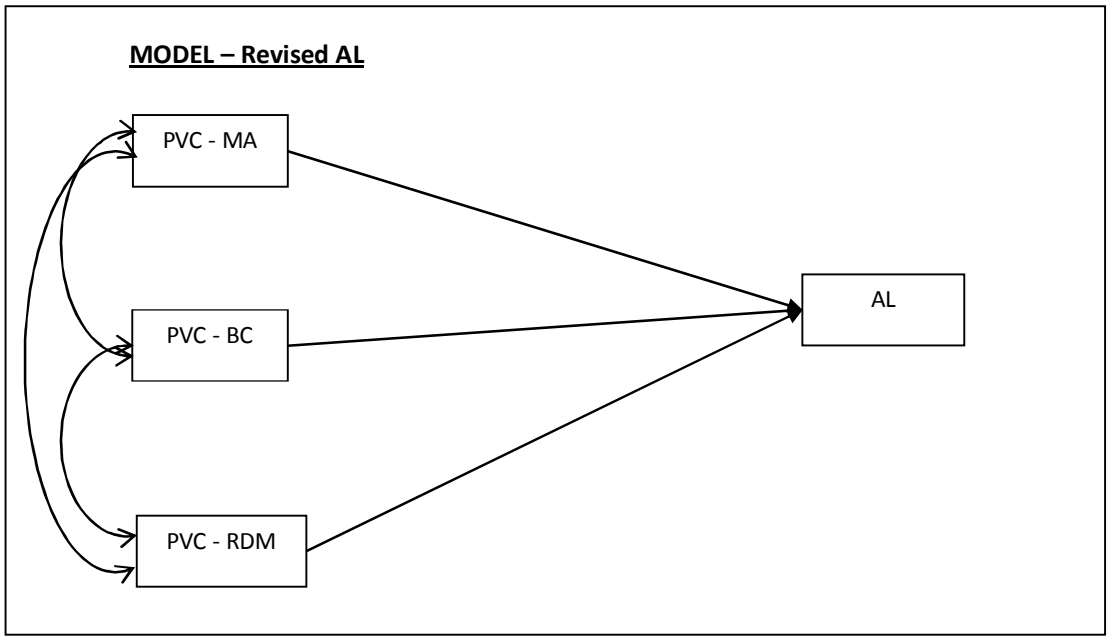
The above-proposed path diagrams were based on theoretical considerations, behind these variables and their likely associational and causative relationships.

However as evident from the indices, none of them were close to even an acceptable level of fit. Hence we are not going into the depth of discussing these indices.

Evaluation of the multiple regression exercise of the optimized variables gave key insights into the basis, which could be theoretically explained and proposed, as a model for SEM study. Hence two specific models (Figures 6(8) and 6(9)) were identified and explored for SEM evaluation.

The first one was excluding the variables of organizational identification construct.

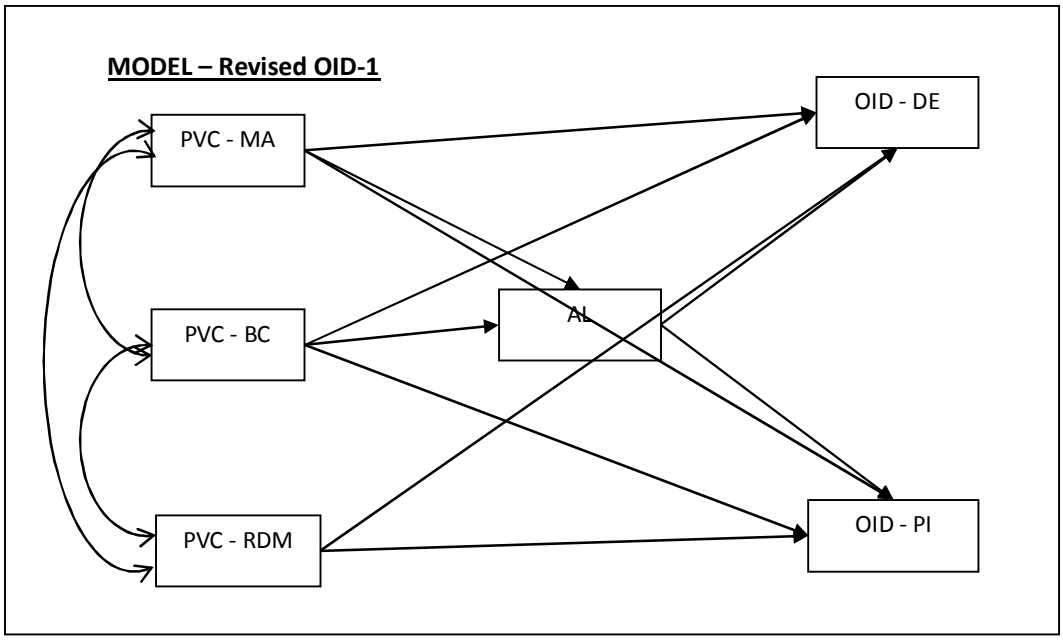
Figure 6(8)



The resulting fit indices indicated an unacceptable model fit with a significant $\chi 2$ value of 510.32 with 183 degrees of freedom. Results also indicated a RMSEA value of 0.086 that is slightly beyond the acceptable value of less than 0.08. The other fit indices too were equally non-supportive of the model ($\chi 2$ /df = 2.79, NFI = 0.84, RMR = 0.09, CFI = 0.89, PNFI = 0.73, AGFI = 0.78, AIC = 606.32). It is evident from these indices that this path diagram is not statistically supported, though this has a limited theoretical support.

Therefore another model based on the direction of regression was tested in AMOS. In this proposed model, the construct of organizational identity was included along with astute leadership, as a moderating variable, for the variables of organizational identification.

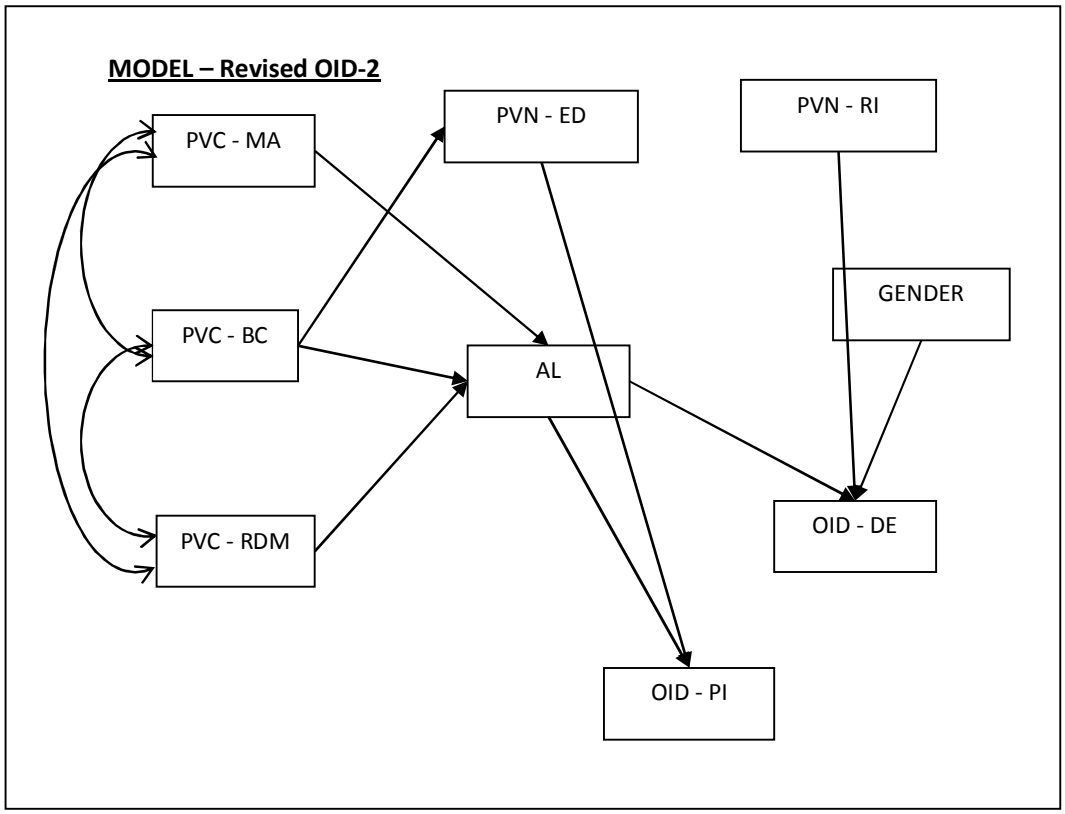
Figure 6(9)



Resulting fit indices, though better than the rest, still did not turn out to be a "good model fit" with a significant $\chi 2$ value of 1176.13 with 547 degrees of freedom. Results indicated a RMSEA value of 0.07 that is in the "acceptable fit" range of being less than 0.08. The other fit indices too were equally marginal on supporting the model fit ($\chi 2$ /df = 2.15, NFI = 0.77, RMR = 0.10, CFI = 0.86, PNFI = 0.71, AGFI = 0.74, AIC = 1342.13).

At this point of the evaluation, it was proposed to test a model, which included peripheral vision need variable as indicated by the regression exercise. Hence the following model Figure 6(10) was proposed for testing with AMOS.

Figure 6(10)



The above model initially did not turn out to be a good fit when the selected indices were evaluated. The modification indices, indicating a variance impact of 0.15 and more due to suggested pathway linking, were reviewed item by item. These suggestions also included related error measurements. All those modification indices that could be adequately supported on a theoretical basis and logical explanation were incorporated in the path diagram and the program was run.

This model turned out a Normed Chi-square value of 1.8 that indicates a 'good fit.' The RMSEA value was observed to be 0.057 which is very close to the lower threshold of 'good fit,' i.e., 0.05, nevertheless, was within the 'acceptable fit' limits of ≤0.08. The AGFI = 0.74), root mean square residual (RMR = 0.17), NFI = 0.73) and

CFI = 0.86) theoretically indicated a 'no fit' as per our criteria, but depicted improvement in fit. However two of these indices, namely CFI and AGFI, did exhibit closeness to the lower threshold of 'acceptable fit.' The values of AIC = 2143.14) were less than the AIC value of the saturated model (AIC = 2352.0). Similarly the Consistent AIC (CAIC) of the model was observed to be 2678.31 that was less than the CAIC value of saturated model 7640.67. These two indices thus indicated a 'good fit' for the model.

While three of the chosen indices indicated a "good fit," one index indicated an "acceptable fit," and four indices indicated "no fit." The indices that were indicating "no fit" were observed to be closer to the lower threshold of acceptable fit. From the above results, it was evident that the model had conflicting fit indications from the chosen indices. In SEM, as in many other statistical models, the choice of a model among competitive models with nearly the same fit to the data is often a subjective matter, instead of a statistical problem (Di Natale, 2002). Hence evaluating the outcomes from a theoretical perspective, one could make a judgment that this model could safely be considered as one exhibiting a good to acceptable fit.

6.6 Comparison of Regression and SEM Coefficients

The coefficients of the multiple regression analysis were compared with the path coefficients obtained from the finally tested model at this point of statistical evaluation and are discussed under this part. When astute leadership was regressed with peripheral vision capacity variables as independent variables, the standard coefficients obtained for managerial attitude towards periphery was (0.47) while the same in the SEM path diagram noted a (0.68), both with very strong significance. The

resource and data management capacity indicated a standard coefficient of (0.10) from the SEM path diagram with moderate significance while regression did not show any significant relationship. Similarly, the standard coefficient for business clairvoyance was observed to be insignificant, in either case.

The disengaged identification, as dependent variable, showed the SEM path coefficient of 0.33 with moderate significance with gender, while the regression coefficient was observed to be insignificant for the same.

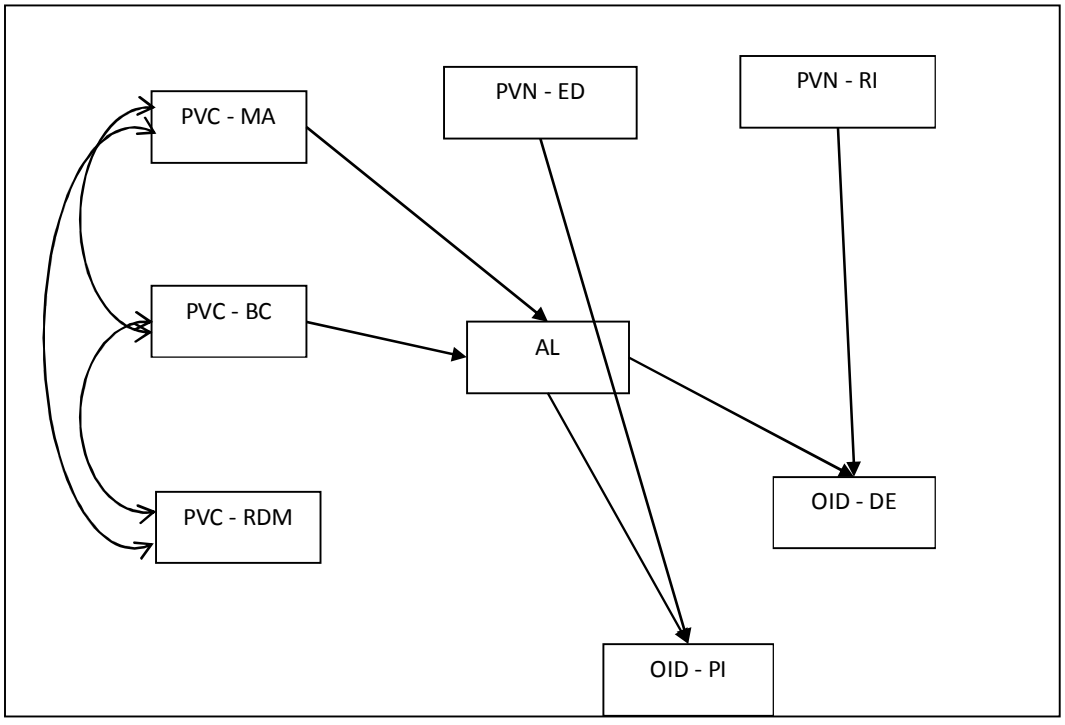
While environmental dynamics do have an association with the positive identification (0.25 and 0.37) with strong significance, astute leadership does not show any association with positive identification in the regression. The path coefficient (0.24) of SEM evaluation was observed, but with strong significance. Both, the regression (0.23) and path coefficients (0.42), seem to support the positive association of regulatory influences and negative association (-0.35 and -0.56) of astute leadership as a moderating variable on the disengaged identification, with very strong significance. In applied research the sample variability, the quality of measurements and the non-normal distribution of the variables are other potential source of errors in model selection (Di Natale, 2002).

From these evaluations, though nothing could strongly be concluded, but it did show a need to propose a Comprehensive Model for further evaluation. Based on the results discussed so far, the Comprehensive Model was evaluated for fitness.

6.7 Comprehensive Model

The Comprehensive Model derived out of the above evaluation is briefly depicted below in Figure 6(11). This Comprehensive Model was tested on full group, aligned group, misaligned group, large project group, and small project groups. The formation and theoretical background of forming the additional four groups have already been dealt with in the earlier chapter, hence excluded here. However the results are discussed briefly as below:

Figure 6(11) – Comprehensive Model



6.7.1 Full sample evaluation:

While the fit indices of Normed Chi-square (1.8) and RMSEA (0.06) indicated a good fit, AGFI, RMR, and NFI did not indicate even an acceptable fit. The fit indices of

CFI, AIC, and CAIC too did not strongly support a good fit. The path coefficients of peripheral vision capacity-managerial attitude to the astute leadership were observed to be (0.77) with a very strong significance. The astute leadership depicted a negative coefficient with strong significance, with the organizational disengaged identification. The peripheral vision need-regulatory influences too exhibited a coefficient of (0.47) with strong significance. While astute leadership showed a path coefficient of (0.23) with positive identification, peripheral vision need-environmental dynamics showed a path coefficient of (0.38). However both these were strongly significant. All the above relationships were in alignment with the theoretical basis of the model proposed.

