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REINTERPRETING INNOVATION AND INNOVATION MEASUREMENT - A THEORETICAL FRAMEWORK FOR INNOVATION IN ORGANISATIONS

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Abstract *The objective of delving into the current study is primarily to understand the innovation landscape and innovation scopes leading to any measurement of innovation efforts having the potential of improving organisational performance. Half a century ago, emphasized that organisations should innovate to renew the value of their asset development. Growing competition, globalisation, and changing circumstances make innovation an inevitable prerequisite for the growth, success, and survival of any organisation. Maxims such as 'innovate or die' are clear expressions of the necessity for innovation as a concept with practical applications and utility. Innovation is the key driver of long term success for a firm in the competitive marketplace. Companies with the capacity to innovate will be able to respond to the environmental challenges faster and better than non-innovative firms. Though the idea of innovation is not new, but the nature of global economic growth has altered the speed of innovation which has expanded its scope more and more to be all encompassing and holistic in nature. It is thus important to have a comprehensive understanding of the concept of innovation through a discussion of the definitions of innovation, the relationship between innovation, creativity and change, as well as the characteristics of innovation, types of innovation, and sources of innovation. This understanding of innovation and creativity at work will help us to raise questions and evolve strategies for meeting the challenge of how to bring about change in work environments. The current study looks from a theoretical perspective into the realms of innovation leading to broadening of innovative scope for organisations. Innovation studies of this nature come to play a central role in any transformations and organisational endeavours at sustainability and market leadership. The study further looks into the entire gamut of prevalent innovation measurement and suggests measurement framework based on a comprehensive conceptualisation.*

Keywords: *Reinterpreting Innovation, Innovation Measurement*

INTRODUCTION

The term innovation is used in many different ways that appear to vary systematically with the level of analysis employed. The more macro the approach (e.g. societal and cultural), the more varied and amorphous does the usages of the term become. The term innovation can be confined to original inventions, defined as implying something new for the organisation but perhaps not original, or synonymous with any kind of change. There are literally hundreds of different definitions of innovation. From a few such definitions we shall relate to our understanding of innovation.

Some of the early definitions of innovation can be seen in the definition of innovation by Kuhn & Weiner (1967), who discussed about the project of Polaris submarine and the fact that success of the project depended on many contingent factors. However the fact that Project Polaris became a reality implied to the existence of demand triggered by latent need which comes to the fore on possibility of opportunity emerging. Thus innovation was made possible by converging the need with the demand thus giving rise to innovation. The concept of innovation did not emerge however overnight but the body of knowledge on innovation emerged and evolved with passing time and growing body of research.

REVIEW OF LITERATURE

The review of literature yielded an evolutionary view of innovation, with each era, enhancing the understanding of what constitutes innovation. The era of 1960s was dominated by definitions of innovation which looked at innovation with a point of view of *technological, commercial and product changes,* like the Zuckerman Committee (1968) or definition given by Marquis (1969). The decade of 1960s was dominated by definitions looking at the technological aspect of innovation only. Schmookler was amongst the first to take cognizance of the fact that *innovators were always the initiators* while the rest were all imitators as they were following what was already done by someone else.

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The 1970s saw the work of scholars like Gabor who took the definition of innovation further to now talk about social innovations and the role and importance of *social changes* to facilitate any technological change. Innovation is any idea, practice, or material artifact perceived to be new by the relevant unit of adoption. The adopting unit can vary from a single individual to a business firm (Zaltman, Duncan, & Holbek, 1973). In 1973 Tinnesand published the results of a study into the definition of innovation gleaned from a review of 188 publications (Tinnesand, 1973). His findings on the interpretation of the meaning of the word were as follows:

- The introduction of a new idea- 36 %
- A new idea-16%
- The introduction of an invention -14%
- An idea different from existing ideas-14%
- The introduction of an idea disrupting prevailing behaviour-11%
- An invention -9%

During the 1980s, a lot of work was done on the subject of innovation by authors like Galbrith (1982), Kanter (1983), Delbec & Mills 1985, Drucker (1985), Van de Van (1986), Kuhn (1986), Urabe (1988), to name a few. According to Kanter (1983) innovation refers to a process of bringing any new, problem solving idea into use. Ideas for re-organising, cutting costs, putting in new budgeting systems, improving communication, or assembling products in teams are also innovations. In 1985, Kuhn suggested that "creativity forms something from nothing" and that innovation shapes that into products and services" (Kuhn, 1985).

