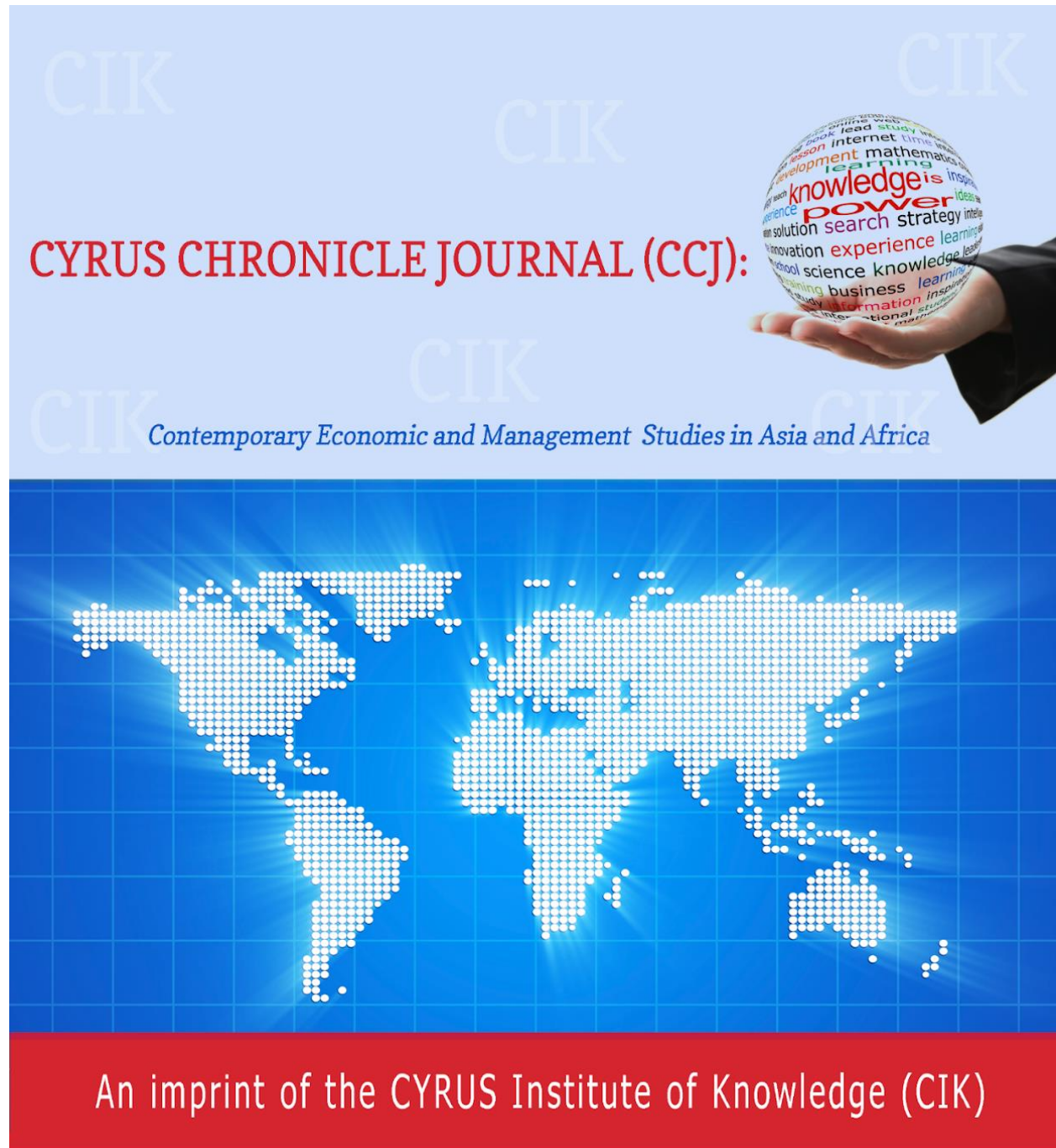


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Intangible Assets and Organizational Performance in Indian Manufacturing Industry

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We invite authors to submit their papers and case studies to Editor@Cyrusik.org. We will have a quick turn-around review process of less than two months. Every volume will be composed of about 5-8 papers and case studies. The first volume was published in the May of 2015. A selected number of papers submitted to the CIK conference will be double-blind reviewed for inclusion in *THE CCJ*. We also have accepted papers from emerging economies about other regions of the world. We intend to have special issues on themes that are within the scope of Journal. Also, we will have invited guest issues.

THE CCJ: An imprint of the CYRUS Institute of Knowledge (CIK)

Background:

This is a historical time for the mentioned regions, and The Cyrus Chronicle intends to offer what is most urgently needed. There is no question that organizations and businesses that are capable of analyzing and applying advanced knowledge in management sciences and development are in high demand, and especially during transitional periods. It is an unusual time in the target regions and the world, a time which requires active intellectual participation and contributions. It is the era of revolution in terms of communication, technology and minds for billions of people. It is a time for intellectuals, entrepreneurs, and philanthropists to help enlighten minds and therefore enrich the quality of life for millions. It is a time to focus intensely on the regions' historical characteristics, achievements, human and natural resources, and its significant deficit in development, management sciences, and democracy. CIK's vision, "to cultivate the discourse on human capital potentials for better living," is the appropriate response to current challenges, and the journal is a platform for sharing the perspectives of scholars and practitioner with a wider audience.

CYRUS associates tend to have a foot in two worlds. First, most of the associates possess a wealth of intellectual and experiential knowledge which is enhanced by their active involvement in business, consulting and scholarly research and collegiate teaching. Second, some associates are sons and daughters of the affirmation regions and possess an ethnic identity, language skills, and the insights only embraced by insiders. Third, most of the CIK board of directors' members and associates are well-known scholars, members of editorial boards of journals, and even editors. CYRUS possesses depth, breadth, and a competitive edge to successfully manage chronicle.

CYRUS is committed to developing knowledge that positively contributes to the life of the world citizens, especially, the target regions. CIK is a charitable, educational, and scientific organization that has been in operation since 2011. It is a secular and nonpartisan organization that has many scholars and practitioner as member.

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Editor's Introduction

Since inception in 2012, the *Cyrus Institute of Knowledge* has held five annual meetings. Three years ago, we published the first volume of its flagship journal, *Cyrus Chronicle Journal (CCJ): Contemporary Economic and Management Studies in Asia and Africa in conjunction with the 2016 annual conference*.