6.7.2 Aligned Group Evaluation

This group consisted of samples that perceived the organization as 'focused' or 'vigilant,' as far as the peripheral vision gap was concerned. While the fit indices of Normed Chi-square (1.7) and RMSEA (0.07) indicated a good to acceptable fit, AGFI, RMR and NFI did not indicate even an acceptable fit. The fit indices of CFI, AIC, and CAIC too did not strongly support a good fit. The path coefficient of peripheral vision capacity-managerial attitude to the astute leadership was observed to be (0.52) with a very strong significance. The astute leadership depicted a negative coefficient (-0.59) with strong significance, with the organizational disengaged identification. This is evident in a group that is aligned in its perception. The peripheral vision need-regulatory influences too exhibited a coefficient of (0.51) with strong significance. While astute leadership showed a path coefficient of (0.27) with positive identification, peripheral vision need-environmental dynamics showed a path

coefficient of (0.35). However both these associations were moderate to strongly significant.

6.7.3 Misaligned Group Evaluation

This group consisted of sample that perceived the organization as 'vulnerable' or 'neurotic' with a mismatched peripheral vision need and capacity, as far as the peripheral vision gap was concerned. While the fit indices of Normed Chi-square (1.99) and RMSEA (0.10) indicated a poor fit, AGFI, RMR, NFI, CFI, AIC, and CAIC did not support even an acceptable fit. The path coefficient of peripheral vision capacity-managerial attitude to the astute leadership was observed to be (1.47) with a very strong significance. The astute leadership depicted a negative coefficient (-0.42) with very strong significance, with the organizational disengaged identification. This is again evident in a group that is united in its perception on misalignment. The peripheral vision need-regulatory influences too exhibited a coefficient of (0.30) with moderate significance. While astute leadership did not show any significant path coefficient with positive identification, the same phenomenon was observed with the peripheral vision need-environmental dynamics with the positive identification.

6.7.4 Large Project Group evaluation:

This group consisted of sample that belonged to a single project under a single middle management leadership. The objective of evaluating this group was primarily to assess, if the responses were influenced by the group level leadership as no other grouping, by statistically significant size, could be identified for evaluating this aspect. While the fit indices of Normed Chi-square (1.87) and RMSEA (0.09)

indicated a poor fit, AGFI, RMR, NFI, CFI, AIC, and CAIC did not support even an acceptable fit. The path coefficient of peripheral vision capacity-managerial attitude to the astute leadership was observed to be (0.51) with a strong significance. The astute leadership depicted a negative coefficient (-0.71) with very strong significance, with the organizational disengaged identification. The peripheral vision need-regulatory influences too exhibited a coefficient of (0.82) with strong significance. While astute leadership did not show any significant path coefficient with positive identification, the peripheral vision need-environmental dynamics showed a path coefficient of (0.35) with the positive identification, with a moderate significance. These coefficients and the indices thus establish that the responses were not influenced by the middle level leadership and even if it did in some parts, they were not significant enough to influence the overall outcome.

6.7.5 Small Project Groups Sample Evaluation

This group consisted of the responses that belonged to nine different groups, with nine middle level leadership interventions. The expectation was that these groups would behave in a similar fashion to the comprehensive group, except for the size of the sample, on a theoretical basis. While the fit indices of Normed Chi-square (1.74) and RMSEA (0.07) indicated a good to acceptable fit, AGFI, RMR, and NFI did not indicate even an acceptable fit. The fit indices of CFI, AIC, and CAIC too did not strongly support a good fit or even an acceptable fit. The path coefficients of peripheral vision capacity-managerial attitude to the astute leadership were observed to be (0.86) with a very strong significance. The astute leadership depicted a negative coefficient of (-0.50) with very strong significance, with the organizational

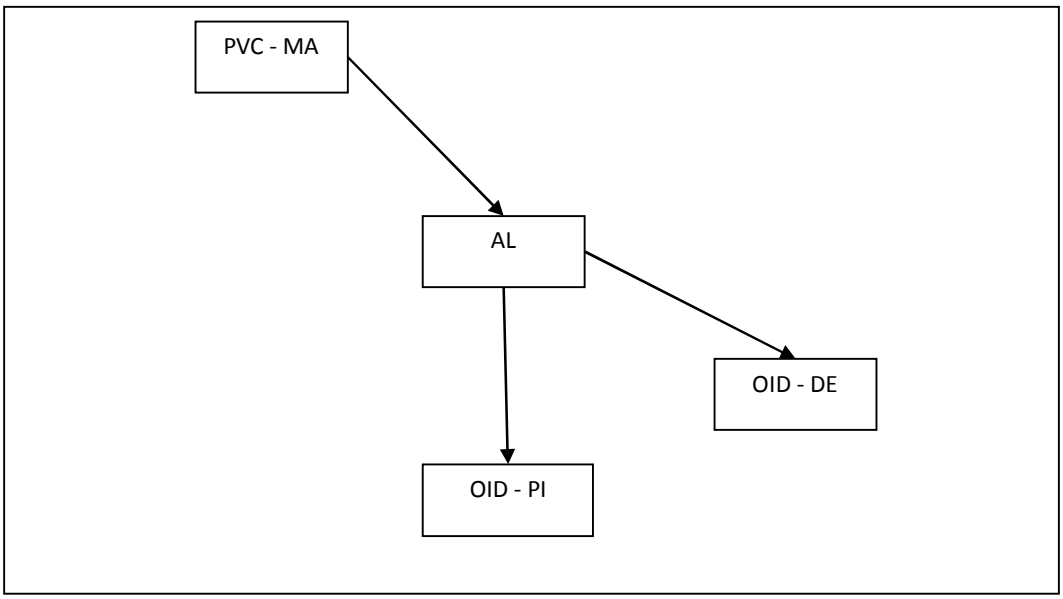
disengaged identification. The peripheral vision need-regulatory influences exhibited no significant relationship. While astute leadership showed a path coefficient of (0.26) with positive identification of strong significance, peripheral vision need-environmental dynamics showed a path coefficient of (0.31) with weak significance. The indices and standard coefficients had a similarity to the whole group, as theoretically anticipated.

Based on the above fit indices and the path coefficients, the model was redesigned to make it more parsimonious and to retain associations that exhibited a reasonably strong relationship of significance. This model is evaluated and the results are discussed below for the fit indices and coefficients.

6.8 Parsimonious Model

The parsimonious model, which was derived out of the previous evaluation exercise, is given as below in Figure 6(12). Like the earlier Comprehensive Model, this model too was tested on all the five sample groups and the results discussed against the backdrop of theory.

Figure 6(12) – Parsimonious Model



6.8.1 Full Sample Evaluation

While an overall view of the indices indicated considerable improvement of the fitness and strength of association, it still could not qualify to be called 'strong' or 'perfect' fit. The Normed Chi-square (1.97) and RMSEA of (0.06) do indicate a 'good fit,' the AGFI, RMR, NFI, and CFI showed substantial improvement towards an acceptable level of fit. The AIC and CAIC too indicated a good fit. Hence, overall, the group population exhibited a good to acceptable fit model.

When the path coefficients were evaluated, we observed that there are three key paths: peripheral vision-managerial attitude towards the periphery with astute leadership, astute leadership with disengaged identification, and positive identification. While PVC-MA indicated a coefficient of (0.78) with astute leadership, the astute leadership itself indicated a coefficient of (0.27) with positive identification, both with a very

strong significance. Again the astute leadership exhibited a path coefficient of (-0.55) with disengaged identification with very strong significance. Overall, this model exhibited a reasonably good fit, strong association with very strong significance. This strongly supported the theory that astute leadership always reinforces positive identification and discourages disengaged identification traits. Similarly the managerial attitude towards the periphery, which is an indicator of one of the key peripheral vision capacity factors, is seen as a strong antecedent of astute leadership.

6.8.2 Aligned Group Evaluation

This group exhibits considerably matching relationship as the one exhibited by the full group. Theoretically this can be expected, as this group perceives the organization to be aligned in its peripheral vision gap aspect. Overall view of the indices indicated considerable improvement of the fitness and strength of association. The Normed Chi-square (1.69) and RMSEA of (0.07) do indicate a 'good fit,' the AGFI, RMR, NFI, and CFI showed substantial improvement towards acceptable fit. The AIC and CAIC do indicate good fit. This group too exhibited a good to acceptable fit model.

When the path coefficients are evaluated, they showed a remarkable resemblance to the full group, with weightages that were indicative of their aligned perception. While PVC-MA indicated a coefficient of (0.51) with astute leadership, the astute leadership itself indicated a coefficient of 0.41 with positive identification, both with a very strong significance. Again the astute leadership exhibited a path coefficient of (-0.53) with disengaged identification with very strong significance. Overall for this group, this model exhibited a reasonably good fit and strong association of very strong significance. This once again strongly supported the theory that astute leadership

always reinforces positive identification and discourages disengaged identification traits. Similarly the managerial attitude towards the periphery, which is an indicator of one key peripheral vision capacity factor, is a strong antecedent of astute leadership.

6.8.3 Misaligned Group Evaluation

This group exhibited relationships which are in line with its perception of the peripheral vision gap of the organization. The strengths of the fit indices are not very strong, even to support an acceptable fit, which clearly brought out the misaligned nature of the group. The Normed Chi-square (1.73) and RMSEA of (0.09) do indicate an 'acceptable' fit, the AGFI, RMR, NFI, and CFI showed poor fits. The AIC and CAIC do indicate an acceptable fit. This group exhibited a poor fit of the model which supported the theory that as this group perceives the organization to be of having misaligned peripheral vision gap, so the poor fit of the model was expected.

When the path coefficients were evaluated, they too showed a mild resemblance to the full group, with different weightages and significance indicative of their misaligned perception. While PVC-MA indicated a coefficient of (1.58) with astute leadership, strongly significant, the astute leadership itself indicated absence of relationship with positive identification. Again the astute leadership exhibited a path coefficient of (-0.47) with disengaged identification with very strong significance. Overall for this group, this model exhibited a fit that is in line with their misaligned perception of the organizational peripheral vision gap.

6.8.4 Large Project Group Evaluation

This group exhibited relationships that are similar to the misaligned group. The strengths of the fit indices were not very strong, even to support an acceptable fit. While this could probably be attributed to the impact and influence of middle level management on the group, the strengths do not completely support this conclusion. Therefore it could be safely presumed that the group level leadership has not significantly impacted the overall perception of the knowledge workforce to the extent of projecting a contradictory indication. The Normed Chi-square (1.76) and RMSEA of (0.09) do indicate an 'acceptable', the AGFI, RMR, NFI, and CFI showed poor fit. The AIC and CAIC indicated an acceptable fit. This group exhibited a poor fit of the model which supported the fact that the group level middle management had not been able to influence the perception, in any significant way. The path coefficients, when evaluated, to show a mild resemblance to the misaligned group, with different weightages and significance, indicative of their homogenous grouped perception. While PVC-MA indicated a coefficient of (0.58) with astute leadership, strongly significant, the astute leadership itself indicated absence of significant association with positive identification. Again the astute leadership exhibited a path coefficient of (-0.65) with disengaged identification with very strong significance. Overall, for this group, associated with a middle level management, did not exhibit a fit that could be termed as good or even fairly acceptable.

6.8.5 Small Project Groups Evaluation

This group exhibited considerably matching relationship as the one exhibited by the full group. Theoretically, this could be expected, as this group composed of people

from nine different groups associated with project teams under a middle level leadership, perceived the organization differently from their group influenced perception. Overall view of the indices indicates striking similarity to the full group, which is theoretically expected. The Normed Chi-square (1.71) and RMSEA of (0.07) indicated a fairly 'acceptable fit,' the AGFI, RMR, NFI, and CFI showed substantial improvement towards acceptable fit. The AIC and CAIC do indicate good fit. This group exhibited a good to acceptable fit model.

When the path coefficients were evaluated, they showed a remarkable resemblance to the full group, with weightages that were indicative of their aligned perception. While PVC-MA indicated a coefficient of (0.87) with astute leadership with very strong significance, the astute leadership itself indicated a coefficient of (0.21) with positive identification, with a strong significance. Again the astute leadership exhibited a path coefficient of (-0.48) with disengaged identification with very strong significance. Overall for this group, this model exhibited a reasonably good fit and strong association with very strong significance. This group, which could be considered as a smaller version of full population, once again strongly reinforced the theory that astute leadership always reinforces positive identification and discourages disengaged identification. Similarly the managerial attitude towards the periphery, which is an indicator of one key peripheral vision capacity factor, is a strong antecedent of astute leadership.

With the parsimonious model exhibiting an acceptable to good fit, closely supported by the theory, it was further broken down to two sub-models A and B as shown in

Figures 6(13) and 6(14), respectively, in order to explore the possible reasons behind some of the contradictions observed.

6.9 Discrete Model

The parsimonious model was evaluated in two parts as described above, independently on all the five groups to evaluate any interesting observations about the population.

Figure 6(13) – Discrete Model - A

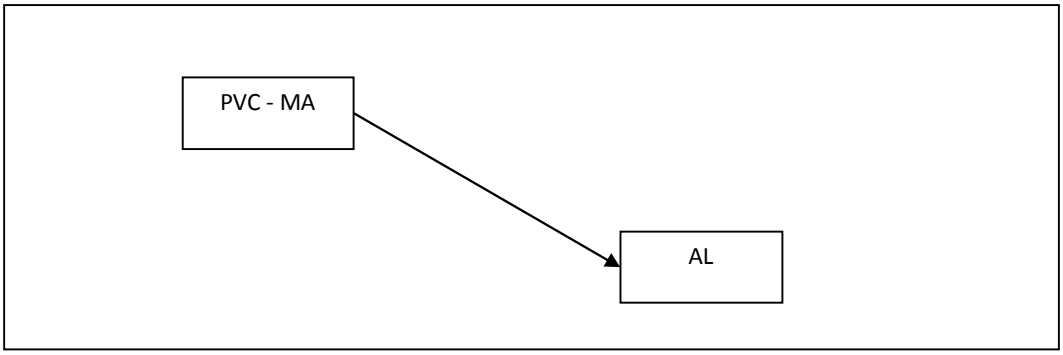
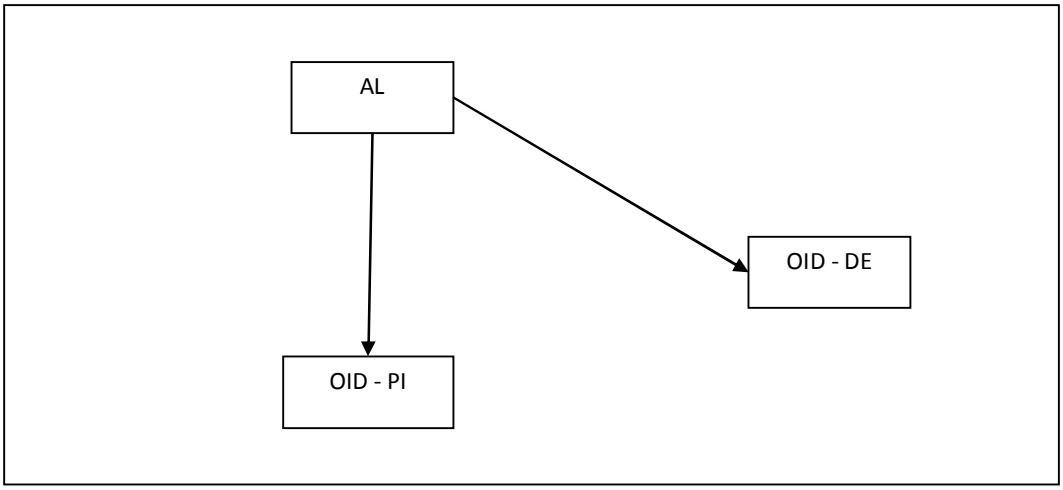


Figure 6(14) – Discrete Model - B



6.9.1 Full Sample Evaluation

While Model A did exhibit a good to acceptable fit, the path coefficient of peripheral vision-managerial attitudes periphery to astute leadership was observed to be (0.78) with very strong significance. The Normed Chi-square index was observed to be (2.05) and the RMSEA was (0.07), indicating an acceptable fit. While the AGFI, RMR, NFI, and CFI indicated improved indices towards acceptable fit, AIC and CAIC indicated a good fit. However when Model B was evaluated, it exhibited a very strong significant negative association of astute leadership with disengaged identification (-0.54) and a strong significant association of astute leadership with positive identification (0.27). The fit indices were not much different from Model A. Overall, for the full group, Model A showed a stronger validity when compared to the Model B. The discrete models did not show any dilution from the overall parsimonious model fit, nor did it exhibit any significant improvement of the model fit, and remained more or less neutral.