In 1988, Urabe wrote that "innovation consist of generation of new ideas and its implementation into new products or services, processes leading to the dynamic growth of the national economy and the increase of employment as well as the creation of pure profit for the innovative business enterprise" (Urabe, 1988). Innovation is the generation, acceptance, and implementation of new ideas, processes, products, or services. It can thus occur in any part of a corporation, and it can involve creative use as well as original invention. *Application and implementation* are central to this definition; it involves the capacity to change or adapt. There can be many different kinds of innovations, brought about by many different kinds of people.

Drucker (1985) has defined systematic innovation as a purposeful and organised search for changes, and in the systematic analysis of the opportunities such changes might offer for economic or social innovation. For Drucker, innovation is the basis of all competitive advantage, the means by which organisations anticipate and fulfill customer needs, and the method by which organisations utilize technology. Innovation endows resources with a *new capacity to create wealth or creates a new resource*. Innovation is the organisation's way of implementing new ideas, of turning the creative concepts of its members into realities. It can cause change or it can exploit change.

These authors not only added to the existing body of knowledge but expanded and added new dimensions to the understanding of the concept of innovation. The innovation definitions by the 1980's had some clear features as:

- Implementability became a central idea to the concept of innovation. Any new idea or change in the product, process, service etc should be first and foremost be implemented and should be saleable in the market. So for the first time we see linkages to revenue and better performance being added on as a result of innovation in the organisation.
- Innovation within the organisation may herald a body of changes in it's fore or exploit already existing latent need for change.
- The evolution process of the role of innovation is also perceptible in so far as now innovation was seen to be spanning over product, process, service, work practice changes, work culture changes etc. Thus we see gradually a more broad based definition emerging.

Evolution is the crux of existence and this evolution is amply personified by the travesty of definition with which every era and with work of every scholar seems to take a more expanded and holistic notion of what constitutes innovation. The era of 1990's saw innovation being defined also in terms of micro level changes so emphasis on process innovation, design changes etc. The role of innovation is taken further to be of critical importance to organisational growth, renewal and sustenance and also at the same time being beneficial to the interest of the different organisational stakeholders. For Amabile (1990) organisational innovation is the successful *implementation of creative ideas* within an organisation. Within this definition, the ideas in question can be anything from ideas for new products, processes, or services within the organisation's line of business to ideas for a new procedures or policies within the organisation itself.

New dimensions like *emphasis on learning* (Mezias & Glynn, 1993; Cohen & Levinthal, 1990) also interlinked organisational innovation to the organisation's knowledge base. It was asserted that way to competitive renewable advantage was through continuous learning (Morgan *et al*., 1998).

During the 1990s, we see innovation being also linked to the *concept of creativity* as Brian S. Cumming stated that without creativity innovation cannot take place and the three basic steps to innovation are:

- Idea generation where organisation encourages new ideas amongst its employees. Example would be the idea that post-it notes and pads could be an aid to remembering things.

- The successful development of that idea into a usable concept wherein the idea thus generated is prototyped into an everyday usability component example of developing the idea of post it by 3 PM.
- The successful application of that concept is the litmus test of the ideation process where the product, service process thus developed is thrown open to the market and its marketability and market success decides the efficacy of the idea thus generated.

INNOVATION GAMUT

The complexity of innovation has multiplied by growth in knowledge available to an organisation, higher level of employee participation, issues like role of leadership, organisational structure, culture, employee acquisition & development issues and innovation's linkages to performance, growth and sustainability. Such broad view of innovation is amply portrayed in the definition of Plessis. Plessis (2007) put emphasis on the knowledge component. He looked at innovation as the creation of new knowledge and ideas to facilitate new business outcomes aimed at improving internal business processes and structures to create market driven products & services.