The Institute has had seven successful international conferences since its inception. These conferences have been hosted at institutions (MIT, Harvard, Hult) in the United States and internationally (Hult - UAE, American University in Cairo, and ESCA in Morocco). Several institutions of higher education collaborated and supported these conferences. Please see CIK website for information about these institutions. We greatly appreciate their support! CIK 2020 Conference will be held at UNINOVE University, São Paulo, Brazil from May 20 -24th. You are invited to participate.

Generally, conference participants come from about 15 countries and 35 institutions, organizations, and companies. Please see [CIK website for detail](#) in this regard. For some plenary sessions we had up to 150 participants. The best papers presented at these conferences have traditionally been accepted for publication in the Journal, with additional articles by prominent scholars.

The acceptance rate of *CCJ* is generally less than 20%. Our aim is to publish the highest quality papers after they pass through multiple review process. CIK colleagues and conference participants have proposed and suggested special issues of the journal which is based on core topics (i.e., entrepreneurship, innovation, ethics, and sustainable development) and/or country specific ones. Therefore, we welcome your articles which meet these characteristics. We already have several papers about Iran.

Now we welcome you to the fourth issue (*CCJ.V4*). The journal intends to cover scholarship pertaining to emerging economies in Asia, Africa, and other emerging economies. Scholarship dealing with these regions tend to be either ignored or misunderstood, and there are limited outlets for scholars who work in these countries to share their scholarly outputs. Focusing on these two continents will help researchers from both developed countries as well as these two continents - which together account for the largest portion of the world population and growth. The *CCJ* intends to fill these gaps. An examination of our mission may shed some light on this question. The primary purpose of the journal is four-fold:

1. To share and promote knowledge of economic, management, and development issues facing countries of Asia and Africa and other emerging markets. Focusing on assessment, evaluation, and possible solutions help advance countries in this which has the largest world habitats. Development challenges are global; virtually all countries face challenges concerning economic development, sustainability, food and water, population and environmental degradation. Yet no country gains by shunning opportunities that globalization can provide, with the possible exception of a few countries whose leaders lack a full understanding of the opportunities that globalization can offer. To take advantage of such opportunities, knowledge is the primary requisite. And this journal aspires to make a contribution to this body of knowledge.
2. To encourage the generation and dissemination of knowledge by local scholars whose access to mainstream academic outlets may be limited. There are many scholars from academic, public and private sector organizations whose first-hand knowledge of problems and solutions is not being shared for lack of an appropriate outlet for dissemination. The *CCJ* seeks to provide an opportunity for spreading such knowledge.
3. To focus on countries that span the northern band of Asia – from China to Turkey – to the northern tier of Africa, areas that have not previously been the subject of much attention. In the past, these countries have tended to gain the attention of scholars and the media only in times of man-made or natural crises. But in fact, these nations share many challenges with others. They wrestle with shortages of food and water and the growth of population and pollution. Many countries, having

been under the shackles of dictatorship for decades, are now redoubling their efforts to educate their citizens, who have become freer to express ideas in journals such as this.

4. Academic scholarship emanating from the region under the journal's coverage tend to get lost in the academic jungle where the pressure of "publish or perish" leaves behind the younger and less experienced members. This journal will provide a venue for the scholars with first-hand knowledge of these areas. By publishing in *CCJ*, they could make important contributions to the body of management and development scholarship on which the journal will continue to concentrate. The *CCJ* will provide a platform for established as well as younger scholars who might collaborate with them in their research.

This fourth issue of the *Cyrus Chronic Journal*, contains six articles. Scholarly articles, from established scholars and policymakers, cover the gamut from the Middle East to Latin America. As part of our mission to advance knowledge about we will continue to include reviews of major scholarly books relevant to the Journal readers.

On the journal's operational side, we want to make the publication more accessible to a wide audience across the world, and so, consistent with the 21st -century trend toward electronic media, we will continue to publish this journal online. To maintain rigor and originality, articles submitted to the journal will nevertheless undergo the standard blind review process. Reviewers' anonymous comments are shared with authors, as appropriate. Submission guidelines and procedures are delineated on the journal's website: <http://www.cyrusik.org/research/the-cyrus-chronicle>

As the first editor of the journal, I am pleased and proud to accept this challenge. I bring some experience; my first editorial assignment was as an undergraduate student at the then Pahlavi University in Shiraz, Iran, a top-ranking institution in the region. A few students and I founded and published *Danesh-Pajouh* (knowledge seeker). In those days when freedom of expression was severely limited, we managed to publish one issue in March 1965 before the censors put a stop to the enterprise.

Years later, while directing a doctoral program in international business in Texas in the early 2000's, I also served as the co-editor - and eventually editor - of the *International Trade Journal* (ITJ) until my retirement in 2013. Under my leadership, the *ITJ* acceptance rate fell below 10%.

Publishing an academic journal is simply a labor of love. The rewards are many-fold and include working alongside a dedicated team of colleagues – Nader Asgary, Alf Walle, Nancy Black Sagafi-nejad, Dina Frutos-Bencze, reviewers, and the entire editorial Board. In addition, of course, we thank our contributors who have trusted their work of scholarship to be published in a new but growing and promising publication. They have spent many hours working to polish and prepare for the journal for publication.

In this fourth issue, we have already reached a threshold of about 20% in acceptance. Still, *CCJ* needs your support and so I ask for your help in the following ways:

- *We are interested to offer special issues based on themes and country case studies. Your support, suggestions, and contributions are welcomed;*
- *Contribute articles, case studies, and book reviews and commentaries;*
- *Encourage your colleagues to do the same;*
- *Encourage promising young scholars – especially those from developing and emerging economies from China to the northern tip of Africa – to submit their works to our journal;*
- *Spread the word, especially in countries where CCJ can be most effective;*

- *Cite the articles published in this journal in your own research when applicable;*
- *Attend the annual conferences of the Institute (<http://www.Cyrusik.org>) the physical platforms that serves as an annual spawning ground for articles that may ultimately be published in this journal;*
- *Give us your feedback by telling us how we can further promote and improve the journal.*

Welcome to *CCJ*, and thank you.

Tagi Sagafi-nejad, Editor

Abstract

The importance of intangible assets, such as organizational competencies, experience, and expertise has not been adequately examined. In order to fill that gap, an organizational model was developed based upon research within Indian Manufacturing Industry, so as to determine the key intangible assets of organizational performance and their significance. To an extent that these intangible organizational knowledge as an asset is capable of creating a competitive advantage, the conceptual model contributes to both scholars and practitioners.