6.9.2 Aligned Group evaluation:

While Models A and B did exhibit a similar good to acceptable fit, the path coefficient like the full group, the strength of significance of astute leadership in the positive identification was very strong unlike the full group where it was just strong. This is amply supported by the theory that owing to its perception of the organization as one with an aligned peripheral vision they are bound to strongly signify a positive identification. The peripheral vision-managerial attitudes periphery to astute leadership was observed to be (0.51) with very strong significance. The Normed Chi-square index was observed to be (1.90) and the RMSEA was (0.08), indicating an

acceptable fit. While the AGFI, RMR, NFI, and CFI indicate improved indices towards acceptable fit, AIC and CAIC indicated a good fit. However when Model B was evaluated, it also exhibited a very strong significant negative association of astute leadership with disengaged identification (-0.51) and a very strong significant association of astute leadership with positive identification (0.42). The fit indices were comparable to the model A. Overall in this group too, model A showed a stronger validity when compared to the model B. The discrete models once did not show any dilution from the overall parsimonious model fit, nor did it exhibit any significant improvement of the model fit, for the aligned group.

6.9.3 Misaligned Group Evaluation

This group exhibited fitness that was not very strong as the groups discussed so far. While the direction of the association was same, the strength and significance were varying. Both Models A and B showed a poor fit. However the path coefficients of PCV-MA was observed to be (1.59) strongly significant and the coefficients of astute leadership to disengaged identification was (-0.48) with very strong significance. The astute leadership did not show a significant association with the positive identification, as theoretically expected, keeping the profile of the group in the background.

6.9.4 Large Project Group Evaluation

This group was made of responses coming from people under a single middle management leadership. They exhibited fitness that was not very strong as the groups discussed so far. They exhibited association, much closer to the misaligned group,

however the weights of coefficients, direction, and the level of significance were similar. This clearly indicated that the middle level leadership did not have a significant impact on the responses. Both Models A and B showed a poor fit. But the path coefficients of PCV-MA was observed to be (0.53), strongly significant and the coefficients of astute leadership to disengaged identification was (-0.65) with very strong significance. The astute leadership did not show any significant association with the positive identification. This could probably be attributable to the group impact.

6.9.5 Small Project Groups Evaluation

This group comprised of responses from nine different project groupings, exhibited indices and coefficients, similar to that of the full group. While model A did exhibit a good to acceptable fit, the path coefficient of peripheral vision-managerial attitudes periphery to astute leadership was observed to be (0.87) with very strong significance. The Normed Chi-square index was observed to be (1.35) and the RMSEA was (0.05), indicating a good fit. While the AGFI, RMR, NFI, and CFI indicated considerably improved indices towards acceptable fit, AIC and CAIC also indicated a good fit. However when Model B was evaluated, it exhibited a very strong significant negative association of astute leadership with disengaged identification (-0.47) and a strong significant association of astute leadership with positive identification (0.28). The fit indices were not much different from Model A, but exhibited a relatively weaker fitness. Overall, for this group of small projects, Model A showed a stronger validity, when compared to Model B. In this group too, the discrete models did not show any

dilution from the overall parsimonious model fit, nor did it exhibit any significant improvement of the model fit.

From the above discussion, it could be reasonably averred that the best fitting model with a strong theoretical support was the parsimonious model, though some fit indices were not strong enough to be termed good. While we could explain this from the theoretical perspective, some of plausible reasons from the sample and its nature, could be associated with these unsupportive fitness are noted as below:

- Though the survey was planned to be carried out on a larger sample with multiple groups, the effective responses obtained did not adequately support group-wise analysis, while the respondents could have participated with varying degree of contextual reference. The non-uniform composition of the participant groups could have impacted the effectiveness of the statistical inference. This could have brought in perceptional differences and reflected in the responses.
- While the survey measurement items were created with minimum ambiguity, some amount of ambiguity could have been introduced due to the leadership aspects at the group levels. Since the statistical evaluation could not be done group wise due to inadequate sample responses, and the analysis was done with the complete group that was non-uniform. It could have adversely impacted the strength of statistical inference. While the evaluation of the large project group indicated that the role played by the middle management on the perception was minimum and not significant, they still existed and could have impacted the overall result, statistically at critical estimates. This presumption can be verified,

if the research could be carried out on a larger sample of multiple groups of larger sizes. This actually opens up a wider scope for research, in this area.

- The possibility of the respondents responding at different time frames in a span of 60 days too could have introduced some error factors, associated with their mood swings, psychological status, and mental framework, thereby impacting the inference through statistical support. This is more prominently observed in knowledge workers, especially in the information technology industry that is known to be stress prone by various research studies.

CHAPTER 7

CONCLUSIONS

This chapter discusses the various conclusions that are drawn based on the data analysis and discussion of the study results as explained in the previous chapters. Towards the end, the conclusion briefly explains the outcomes that are relevant for the corporate management.

Though focused vision is essential to accomplish a task or for that matter any activity that requires concentration in the current technologically driven business scenario, it is not the only aspect that ensures success. While focused vision does help an organization to concentrate on its objective, it is the peripheral vision or the 'awareness' of what is happening around helps it to keep off the dangers (Day & Schoemaker, 2004). Therefore, not recognizing the peripheral vision need of one's business and not aligning the resources to address the same is a sure recipe for disaster.

In the current businesses that are predominantly run by knowledge workers, traditional ways of managing them are seldom effective. Responsibility cannot be purchased, and satisfaction is vague as far as knowledge workers are concerned (Drucker, 1954). Knowledge workers can coordinate their work efficiently, when they are empowered and provided with information on organizational objectives and business environment (Frederickson, et al., 2004). Knowledge workers constitute over two-fifths of total workforce, and it is ever increasing (Drucker, 2006). The critical role of leadership in such an environment can hardly be overemphasized. Thamhain

(2003) in his study has tried to identify specific barriers and drivers for innovative team performance and provide an insight into the kind of organizational environment and leadership styles conducive to effective R&D team performance.

For an enterprise to sustain growth in the technology driven world today, the identification pattern of employees with the organization is of foremost concern. The right kind of identification ensures the best contribution from each employee, ascertaining business sustenance. However, the right organizational identification is not something that just occurs on its own. They get cultivated over the experiences of the knowledge workforce. Organizational identification has also been argued to help foster a sense of meaning, belonging, and control at work (Ashforth, 2001).

A positive identification has to be nurtured and cultivated. When it comes to knowledge workers, the task becomes even more complex and confounding.

In light of the above brief observation, this study has attempted to get an insight into the relationships, these constructs shares, in a knowledge industry. While each of these aspects is individually important and has been studied in depth, they have not been studied together. This study has tried to explore the relationships in combination. This study used a survey among the knowledge workers of an Indian conglomerate, in their information technology business. Though the purpose of the survey was to collect as much data as possible with a wide variety of groups in order to keep the scope of study wider, only 244 samples could be obtained from one business unit with ten groups. Though the participants belonged to one large business unit under the leadership of one individual, they however constituted ten different groups unified under ten middle level leaders. As the responses from the group were skewed, the

study could not be extended beyond the composite sample. However based on the perceptions, two groups were created and the models were evaluated within these groups.

The survey was designed such that no missing data were generated and hence all the 244 data points were complete. Yet most of the demographic details were observed to be incoherent, making them not usable for the study.

The study resulted in creation of nine new latent variables, post an EFA with Varimax rotation. These variables were factor scored and studied in depth to derive meaning out of the relationship. While relationships were proposed for evaluation based on the available literature and theory; nevertheless, it was ensured at every stage that statistical aspects do not drive the inference. The data was statistically evaluated for descriptive and correlation studies. The variables were regressed to study the weight and strength of the independent variables. The data was also evaluated with SEM and path diagrams. The multiple exploratory evaluations eventually resulted in the conceptualization of a Comprehensive Model which was further evaluated. This evaluation led to conceptualization of a parsimonious model that was found to exhibit a good to acceptable fit from the SEM and the coefficients exhibited sound association with a very strong level of significance.

Based on the results and its discussion, following are the three key conclusions that could be made:

(1) As far as the knowledge workers are concerned, there is enough reason to believe from our study that , the managerial attitude towards periphery of the

perceived peripheral vision capacity of an organization and the astute leadership are very strongly associated, at a very strong level of significance. Despite the statistical orientation, it is not possible to claim that the former causes the latter based on the study with this available data; There is enough reason to strongly believe that it could be so and needs further longitudinal research.

(2) This study also reinforces the theoretical fact that the astute leadership strongly influences the positive identification and negatively associates with disengaged identification traits, with a very strong level of significance. This is supported by the observed acceptable to good fit of the structure equation model.

(3) The organizational identification pattern of a knowledge worker in an organization is strongly influenced and impacted by his perception of the peripheral vision capacity of the organization, more specifically its attitude towards the periphery and the astute leadership of the organization. While the current study does support this conclusion based on a single industry and the homogenous business group, a multiple industry study on a larger sample with multiple business groups could reinforce this conclusion with greater validity.

(4) The measuring instrument that has emerged in the course of various analyses of this data set is observed to be an effective, reliable, and strong tool to carry out further research on these constructs in this direction.

Our study suggests that while traditional workers are task oriented, knowledge workers are more objective oriented. The impact of the organizational peripheral vision and the perceived gap between need and capacity on the perceived leadership

styles, and the organizational identification ethos are closely associated and are mutually influencing. Khoury (2005), with a purpose to explore the relationship between leadership effectiveness and character using leader-managers of knowledge workers as the subject sample, has focused her work on the personal characteristics of leaders like honesty, uprightness, and technical competence rather than their impact on the effectiveness of the knowledge workers. The association of managerial attitudes towards the periphery to the astute leadership is significantly strong and likely to be causative. The study also indicates a strong likely causative association of astute leadership with the organizational identification pattern of the knowledge workers.

It is evident from the this study that, when an organization is perceived to be good in recognizing its peripheral vision needs and align its resources to meet the same, its leadership is perceived to be astute and competent, which further encourages a positive identification of the knowledge workforce with the organization and negatively influences its disengaged identification traits. Therefore, a well-formulated policy by the corporate management works towards ensuring proper systems to recognize the peripheral vision needs of its business. When the organization communicates and shares its relevance and importance with the knowledge employee, along with demonstrating its ability to align its resource in meeting these needs, ensures that the organization is perceived to be led by astute leaders. Thus, ensuring positive identification by the knowledge workers that goes to improve the morale levels andkeep the employee turnover and attrition low, thereby ensuring business sustenance and consequential healthy growth.

CHAPTER 8

IMPLICATIONS AND SPECIFIC CONTRIBUTIONS

This chapter has two parts. The first part explains the implication of the study results for the management and the second part deals with the specific contributions made by this study to the management knowledge domain.

8.1 Implications

The implications of this study are based on the statistical evaluation of the survey responses, in the background of the theoretical basis for the studies. The primary objective of this study was to identify the relationships between the constructs of the peripheral vision need and capacity of an organization, along with the construct of Bolman & Deal's leadership orientation and its consequent impact on the organizational identification pattern of the employees, specifically the knowledge workers.

In the current business scenario, managers are faced with the challenge of running a business that is increasingly dependent on the knowledge workers. Knowledge workers constitute over two-fifths of total work force, and it is ever increasing Drucker (2006). The businesses are increasingly becoming interdependent and the knowledge workers are expected to coordinate their work and deliver performance. According to Frederickson, et al. (2004), knowledge workers can coordinate their work efficiently and effectively, when they are furnished with the information about the organization, business environment they operate, and the management thoughtprocess on key issues. While traditional motivational techniques are not found

to be effective newer ways of retaining talent and reducing attrition have become the key result area for the corporate management. These challenges will be increasing in the days to come while the work culture continues to undergo a paradigm shift.

Hence, in that context, this study contributes to understanding some of these critical aspects of retention and motivation of knowledge workforce.

While the need of peripheral vision for an organization driven by knowledge workforce can hardly be overemphasized, understanding the key attributes of peripheral vision ethos, as perceived by the knowledge workforce, could go a long way in helping the corporate to design their human resource strategy.

The finding, that the managerial attitude towards the periphery by the senior management is perceived to be an important antecedent of the astute leadership. It can aid in prioritizing the organizational resources towards improving the same. Consequence of a positive perception of astute leadership leads to a positive organizational identification by the knowledge workforce, although it also impacts the disengaged identification patterns negatively. This could effectively lead to implementation of human resource policies and procedures, which leads to the demonstration of astute leadership traits.

Attrition continues to haunt every human resource manager in the knowledge industry. This issue could be effectively managed by understanding the behavioral pattern of the knowledge workforce, their expectations from the senior leadership, and knowledge sharing culture. The study reinforces this statistically and helps in

improving the understanding of the knowledge workforce by the corporate leadership more fully.

The study results also reveal the lesser effect of aspects like resource management and data management by the corporate leadership on the perceived astute leadership. It also depicts that the peripheral vision need, an attribute outside the control of the organization and its resources, is not seriously impacting the leadership perception and identification patterns of knowledge workforce. The regulatory influences of the peripheral vision need of an organization had some detrimental effect on the positive identification. Our study clarifies that they are not so significant to impact the perception of the knowledge workforce on the astute leadership. This proves our point that objective oriented knowledge workforce is different in its thinking and attitudes from the task oriented traditional workforce.

To simply put it in our earlier stated example of navigating the ship, the knowledge workforce is not significantly impacted by "*conditions of the sea,*" but are more influenced and impacted by the astute leadership's capability to "*navigate the ship*" through the prevailing "*conditions of the sea.*"

While the study could not effectively bring about the impact of demographic attributes of the knowledge workforce, like gender, marital status, educational levels, experience, and their educational association to elite institutions, we strongly opine that these could be influencing their perception significantly, with strong theoretical reasons to support. Further study on a substantially larger group across businesses could lead to substantiation of these presumptions.

8.2 Specific Contribution

In our effort to understand the relationships among the constructs of peripheral vision need and capacity, Bolman & Deal's leadership orientation and organizational identification, this study makes the following modest contributions to the existing body of management literature.

The study has resulted in the generation of new attributes under each of these constructs with very strong association. The attributes of peripheral vision need in terms of *environmental dynamics*, *business dynamics*, and *regulatory influences* can play a key role in studying various corporate issues. The attributes of peripheral vision capacity in terms of *business clairvoyance*, *resource and data management capacity*, and *managerial attitudes towards periphery* brings in a fresh and renewed perspective of the peripheral vision capacity of an organization, relevant to its current business scenario.

The leadership dimension measured and nomenclated as '*Astute Leadership*' brings in a completely new leadership variable that is relevant to knowledge workforce management, leadership, and motivational studies. With a strong measurement instrument, this variable, is a key contribution to the body of management domain and could be helpful in studying one of the key dimensions of leadership.

The new factors of the organizational identification pattern, namely the disengaged identification and positive identification, is an emergent mode consequent to the applicability of the convergence model of organizational identification (Sluss & Ashforth, 2008). The new elements of the organizational identification as disengaged

identification and positive identification are an offshoot of the expanded model of the organizational identification by Kreiner and Ashforth (2004).

The study has established the strong association of managerial attitudes towards periphery as an important peripheral vision capacity antecedent for the astute leadership. This brings in a fresh perspective of the knowledge workforce and how they look at this aspect of peripheral vision capacity over the rest. This clearly brings in a direction and prioritization for the management leadership to focus.

The study has also established the existence of a strong relationship between the astute leadership and its positive impact on the positive identification by the knowledge workforce, and also its negative influence on the disengaged identification traits as exhibited by the knowledge workforce.

Another key contribution of our study is the establishment of an effective measurement instrument to measure the attributes of (a) peripheral vision need; *environmental dynamics, business dynamics,* and *regulatory influences*, (b) astute leadership, and (c) organizational *disengaged* identification and *positive* organizational identification. These tools, that emerged while the study was being carried out, are found to be highly reliable, consistent, and effective, as a measurement instrument just based on a single study. Emanating from this study further extensive study using this instrument could go a long way in proving the utility of this specific contribution.

Another key contribution of this study is the reduced impact or influence of other aspects of peripheral vision need and capacity, that are apparently appearing to be

critical; but actually are not so, as shown by the perceptional response of knowledge workforce. This once again helps in the prioritization of the application of managerial resources in improving the astute leadership skills for managing the knowledge-driven businesses.