From some of these definitions, several aspects may be highlighted which may form a basis for our definition of innovation. First, innovation is restricted to intentional attempts to derive anticipated benefits from change. Second, a broad perspective on the anticipated benefits is adopted, rather than using a sole criterion of economic benefit. Thus, possible benefits might be personal growth, increased satisfaction, improved group cohesiveness, better interpersonal communication, as well as those productivity and economic measures more usually invoked.

These definitions also are not restricted to technological change but subsume new ideas or processes in administration or human resource management. Indeed, it has been claimed that innovation occurs frequently in management methods and organisational practices as well as in technological domains, and that administrative innovation has a facilitating effect on technological innovation. These definitions also require an *application component*, thus encompassing what many would regard as the crucial social element of the process of innovation.

Finally, from these definitions we can say that innovation does not require absolute novelty of an idea, simply that the idea be new to the relevant unit of adoption. Therefore, if an individual brings new ideas to an organisation from his or her previous job, this would be considered an innovation. The role of innovation as it has emerged today is central to organisational growth and innovation takes into its fold changes which is more incremental than radical in nature. Innovation is no longer restricted to only technological domain but has expanded to include product, process, service, culture, organisational structure and any other organisational area or component changes. Important in these processes are that the innovation process improves the organisational performance, improves employee experience and has the potential to impact organisational performance in a big way.

Innovation is a social process with elements of the process being events that occur between people, whereas creativity is an individual, the thought process in which events occur within the person.

CHARACTERISTICS OF INNOVATION

Innovation with changing nature and needs of business has become an ever evolving, continually attempting to generate ideas leading to new methods/ways of working which in turn changes the way business operates. Today the corporate innovation landscape is inhabited by the three types of innovators having separate requirements and impacting different areas of organisational functioning. Neyer, Bullinger and Moeslein (2007) in their article on "Integrating the inside and outside innovators", looked at innovation practices of these various groups of innovators.

- **The core inside innovators:** The core, inside innovators are at the heart of the innovation process specially the technological innovations. The R&D department falls in this category of innovators. Core inside innovators practices fall in the areas of product development, innovation management, project management et al. Methods and frameworks like scenario planning, prototyping are implemented to support the daily work of this group of innovators.
- **Peripheral inside innovators:** This group of innovators consists all the employees of the organisation other than the R&D. This group takes into cognizance the ability of each employee to bring about change and innovation. Even though this group did not have any designated innovation role but systems as employee suggestion schemes helped this group to bring forward innovative ideas and suggestions.
- **Outside innovators** are all the other stakeholders like customers, suppliers, partners, competitors etc. This segment of innovators is influenced by customer feedback, futuristic suggestions, trend analysis etc. Thus this group of innovators influenced the process of innovation from outside and tried to integrate the work of the core and the peripheral innovators.

RESEARCH ON INNOVATION

Innovation is central in today's world to organisational sustenance and growth. Research on innovation gradually

expanded its scope of coverage and became more encompassing.

To start with innovation was related only to product and technology changes. To further understand the role of R&D, innovation, and engagement, studies were undertaken, for example an exploratory research was undertaken on Honda by Robert Paton. The study was undertaken to look into the interlink ages between R&D and enhanced innovatory potential and employee engagement. The study looked into R&D thrust and need to look into knowledge creation, knowledge sharing, knowledge capture, knowledge development, and knowledge utilisation. The study also looked into how transfer of knowledge takes between groups within groups among individuals and media, and provides the feedstock, the ideas, that drive forward innovation. The results of the study revealed to a positive correlation between R&D and associated plant performance.

Ongoing research suggests that there is a clear link between interventions and enhanced employee engagement. In addition, there appears to be evidence that monoculture outperform multicultural establishments based on this study (Paton, 2009).