Keywords: Organization experience, organization expertise, organization competencies.

1. Introduction

In the changing scenario of the dynamic markets and high competition, products are becoming obsolete very fast. Businesses respond to the situation by creating new knowledge, sharing it across the organization and integrating the same in new products/services and processes.

According to Nonaka (1998), successful organizations that focus on creating knowledge within the organization, develop different ways to redirect and position knowledge to create product and services. In addition, most of these organizations believe that creating knowledge is a matter of tapping the tacit, subjective information and perceptions of the employees. Such organizations ensure that this knowledge is managed and available for the use of organization as a group. This knowledge is available and used in the form of slogans, metaphors, and symbols, wherein these are indispensable tools for continuous improvement. The theory of organizational knowledge creation explains the process of combining the knowledge held by individuals and organization, which can be enlarged and synergized in building knowledge-based organizations. This theory also emphasizes the fact that the contribution of an individual is critical in creating new knowledge at the organizational level (Nonaka 1994), and the knowledge of individual in an organization results in innovation, when they are given appropriate environment to create and innovate. Such environment gives an edge to the organizations in terms of performance and creating wealth for their stakeholders. These organizations are capable of exploring and generating new forms of knowledge (Zack 1999), as a fundamental resource of knowledge-based organizations. Organization knowledge collectively with its successful management is transformed in a factor that differentiates successful companies from not so successful companies and facilitates competitive advantage in the volatile market (Brown & Duguid, 1998) and Davenport & Prusak (1998)). The suggested advantages generated by knowledge include effective decision-making, increased innovation, competitive advantage, and operational efficiency.

Nonaka and Takeuchi (1995) considered knowledge as a strategic resource, which enables an organization to attain competitive advantage. This in turn refers to the fact that everyone in an organization must constantly aim to attain new set of knowledge. Also it becomes critical that individuals in an organization should have an attitude that knowledge is a reservoir to be shared rather than to be holdfast. Knowledge when shared, builds the foundation for organizational experience and expertise. Despite the fact that appreciation is growing towards impact of intangible assets / resources in organization performance, the research conducted in this context is in the form of anecdotal studies, case studies. (Carmeli & Tishler (2004). Carmeli & Tishler (2004) stated in their research that comparing the impact of intangible elements on organizational performance across the private and the public sectors would be an interesting avenue for researchers. Nguyen (2008) studied the manufacturing companies in Vietnam and addressed four functional competencies (manufacturing, marketing, research & development, and human resource) and their influence on the performance of the organisation. Masoud (2013) studied the influence of manufacturing

competencies on the organisation's performance, and highlighted that literature for linking managerial competencies to the organisation's performance (sales, customer satisfaction, and employee engagement) is limited. Jabbouri and Zahari (2014) explains the role of core competencies (organizational resources, human resources and capabilities) on improving the organizational performance, wherein Dubey and Ali (2011) suggested that to improve an organizational performance in the manufacturing companies in India, organizations have to focus on their functional competencies. Osei and Ackah (2015) concluded that in order to achieve high standards of performance, an organizations has to expand the scope of learning and enhance the level of competencies. According to Chander & Mehra (2011), the management of intangible assets like experience is unorganized and unsystematic. Further research in the domain of intangible assets is done in service and knowledge based sectors to explain the impact of intangible assets on the organizational performance (Carmeli & Tishler (2004). Considering the earlier studies, the current research aims to bridge this gap by studying the impact of the intangible assets/resources like experience, expertise and competencies on the overall performance of the organization in the context of Indian manufacturing industry.

With the aim of achieving the objectives of the research, two major questions are:

RQ1: What are the factors constituting intangible assets?

RQ2: What is the impact of the intangible assets on the Organizational performance?

The attributes of experience and expertise have been studied at individual level but this study focus on the relevance, need to identify and validate the attributes of organizational competencies, experience and expertise, which lead to improved organizational performance. The fundamental view of organizational knowledge is that it exists in the form of practices followed in organizations as a result of former experience which direct future actions (Levitt & March, 1988).

2. Literature Review

The focus of the current research is on the organizational competencies, organizational expertise and organizational experience and its impact on the organizational performance in the Indian Manufacturing Industry.

2.1 Competencies

Boyatzis (2011) defined competencies as capabilities, which is a cluster of related but diverse group of behaviours structured around a fundamental construct called the 'intent'. Prahalad & Hamel (1990), stated that competencies are the combined learning in the organisation. Further organizational learning process contributes crucially in the creation, and maintenance of the organizational competencies. According to Sherman (2004), the process of development and creation of competencies in an organization is driven from the core competencies for business. This leads to documentation of individual competencies by understanding of the critical success factors differentiating the organization from its competitors. The current research defines organizational competencies as the collective learning of the organization (Prahalad & Hamel (1990)) and set of knowledge (know-how) and skills along with their practical implication (Edgar and Lockwood 2008). Organizational competencies are closely associated with the performance of the organization and capacity building resulting in competitive advantage, closely connected with the growth and development of the business (Man 2001 as cited in Lopa & Bose (2014). Thus businesses which aim at high performance amid competition, would acquire and leverage organizational competencies and also ensures creation of new products & services to gain an edge in the market (Edgar & Lockwood 2008).

Based on the literature review the organizational competencies considered for the current research are:

Managerial Competencies	Functional Competencies
Cross Function Groups	Marketing Competencies
Leadership Team	Research & Development Competencies
Learning Environment	Production Competencies
Change Management	

2.2 Experience

The definition of knowledge adopted in the current research is the information combined with experience, perspective, interpretation, and reflection of a context, which can be applied for decision making, solving problems and taking appropriate actions (Dewey 1989). The term experience is over and again used in association with knowledge and learning, where experience as a state (*having experience*) is a subset of knowledge (Dewey 1989). According to Yelle (1979), organizational experience involves gaining experience with products and services, achieving efficiency through innovation and making improvements in working practices and methodology. This experience at an organizational level can be observed in change of behaviour. The organizational experience could be rooted in a wide range of repositories, including individuals, routines, databanks and memory systems in an organization.