CHAPTER 9

LIMITATIONS AND FUTURE RESEARCH SCOPE

This chapter is divided into two parts. The first part discusses the key limitations to this study while the second part discusses the scope for future research based on the concluded study.

9.1 Limitations

Like every social research study, this study too has certain limitations, which need to be considered while generalizing and interpreting the outcomes or results. These limitations have been explained below:

Though the objective of the study was to carry out the survey on a much larger group of knowledge workforce, in multiple organizations and multiple businesses, the survey could not be done due to constraints in getting organizational participation, time, and resource in administering a large survey, compounded by the usual difficulties, like poor response rate, poor participation, etc., associated with any survey attempting to collect primary data.

This study has been done on a single Indian conglomerate and in one of its business units. Hence extending the outcome beyond a point is too far fetched to be generalized. So a generic claim of the outcome on the entire knowledge workforce cannot be concluded based on these outcomes.

The knowledge industry studied here in this survey was pertaining to information technology (IT). While it could be claimed that a knowledge industry is a knowledge

industry as far as the soft skills of knowledge workforce are concerned, despite the nature of technology or business, there is not enough data or studies to prove this. Though theoretically it could be claimed that the knowledge workforce has comparable behavioral patterns across the industry, as far as identification and leadership perceptions are concerned, it cannot be assured with certainty that these patterns are same, in light of various other organizational, political, geographical, and social factors, which could also be influencing the behavior. To that extent, this study results confines itself to an Indian, IT industry, from the southern part of the country, under single senior leadership.

Another limitation of this study is the error factor that could have crept in due to the fact that this study was kept open for response for over 60 days, wherein it cannot be assured that the thought process and mood of the respondents could not have been influenced either way, due to their ongoing experience in the organization. While this could have been considerably reduced and factored in, in a face-to-face paper survey done in a single session, the mere logistics of this exercise and the apprehension from the industry made it impossible for this format of the survey, and we had to absorb error factor in our study.

Yet another limitation of this study is that the entire response came from one business unit of this organization and the same cannot be representative of, neither the organization nor the industry. So extending the outcomes on any of these lines, based solely on this study, is not sustainable.

According to Bozionelos (2003), path analysis models with more than ten variables are difficult to analyze and interpret, and this study had nine variables, post EFA.

However, it still cannot be conclusively presumed that the path analysis and its interpretation would have been easy, sound, and strong. Hence the outcome of this study could be treated more as indicative in nature and hence would require further validation through longitudinal studies.

9.2 Future Research Directions and Scope

These study outcomes suggest several opportunities and scope for future research in the managerial and theoretical arena. Suggestions for future research in this chapter are however not limited to whatever has been indicated here but could be extended much beyond what is stated here.

While the peripheral vision need aspects of environmental dynamics, business dynamics and regulatory influences do not exhibit any significant association with the leadership orientation; nevertheless, they do form a fertile ground for future research in the area of peripheral vision as a construct. In the same light, peripheral vision capacity as a construct with *managerial attitudes towards the periphery*, *business clairvoyance*, and *resource and data management capability* can be studied as key organizational factors.

The scale that has been developed for measuring these variables is observed to be of high reliability and internal consistency from the social research statistical standards (Tripathi, 2008) and could be of immense use in further research studies. These instruments, therefore, could be put to use independently for studying any of these constructs in the management or social research. They also leave further scope for improvement of these scales to suit various other research studies.

This study is done in a single industry, in a single organization, in a single geographical location, in one country. Same study with multiple organizations, multiple business units, and multiple geographical and national variants, offers a very large scope for future research to enrich the management domain substantially.

Since the constructs of peripheral vision and Bolman & Deal's leadership orientation are fairly recent, as noted from the literature study, this study could be considered just a beginning towards a much larger and deeper research initiative in studying the behavioral aspects of the knowledge workforce.

We feel that our study has raised more research questions, than it has tried to answer, thereby opening up a wide scope for future research in the important domain of leadership, behavioral studies of knowledge workforce in technology driven businesses of today.

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APPENDICES

APPENDIX I – Research Survey Questionnaire for pilot study

Birla Institute of Technology & Science PILANI (RAJ)

(Study of the work environment of knowledge based workforce)

PERSONAL INFORMATION

Age: …….. Gender: Male / Female Marital Status: Single / Married

Spouse's Occupation: Working / Home maker

Family type: Joint / Nuclear

Highest Qualification:

☐ Graduation ☐ Doctorate

☐ Post Graduation ☐ Others: CA etc..

Institution of highest qualification: ……

Educational background:	Region	Language
Schooling:	Rural / Urban	English / Vernacular
College:	Rural / Urban	English / Vernacular

Size and nature of business unit that is referenced for this survey:

☐ Part of core business

☐ Support service

(approximate number of people in this business unit)

……..

Nature of your Organization

☐ Domestic company ☐ Domestic transnational corporation

☐ Multinational corporation ☐ Govt. establishment

Work Experience:

Current organization: …….. (in months)

All previous organizations: …….. (in months)

Your Line of Business is called as:

Department Affiliation:

☐ Research and Development ☐ Human Resource

☐ Product/Process Development ☐ Manufacturing and Operations

☐ Marketing ☐ Others (pls mention)

☐ Finance

Mention briefly about nature of your work in just two lines:

……

……

Current Designation Level: Levels from Business Unit Head (1 if you report to the BU Head)

☐ 1 ☐ 3

☐ 2 ☐ 4 and above

Do you wish to receive the Executive Summary of this research outcome. Yes / No

Birla Institute of Technology & Science PILANI (RAJ)

(Study of the work environment of knowledge based workforce)

While responding to the below questionnaire kindly remember that there are no right answers or wrong answers. Hence please answer the questions as frankly as possible to your best of the ability. Please do not give a response that makes you / your management "look good" or that makes the response "socially acceptable" one or based on what you think your management / BITS want you to say. This will defeat the very purpose and the spirit of the research exercise. kindly note that this survey has **three parts** and ensure that all three parts are responded to.

PART A: ***Using the following scale, please circle the number for each item that comes closest to reflecting your opinion about the strategic eye of your organization as a composite unit, as perceived by you in your current role. Kindly read the description in the extremes to clearly understand the direction of response.***

Kindly use the following scale:

1 2 3 4 5 6

(100% X, 0% Y) (80% X, 20% Y) (60% X, 40% Y) (40% X, 60% Y) (20% X, 80% Y) (0% X, 100% Y)

	Column X							Column Y
	% of X ►	*100*	*80*	*60*	*40*	*20*	*0*	◄ % of X
	% of Y ►	*0*	*20*	*40*	*60*	*80*	*100*	◄ % of Y
1. Industry/Business structure	Few easily identifiable competitors	**1**	**2**	**3**	**4**	**5**	**6**	May competitors from unexpected sources
2. Channel structure-meaning the modality of reaching your product/services to the customer/end user.	Simple and direct	**1**	**2**	**3**	**4**	**5**	**6**	Long and complex channel

								mix
3. Market structure-refers to the way your product/services are segmented.	Fixed boundaries and simple segmentation	1	2	3	4	5	6	Fuzzy boundaries and complex segmentation
4. Enabling technologies-refers to the complexity and number of technologies directly impacting the business.	Few and mature (simple systems)	1	2	3	4	5	6	Many converging (complex systems)
5. Government regulations (Central; State etc.)	Minimal or stable	1	2	3	4	5	6	Many or changing rapidly
6. Public visibility of industry in / by media	Largely ignored	1	2	3	4	5	6	Closely watched but media or special interest groups
7. Dependence on government funding and political access	Low: largely independent of government	1	2	3	4	5	6	High: sensitive to politics and funding climate
8. Dependence on global economy	Low: domestic focused and isolated	1	2	3	4	5	6	High: affected by global conditions
9. Number of surprises by high impact events in the past three years	None	1	2	3	4	5	6	Three or more
10. Accuracy of past forecasts	High: small deviations from actual	1	2	3	4	5	6	Low: Actual differ greatly from forecasts
11. Market growth pattern	Slow and stable	1	2	3	4	5	6	Rapid and unstable
12. Growth opportunities	Have decreased dramati	1	2	3	4	5	6	Have increased dramati

	cally in the past three years							cally in the past three years
13. Speed and direction of technological change	Predictable	1	2	3	4	5	6	Unpredictable
14. Behavior of key competitors, suppliers and partners	Very predictable	1	2	3	4	5	6	Highly unpredictable
15. Posture of key rivals	Live and let-live mentality	1	2	3	4	5	6	Hostile (aggressive)
16. Susceptibility to macroeconomic forces	Low sensitivity to price changes; currencies; business cycles; tariffs etc.	1	2	3	4	5	6	High sensitivity to price changes; currencies; business cycles; tariffs etc.
17. Dependence on financial markets	Low	1	2	3	4	5	6	High
18. Customer and channel power refers to the level of influence they can have on your business.	Low	1	2	3	4	5	6	High
	Column X							**Column Y**
19. Sensitivity to social changes (fashion, values etc)	Low: Mostly gradual change from the past	1	2	3	4	5	6	High: Good chances of major disruptions & changes in business models
20.Potential for major disruptions	Low: Few surprises expected, mostly things we can handle over next five years	1	2	3	4	5	6	High: Several significant business shocks are expected, without our knowing which in particul

								ar
21. Importance of periphery in business leader's agenda	Low priority	1	2	3	4	5	6	High priority
22. Time horizon overall	Emphasis on short term (two years or less)	1	2	3	4	5	6	Emphasis on long term (five years or more)
23. Attitude towards the periphery in the organization	Limited and myopic (few people care)	1	2	3	4	5	6	Active and curious (active mining of periphery)
24. Willingness to test and challenge the basic assumptions	Mostly defensive	1	2	3	4	5	6	Very willing to test key premises or widely held views
25. Experience with uncertainty reducing strategies (i.e. real options)	Limited	1	2	3	4	5	6	Extensive
26. Use of scenario thinking to guide strategy process	Never	1	2	3	4	5	6	Frequent
27. Number of alliance partners	Few	1	2	3	4	5	6	Many
28. Flexibility of strategy process	Rigid, calendar driven, budgeting	1	2	3	4	5	6	Flexible, issues-oriented processes
29. Resources devoted to scanning the periphery	Negligible	1	2	3	4	5	6	Extensive
30. Integration of customer and competitor information into future technology platform and new product development plans	Poorly and sporadically integrated	1	2	3	4	5	6	Systematically and fully integrated
31. Quality of data about events and trends at periphery	Poor; limited coverage and often out-of-date,	1	2	3	4	5	6	Excellent broad coverage and timely

32. Access to data across organizational boundaries	Difficult: limited awareness of what is availabl e	1	2	3	4	5	6	Relativ ely easy: wide awaren ess of what is availabl e.
33. Use of data base for existing business	Limited	1	2	3	4	5	6	Extensi ve
34. Technologies for posing queries to database	Old and difficult to use	1	2	3	4	5	6	State-of-the-art inquiri ng systems .
35. Accountability on sensing and action on weak signals	No one is responsi ble	1	2	3	4	5	6	Respon sibility is clearly assigne d to project teams or dedicat ed groups.
36. Early warning systems and procedures	None	1	2	3	4	5	6	Extensi ve and effectiv e
37. Incentives to encourage and reward wider vision	None	1	2	3	4	5	6	Top manage ment recogni tion and direct rewards .
38. Readiness to listen to reports from scouts from periphery	Closed: listening discoura ged	1	2	3	4	5	6	Open: listenin g encoura ged
39. Willingness of customer-contact people to forward market information	Poor	1	2	3	4	5	6	Excelle nt
40. Sharing of information about periphery across functions	Poor: Informa tion ignored or hoarded	1	2	3	4	5	6	Excelle nt: Ongoin g informa tion sharing at multipl e levels.

41. Self assessed overall need for peripheral vision today (at present)	Low	1	2	3	4	5	6	High
42. Self assessed overall need for peripheral vision during the past five years	Low	1	2	3	4	5	6	High
43. Self assessed overall need for peripheral vision over the next five years	Low	1	2	3	4	5	6	High
44. Self assessed peripheral vision capacity at present - today (at present)	Low	1	2	3	4	5	6	High
45. Self assessed peripheral vision capacity - five years ago	Low	1	2	3	4	5	6	High
46. Self assessed peripheral vision capacity required over the next five years	Low	1	2	3	4	5	6	High
								Always
PART B: *Using the following scale, please circle the number for each item that comes closest to reflecting your opinion about the leadership style of your senior management, as perceived by you in your current organization, with respect to your role. Response needs to reflect the comprehensive leadership style of your senior management team and NOT necessarily specific to your immediate superiors), that may or may not match.*								To a large extent
								To some extent
								To little extent
								To very little extent
								Never
1. Thinks clearly and logically		1	2	3	4	5	6	
2. Shows high levels of support and concern for others		1	2	3	4	5	6	
3. Shows exceptional ability to mobilize people and resources to get things done		1	2	3	4	5	6	
4. Inspires others to do their best		1	2	3	4	5	6	
5. Strongly emphasizes careful planning and clear time lines		1	2	3	4	5	6	
6. Builds trust through open and collaborative relationships		1	2	3	4	5	6	
7. Is a very skillful and shrewd negotiator		1	2	3	4	5	6	
8. Is highly charismatic		1	2	3	4	5	6	
9. Approaches problems through logical analysis and careful thinking		1	2	3	4	5	6	
10. Shows high sensitivity and concern for others' needs and feelings		1	2	3	4	5	6	
11. Is unusually persuasive and influential		1	2	3	4	5	6	

12. Is an inspiration to others		1	2	3	4	5	6
13. Develops and implements clear, logical policies and procedures		1	2	3	4	5	6
14. Fosters high level of participation and involvement in decisions		1	2	3	4	5	6
15. Anticipates and deals skillfully with organizational conflict		1	2	3	4	5	6
16. Is highly imaginative and creative		1	2	3	4	5	6
17. Approaches problems with fact and logic		1	2	3	4	5	6
18. Is consistently helpful and responsive to others		1	2	3	4	5	6
19. Is very effective in getting support from people with influence and power		1	2	3	4	5	6
20. Communicates a strong and challenging vision and sense of mission		1	2	3	4	5	6
21. Sets specific, measurable goals and holds people accountable for results		1	2	3	4	5	6
22. Listens well and is unusually receptive to other people's ideas and input		1	2	3	4	5	6
23. Is politically very sensitive and skillful		1	2	3	4	5	6
24. Sees beyond current realities to create exciting new opportunities		1	2	3	4	5	6
25. Has extraordinary attention to details		1	2	3	4	5	6
26. Gives personal recognition for work well done		1	2	3	4	5	6
27. Develops alliances to build a strong base of support		1	2	3	4	5	6
28. Generates loyalty and enthusiasm		1	2	3	4	5	6
29. Strongly believes in clear structure and a chain of command		1	2	3	4	5	6
30. Is a highly participative manager		1	2	3	4	5	6
31. Succeeds in the face of conflict and opposition		1	2	3	4	5	6
32. Serves as an influential model of organizational aspirations and values		1	2	3	4	5	6

<u>PART C:</u> ***Using the following scale, please circle the number for each item that comes closest to reflecting your opinion about your current organization, as perceived by you in your current***		Agree very much					
		Agree moderately					
		Agree slightly					
		Disagree slightly					

role.	Disagree very much						Disagree moderately
1. When someone criticizes my organization, it feels like a personal insult		1	2	3	4	5	6
2. I have mixed feelings about my affiliation with this organization		1	2	3	4	5	6
3. This organization does shameful things		1	2	3	4	5	6
4. It really doesn't matter to me what happens to this organization		1	2	3	4	5	6
5. I am very interested in what others think about my organization		1	2	3	4	5	6
6. I'am torn between loving and hating this organization		1	2	3	4	5	6
7. I find this organization to be disgraceful		1	2	3	4	5	6
8. I give little thought to the concerns of this organization		1	2	3	4	5	6
9. When someone praises this organization it feels like a personal compliment		1	2	3	4	5	6
10. I feel conflicted about being a part of this organization		1	2	3	4	5	6
11. I want people to know that I disagree with how this organization behaves		1	2	3	4	5	6
12. This organization doesn't have much personal meaning to me		1	2	3	4	5	6
13. If a story in the media criticized this organization, I would feel embarrassed		1	2	3	4	5	6
14. I have contradictory feeling about this organization		1	2	3	4	5	6
15. I have been ashamed of what goes on in this organization		1	2	3	4	5	6
16. I don't concern myself much with this organization's problem		1	2	3	4	5	6

I wish to express my sincere gratitude for your time and effort in supporting this research exercise, by responding to this survey. Warm regards, Anand.K

APPENDIX II – Final Research Questionnaire for pivotal study

Birla Institute of Technology and Science Pilani (Raj)

(Study of the work environment of knowledge based workforce)

PERSONAL INFORMATION

Age: ……..years | Gender: Male / Female | Marital Status: Single / Married

Spouse's Occupation: Working / Home maker

Family type: Joint / Nuclear

Highest Educational Qualification:

☐ Graduation ☐ Doctorate

☐ Post Graduation ☐ Others: CA etc..