A study by Naranjo-Valencia, Jimenez-Jimenez, and Valle (2011) looked into the role of organisational culture in building innovative capacity. The paper looked into 471 Spanish companies to understand whether organisational culture enables or inhibits innovation. This paper uses hierarchical multiple regression analysis to relate the effect of organisational culture with an innovation strategy. Control variables used were size of the company and company age as they were found to be frequently related to organisational culture. The other variables looked into were dominant-characteristics, management of employees, organisation glue, and criteria of success. The findings of the paper revealed that organisational culture is a clear determinant of innovation strategy. Further findings of study pointed to the fact that adhocracy cultures foster innovation strategies and hierarchical cultures promote imitation cultures. Hanne Westh Nicolajsen & Ada Scupola (2011) conducted a study on involvement of customers in the process of innovation. Qualitative research was undertaken by delving into issue of customer involvement for business service innovation based on extensive interviewing at Ramboll an engineering consultancy major. Each of the interviews lasted for 1.5-2 hours, looking into role of customers as co-creators, users, or a resource. Based on the interview results the findings of the investigations revealed of a partnership role of customers in the innovation process and the fact that unsolved problems as well as personal trust are keys in making customers involved in radical service innovations. Customers thus involved showed high level of expertise and immense personal engagement.

A theoretical study was undertaken by C. Annique Un (2011) to look into how or what leads to innovative capability development. This body of research looked into role of communication, cooperation, knowledge mobilisation process within organisation, and role of the former in mobilisation process. Based on the study two models of capability development were proposed organisation models and project team models. The "organisation model" requires firms to invest in processes like communication systems to generate organisational capabilities, and the "project team model" calls for just-in-time investment as needed in the process of innovation. Talking of multidimensional nature of service innovation, Dr Rene Aggarwal & Prof William Selen talked of elevated service offering (ESO). ESO signifies efforts at providing new and better service offerings which can only be possible as a result of partnership and not only based on organisational merit. The study dwelled around service value networks, innovation in services, dynamic capability building, management practice and its impact on firm performance. The study was based on empirical data from 449 respondents in an Australian telecommunications service provider and their partnering organisations. The results of the study reaffirmed the need for ESO's to better enable service innovations. Other theoretical cum empirical studies like the one undertaken by J. Roland Ortt and Patrick A. Van der Duin were undertaken to understand whether innovation strategies differ according to the context and reiterated by data from companies like Philips. The finding pointed towards need for contextual approach to innovation as innovation seems to differ according to type of industry, type of organisation., type of innovation desired for etc.

Employee engagement and participation became focus of many research studies like a study conducted by Frank Pot's reflective paper on innovation and its emergence and discusses through its research findings that innovation efforts becomes successful only when supported through employee participation in change process etc. Talks of concepts like mobile working, innovation & creativity at workplace, flexible job design, employee involvement et al contributed to better innovative ideas & performance.

H. Salavou, G. Baltas and S. Lioukas (2004), in their study considers determinants of organisational innovation in small to medium-sized enterprises (SMEs), as expressed by the number of product innovation adoptions. Drawing upon data from 150 manufacturing firms in Greece, the study attempted to identify the importance of strategic orientation and competitive structure. Based on the study conclusions drawn were First, strategy-driven characteristics, such as market orientation and learning, are shown to increase SMEs' innovative performance.

Second, competition-related characteristics, and in particular industry concentration and barriers to entry, appear to have significant effects on SMEs' innovative activity. Overall,

the empirical findings suggest that market- and learning-oriented SMEs facing strong competition tend to be more innovative.

The study was undertaken in Chinese industries by Yu Zhou to correlate the reward with innovative behaviour with help of quantitative approach, multiple regression analysis with a sample of 216 individuals. The main conclusions were arrived at from this study was that:-

- Tangible extrinsic reward affects the innovative behaviour in inverse U shape.
- Intrinsic motivation positively related to innovative behaviour.
- Extrinsic reward and intrinsic motivation have positive effect on individual creativity and innovation at workplace.