2.3 Expertise

Expertise is primarily based on the fact that, an individual who is referred as expert has achieved a level of proficiency in a specific domain ((Philips, Klein & Sieck 2008), thus outlining it as an 'expert skill or knowledge. Another study states that an expert is someone who is proficient in making decisions, predictions in their defined area of work and enjoy the state of professional and social credentials among the peer group (Camerer and Johnson 1991). On reviewing the literature, it was found that expertise could also be defined as competence and proficiency of an individual by virtue of owning the knowledge of a specific function or task. Karhu (2002) states that the process of extensive knowledge develops expertise, the expert is equipped to respond to any situations intuitively by identifying the situation and suggesting applicable solutions. In addition, an expert can utilize the experience for analyzing difficult problems and making decisions. However, Scribner views expertise as a function of experience, whereas Mieg (2001) discusses the concept of expertise differently, and defines an experts as specialist having specialized knowledge.

Expertise consists of characteristics, skills and knowledge of a person or of a system, which distinguish experts from novices and less experienced people. Literature review gives insight to the key distinguishers about an individual moving from experienced person to expertise level. The key differentiators are (a) problem solving (*ability to solve problems*), (b) risk taking (*ability to take higher risk*) and (c) decision making (*ability to take faster decision*).

2.4 Organizational Performance

According to Richard (2009), performance of an organization includes three specific parameters for results. These parameters are financial performance (*which covers profits, return on assets, return on investment etc.*), secondly product-market performance, (*which is based on sales, market share, etc.*), and lastly the shareholder return (*counting total shareholder return, economic value added, etc.*). Different constituencies, resulting in different interpretations of "successful performance", can judge organizational performance and each of these perspectives is unique, wherein each organization has a unique set of circumstances that makes performance measurement essentially situational (Cameron & Whetton, 1983). Kaplan & Norton (1996) presents Balance Scorecard (BSC) as a tool for measuring organizational performance by integrating four perspectives that cover all the important processes, procedures and activities of an organization. These four perspectives are financial, customer, internal business process and learning & growth that provide a

framework for the Balance Scorecard and also the linkages and relationships between customers, internal process and learning/growth with financial performance.

3. Theoretical Model

In this research, Resources Based View (RBV) and Intangible Resources/Assets formulate the basis for understanding the key constructs that constitutes the intangible assets in an organization and their impact on the organizational performance. Balance Scorecard (BSC) by Kaplan & Norton (1992) used in the current study facilitates the research to identify organizational performance indicator.

3.1 Resource Based View (RBV)

Resource based view was developed to understand, how an organization can attain the level of sustained competitive advantage (Halawi, Aronson & McCarthy 2005). Unlike, conventional belief that the available resources are homogenous, RBV theory counter that the resources are heterogeneous and are not evenly transferred between organizations (Barney, 1991) Okpara (2015), explains resources as accumulation of knowledge, human capital, intangible assets, physical assets available within organization and can sooner or later be utilized and transformed into valuable products and services.

Literature review reveals that intangible assets contribute in generating value for an organization much higher as compared to tangible assets. Nonetheless, most of the studies in this regard are limited to the developed nations and there still prevails a knowledge gap on this area regarding the developing nations. If the information is assumed universal, then it may lead to wrong results. Therefore, it is important to study this model separately for developing nations (Okpara (2015). The Resource-based view of the organization suggests that factors within the organization to a great extent are accountable for creating sustainable competitive advantage, quality output and performance in an organization. To be more precise, the RBV predicts that deployment of unique resources and capabilities can result in sustained higher performance. In this research, we are describing intangible assets and organizational capability as integration of organizational level competencies (skills), experiences and expertise to achieve organizational goals or organization performance, which we are further describing through Balances Score Card.

3.2 Intangible Assets

Nowadays, most of the organizations including the manufacturing companies are not merely selling products but are selling experience in- terms of customer service, expediency and even more. In this regard, intangible assets are considered as an important asset by most of the successful companies, albeit the contribution of intangible assets is not understood adequately (Lin & Tang 2009). Lev (2005) make use of the terms intangible assets, knowledge assets and intellectual capital interchangeably and put forward a viewpoint that these terms differ merely in the discipline of origin, wherein intangible assets are knowledge assets for economists and intellectual capital for managers and lawyers. Thus, intangible assets, when explained in terms of intellectual capital are deep rooted in the experience and expertise of the individuals who belong to the organization and can be in the form of decision making, problem solving. It is an integral part of the assets which enhances value of an organization, though intangible assets and tangibles are not independent and coexist in the organizational setting (Carayannis, 2004). Intangible assets can be described as a combination of knowledge, skills, competencies, experience and expertise along with technology, which can bring more value to the organization in the form of sustainable competitive advantage (Gamayuni (2015).

3.3 Resource Based View and Intangible Assets

Resources are transformed into product or services by making use of various assets existing in the organization (Raphael & Schoemaker 1993). These resources include wide range of assets, capabilities, process, information, knowledge etc. (Barney 1991). In view of that RBV suggest that resources to be counted should be able to (Barney 1991), a) create value for the organization, b) rare, which is not easily accessible to the rivals of the business, c) the resource has to be unique, and cannot be copied easily, and d) non-transferable.

Researchers refer RBV as the foundation of competitive advantage of an organization and it lay emphasis on the implementation of collection of resources (tangible or intangible). RBV and intangible assets can be positioned on the similar platform, though equating the two is not an easy task. On reviewing the two concepts, it reflects that they are linked with the business strategy and enables an organization to sustain superior performance and competitive advantage. However, this is based on the interaction between the assets and resources available within the organization and the capabilities that transfer the assets into products/services with higher value (Kristandl & Bontis 2007). Notwithstanding, it is important to understand that intangible assets which are not able to add value, are imitable and are not unique may not contribute to the superior performance of an organization.

3.4 Knowledge Based View (KBV)

With the increasing focus on knowledge in current scenario, there is an incremental movement towards a race of gaining competitive advantage with the help of knowledge (Halawi, Aronson & MacCarthy 2005). In addition, success of the business is not just associated with the financial perspective or physical resources only, but is deep rooted in how effective an organization can channelize its intellectual capital or knowledge. In the current scenario, there is acceptability to the achievements attained through the mode of knowledge-based resources and large organizations are paying attention towards the significance of knowledge for gaining higher efficiency and competitiveness (Halawi, Aronson & MacCarthy, 2005). It is further stated and discussed that knowledge based resources are difficult to imitate or reproduce since they are complex and diverse in nature therefore are primary factors for sustained competitive advantage (A. Fenwick, 2011). Additionally, recent concepts of the knowledge-based view of the firm indicate that organizational learning plays a key role in the sustainability of competitive advantages.