Institution of highest qualification: ……

Educational background:	Place	Language
Schooling:	Rural / Urban	English / Vernacular
College:	Rural / Urban	English / Vernacular

Work Experience:

Current position: ……. (in months)

Current organization: ……. (in months)

All previous organizations: ……. (in Yrs and months)

Name of your business unit or Line of Business:

……..

Size of business unit that is referenced for this survey:

……. (approximate number of people in this business unit)

……..

Current Level: Number of levels from Business Unit Head (1 if you report to the BU Head)

☐ 1 ☐ 3

☐ 2 ☐ 4 and above

Do you wish to receive the Executive Summary of this research outcome. Yes / No

Birla Institute of Technology and Science Pilani (Raj)

(Study of the work environment of knowledge based workforce)

While responding to the below questionnaire kindly remember that there are no right answers or wrong answers. Hence please answer the questions as frankly as possible to your best of the ability. Please do not give a response that makes you / your management "look good" or that makes the response "socially acceptable" one or based on what you think your management want you to say. This will defeat the very purpose and the spirit of the research exercise. kindly note that this survey has **three parts** and ensure that all three parts are responded to.

PART A: ***Using the following scale, please circle the number for each item that comes closest to reflecting your opinion about the strategic eye of your business unit, as perceived by you in your current role. Kindly read the description in the extremes to clearly understand the direction of response.***

Kindly use the following scale:

1 2 3 4 5 6

(100% X, 0% Y) (80% X, 20% Y) (60% X, 40% Y) (40% X, 60% Y) (20% X, 80% Y) (0% X, 100% Y)

	Column X							Column Y
1. Industry/Business structure	Few easily identifiable competitors	**1**	**2**	**3**	**4**	**5**	**6**	Many competitors from unexpected sources
2. Marketing Channel - meaning the modality of reaching your product/services to the customer/end user.	Simple - direct contact or with no more than one intermediary	**1**	**2**	**3**	**4**	**5**	**6**	Long and complex channel with many intermediaries
3. Market structure - refers to the way your product/services are segmented.	Fixed boundaries with simple segmentation	**1**	**2**	**3**	**4**	**5**	**6**	Fuzzy boundaries with complex segmentation
4. Enabling technologies - refers to the complexity and number of technologies directly impacting the business.	Few and mature (simple systems)	**1**	**2**	**3**	**4**	**5**	**6**	Many converging (complex systems)
5. Government regulations (Central; State etc.)	Minimal or stable	**1**	**2**	**3**	**4**	**5**	**6**	Many or changing rapidly

6. Public visibility of industry in/by media	Largely ignored	1	2	3	4	5	6	Closely watched but media or special interest groups
7. Dependence on government policies and political access	Low: largely independent of government	1	2	3	4	5	6	High: sensitive to political climate
8. Dependence on global economy	Low: domestic focused and isolated	1	2	3	4	5	6	High: affected by global conditions
9. Number of surprises by high impact events in the past three years	None	1	2	3	4	5	6	Three or more
10. Accuracy of past forecasts	High: small deviations from actual	1	2	3	4	5	6	Low: Actual differ greatly from forecasts
11. Market growth pattern	Slow and stable	1	2	3	4	5	6	Rapid and unstable
12. Business Growth opportunities.	Have decreased dramatically in the past three years	1	2	3	4	5	6	Have increased dramatically in the past three years
13. Speed and direction of technological change	Predictable	1	2	3	4	5	6	Unpredictable
14. Behavior of key competitors, suppliers and partners	Very predictable	1	2	3	4	5	6	Highly unpredictable
15. Posture of key rivals	Live and let-live mentality	1	2	3	4	5	6	Hostile (aggressive)
16. Susceptibility to macroeconomic forces	Low sensitivity to price changes; currencies; business cycles; tariffs etc.	1	2	3	4	5	6	High sensitivity to price changes; currencies; business cycles; tariffs

								etc.
17. Dependence on financial markets	Low	**1**	**2**	**3**	**4**	**5**	**6**	High
18. Customer and Marketing channel intermediary power (refers to the level of influence they can have on your business.	Low	**1**	**2**	**3**	**4**	**5**	**6**	High
	Column X							**Column Y**
19. Sensitivity to social changes (fashion, values etc)	Low: Mostly gradual change from the past	**1**	**2**	**3**	**4**	**5**	**6**	High: Good chances of major disruptions & changes in business models
20.Potential for major disruptions	Low: Few surprises expected, mostly things we can handle over next five years	**1**	**2**	**3**	**4**	**5**	**6**	High: Several significant business shocks are expected, without our knowing which in particular
21. Importance of periphery in business unit leader's agenda	Low priority	**1**	**2**	**3**	**4**	**5**	**6**	High priority
22. Time horizon overall of business unit managers.	Emphasis on short term (two years or less)	**1**	**2**	**3**	**4**	**5**	**6**	Emphasis on long term (five years or more)
23. Attitude of business unit managers towards the periphery in the organization	Limited and myopic (few people care)	**1**	**2**	**3**	**4**	**5**	**6**	Active and curious (active mining of periphery)
24. Their willingness to test and challenge the basic assumptions	Mostly defensive	**1**	**2**	**3**	**4**	**5**	**6**	Very willing to test key premises or

								widely held views
25.Their experience with uncertainty reducing strategies (i.e. real options)	Limited	1	2	3	4	5	6	Extensive
26. Their use of scenario thinking to guide strategy process	Never	1	2	3	4	5	6	Frequent
27. Number of alliance partners	Few	1	2	3	4	5	6	Many
28. Flexibility of strategy process	Rigid, calendar driven, budgeting	1	2	3	4	5	6	Flexible, issues-oriented processes
29. Resources devoted to scanning the periphery	Negligible	1	2	3	4	5	6	Extensive
30. Integration of customer and competitor information into future technology platform and new product development plans	Poorly and sporadically integrated	1	2	3	4	5	6	Systematically and fully integrated
31. Quality of data about events and trends at periphery	Poor; limited coverage and often out-of-date,	1	2	3	4	5	6	Excellent broad coverage and timely
32. Access to data across organizational boundaries	Difficult: limited awareness of what is available	1	2	3	4	5	6	Relatively easy: wide awareness of what is availabl e.
33. Use of data base for existing business	Limited	1	2	3	4	5	6	Extensive
34. Technologies for posing queries to database	Old and difficult to use	1	2	3	4	5	6	State-of-the-art inquiring systems.
35. Accountability on sensing and action on weak signals	No one is responsible	1	2	3	4	5	6	Responsibility is clearly assigned to project teams or dedicated groups.
36. Early warning systems and procedures	None	1	2	3	4	5	6	Extensive and effectiv

								e
37. Incentives to encourage and reward wider vision	None	1	2	3	4	5	6	Top management recognition and direct rewards.
38. Readiness to listen to reports from scouts from periphery	Closed: listening discouraged	1	2	3	4	5	6	Open: listening encouraged
39. Willingness of customer-contact people to forward market information	Poor	1	2	3	4	5	6	Excellent
40. Sharing of information about periphery across functions	Poor: Information ignored or hoarded	1	2	3	4	5	6	Excellent: Ongoing information sharing at multiple levels.
41. Self assessed BU need for peripheral vision in business unit today (at present)	Low	1	2	3	4	5	6	High
42. Self assessed BU need for peripheral vision in business unit during the past five years	Low	1	2	3	4	5	6	High
43. Self assessed BU need for peripheral vision in business unit over the next five years	Low	1	2	3	4	5	6	High
44. Self assessed BU capacity for peripheral vision in business unit today (at present)	Low	1	2	3	4	5	6	High
45. Self assessed BU capacity for peripheral vision in business unit - five years ago	Low	1	2	3	4	5	6	High
46. Self assessed BU capacity for peripheral vision in business unit required over the next five years	Low	1	2	3	4	5	6	High
								Always
PART B: ***Using the following scale, please circle the number for each item that comes closest to reflecting your opinion about the leadership style of your business unit's senior management, Response needs to reflect the comprehensive leadership style of your business unit's senior management team and NOT necessarily specific to your immediate superior.***	**To a large extent** **To some extent** **To little extent** **To very little extent** **Never**							
1. Thinks clearly and logically		1	2	3	4	5	6	

2. Shows high levels of support and concern for others		1	2	3	4	5	6
3. Shows exceptional ability to mobilize people and resources to get things done		1	2	3	4	5	6
4. Inspires others to do their best		1	2	3	4	5	6
5. Strongly emphasizes careful planning and clear time lines		1	2	3	4	5	6
6. Builds trust through open and collaborative relationships		1	2	3	4	5	6
7. Is a very skillful and shrewd negotiator		1	2	3	4	5	6
8. Is highly charismatic		1	2	3	4	5	6
9. Approaches problems through logical analysis and careful thinking		1	2	3	4	5	6
10. Shows high sensitivity and concern for others' needs and feelings		1	2	3	4	5	6
11. Is unusually persuasive and influential		1	2	3	4	5	6
12. Is an inspiration to others		1	2	3	4	5	6
13. Develops and implements clear, logical policies and procedures		1	2	3	4	5	6
14. Fosters high level of participation and involvement in decisions		1	2	3	4	5	6
15. Anticipates and deals skillfully with organizational conflict in business unit.		1	2	3	4	5	6
16. Is highly imaginative and creative		1	2	3	4	5	6
17. Approaches problems with fact and logic		1	2	3	4	5	6
18. Is consistently helpful and responsive to others		1	2	3	4	5	6
19. Is very effective in getting support from people with influence and power		1	2	3	4	5	6
20. Communicates a strong and challenging vision and sense of mission		1	2	3	4	5	6
21. Sets specific, measurable goals and holds people accountable for results		1	2	3	4	5	6
22. Listens well and is unusually receptive to other people's ideas and input		1	2	3	4	5	6
23. Is politically very sensitive and skillful		1	2	3	4	5	6
24. Sees beyond current realities to create exciting new opportunities		1	2	3	4	5	6
25. Has extraordinary attention to details		1	2	3	4	5	6

26. Gives personal recognition for work well done		1	2	3	4	5	6
27. Develops alliances to build a strong base of support		1	2	3	4	5	6
28. Generates loyalty and enthusiasm		1	2	3	4	5	6
29. Strongly believes in clear structure and a chain of command		1	2	3	4	5	6
30. Is a highly participative manager		1	2	3	4	5	6
31. Succeeds in the face of conflict and opposition		1	2	3	4	5	6
32. Serves as an influential model of organizational aspirations and values		1	2	3	4	5	6

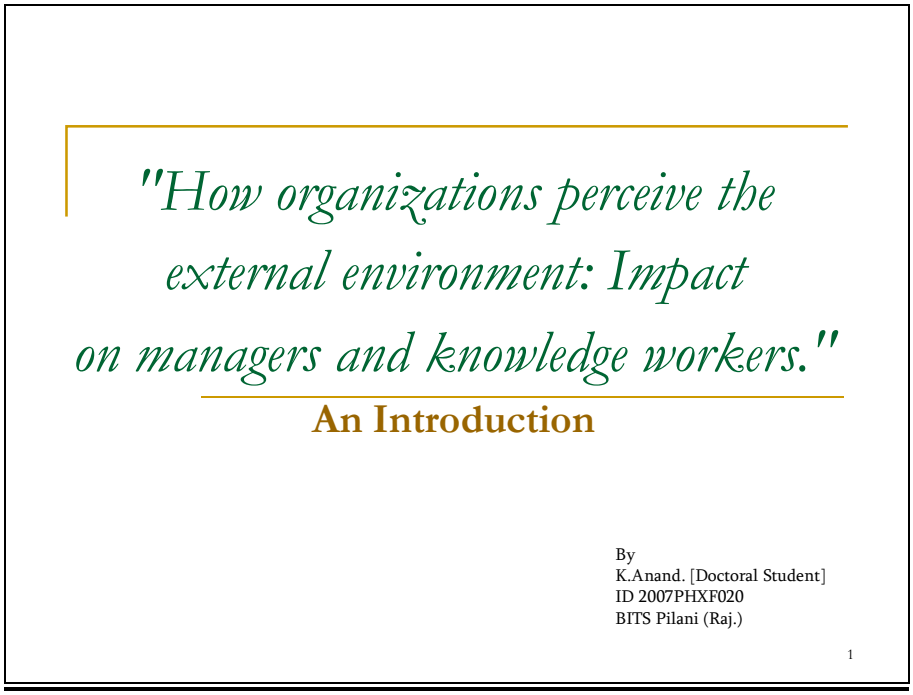
PART C: ***Using the following scale, please circle the number for each item that comes closest to reflecting your opinion about your business unit, as perceived by you in your current role.***	**Agree very much** **Agree moderately** **Agree slightly** **Disagree slightly** **Disagree moderately** **Disagree very much**						
1. When someone criticizes the business unit, it feels like a personal insult		1	2	3	4	5	6
2. I have mixed feelings about my affiliation with this business unit.		1	2	3	4	5	6
3. This business unit does shameful things to powerless stake holders.		1	2	3	4	5	6
4. It really doesn't matter to me what happens to this business unit.		1	2	3	4	5	6
5. I am very interested in what others think about my business unit.		1	2	3	4	5	6
6. I'am torn between loving and hating this business unit.		1	2	3	4	5	6
7. I find this business unit to be disgraceful in placating powerful stakeholders.		1	2	3	4	5	6
8. I give little thought to the concerns of this business unit.		1	2	3	4	5	6
9. When someone praises this business unit, it feels like a personal compliment		1	2	3	4	5	6
10. I feel conflicted about being a part of this business unit.		1	2	3	4	5	6

11. I want people to know that I disagree with how this business unit behaves.		1	2	3	4	5	6
12. This business unit doesn't have much personal meaning to me		1	2	3	4	5	6
13. If a story in the media criticized this organization or my business unit, I would feel embarrassed		1	2	3	4	5	6
14. I have contradictory feeling about this business unit.		1	2	3	4	5	6
15. I have been ashamed of what goes on in this business unit.		1	2	3	4	5	6
16. I don't concern myself much with this business unit's problem.		1	2	3	4	5	6
17. I would be very happy to spend the rest of my career with this business unit.		1	2	3	4	5	6
18. I enjoy discussing my business unit's with people outside it.		1	2	3	4	5	6
19. I really feel as if this business unit's problems are my own.		1	2	3	4	5	6
20. I think that I could easily become as attached to another business unit in this or another organization as I am to this business unit.		1	2	3	4	5	6
21. I do not feel like 'part of the family' at my business unit.		1	2	3	4	5	6
22. I do not feel 'emotionally attached' to this business unit.		1	2	3	4	5	6
23. This business unit has a great deal of personal meaning for me.		1	2	3	4	5	6
24. I do not feel a strong sense of belonging to my business unit.		1	2	3	4	5	6

I wish to express my sincere gratitude for your time and effort in supporting this research exercise, by responding to this survey. Warm regards, Anand.K

APPENDIX III –

Introductory Presentation for senior management of the participating organization



What is the objective of the survey.

The key objective of this survey is to collect data to explore the relationships across the constructs of Peripheral Vision of an organization as perceived by the knowledge workers with respect to Boleman and Deal's four frames of Leadership styles and four elements of Organizational Identification.

2

A brief about the constructs

- Peripheral Vision – This refers to the ability to "see around corners", and attend to early signals of threats and potential opportunities. The tool used in this survey aims at measuring this as "Strategic Eye" examination, in order to assess the "Need" and "Capacity".
- Boleman & Deal's Leadership frames – These are leadership styles viewed from four windows of reference. These are structural, human resource, political and symbolic. We have considered all these four frames of leadership styles in our construct.
- Organizational identity - Refers to the ways people define themselves in terms of their relationships to organizations. In our construct we have chosen the four types of identification namely positive identification, disidentification, ambivalent identification and neutral identification.