INNOVATION MEASUREMENT

Innovation measurement is still at a very nascent state. Literature on the same was not available and hardly any accepted measurement system was found on the same. So while literature on what constitutes innovation galore the same cannot be said about the innovation measurement system. Whatever measurement systems we could find were developed from 1950's 1960's, however that too was not universally followed. Various studies have been conducted to look into innovation measurement systems. One such study was undertaken by Dr Dalia Gamal which took an overview of the innovation measurement systems with the purpose of study being to come up with some convenient and accurate measurement system for Egyptian ICT industry. Innovation metrics followed generational growth as evident in the following:-

Table 1: Innovation Measurement Evolution

1st Generation Input Indicators(1950s-1960s)	2nd Generation Output Indicators (1970s-1980s)	3rd Generation Innovation Indicators (1990s)	4th Generation Process Indicators (2000 and merging)
• R & D Expenditure	• Patents	• Innovation surveys	• Knowledge
• S& T Personnel	• Publications	• Indexing	• Intangibles
• Capital	• Product	• Benchmarking	• Networks
• Tech Intensity	• Quality	• Innovation Indicators	• Demand
			• Cluster
			• Management techniques
			• Risk/Return
			• System Dynamics

Source: Centre of Accelerating innovation. George Washington University (2006)

The first generation of indicators focused on the input factors like R&D expenditure, Science & Technology personnel etc.

The second generation of indicators concentrated on the outputs like patents, publications which was supposed to indicate innovation efficacy.

The third generation of measurements looked at comparative tools like innovation surveys to gauge innovation efficacy.

The fourth generation is still at an evolving state where due to the amorphous nature of the market and dynamic interweaving of external and internal organisational environment measurement has started talking of networks because now a holistic evaluation framework is the call of the hour. As organisations become global having alternative work schedules and strategic partnerships are forged, the measurement system has to take care of all the above. Today business strategic changes have reduced shelf life so the measurement systems have to take care of this transitiveness.

EXISTING MODELS OF INNOVATION MEASUREMENT

There are few existing models at global level to measure innovativeness as follows:

1. The Diamond Model suggested by TIdd Besant and Pavitt has five parameters namely
   - Strategy: how well ingrained innovativeness is in the strategic intent of the organisation.
   - Process: how robust and flexible are the processes to accommodate innovative changes and ideas.
   - Organisation: whether organisation encourages innovation through what kind of decision styles etc.
   - Linkages: ability of the organisation to form effective linkages with the external environment.
   - Learning: how receptive and accepting the organisation is towards learning, training and development etc.

Each of the parameters in the model is analysed through a set of questions and the responses of the organisation help understand where the organisation is in terms of innovation. The responses are in shape of a diamond with each of the parameter forming a pillar of the diamond model.

2. Innovation funnel looks at innovation in terms of parameters spanning over strategic thinking, innovation ideation, conceptualisation to marketing and selling the innovation concept. It has soft and hard metrics for innovation, with the soft metrics targeting on qualitative issues and questions like what and how things are being done, while the hard metrics makes amenable to quantitative analysis.
3. Hansen and Birkinshaw in 2007 looked at innovation measurement by viewing innovation as a value chain and the measurement happened at three levels:-
    - Idea generation
    - Idea development
    - Diffusion of developed concepts
4. European Commission and OECD developed the OSLO manual which took a systemic view of innovation and looked from four dimensions:-
    - Innovation in the firm
    - Linkages with other firms and public research institutions
    - Institutional framework in which the firm operates
    - Role of demand

Many innovation assessment tools have developed based on this framework like INNOCERT used by the Malaysian Government, INNO Biz developed by the Korean government.

However when we look at the Indian landscape we do not find any such integrated approaches to measure innovation per se. 2010 was set out by Indian Government as the decade of innovation. Important is not only to put impetus on innovation but also move focus on innovation measurement because it is a cyclical process where innovation initiatives undertaken by the organisation and post hoc analysis of the same helps us in understanding efficacy of the innovation process. Not only that an effective measurement system also formalises and structures the whole process by helping organisation know what to measure and helping policymakers understand what policies are needed to strengthen the innovation environment in the country as a whole.