Knowledge itself cannot be “managed”, however, knowledge that is captured and transformed into a resource (*tangible or intangible*), is definitely a product commodity, which can be considered as a valuable asset in order to enhance the performance of the organization and generate returns. But, neither for the organization nor for employees it is possible to own any of such assets unless it is captured and transformed into some kind of new knowledge or skill that can be reused or applied in other areas in the organization. This knowledge or skills can be a new learning process, a new operating policy, a strategy, or even a new process (Shah and Khedkar 2006). Most of the big organizations in India are aggressively on the lookout for ways of leveraging their “human capital” synonym with knowledge capital to develop and expand their strategic advantage. Curado (2006) states, that knowledge based organizations are considered as learning organizations and are quick innovators. However, knowledge hoarding with individuals can significantly affect an organization; whilst knowledge sharing gives an added advantage to the organization by allowing the knowledge to reside within the organization’s periphery. KBV enables an organization to develop a process of acquiring knowledge from within the organization or from different sources and turning it into explicit

information that the employees can use to transform into their own knowledge allowing them to create and increase organizational knowledge.

Knowledge based view (KBV), is an extension of the Resource Based View (RBV) in an organisation, where the knowledge is considered as one of the most critical resources, which is non-depreciable and has a capability to create returns. These resources are primarily intangible in nature, which forms the foundation of the in the Knowledge-based view of the organization (Curado 2006).

4. Balance Scorecard

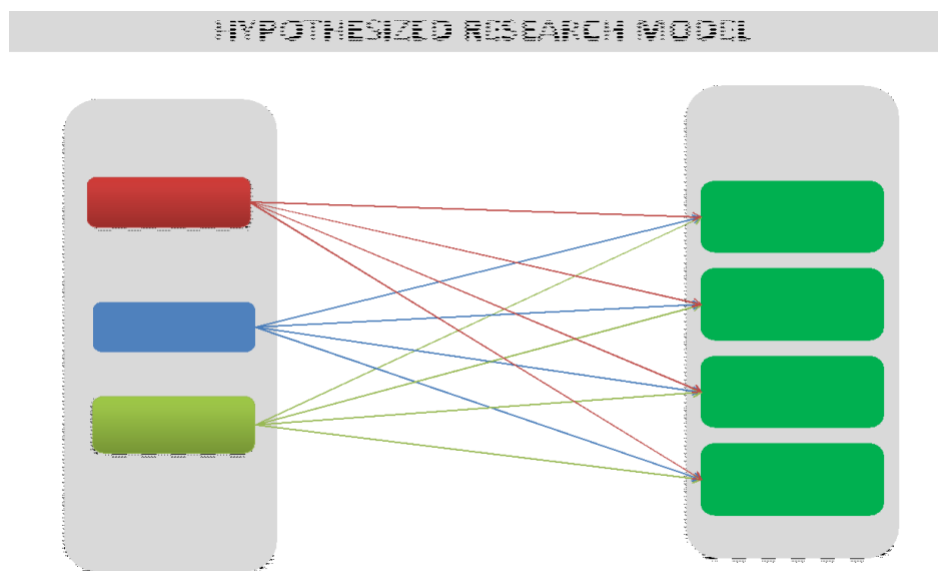
In the current research, measures of Organizational performance are based on the principles of Balance Scorecard (BSC). BSC is a multi-dimensional framework, which focuses more on non-financial information and is designed to provide a balance by including measures of external success as well as internal performance, and measures that are designed to give an early indication of future organizational performance as well as a record of what has been achieved in the past.

5. Conceptual Model

The conceptual model analyses the impact of intangible assets i.e. organizational competencies, organizational experience, and organizational expertise as key constructs on the organizational performance and is shown in Figure 1.

6. Proposed Conceptual Model

Figure 1: Hypothesized Research Model



The constructs and their theoretical foundation is given in table 1. The hypothesis are as follows:

Managerial Competencies

- H1 (a) Managerial Competencies impact the Financial Perspective.
- H1 (b) Managerial Competencies impact the Customer Perspective.
- H1 (c) Managerial Competencies impact the Internal Business Process Perspective.
- H1 (d) Managerial Competencies impact the Learning and Growth Perspective.

Technical Competencies

- H2 (a) Technical Competencies impact the Financial Perspective.
- H2 (b) Technical Competencies impact the Customer Perspective.
- H2 (c) Technical Competencies impact the Internal Business Process Perspective.
- H2 (d) Technical Competencies impact the Learning and Growth Perspective.

Organizational Experience

- H3 (a) Organizational Experience impacts the Financial Perspective.
- H3 (b) Organizational Experience impacts Customer Perspective.
- H3 (c) Organizational Experience impacts the Internal Business Process Perspective.
- H3 (d) Organizational Experience impacts the Learning & Growth Perspective.

Organizational Expertise

- H4 (a) Organizational Expertise impacts the Financial Perspective.
- H4 (b) Organizational Expertise impacts the Customer perspective.
- H4 (c) Organizational Expertise impacts the Internal Business Process Perspective.
- H4 (d) Organizational Expertise impacts the Learning and Growth Perspective.

7. Research

This research primarily uses quantitative research methodology; wherein questionnaire-based survey was conducted to capture feedback on the key parameters of the research. The questionnaire was designed based on the literature review related to the identified parameters of the research. Pre-testing and pilot study of the questionnaire was done to check the validity and reliability of the survey instruments.

In order to answer the research questions and achieve the objectives of the current research, data was collected from the Indian Manufacturing Industry. Responses were collected through online survey, face-to face or telephonic interactions with the respondents of the industry. Statistical Package for the Social Sciences (SPSS) was used for the statistical analysis. Coding of the variable in quantitative research was done for better interpretation of the results. Structural Equation Modeling (SEM) was used to analyse structural relationships between measured variables and latent constructs that are defined in the conceptual model of the current research. This model is preferred since it estimates the multiple and interrelated dependence in a single analysis. Initial step of the research was to get an extensive review of the published literature and develop the conceptual model and hypothesis. The latent constructs included in the conceptual model were examined by collecting responses through the questionnaire from representatives of the Indian manufacturing industry.

The current research majorly focuses on identifying and validating the key factors constitution intangible assets in an organization and impacting the organizational performance. Each research question is broken into 4 hypotheses to understand the impact of each factor on the performance of the organization. In the research

individual level factors are not considered, every factor is studied at an organizational level. Based on the literatures review, it can be inferred that the current research, the impact of organizational competencies, experience and expertise and its impact on Organizational Performance of Manufacturing Industry in the Indian Context.