1

Peripheral Vision

- The importance of peripheral vision can hardly be emphasized. In the current world of technologically driven businesses with a very high degree of complexity, survival of business is constantly threatened.
- There is absolutely no room for complacence and perpetual vigilance has become a necessity, rather than a choice.
- While it is important to be "focused" it has become essential to be "vigilant" of the business periphery.
- Please remember, the snow always melts at the periphery first and the invaders cross the nation at borders first.
- Hence the importance of a strong peripheral vision for the organizations is critical for its survival, growth and sustenance.
- Our view has been endorsed by the recent events in the economic world, globally.

B&D Leadership framework

- Structural framework relies upon the organizational structures, processes, procedures and other 'control' mechanisms.
- Human Resource framework focuses upon the nurturing and caring spirit of leadership to achieve results. It has a heavy reliance on the human approach to organizational issues.
- Political framework views organizations as coalitions composed of interest groups, political alliances etc. They are at constant struggle for the scarce resources and people are believed to indulge in political behaviors to protect their 'interests'.
- Symbolic framework sees the organizations from the perspective of 'values', 'culture' and 'beliefs'. It believes in involvement of members and relies upon value system to succeed.

5

Organizational Identification

- Positive Identification – Employee identifies positively with the organization and its ethos.
- Disidentification – Here the employee does not identify himself with the organization and is reluctant to associate himself with the organization.
- Ambivalent identification - Refers to a state of identification wherein an employee identifies with the organization in certain aspects while he does not do so in the rest.
- Neutral identification – Here the pattern of identification is completely neutral and is not connected with the organization in either way.

6

What's in it? Outcome of the study

- Organizations/Corporate – Executive summary that helps the corporate to improve the understanding of their teams. Specific inputs on employee motivation, their perception of leadership and organizations own retrospection from the team member's perception.
- The Institution/Academia – Contribution to the management body of knowledge by way of papers in the journals.
- Individual/Me – The satisfaction of pursuing my passion with the best institutions in India and the contentment of the work resulting into two sweet letters Dr.

7

We abide to:

- Keep the purpose of this initiative purely academic.
- Keep the identity of the participating organizations and team members absolutely confidential and are in no way required for the doctoral work. They will not be the part of thesis and will only be generically referred [by size, nature of holding etc], if required.
- To assure that the inputs taken for this study has nothing to with the core businesses of the participating organizations and are purely 'soft' in nature.
- To firmly believe that the outcome will be of use to every one managing knowledge workers for running their businesses.

9

APPENDIX IV – Request from guide for participation in the survey

Indian Institute of Management Bangalore

Bannerghatta Road, Bangalore 560 076, India.

L Prasad *Ph.D. (Northwestern University)* **Phone: 91-80-6993158**

Professor of Organizational Behavior**:** e-mail: prasad@iimb.ernet.in; iq2eq@yahoo.com

Soft Skills Transform People

January 15, 2010

Dear Friends:

As you may be aware there is paucity of high quality research in the Indian context. Most of our knowledge is based on the American, European or Japanese experiences. Therefore, we at IIMB are endeavoring to address this lacuna.

One of the external Doctoral students I am guiding, K Anand, is doing his dissertation under my guidance on the **Organizational Work Environment Experienced by Knowledge Workers.** For this, we have proposed a conceptual framework to understand how various behavioral dimensions at the organizational level impact the individual.

In this connection, I am writing to you to request your cooperation to fulfill this research agenda by completing the attached questionnaire. The total time required for filling out the questionnaire should not exceed 45 minutes.

W would like to assure you that all the information provided shall be treated as confidential. A respondent's identity will not be revealed to anyone.

Please note that, unless otherwise specified, the unit of analysis is a BUSINESS UNIT OR LINE OF BUSINESS YOU ARE MOST FAMILIAR WITH, not the entire organization.

Sincerely,

(L. Prasad)

PS In filling out the questionnaire, you will come across the term PERIPHERAL VISION. This refers to management's ability to appreciate the importance of events unfolding in the remote regions of the business, which often signal hidden opportunities and threats that could profoundly affect the enterprise. Even as managers focus on running the business, they face a barrage of signals from the periphery. The key is to spot those signals that are relevant and explore them further, while filtering

out the noise. This helps organizations pursue opportunities ahead of the competition or recognize the early signs of trouble before they escalate into major problems.

APPENDIX V – Introductory presentation for participants of the survey

"How organizations perceive the external environment: Impact on managers and knowledge workers."

An Introduction

By
K.Anand. ID 2007PHXF020
BITS Pilani (Raj.)

1

What is the objective of the survey.

The key objective of this survey is to collect data to explore the relationships across the constructs of Peripheral Vision of an organization as perceived by the knowledge workers with respect to Boleman and Deal's four frames of Leadership styles and four elements of Organizational Identification.

2

A brief about the constructs

- Peripheral Vision – This refers to the ability to "see around corners", and attend to early signals of threats and potential opportunities. The tool used in this survey aims at measuring this as "Strategic Eye" examination, in order to assess the "Need" and "Capacity".
- Boleman & Deal's Leadership frames – These are leadership styles viewed from four windows of reference. These are structural, human resource, political and symbolic. We have considered all these four frames of leadership styles in our construct.
- Organizational involvement - Refers to the ways people define themselves in terms of their relationships to organizations. In our construct we have chosen the four types of identification namely positive identification, disidentification, ambivalent identification and neutral identification.

3

Structuring of the survey tool

- A questionnaire is designed to study the elements of these three constructs.
- The three parts refer to each of these constructs.
- In order to make the survey response useful, it is important to respond to all the three parts.
- While responding to the survey kindly keep the **frame of reference i.e. the organizational unit same.** This is important to make contextual relevance.
- While the parts B and C are simple and straight forward, part A is more qualitative in nature. Hence kindly go through the situations explained at the extremes to simplify your efforts while responding.

4

Thanking You for your support

- *Kindly note that you can take this survey only once.*
- *This survey is being done for a doctoral dissertation and hence is comparatively longer than an opinion survey. Therefore I request you to bear with the same and I can assure it would just take about 30 minutes for responding.*
- *I respect your privacy and hence only broad background related inputs relevant to my study, are sought in the initial parts of the survey, fully protecting your identity. I also assure you that your inputs will be used only for the purpose of this research work. All the best.*
- *Now Click **HERE** to take the web enabled survey.*

Regards,
K Anand [Doctoral Student]
ID: 2007PHXF020
BITS Pilani (Raj.)

5

APPENDIX VI – Output of Survey from KWIK SURVEY.COM

Courtesy: http://www.kwiksurveys.com/results-overview.php?mode=1&surveyID=146340
02/02/2011

Survey Invitations
Invitations Sent: 0
Invitations Accepted: 0
Untracked Responses: 244
Total Responses Received: 244
View invitations & send reminders
Results Filtering
Add Filter
Question 1*
Age (in the nearest years)
Range: 32 (22 to 54)
Average: 27.811475409836
Median: 27
Total responses: 244
Mode: 27
Show values Pop-up

Question 2*
Gender
Male 164 67%
Female 80 33%
Others 0 0%
Pop-up

Question 3
Marital Status
Single 114 47%
Married 130 53%
Pop-up

Question 4*
Highest Educational Qualification (state the completed one)
Graduation 172 70%
Post Graduation 72 30%
Doctorate 0 0%
Other Professional (like CA ICWAI etc) 0 0%
Pop-up

Question 5
Work Experience (in nearest months)
Current Position Current Organization Total experience
4 1 66
1 1 54
1 1 3
3 3 58
24 36 36
1 1 2
3 1 3
3 1 2.5
3 3 3

2 1 33
3 1 6
56 56 56
18 60 60
30 30 73
3 3 36
Expand >> Pop-up

Question 6*
Size of your business unit (approx. no. of people) considered as reference for this survey
Range: 399999 (1 to 400000)
Average: 13358.610655738
Median: 200
Total responses: 244
Mode: 50
Show values Pop-up

Question 7*
Your current level in the organization: Number of levels from Business Unit Head (1 if you report to the BU Head)
1 25 10%
2 21 9%
3 38 16%
4 or above 160 66%
Pop-up

Question 8*
Name of your Business sub unit
A-Project-1 95 39%
A-Project-2 30 12%
E-Project-1 15 6%
E-Project-2 8 3%
I-Project-1 31 13%
M-Project-1 27 11%
M-Project-2 30 12%
S-Project-1 1 0%
S-Project-2 3 1%
X-Project-1 4 2%
Pop-up

Question 9*
Your industry/business structure .....
Few easily identifiable competitors. 2 3 4 5 Many competitors from unexpected quarters.
Responses Total
15% 8% 30% 16% 8% 23% 244 100%
Show values Pop-up

Question 10*
Marketing Channel - meaning the modality of reaching your product/services to the customer/end user. .....
Simple - direct contact or with no more than one intermediary.
2 3 4 5
Long and complex channel with many intermediaries.
Responses Total
18% 16% 33% 15% 4% 14% 244 100%

Show values Pop-up

Question 11*
Market structure - refers to the way your product/services are segmented.. .....
Fixed boundaries with simple segmentation. 2 3 4 5 Fuzzy boundaries with complex segmentation. Responses Total
12% 19% 30% 25% 3% 11% 244 100%
Show values Pop-up

Question 12*
Enabling technologies - refers to the complexity and number of technologies directly impacting the business. .. ..
Few and mature (simple systems). 2 3 4 5 Many converging (complex systems). Responses Total
8% 10% 24% 25% 11% 22% 244 100%
Show values Pop-up

Question 13*
Government regulations (Central; State etc.).. pertaining to your business/industry.....
Minimal or stable. 2 3 4 5 Many or changing rapidly. Responses Total
26% 13% 38% 10% 5% 8% 244 100%
Show values Pop-up

Question 14*
Public visibility of industry in/by media.. .....
Largely ignored. 2 3 4 5 Closely watched but media or special interest groups. Responses Total
5% 12% 20% 27% 7% 28% 244 100%
Show values Pop-up

Question 15*
Dependence on government policies and political access.. .....
Low: largely independent of government. 2 3 4 5 High: sensitive to political climate. Responses Total
19% 17% 39% 13% 5% 8% 244 100%
Show values Pop-up

Question 16*
Dependence on global economy.. .....
Low: domestic focused and isolated. 2 3 4 5 High: affected by global conditions. Responses Total
2% 8% 19% 26% 9% 35% 244 100%
Show values Pop-up

Question 17*
Number of surprises by high impact events in the past three years.. .....
None. 2 3 4 5 Three or more. Responses Total
6% 18% 33% 21% 7% 15% 244 100%
Show values Pop-up

Question 18*
Accuracy of past forecasts.. .....
High: small deviations from actual. 2 3 4 5 Low: Actual differ greatly from forecasts. Responses Total
16% 20% 35% 19% 2% 7% 244 100%
Show values Pop-up

Question 19*
Market growth pattern.. .....
Slow and stable. 2 3 4 5 Rapid and unstable. Responses Total

12% 9% 35% 31% 6% 6% 244 100%
Show values Pop-up
Question 20*
Business Growth opportunities.. .....
Have decreased dramatically in the past three Have increased dramatically in the past three years. 2 3 4 5 years. Responses Total
5% 11% 32% 31% 6% 15% 244 100%
Show values Pop-up

Question 21*
Speed and direction of technological change.. .....
Predictable. 2 3 4 5 Unpredictable. Responses Total
11% 15% 31% 27% 6% 11% 244 100%
Show values Pop-up

Question 22*
Behavior of key competitors, suppliers and partners .. ..
Very predictable. 2 3 4 5 Highly unpredictable. Responses Total
6% 14% 45% 23% 3% 9% 244 100%
Show values Pop-up

Question 23*
Posture of key rivals.. .....
Live and let-live mentality. 2 3 4 5 Hostile (aggressive). Responses Total
7% 14% 42% 19% 5% 13% 244 100%
Show values Pop-up

Question 24*
Susceptibility to macroeconomic forces.. .....
Low sensitivity to price changes; currencies;
business cycles; tariffs etc..
2 3 4 5
High sensitivity to price changes; currencies;
business cycles; tariffs etc..
Responses Total
3% 9% 33% 30% 9% 17% 244 100%
Show values Pop-up

Question 25*
Dependence on financial markets .....
Low. 2 3 4 5 High. Responses Total
3% 11% 30% 24% 9% 21% 244 100%
Show values Pop-up

Question 26*
Customer and Marketing channel intermediary power (refers to the level of influence they can have on your
business.....
Low. 2 3 4 5 High. Responses Total
2% 14% 34% 29% 7% 14% 244 100%
Show values Pop-up

Question 27*
Sensitivity to social changes (fashion, values etc).....
Low: Mostly gradual change from the
past.

2 3 4 5
High: Good chances of major disruptions & changes in business models.
Responses Total
14% 20% 30% 27% 5% 5% 244 100%
Show values Pop-up

Question 28*
Potential for major disruptions.....
Low: Few surprises expected, mostly things we can handle over next five years.
2 3 4 5
High: Several significant business shocks are expected, without our knowing which in particular.
Responses Total
12% 21% 36% 23% 4% 5% 244 100%
Show values Pop-up

Question 29*
Importance of periphery in business unit leader's agenda .....
Low priority. 2 3 4 5 High priority. Responses Total
3% 13% 50% 16% 7% 11% 244 100%
Show values Pop-up

Question 30*
Time horizon overall of business unit managers. .....
Emphasis on short term (two years or less). 2 3 4 5 Emphasis on long term (five years or more). Responses Total
7% 19% 41% 18% 4% 11% 244 100%
Show values Pop-up

Question 31*
Attitude of business unit managers towards the periphery in the organization .....
Limited and myopic (few people care). 2 3 4 5 Active and curious (active mining of periphery). Responses Total
9% 14% 42% 17% 7% 11% 244 100%
Show values Pop-up

Question 32*
Their willingness to test and challenge the basic assumptions .....
Mostly defensive. 2 3 4 5 Very willing to test key premises or widely held views. Responses Total
9% 15% 37% 23% 7% 9% 244 100%
Show values Pop-up

Question 33*
Their experience with uncertainty reducing strategies (i.e. real options) .....
Limited. 2 3 4 5 Extensive. Responses Total
7% 25% 48% 14% 1% 5% 244 100%
Show values Pop-up

Question 34*
Their use of scenario thinking to guide strategy process .....
Never. 2 3 4 5 Frequent. Responses Total
4% 20% 47% 18% 4% 7% 244 100%
Show values Pop-up

Question 35*

Number of alliance partners .....
Few. 2 3 4 5 Many. Responses Total
10% 11% 34% 20% 5% 20% 244 100%
Show values Pop-up

Question 36*
Flexibility of strategy process .....
Rigid, calendar driven, budgeting. 2 3 4 5 Flexible, issues-oriented processes. Responses Total
11% 17% 34% 22% 6% 9% 244 100%
Show values Pop-up

Question 37*
Organizational resources devoted to scanning the periphery .....
Negligible. 2 3 4 5 Extensive. Responses Total
5% 21% 50% 14% 5% 6% 244 100%
Show values Pop-up
Question 38*
Integration of customer and competitor information into future technology platform and new product development
plans .....
Poorly and sporadically integrated. 2 3 4 5 Systematically and fully integrated. Responses Total
6% 14% 30% 29% 8% 12% 244 100%
Show values Pop-up

Question 39*
Quality of data about events and trends at periphery .....
Poor; limited coverage and often out-of-date. 2 3 4 5 Excellent broad coverage and timely. Responses Total
3% 17% 36% 27% 6% 11% 244 100%
Show values Pop-up

Question 40*
Access to data across organizational boundaries .....
Difficult: limited awareness of what is available. 2 3 4 5 Relatively easy: wide awareness of what is available. Responses Total
7% 14% 30% 28% 8% 13% 244 100%
Show values Pop-up

Question 41*
Use of data base for existing business .....
Limited. 2 3 4 5 Extensive. Responses Total
7% 8% 35% 32% 7% 11% 244 100%
Show values Pop-up

Question 42*
Technologies for posing queries to database.....
Old and difficult to use. 2 3 4 5 State-of-the-art inquiring systems. Responses Total
2% 11% 30% 34% 10% 14% 244 100%
Show values Pop-up