The scenario and need for tightening the innovation loop becomes even more important as although we have been late in starting the process of liberalisation but the pace of change, emerging waves of outsourcing, alternative work systems, virtual work spaces, gradually increasing competitive and extremely fast occurring changes make innovation need of the hour. Again innovation is nothing new to our cultural milieu. One of the earliest civilisations of the world was the Harappan Civilisation of India and the way they designed their roads, houses, dresses, all spoke of innovative outlook even so many thousand years back.

Today as we stand in this globalised landscape where the world is the customer, companies need to innovate and measure their innovativeness and its impact on performance and design better ways of innovation.

DISCUSSION AND VARIABLE IDENTIFICATION

What emerges from the earlier researches on innovation is that two major challenges face us now more than ever are how to adapt successfully to change and how to bring about change. With innovation and creativity at work, we can evolve strategies for meeting the challenge of how to bring about change in work environments. Innovation and creativity are often associated with economic prosperity.

Innovation presents an optimistic picture of people's involvement in their social and organisational contexts. It promises to advance our understanding of how people can be effective in transforming and shaping organisations.

But, the effective transformation and shaping of organisations is largely the responsibility of the management. Management must create a vision of where the organisation wants to go and must create an environment that will enable the organisation to make the necessary changes to live up to its vision. This will include making the necessary adjustments to create favourable conditions for innovation to take place as well as enabling the management of the innovation process.

Thus, for *organisational innovation*, it is important to understand the underlying phenomena that contribute to the innovation process – from realising the need to innovate, through to the successful implementation of innovation.

This latent variable *organisational innovation* cannot be observed or quantified directly; it has a specific value under some specified set of conditions. The value largely depends on whether people within management have the necessary skills and knowledge to be able to lead and manage innovation within their organisations, determine whether they know how to create the most favourable conditions for successful innovation, and whether they know what type of workers they must create in order to have a workforce capable of creative and innovative work. Since we found little work on measurement of innovation in organisations and still less work which tries to look at innovation from a holistic standpoint, our efforts would be to try and evolve a measurement system which scaffolds organisational innovation process.

Organisational innovation thus, depends on:

- Qualities of individuals that influence creativity and thus innovation
- Qualities of the environment that influence innovation;
- The structural, and social conditions for innovation in organisations

Our study of the literature available revealed few of the variables from which Fig. 1 was conceptualised. The figure depicts the inter linkages of the dependent variables with the latent variable organisational innovation.