In this research stratified random sampling method is used, which comprises the partition of a population into smaller groups which are termed as 'strata', wherein these strata are formed on the basis of the members who shared attributes or characteristics. In stratified random sampling all the organizations were divided in different homogeneous groups based on the size of the company (*i.e., small, medium and large*). The selected companies were further stratified in the basis of size of the company (*i.e., no. of employees*), company category. In addition, the population of respondents was stratified in the basis of gender, age, role and years of experience of the respondents. The study aimed to manage inputs from minimum 300 responses; therefore 50 organizations from each size group stratum were contacted for the study. Out of 250 organizations 304 responses were collected (Table 2).

8. Data Analysis

Analysis of data is a process of inspecting, cleaning, transforming, and modelling data with the objective of discovering useful information, suggesting conclusions, and supporting decision-making. This section focuses on the data analysis, interpretation and findings for the current study. In this research, data analysis is used to study the data that have been collected using the structured questionnaire.

8.1 Reliability of Latent Constructs

Reliability of the latent contracts was checked using Cronbach's alpha test for internal consistency. Literature review suggests that the values of the Cronbach's alpha less than 0.6 are considered as poor and above 0.7 are assumed to be acceptable and the value of Cronbach's alpha above 0.8 and is considered to be good (Cortina 1993).

8.2 Reliability

The Cronbach's alpha of 0.393 which is deemed to be poor for LP and 0.895 indicates that it is deemed to be good. The overall Cronbach's alpha value is 0.976, hence, all the items were considered for further analysis.

8.3 Validity

The principal component analysis was carried out to reduce large set of data to obtain meaningful smaller set of constructs. Each variable used in the analysis was measured by multi-item constructs by factor analysis with varimax rotation to check the uni-dimensionality among the items. The constructs included in the confirmatory factor analysis had Cronbach's alpha of more than 0.8. The Cronbach's alpha indicated that internal consistency between the constructs and is considered to be good. All the items included in the analysis, had factor loading of 0.4. Hence, this indicated the assessment and validation by using the discriminant and convergent validity.

8.4 Testing of hypothesis

The output of the overall structural model with hypothesized relationships is represented in table 4. Total of 16 casual paths are defined in the table 4, and were examined using path estimates and critical ratio (C.R.). The parameter estimates are also presented in the same table and demonstrates that C.R. values above 1.96 for 11 casual path confirming positive and statistically significant paths with $\beta = .019, -.015, .105, .052, .039, -.052, .048, .037, .074, .019, .019$ respectively.

9. Findings and Discussions

The outcomes reveal that, organizational competencies (managerial & functional) have a direct influence on the tangible results of the organization, i.e. financial, customer and internal business process perspective. However, experience and expertise have a positive influence on the learning and development perspective in the organisation. According to Kolb (2014), experience is the source of learning and development. In this scenario the experience and expertise acquired over years are analysed and reflected in the form of decisions taken, solving the problems and calculative risk which is taken to gain competitive advantage. Further, this reflection of experience and expertise, not only empowers the individual to learn, but also helps to identify need for some specific learning before further experience is acquired.

9.1 Managerial Competencies and Organizational Performance

Internal business process focuses on the processes that have highest influence on the customer satisfaction leading to overall performance. As studied in the literature review, performance reviews based on these perspectives enables the managers / leaders of the organization to understand whether the product or services offered are in-line with the requirement of the customer requirements and towards the goals of the organization. As per the customer requirements, the processes have been strengthened and this can be accomplished by having emphasis on cross-functional groups, strong leadership teams and a constructive learning environment in the organization. The Cross-Functional groups have subject matter experts having certain competencies and set of capabilities, who work to resolve challenging issues to improve processes and productivity. One side, leadership team based on their intellectual ability foresees the changes occurring in the business scenario and introduces changes in the processes and technology to satisfy customers. And on the other side learning environment forms groundwork that enables the organization to achieve business objectives. Further to add, processes by definitions are cross-functional groups and to bring improvement in processes we need to enhance competencies of the organization. Thus it can be concluded that managerial competencies positively influences the tangible performance of the organization through contracts like formulating Cross-Functional groups, dedicated and visionary leadership teams, creating learning environment and managing change in the organization.

9.2 Functional Competencies and Organizational Performance

The study identifies the impact of these functional competencies on organizational performance and its four perspectives of performance, in context of Indian Manufacturing Industry. Literature review has reflected that there is a direct relationship between marketing, research and development and production in the manufacturing companies resulting in sales volumes, ROI and overall performance. Research and development enables the organization to produce customized or new products and services, making the product marketable and as a result creating a sustainable competitive advantage over competitors. This competitive advantage enables an organization to build a strong brand image and attract new customers. A focused research and development also helps the organization in continuous improvement of existing process, product & services and their quality. In addition, it aids the organization to focus on capacity utilization and enhancing productivity. The analysis of the responses suggests that Indian manufacturing companies which are putting more emphasis on marketing, research & development and production can expect higher profitability and overall performance. Therefore, to improve the tangible outcomes and

performance of the organization through the means of customers and financial perspective, it is important to strengthen the functional competencies of the organization.

9.3 Organizational Experience and Organizational Performance

The data of the studied Indian manufacturing industry exhibited that, to gain competitive advantage in business through experience of the organization, it is important to focus on diversity. This diversity can be identified in terms of industry, experience level, handling business dealings, prior experience in the existing industry, and experience of latest technology, product and services along with managers who have spent multiple years in decision-making. With a right mix of teams and gaining experience on products and services helps an organization to achieve efficiency through innovation and making improvements in working practices and methodology. The analysis of the responses suggests that Indian manufacturing companies that are putting an extra emphasis on creating right teams and lay stress on building wide-range of repositories, including individuals, routines, databanks and memory systems in an organization gain advantage over competition. Many studies in literature have documented the relationship between experience and measures of operational performance (*for e.g. Productivity enhancement, continuous improvement and innovation, creating cost effectiveness etc.*). Experience is directly related to the knowledge-base of an organization which is connected with the learning & development perspective. Learning occurs from training imparted to the memory system and repositories of the organisation. Thus, it can be stated that organizational experience positively influences the performance of the organization.