Question 43*
Accountability on sensing and action on weak signals.....
No one is responsible. 2 3 4 5 Responsibility is clearly assigned to project teams or dedicated groups. Responses Total
2% 11% 34% 23% 9% 23% 244 100%
Show values Pop-up

Question 44*
Early warning systems and procedures....
None. 2 3 4 5 Extensive and effective. Responses Total
2% 15% 39% 18% 9% 16% 244 100%
Show values Pop-up

Question 45*
Incentives to encourage and reward wider vision.....
None. 2 3 4 5 Top management recognition and direct rewards. Responses Total
8% 22% 36% 18% 7% 9% 244 100%
Show values Pop-up

Question 46*
Readiness to listen to reports from scouts from periphery.....
Closed; listening discouraged. 2 3 4 5 Open; Listening encouraged. Responses Total
3% 19% 47% 15% 7% 9% 244 100%
Show values Pop-up

Question 47*
Willingness of customer-contact people to forward market information .....
Poor. 2 3 4 5 Excellent. Responses Total
5% 15% 32% 28% 7% 11% 244 100%
Show values Pop-up

Question 48*
Sharing of information about periphery across functions .....
Poor; Information ignored or hoarded. 2 3 4 5 Excellent; Ongoing information sharing at multiple levels. Responses Total
3% 17% 35% 27% 7% 11% 244 100%
Show values Pop-up

Question 49*
Self assessed Business Unit need for peripheral vision in business unit today (at present) .....
Low. 2 3 4 5 High. Responses Total
5% 17% 42% 24% 6% 6% 244 100%
Show values Pop-up

Question 50*
Self assessed Business Unit need for peripheral vision in business unit during the past five years .....
Low. 2 3 4 5 High. Responses Total
3% 21% 44% 20% 4% 7% 244 100%
Show values Pop-up

Question 51*
Self assessed Business Unit need for peripheral vision in business unit over the next five years .....
Low. 2 3 4 5 High. Responses Total
3% 15% 34% 34% 7% 8% 244 100%
Show values Pop-up

Question 52*
Self assessed Business Unit capacity for peripheral vision in business unit today (at present).....
Low. 2 3 4 5 High. Responses Total
3% 16% 48% 21% 6% 6% 244 100%
Show values Pop-up

Question 53*

Self assessed Business Unit capacity for peripheral vision in business unit - five years ago .....
Low. 2 3 4 5 High. Responses Total
4% 20% 48% 20% 4% 5% 244 100%
Show values Pop-up

Question 54*
Self assessed Business Unit capacity for peripheral vision in business unit required over the next five years .....
Low. 2 3 4 5 High. Responses Total
2% 12% 36% 31% 10% 9% 244 100%
Show values Pop-up

Question 55*
The leadership thinks clearly and logically.
Never 6 2%
To very little extent 20 8%
To little extent 31 13%
To some extent 117 48%
To a large extent 52 21%
Always 18 7%

Question 56*
Leadership shows high levels of support and concern for others. .....
Never 10 4%
To very little extent 26 11%
To little extent 44 18%
To some extent 103 42%
To a large extent 51 21%
Always 10 4%
Pop-up

Question 57*
Leadership shows exceptional ability to mobilize people and resources to get things done .....
Never 12 5%
To very little extent 18 7%
To little extent 37 15%
To some extent 87 36%
To a large extent 74 30%
Always 16 7%
Pop-up

Question 58*
Leadership inspires others to do their best .....
Never 15 6%
To very little extent 18 7%
To little extent 44 18%
To some extent 96 39%
To a large extent 51 21%
Always 20 8%
Pop-up

Question 59*
Leadership strongly emphasizes careful planning and clear time lines .....
Never 8 3%
To very little extent 23 9%
To little extent 42 17%

To some extent 87 36%
To a large extent 66 27%
Always 18 7%
Pop-up

Question 60*
Leadership builds trust through open and collaborative relationships .....
Never 15 6%
To very little extent 20 8%
To little extent 47 19%
To some extent 105 43%
To a large extent 38 16%
Always 19 8%
Pop-up

Question 61*
Leadership is a very skillful and shrewd negotiator .....
Never 9 4%
To very little extent 14 6%
To little extent 45 18%
To some extent 104 43%
To a large extent 54 22%
Always 18 7%
Pop-up
Question 62*
Leadership is highly charismatic .....
Never 12 5%
To very little extent 20 8%
To little extent 58 24%
To some extent 80 33%
To a large extent 61 25%
Always 13 5%
Pop-up

Question 63*
Leadership approaches problems through logical analysis and careful thinking .....
Never 11 5%
To very little extent 24 10%
To little extent 39 16%
To some extent 93 38%
To a large extent 64 26%
Always 13 5%
Pop-up

Question 64*
Leadership shows high sensitivity and concern for others' needs and feelings .....
Never 15 6%
To very little extent 24 10%
To little extent 52 21%
To some extent 109 45%
To a large extent 34 14%
Always 10 4%
Pop-up

Question 65*
Leadership is unusually persuasive and influential .....
Never 13 5%

To very little extent 14 6%
To little extent 52 21%
To some extent 119 49%
To a large extent 35 14%
Always 11 5%
Pop-up

Question 66*
Leadership is an inspiration to others. .....
Never 22 9%
To very little extent 18 7%
To little extent 50 20%
To some extent 75 31%
To a large extent 58 24%
Always 21 9%
Pop-up

Question 67*
Leadership develops and implements clear, logical policies and procedures .....
Never 12 5%
To very little extent 14 6%
To little extent 44 18%
To some extent 93 38%
To a large extent 65 27%
Always 16 7%
Pop-up

Question 68*
Leadership fosters high level of participation and involvement in decisions .....
Never 10 4%
To very little extent 17 7%
To little extent 48 20%
To some extent 110 45%
To a large extent 43 18%
Always 16 7%
Pop-up

Question 69*
Leadership anticipates and deals skillfully with organizational conflict in business units .....
Never 13 5%
To very little extent 16 7%
To little extent 38 16%
To some extent 120 49%
To a large extent 45 18%
Always 12 5%
Pop-up

Question 70*
Leadership is highly imaginative and creative .....
Never 17 7%
To very little extent 19 8%
To little extent 47 19%
To some extent 104 43%
To a large extent 43 18%
Always 14 6%
Pop-up

Question 71*
Leadership approaches problems with facts and logic .....
Never 12 5%
To very little extent 19 8%
To little extent 32 13%
To some extent 102 42%
To a large extent 67 27%
Always 12 5%
Pop-up

Question 72*
Leadership is consistently helpful and responsive to others .....
Never 18 7%
To very little extent 19 8%
To little extent 38 16%
To some extent 107 44%
To a large extent 50 20%
Always 12 5%
Pop-up

Question 73*
Leadership is very effective in getting support from people with influence and power .....
Never 9 4%
To very little extent 12 5%
To little extent 51 21%
To some extent 112 46%
To a large extent 50 20%
Always 10 4%
Pop-up

Question 74*
Leadership communicates a strong and challenging vision and sense of mission .....
Never 12 5%
To very little extent 21 9%
To little extent 35 14%
To some extent 87 36%
To a large extent 72 30%
Always 17 7%
Pop-up

Question 75*
Leadership states specific, measurable goals and holds people accountable for results .....
Never 14 6%
To very little extent 15 6%
To little extent 38 16%
To some extent 91 37%
To a large extent 73 30%
Always 13 5%
Pop-up

Question 76*
Leadership listens well and is usually receptive to other people's ideas and inputs .....
Never 9 4%
To very little extent 20 8%
To little extent 39 16%
To some extent 114 47%
To a large extent 46 19%

Always 16 7%
Pop-up

Question 77*
Leadership is politically very sensitive and skillful .....
Never 9 4%
To very little extent 23 9%
To little extent 41 17%
To some extent 113 46%
To a large extent 46 19%
Always 12 5%
Pop-up

Question 78*
Leadership sees beyond current realities to create exciting new opportunities .....
Never 14 6%
To very little extent 18 7%
To little extent 50 20%
To some extent 92 38%
To a large extent 56 23%
Always 14 6%
Pop-up

Question 79*
Leadership has extraordinary attention to details .....
Never 10 4%
To very little extent 20 8%
To little extent 48 20%
To some extent 108 44%
To a large extent 42 17%
Always 16 7%
Pop-up

Question 80*
Leadership gives personal recognition for work well done .....
Never 18 7%
To very little extent 23 9%
To little extent 42 17%
To some extent 111 45%
To a large extent 37 15%
Always 13 5%
Pop-up

Question 81*
Leadership develops alliances to build a strong base of support .....
Never 12 5%
To very little extent 16 7%
To little extent 42 17%
To some extent 105 43%
To a large extent 55 23%
Always 14 6%
Pop-up

Question 82*
Leadership generates loyalty and enthusiasm.....
Never 13 5%
To very little extent 22 9%

To little extent 55 23%
To some extent 76 31%
To a large extent 64 26%
Always 14 6%
Pop-up

Question 83*
Leadership strongly beleives in clear structure and a chain of command .....
Never 8 3%
To very little extent 20 8%
To little extent 44 18%
To some extent 86 35%
To a large extent 73 30%
Always 13 5%
Pop-up

Question 84*
Leadership is highly participative in management style .....
Never 11 5%
To very little extent 16 7%
To little extent 46 19%
To some extent 108 44%
To a large extent 49 20%
Always 14 6%
Pop-up

Question 85*
Leadership succeeds in the face of conflict and opposition .....
Never 9 4%
To very little extent 20 8%
To little extent 37 15%
To some extent 120 49%
To a large extent 44 18%
Always 14 6%
Pop-up

Question 86*
Leadership serves as an influential model of organizational aspirations and values .....
Never 12 5%
To very little extent 18 7%
To little extent 46 19%
To some extent 88 36%
To a large extent 64 26%
Always 16 7%
Pop-up

Question 87*
When someone criticizes the business unit, it feels like a personal insult to me
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
9% 6% 14% 30% 29% 11% 244 100%
Show values Pop-up

Question 88*
I have mixed feelings about my affiliation with this business unit
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total

5% 9% 14% 49% 20% 3% 244 100%
Show values Pop-up

Question 89*
This business unit does shameful things to powerless stake holders
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
28% 30% 16% 16% 7% 3% 244 100%
Show values Pop-up

Question 90*
It really does not matter to me what happens to this business unit
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
35% 30% 14% 14% 6% 1% 244 100%
Show values Pop-up

Question 91*
I am very interested in what others think about my business unit
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
3% 3% 14% 33% 32% 15% 244 100%
Show values Pop-up

Question 92*
I am torn between loving and hating this business unit.
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
13% 16% 28% 33% 8% 2% 244 100%
Show values Pop-up

Question 93*
I find this business unit to be disgraceful in placating powerful stakeholders
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
25% 25% 23% 18% 7% 2% 244 100%
Show values Pop-up

Question 94*
I give little thought to the concerns of this business unit
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
14% 26% 20% 25% 11% 3% 244 100%
Show values Pop-up

Question 95*
When someone praises this business unit, it feels like a personal compliment
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
4% 2% 13% 31% 35% 15% 244 100%
Show values Pop-up

Question 96*
I feel conflicted about being a part of this business unit
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
17% 18% 31% 22% 8% 3% 244 100%

Show values Pop-up

Question 97*
I want people to know that I disagree with how this business unit behaves
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
15% 13% 20% 35% 11% 6% 244 100%
Show values Pop-up

Question 98*
This business unit doesn't have much personal meaning to me
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
18% 26% 26% 21% 7% 2% 244 100%
Show values Pop-up

Question 99*
If a story in the media criticized this organization or my business unit, I would feel embarrassed
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
3% 7% 13% 23% 32% 22% 244 100%
Show values Pop-up

Question 100*
I have contradictory feeling about this business unit.
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
18% 19% 31% 23% 7% 2% 244 100%
Show values Pop-up

Question 101*
I have been ashamed of what goes on in this business unit
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
31% 26% 20% 16% 6% 1% 244 100%
Show values Pop-up

Question 102*
I don't concern myself much with this business unit's problem
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
25% 30% 23% 16% 5% 1% 244 100%
Show values Pop-up

Question 103*
I would be very happy to spend the rest of my career with this business unit
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
10% 11% 19% 27% 25% 9% 244 100%
Show values Pop-up

Question 104*
I enjoy discussing about my business units with people outside it.
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
11% 10% 16% 37% 19% 7% 244 100%
Show values Pop-up

Question 105*
I really feel as if this business unit's problems are my own
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
5% 9% 23% 31% 27% 5% 244 100%
Show values Pop-up

Question 106*
I think that I could easily become as attached to another business unit in this or another organization as I am to this
business unit
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
4% 21% 17% 30% 20% 7% 244 100%
Show values Pop-up

Question 107*
I do not feel like 'part of the family' at my business unit
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
14% 27% 23% 21% 11% 3% 244 100%
Show values Pop-up

Question 108*
I do not feel 'emotionally attached' to this business unit
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
11% 27% 21% 28% 9% 4% 244 100%
Show values Pop-up

Question 109*
This business unit has a great deal of personal meaning for me
Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much Responses Total
5% 9% 18% 33% 27% 8% 244 100%
Show values Pop-up

Question 110*
I do not feel a strong sense of belonging to my business unit
Agree very much Agree moderately Agree slightly Disagree slightly Disagree moderately Disagree very much Responses Total
7% 12% 20% 25% 25% 9% 244 100%
Show values Pop-up

APPENDIX VII – Contents in the Compact Disc

Key Files

1. Tips to use the CD and files
2. SPSS Output Files; files with extension ***.spv***
3. AMOS Output Files: files with extension ***.pth***
4. LISREL Output Files : files with extension ***.ls8***

[System Requirements to open statistical files: ***SPSS-16; AMOS-16 and LISREL-8****]*

SYNOPSIS OF

"Exploring the Relationship between Organizational Identification, Leadership Orientation and Management's Peripheral Vision: A Study of Knowledge Workers' Perceptions."

A Thesis to be submitted by

ANAND.K

For the award of the degree of

Doctor of Philosophy

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE

PILANI (RAJASTHAN)

March 2013

1. Introduction

In the present world of technologically driven businesses, the role of knowledge workforce is increasingly becoming important. The organizations and their business sustenance are becoming uncertain and complex. While it is important for the organizations to have focus on their business, being 'aware' of the environment and the changes is becoming a necessity. The importance of the peripheral vision, environmental aspects of business its importance in operation of the business, its key role in making key business decisions have all been studied by Day and Schoemaker (2006); Miles and Snow (1978); Haeckel (2004); Feldman and March (1981) and Murphy (1987). The peripheral vision need of a business and the peripheral vision capacity of an organization is becoming the determining factor for its survival. Therefore it is natural to expect that this would be impacting the leadership style and approach of the businesses. In our study we have selected the Bolman and Deal's four leadership orientation. No evidence of such study being done on knowledge work based business is available. While more and more businesses are becoming dependent on knowledge workers according to Drucker (2006), the role of knowledge workforce thus becomes very critical in the sustained growth and survival of the technologically driven businesses. The dependence of the success of business on the knowledge workforce is widely acknowledged and for the organizations, it has become a must to adequately address this dependence from human resource perspective of employee retention. Organizational identification, being an important parameter for the continuance of the knowledge workforce in an organization, therefore becomes a key subject of interest. While the literature shows evidence of work done in the area of organizational commitment, not much of study has been done on the organizational

identification, specifically on the expanded model by Kriener and Ashforth (2004). While there are evidences in literature on studies done in this area by Sluss and Ashforth (2008); Ashforth and Mael (1989); Shirbagi (2007); Cheney (1982), there is no evidence of a study done in relation to the Bolman and Deal's leadership orientation and Peripheral vision, in a knowledge driven business.

Hence, importance of peripheral vision for a technologically driven business, its impact on the leadership styles and therefore the outcome on the organizational identification pattern of the knowledge workforce that forms the backbone for such businesses, forms the key research interest in this study. A well studied and established relationship between these constructs thus becomes a key tool in formulation of the organization's human resource policy.