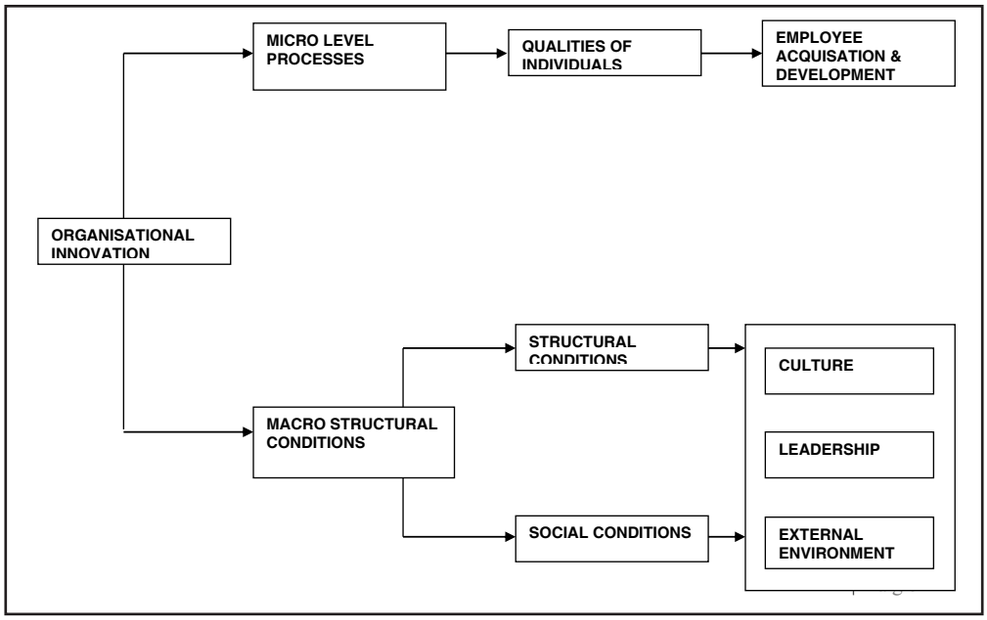

Fig. 1: A Holistic Model of Innovation Measurement (Self Conceptualised)

Employee acquisition and development will look into variables like organisational training, learning roles and mechanisms within the organisation, rate of innovativeness, and role of employee suggestions, any factors governing employee acquisition process (from employee point of view) to propel innovation would be main thrust areas of study.

Macro level processes will look into organisational features with special focus on organisational culture, leadership, and external environment influences.

Organisational culture will look at variables like employee involvement, support, trust, sharing, commitment, team environment, equality practices, innovation roles, and resources in the organisation etc.

Leadership would look into variables like leadership style, organisational leadership training, any steps to promote better leadership roles etc.

External environmental factors would look into demographic changes in terms of age, gender, education, seniority, gender etc. External factors like role of policy would also be taken into consideration while designing the measurement as policy & matrix strengthen each other.

GAPS

Innovation is a term that is used widely in management and organisational development literature. In business circles it is common to hear people talk about the importance of innovation. Management 'gurus' stress on the need for organisations to be innovative in order to survive.

However, rarely do the people who talk about the need for innovation say exactly what they mean by it; and, more importantly, they do not explain in detail what an organisation must *do* in order to be innovative.

They do not tell their audience what processes are involved in innovation; nor do they outline the factors that need to be taken into consideration.

The concept of innovation has evolved and undergone changes starting from 1950s where the thrust was only on technological changes to the present day where innovation is seen not only technological changes but process, service, work practice changes. Today innovation is deeply ingrained with bottom-line performance and is a knowledge creation process in itself. Today's enterprise has a dynamic existence where even the innovation process gets actively impacted by the external and internal environment and in turn impacts the same.

The sources of innovation can lie both within the organisation in factors like unexpected occurrences, incongruities, process needs, and industry changes. The factors outside the organisation were found to be factors like change in perception, new knowledge, demographic changes etc. However these factors cannot be compartmentalised in water tight compartments and were seen to be major influencers in the process of innovation.

Gaps in innovation research that were observed during the course of the literature review process were mainly due to lack of any comprehensive measurement tool which could tie the entire innovation process together and provide cutting edge to the process. The areas identified were:-

1. **Process:** Micro and macro processes like team orientation and innovativeness leadership style and innovative capacity, structural factors like organisational hierarchy and innovativeness etc.
2. **Functionally:** What are the special characteristics in innovative firms that made them successful so whether employee acquisition process, culture etc. needed to be relooked into by individual organisations?
3. **Excellence:** To understand what are the special characteristics of a high performing innovative firm versus a lower performing one.

During the literature search, the author could not find any scale that sets out to measure the whole process of innovation and the factors involved in it and since innovation is mainly the responsibility of management, a scale of innovation could be a valuable tool for organisations to establish whether their management team is up to the task. The scale would try to integrate these mentioned areas to the extent possible. Although during our study we did come across some measurement tools being used internally, we did not come across any such measurement scale in the Indian context. A comprehensive scale that covers all factors and processes involved in innovation could help management to establish whether or not management has covered all of the processes, and where it is lacking or weak. Once management has identified weaknesses or factors that are missing, corrective steps can be taken to remedy the situation.

The future scope of the study remained that an effort to develop such a measurement scale would further strengthen the innovation viability for organisations.

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