9.4 Organizational Expertise and Organizational Performance

Organizational expertise in this study is defined as ability of a team by virtue of having knowledge on a particular topic or project and the ability to prepare and respond to different situations. And also by recognizing a situation and suggesting an appropriate answer, by using experience for analysing new and difficult problems, taking right decisions and calculative risks. At the same time, creating process to ensure that the tacit knowledge available within organization is shared with junior employees, this sharing builds an environment of learning and growth within organization. By having a well-defined process through which the organization can convert its tacit knowledge into explicit knowledge (*by articulating it into concepts, systematic documents and repositories,*) enables the team to solve problems in shorter duration and offers solutions to the client, take right decision to improve processes and take calculative risk for growth of the organization. The learning cycle which leads to creating the knowledge base of the organisation can directly impact the process of problem solving, decision making, taking calculative risk and introduce changes as per the business requirement.

10. Conclusion

To conclude, the results of the research provides statistical significance of managerial competencies, functional competencies, organizational experience and organizational expertise on the four perspectives of organizational performance i.e. financial perspective, customer perspective internal business processes perspective and learning and growth perspective in the Indian manufacturing industry.

10.1 Findings with regard to research questions

RQ#1

10.1.1 Factors constituting intangible assets

The current research defined the intangible assets as a combination of knowledge, skills, competencies, experience and expertise along with technology, which can add up value to the organization in the form of sustainable competitive advantage and performance of the organization.

One of the contributions of this research is the identification of the factors constituting the intangible assets in the Indian manufacturing organizations. It is observed that intangible assets for the competitors are difficult to imitate and this makes the organization to gain sustainable competitive advantage in the market. Intangible assets in the current research are defined as organizational competencies, organizational expertise and organizational experience. These assets includes components like managerial competencies, technical competencies, marketing, production, research & development, tacit knowledge, problem solving, decision making, risk taking, managerial experience etc. Unlike the tangible assets, these intangible assets may occasionally impact the financial performance of the organization directly; rather they would work together thru a chain of factors; like managerial competencies would work through the cause and effect of Cross-Functional groups, leadership teams, change management, creating learning environment offered. The improvement shown would result in customer satisfaction and building internal capacity and enhancing productivity. Thus, it is observed that intangible assets provide potential and sustainable competitive advantage. The significance of these factors, which constitute the intangible assets, is evidently important for an organisation's profitability and sustainability of its future performance.

RQ#2

10.1.2 Impact of Intangible assets on the organizational performance

Another contribution of this research is identification of the impact of intangible assets on the performance of the organizations and the four perspectives of Balanced Scorecard model, i.e. financial perspective, customer perspective, internal business perspective and learning and growth perspective. Results of this research provide evidence that in order to improve the organizational performance (*ROI, enhancing of bottom line, profitability, higher customer satisfaction index, quality of product, continuous improvement, innovation, improved productivity of employees, improvement in the level of expertise*), Indian manufacturing companies have to emphasis on intangible assets besides the tangible assets.

The study indicates that the organizational competencies are not influencing the learning and growth perspective of the Indian manufacturing companies. As per the findings of the study, managerial competencies positively influence the customer perspective and internal business processes perspective. Wherein, the technical competencies in the Indian manufacturing industry influences the financial and customer perspective. Those organizations that invest in the development and enhancement of intangible assets and put efforts to build these competencies result in better performance outcomes. They are also able to accomplish the requirement of their respective markets and customers. And all together develop strong internal processes leading to a scenario where the organization can have competitive advantage in the market.

This research examines organizational experience as an intangible asset that impacts all the four perspectives of the organizational performance in the context of Indian manufacturing industry. The significance of the organizational experience is evident and is reflected s that the manner organizations work to build up their experience through different sources directly influences the overall performance and gives an edge in the market. The study on the Indian manufacturing industry also indicates that organizational expertise influences customer, internal business processes and learning and growth perspective amongst the organization performance perspective of balance scorecard.

11. Limitations of the research

The present research is a comprehensive research on studying the impact of intangible assets on the organizational performance, using survey questionnaire having acceptable reliability and validity, a sufficient sample size and data analysis. The findings of this research are useful but it has certain limitations. The limitations of this study constrain our interpretation of the findings and point to several issues for future research.

1. The study was restricted to only Indian Manufacturing Industry due to time constraints.
2. In many cases, the respondents were not willing to give honest information on certain items of the questionnaire since they felt that the items are sensitive in nature.
3. Since this study was conducted in Indian Manufacturing Industry only, therefore the findings of the study cannot be generalized in global context.
4. The study is majorly focused on the organizational factors such as organizational competencies, organizational expertise and organizational experience, and did not considered factors like organizational, culture, available human capital, good practises of an organisation, branding and market positioning etc.

12. Scope for the Future Research

The current study can be extended in many ways, for example to enhance the validity of the results; the data collected through the means of questionnaire can be combined with the secondary data. In addition, the conceptual model can be extended by including more variables that reflects the practices of the Indian Manufacturing companies. Based on the current findings, this study suggests the following future research recommendations for research -

1. The current study was conducted in Indian context only; therefore, future research could be done in other geographic areas, cross-countries or cross-cultural to get results from different demographics.
2. Research has been conducted on Indian manufacturing industry, and sectors like Information Technology, Engineering, Consulting, Health, FMCG, etc. can be considered for future research.
3. The study focused on organizational factors such as organizational competencies, organizational expertise and organizational experience.
4. Additional factors such as organizational structure, organizational culture, branding, intellectual capital, workforce diversity, best practices etc. can also be involved for future study.

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Appendix

Table 1: Constructs and theoretical foundation

Constructs	Definitions	Theoretical Foundation	Measurement items derived from the literature	Key reference
Organizational Competencies	Organizational competencies are defined as the collective learning of the organization and set of knowledge (know-how) and skills along with their practical implication while at work.	Knowledge Based View (KBV)	<ul style="list-style-type: none"> • Managerial Competencies • Technical Competencies 	<ul style="list-style-type: none"> • <i>Wernerfelt(1984)</i> • <i>Barney(1991),</i> • <i>(Pralahad & Hamel (1990)</i> • <i>Amit & Schoemaker(1993)</i> • <i>(Edgar and Lockwood 2008).</i>
Managerial Competencies	Managerial competencies are defined as the set of behaviors which facilitates the demonstration of effective performance for a given assignment in an organization.		<ul style="list-style-type: none"> • Cross Functional Team • Leadership Team • Learning Environment • Change Management 	
Technical Competencies	Technical Competencies can be defined in context of the functions and processes in an organization. This further is added by knowledge of the subject and practical understanding of the jobs specific to an assignment in the organization.		<ul style="list-style-type: none"> • Marketing • Research & Development • Production 	
Organizational Experience	Organizational experience involves gaining experience with products and services, achieving efficiency through innovation and making improvements in working practices and methodology.	Resource Based View	<ul style="list-style-type: none"> • Domain • Years of Experience • No. of Projects 	