2. Motivation

The peripheral vision need for every business differs based on the environment it operates and the very nature of the business. Similarly, every organization has to develop its peripheral vision capacity to address its needs for sustenance and business growth. A perceived gap in this aspect makes the organization misaligned to its business objective. Thus every organization gets classified into 'aligned' or 'misaligned'. The earlier the organization identifies its status, the better its position in correcting the anomaly. This aspect of aligning its peripheral vision capacity with its need however demands certain leadership orientations. The four frameworks of Bolman and Deal's leadership approach, is a strong pointer to the desired leadership orientation required to lead such organizations in the current business scenario. The impact of this leadership approach on the identification pattern of the knowledge

workforce that forms the backbone of knowledge driven businesses, is anticipated. Hence an empirical study relating these three key managerial constructs in the knowledge industry thus forms the basis of our research objective. The importance of the outcomes from this study can hardly be overemphasized, since today most of the businesses are driven technologically and are critically dependent on the knowledge workforce, for their survival, sustenance and growth. Hence an alignment of the strategic thinking on these three aspects of business is the need of the hour in addressing the organizational requirement of low attrition, sustained motivation and positive organizational identification of the knowledge workforce, in order to ensure a congenial and progressive organizational 'eco-system'.

3. Objectives and Scope

This study hence attempts to explore some key research questions originating from the above ideas.

- How do the Bolman and Deals four framework of leadership, impact the peripheral vision capability and address the need gap in an organization comprising of knowledge workers?
- How are the organizational identification factors, impacting the Bolman and Deal's four frames of leadership, influence the peripheral vision gap?
- Are the elements of organizational identification and Bolman and Deal's leadership framework associated or related in an organization of knowledge workers?

- How can the peripheral vision capability of an organization be improved and the gap between need and capacity reduced in a knowledge based organization through the Bolman Deal's leadership framework?
- How would the peripheral vision capacity, need and the resultant gap be moderated by the four leadership frameworks of Bolman & Deal, in the back drop of the four extended models of organizational identification namely positive identification, ambivalent identification, neutral identification and dis-identification, in a corporate set-up of knowledge workers?

The study framework thus can be depicted as below, in terms of three distinct constructs with identified variables that are measured for studying the association between these constructs generally and variables specifically.

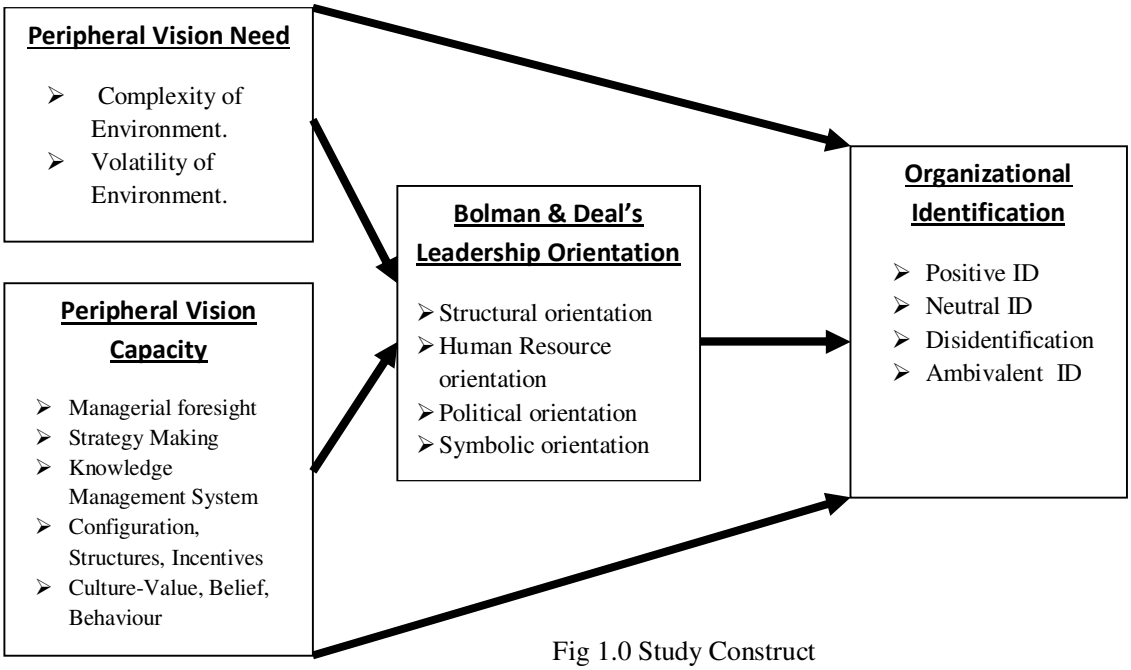


Fig 1.0 Study Construct

4. Description of the Research work

Organizations have existed in this world, in various forms and for different purposes, since man began understanding the concept of division of labour. As organizations began to become pervasive and dominant, it has become formidably difficult to understand and increasingly tough to manage them Bolman & Deal (2003). While it is increasingly becoming a challenge to manage organizations and the complexities associated with these, it is also worthwhile to note that the organizations and the people too are increasingly becoming complex. Though in the last five decades, a great lot of management wisdom has been added to the knowledge domain, it is still a fact to be reckoned with that managing knowledge workforce continues to be a challenge, for the business leaders.

The recent incidences of failures of large organizations like Lehman Brothers and Bear Stearns and the associated financial debacle, goes to prove the point of complex business environment as well as the leadership challenges. All the management wisdom and intelligence has not been able to prevent this debacle, which has impacted a large number of people and national communities, across the globe. The most surprising aspect on these incidents however is, that despite all the management wisdom, knowledge, and the knowledge workforce at the main stream of the business, these disasters could not be even foreseen, leave alone being prevented.

In the light of the above background, some questions that become very pertinent at this point are:

- *Could this have been prevented?*
- *Was it possible to notice the impending danger?*

- *Were the signs in the periphery not noticed when it occurred first or was it noticed but not acted upon.*
- *Were the organizations not capable of noticing the signs of danger when they appeared at periphery?*
- *Did the leadership and the knowledge workforce have the requisite peripheral vision or lacked it?*
- *How could organizations have reacted to these kinds of danger and respond to them?*

Where does today's' leadership of these technologically driven organization stand? How do the people who are the backbone for these organizations perceive the leadership and identify themselves. While we do not enter into discussions of ethical and moral angle to these issues, nevertheless an organization must be aligned with its needs. Its impact on the leadership and the consequent identification by its knowledge workforce cannot be far behind, in ensuring sustenance. Hence an empirical study on these constructs is the need of the hour and quite appropriate. Some of the ***general focus research questions*** thus originating from the above ideas could be stated as below:

- How is the Bolman and Deal's four framework of leadership, impacted by the peripheral vision capability and address the need gap in an organization comprising of knowledge workers?
- What is the impact on the organizational identification due to the peripheral vision capability and need in a knowledge based organization?

- How is the organizational identification factors impacted by the Bolman and Deal's four frames of leadership as a moderating factor, and influenced by the peripheral vision capacity and need, as an antecedent?
- Are the elements of organizational identification and Bolman and Deal's leadership framework associated in an organization of knowledge workforce?
- How can the peripheral vision capability of an organization be improved and aligned in a knowledge driven organization to positively influence the leadership styles?
- How would the peripheral vision capacity, need and the resultant gap be moderating the four leadership orientations of Bolman & Deal, in the back drop of the four extended models of organizational identification; namely positive identification, ambivalent identification, neutral identification and dis-identification, in a corporate set-up of knowledge workers?

In a nutshell however, the key question, this model attempts to answer, may be stated broadly as below:

What is the Relationship between Organizational Identification, Leadership Orientation and Management's Peripheral Vision in the perception of the Knowledge Workers?

The directions of the hypothesis under study is given in Table 1.0

Table 1.0 – Hypothesized Directions

S.No	Variables*	Structural orientation	Human Resource Orientation	Political Orientation	Symbolic Orientation	Positive Identification	Disidentification	Ambivalent Identification	Neutral identification
1	Complexity of Environment	+	_	+	_	_	+	@	+
2	Volatility of Environment	+	_	+	_	_	+	@	+
3	Managerial. Foresight	_	+	_	+	+	_	_	@
4	Strategy Making	+	_	+	_	+	_	_	@
5	Knowledge Management System	+	_	_	+	+	_	_	@
6	Configuration – Structure & Incentives	+	+	_	@	+	_	_	_
7	Culture – Value/Belief/Behaviour	+	_	_	+	+	_	_	_
8	STRUCTURAL Orientation					@	@	+	+
9	HUMAN RESOURCE Orientation					+	_	_	_
10	POLITICAL Orientation					_	+	+	@
11	SYMBOLIC Orientation					+	_	@	_

+ :- Positive association; - :- Negative association; @ :- No perceived association

4.1 Though it was proposed to conduct the study across multiple groups and multiple knowledge functions, the same was not plausible due to limitation of participation by the corporate. Hence the study had to be restricted to the extent of available participation.

4.2 The study was initially done on a group of Executive post graduate program students, as a pilot study, in order to improve the instruments, that were already validity and reliability tested for the purpose. The pilot study was used to get a 'feel' of the statistical treatment and also simplify the peripheral vision part of questionnaire, for use in conducting the pivotal survey. The study with improvised instrument was carried out by way of survey of 244 knowledge workers, employed by a large reputed Indian conglomerate with diversified business interests. This study, being related to the knowledge workforce, was carried out on one of their information technology development business units. The survey was administered through the web platform and the results were downloaded as MS-Excel file for further analysis. The survey was pre-designed to prevent creation of missing data altogether and hence all the recorded responses were complete. This downloaded raw data file was evaluated, pruned and prepared for export to various data files into SPSS and LISREL software.

4.3 The data imported from the spruced up raw data file was used in SPSS to create further exogenous variables and was analysed for all the basic statistical information. Regression and ANOVA were performed with the variables to study the association among the constructs. It was however found during analysis, that the data exhibited high incidence of multicollinearity, which was perceived to be

detrimental to the statistical evaluation and interpretations. In light of this observation, exploratory factor analysis (EFA) was performed on the variables and the variables were optimised to nine from the initial fifteen, across the three constructs. These newly created variables were suitably named based on the items they were used for measurement. Table 4.1 gives the original and revised variables in a nutshell, along with their reliability values.

Table 4.1 - VARIABLES POST EXPLORATORY FACTOR ANALYSIS VIS-À-VIS THE EARLIER ONES

Construct	Initial variables [15]	Reliability [Cronbach's α]	Variables post Factor Analysis [9]	Reliability [Cronbach's α]
Peripheral Vision Need	PVN Complexity of environment	**0.72**	PVN – Environmental Dynamics	**0.82**
	PVN Volatility of environment	**0.80**	PVN – Business Dynamics	**0.73**
			PVN – Regulatory Influences	**0.68**
Peripheral Vision Capacity	PVC - Managerial foresight	**0.71**	PVC - Managerial attitude towards periphery	**0.90**
	Strategy marking	**0.79**		
	Knowledge management systems	**0.85**	PVC – Resource and data management capability	**0.84**
	Configuration – Structure and incentives	**0.79**		
	Culture – Values, Belief and behaviour	**0.90**	PVC – Business clairvoyance	**0.70**
Leadership	Structural framework	**0.94**	Astute Leadership	**0.91**
	Human Resource framework	**0.95**		

	Political framework	**0.93**		
	Symbolic framework	**0.96**		
Organizational Identification	Positive identification	**0.76**	Disengagement	**0.90**
	Dis-identification	**0.77**		
	Ambivalent identification	**0.81**	Positive identification	**0.76**
	Neutral identification	**0.78**		

Structure Equation Modelling (SEM) was another statistical method that was adopted to study the association of the variables. Various models based on the theory were tested for fit and eventually a parsimonious model was identified to be exhibiting the best fit based on the data analysis as well as the theory supporting the constructs. SEM and the regression studies brought out an interesting association among the variables under study and also created a strong platform for further research, by certain encouraging leads from the outcomes.

4.4 The key interpretations from the statistical evaluation brought out the strong association of, the managerial attitude towards periphery of the perceived peripheral vision capacity of an organization and the astute leadership, as perceived by the knowledge workforce.

The evaluation and interpretation also brought out the strong influence of astute leadership on the positive identification and its negative influence on the disengaged identification variables. The outcome also indicated that the organizational identification pattern of a knowledge worker in an organization is strongly influenced and impacted by his perception of peripheral vision capacity of the organization, more particularly the leadership attitude towards periphery.

Last but not least, the outcome led to emergence of a robust measuring instrument that is observed to be an effective, reliable and strong tool to carry out further research on these constructs.

5. Summary of the work

Summarizing the study outcomes and discussions, the key conclusions were:

(1) There is enough reason to believe from our study, that as far as the knowledge workers are concerned, the managerial attitude towards periphery of the perceived peripheral vision capacity of an organization and the astute leadership are very strongly associated, at a very strong level of significance. While it may not be possible to claim that the former causes the latter based on the study with this available data, there is enough reason to strongly believe that it could be so and needs further longitudinal research.

(2) This study also reinforces the theoretical fact that astute leadership strongly influences the positive identification and negatively associates with disengaged identification, with a very strong level of significance. This is supported by the observed 'acceptable' to 'good' fit of the structure equation model.

(3) The organizational identification pattern of a knowledge worker in an organization is strongly influenced and impacted by his perception of peripheral vision capacity of the organization, more specifically its attitude towards periphery and the astute leadership of the organization. While the current study does support this conclusion based on a single industry and

homogenous business group, a multiple industry study on a larger sample with multiple business groups could reinforce this conclusion, with greater validity.

(4) The measuring instrument that has emerged in course of various analysis of this data set is observed to be an effective, reliable and strong tool to carry out further research on these constructs, in this direction.

The above conclusions and interpretations have an immense value for the business that depends on knowledge workforce for their business success. The finding, that the managerial attitude towards periphery, by the senior management is perceived to be an important antecedent of the astute leadership, can aid in prioritizing the organizational resources deployed towards improvement. The fact that a positive perception of astute leadership could impact the identification pattern of the knowledge workforce, can lead to implementation of appropriate human resource policies and procedures.

While attrition continues to haunt every human resource manager in the knowledge industry, the issue could be effectively managed by understanding the behavioural pattern of the knowledge work force; their expectations from the senior leadership and knowledge sharing culture. The study reinforces this statistically and helps in improving the understanding of the knowledge workforce by the corporate leadership, more fully.

The study results also reveal attributes that are of lesser importance, thereby aiding better utilization of resources by the corporate leadership.

To simply put, as a simile of a navigating ship, the knowledge workforce does not seem to be significantly impacted by "*conditions of sea*" but are more influenced and

impacted by the astute leadership's capability to "*navigate the ship"* through the prevailing "*conditions of sea*", that eventually determines whether they would continue to sail with or bail out of the organizational ship.

Further study, on a substantially larger group, across businesses could enrich the key observations made in this study.

This study too has certain limitations, which needs to be considered while generalizing and extending the outcomes or results. Firstly, this study has been done on a single Indian conglomerate, in one of its business units. Hence extending the outcome beyond a point is too farfetched to be generalized. So a generic claim of the outcome on the entire knowledge workforce cannot be concluded based on these outcomes. Secondly, the knowledge industry studied here pertains to information technology (IT) only. Extending the outcomes and interpretations to other knowledge industry may not be scientifically sustainable. These study results and interpretations therefore confines itself to one Indian IT organization, from the southern part of the country, under a single senior leadership.

Thirdly, there is a possibility of an error factor having crept in, as the survey was kept open for response for over sixty days, where in it cannot be assured that the thought process and mood of the respondents could not have been influenced either way, due to their ongoing experience in the organization. Nevertheless it could also be argued that this extended period of survey window could have actually helped in getting a far more genuine and balanced response that would not have been possible had the respondents been asked to respond in a short period of duration. Restricting the respondents to respond within a span a 45 to 60 minutes could have heavily

influenced the responses and reflected their recent experience at the work over an objective and balanced opinion, based on their overall experience. Hence, consideration of this aspect as a limitation by itself is a point of discussion. So without getting into the merits and demerits of this aspect, we do place on records this aspect of extended response time, while leaving it to the judgment of the academic fraternity, if this fact could be constituted as a limitation or an advantage. Lastly, for this study, the entire response came from one business unit of this organization and the same cannot be representative of, neither the organization nor the industry. So extending the outcomes on any of these lines, based solely on this study, is once again not scientifically sustainable.

According to Bozionelos (2003), path analysis models with more than ten variables are difficult to analyse and interpret, and this study had nine variables, post exploratory factor analysis. It however cannot still be conclusively presumed that the path analysis and its interpretation would have been easy, sound and strong. Hence the outcome of this study could be more of exploratory or indicative in nature, opening up a wider scope through further longitudinal studies.

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