<p>Organizational Expertise</p>	<p>Organizational Expertise indicates to the unshared knowledge instead of the shared knowledge is imperative and essential in organizations.</p>	<p>Resource Based View (RBV)</p>	<ul style="list-style-type: none"> • Problem Solving • Risk Taking Decision Making • Tacit knowledge 	
<p>Decision Making</p>	<p>It is defined as a process wherein decisions are taken considering alternative options available within the organization.</p>			
<p>Problem Solving</p>	<p>Problem Solving is the process of classifying and removing the sources of inefficiency and ineffectiveness in process of the organization alongside bringing improvements.</p>			
<p>Risk Taking</p>	<p>Risk Taking is a defined as a trait which encourages teams or organizations to take calculative risk. It is the ability to have the courage to undertake new assignments, projects that carry or involve risk</p>			
<p>Tacit Knowledge</p>	<p>Tacit knowledge is a knowledge which is not easy to transfer from one person to another person. It is integral to the individual and to the organization and is acquired over a period of time.</p>			

<p>Organizational Performance</p>	<p>Organizational Performance is defined as the actual outcomes or results of an organization and which can be measured against the intended objectives. Wherein the Organizational Performance encompasses of four major outcomes i) Financial, ii) Customer, iii) Internal Process & vi) Employees in terms of Learning & Growth</p>	<p>Balance Scorecard (BSC)</p>	<ul style="list-style-type: none"> • Financial Perspective • Customer Perspective • Internal Business Processes Perspective • Learning & Growth Perspective 	<p><i>caplan & Norton 1992 & 1996)</i></p>
<p>Financial Perspective</p>	<p>Financial Perspective evaluates if the organization is able to attain outcomes in the form of improvement in the bottom line, RoI, profitability of the organization.</p>			
<p>Customer Perspective</p>	<p>Customer perspective is defined as a parameter which examines if the organization is able to enhance its customer satisfaction index, customer retention and acquisition of new customer etc.</p>			
<p>Internal Business Process Perspective</p>	<p>Internal Business Process measures the no. of innovations, new product and designs development and enhancement of the process which improves the</p>			

	outcomes of the organization. It facilitates in achieving the customer and financial outcomes of the organization.			
Learning & Growth Perspective	Learning & Growth ensures the making of the long term growth and improvement set-up in the organization by covering employee satisfaction, employee engagement, employee retention, employee productivity, employee competencies as the core measures			

Table 2: Sample Distribution

Segments	Size of the company			Total	%age (Frequency)
	<i>3,000 to 4,999 and Above</i>	<i>1000 to 2999</i>	<i>Fewer than 500 to 999</i>		
Years of Experience	Large Size Company	Medium Size Company	Small Size Company		
1 – 2 Years	0	1	0	1	0.3%
3 - 5 Years	0	6	4	165	54.3%
6 - 9 Years	10	38	7	73	24.0%
10 - 20 Years	51	97	17	10	3.3%
20+ years	35	31	7	55	18.1%
Total	96	173	35	304	
%age (Frequency)	31.6%	56.9%	11.5%		

Table 3: Cronbach's alpha test: Reliability of Latent Constructs

Latent Factors	Cronbach's alpha	Variance (%)
CF	0.875	71.02%
LP	0.393	
LE	0.852	
MC	0.784	
MK	0.827	
RD	0.895	
PD	0.833	
PS	0.823	
DM	0.733	
RT	0.801	
TK	0.803	
ME	0.781	
OE	0.820	
FP	0.875	
CP	0.827	
IBP	0.822	
LGP	0.883	
Overall	0.976	

Note: CF: Cross Function Group; LP: Leadership Team; LE: Learning Environment; MC: Change Management; MK: Marketing; RD: Research & Development; PD: Production; PS: Problem Solving; DM: Decision Making; RT: Risk Taking; TK: Tacit Knowledge; ME: Managerial Experience; OE: Overall Experience; FP: Financial Perspective; CS: Customer Perspective; IBP: Internal Business Perspective; LGP: Learning & Growth Perspective.

Table 4: Hypothesis Testing Results

Hypothesis	Path	Estimates	S.E.	C.R.	P	β	Hypothesis testing result
H1(a)	MC <--> FP	.014	.008	1.849	.064	.014	Rejected
H1(b)	MC<--> CP	.019	.007	2.740	.006	.019	Accepted
H1(c)	MC<--> IBP	.015	.007	2.167	.030	.015	Accepted
H1(d)	MC<--> LGP	.003	.006	.480	.631	0.003	Rejected
H2(a)	CF<--> FP	.105	.015	6.971	***	.105	Accepted
H2(b)	CF<-->CP	.052	.010	5.065	***	.052	Accepted
H2(c)	CF<-->IBP	-.013	.009	-1.394	.163	-.013	Rejected
H2(d)	CF<-->LGP	-.011	.009	-1.217	.224	-.011	Rejected
H3(a)	ME<-->FP	.039	.009	4.181	***	.039	Accepted

H3(b)	ME<-->CP	.052	.010	5.285	***	.052	Accepted
H3(c)	ME<-->IBP	.048	.010	4.786	***	0.048	Accepted
H3(d)	ME<-->LGP	.037	.009	4.150	***	0.037	Accepted
H4(a)	OE<-->FP	-.011	.008	-1.400	.162	-.011	Rejected
H4(b)	OE<-->CP	.074	.012	6.304	***	.074	Accepted
H4(c)	OE<-->IBP	.019	.008	2.373	.018	.019	Accepted
H4(d)	OE<-->LGP	.019	.008	2.504	.012	.019	Accepted

S.E. = standardized error; *C.R.* = critical ratio; β = standardized regression weights

*** $p < .001$

CF: Cross Function Group; *LP*: Leadership Team; *LE*: Learning Environment; *MC*: Change Management; *MK*: Marketing; *RD*: Research & Development; *PD*: Production; *PS*: Problem Solving; *DM*: Decision Making; *RT*: Risk Taking; *TK*: Tacit Knowledge; *ME*: Managerial Experience; *OE*: Overall Experience; *FP*: Financial Perspective; *CS*: Customer Perspective; *IBP*: Internal Business Perspective; *LGP*: Learning & Growth Perspective.