

Dynamics of Knowledge Development in a Competitive Economy – Exploring the Role of Ideas

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Abstract

In recent times, knowledge has become the major driving force for economic development through free trade and competition. In the process, the global economy got gradually transformed into a knowledge-based economic system. Since knowledge is considered as a critical strategic resource, its development and utilization has become a matter of major concern to all analysts. It is in this context, the present paper derives its relevance and utility. It is being increasingly realized that competition is not fought in the market places but in the R & D Labs, which are said to be the factories of ideas (or knowledge in general) while the markets are their testing grounds. Keeping this in mind, the paper attempts to analyze the nature and significance of the dynamics of knowledge development and also the role and significance of idea generation and its ideation modes, to gain competitive advantage.

Key words: Knowledge, Knowledge-based economy, competitive advantage, idea generation, ideation processes.

0. Introduction

The essence of recent changes in the global economy is competition and free trade. Both are considered to be the instruments of economic development. Their fundamentals are essentially *“innovation & efficiency” - the basic tenets. That being the case, knowledge becomes obviously the defining feature of the competitive economy.* Knowledge-based economy thus evolved mainly in response to the intense competitive environment. Competition, innovation & efficiency grow invariably together in a reciprocal manner. One promotes and reinforces the

other. They form the core of technology innovation and knowledge management, which together become an important source of added value for firms and hence their competitive strength. Competition thrives on knowledge and ideas.

In this new scheme of arrangement, ideas being what they are, occupy a central place in the knowledge-based competitive economy. *Behind knowledge lies ideas, which propel the growth of knowledge of all types.* In fact, they shape knowledge society in general. Accordingly, an attempt is made in this paper to explore the various dimensions of ideas and their

relevance in building a sustainable knowledge-based competitive economy. It will be of some definite use in formulating the guidelines to carry out an empirical analysis and assessment of knowledge management practices in organizations for achieving the competence based competition. Our focus is not on epistemology but on the relevance and utility of knowledge development in the context of competitive environment.

The present paper is divided into *three sections*. Each one deals with a particular aspect of ideas. The first part deals with the nature and significance of ideas in the competitive environment and their broad interface with Knowledge-building. It also explains the dynamics of knowledge development with a special focus on the role of tacit knowledge in achieving competitive strength. The second part attempts to delineate the broad ideation processes. An exclusive emphasis is laid on this aspect since raw ideas do not have much value unless they are made saleable in the knowledge market. The last Section deals with the classification of ideas and its linkage with building sustainable competitive strength. For the sake of brevity and precision, a few schematic diagrams have been prepared. This paper is mainly conceptual in its nature and scope.

1. Nature and Significance of ideas in the competitive environment and their broad interface with knowledge-building

The significance of knowledge has been realized even in the distant past. For instance, Chanakya, a great Indian Statesman, who lived during 4th century B C says:

“Knowledge is like a holy Kamadhenu[#] cow. It bears fruit in all seasons. In foreign lands it protects and rewards. That is why it is considered in-built secret treasure”⁽²⁾

Importantly, Chanakya considers Knowledge as the ‘in-built treasure’. Modern writers also treat Knowledge as “*parallel wealth*”⁽³⁾. These old and new viewpoints imply that Knowledge has been considered as the source of all development and hence competitive advantage. Knowledge also acts as a great leveler in a society.

The growth of knowledge is phenomenal in recent years mainly due to the revolutionary changes in IT and communication, unprecedented rise in corporatization and an ever-expanding R & D sector coupled with the competitive forces. The whole process of spiraling growth of knowledge, competition and globalization operates mostly through creating new wants/desires, inventing new uses/functions, new ways of doing things perhaps more efficiently as also economically and new ways of fulfilling the desires/wants. This implies that the creation of markets is different from the capture of markets. The former refers to the arena of knowledge and innovations while the latter to the general management.

1.1. Classification of Knowledge: Formal Vs. Tacit

The width and breadth of knowledge is so vast that its boundaries are beyond our comprehension and definition. In a sense, it is infinite with neither beginning nor end. Its distinctive feature is that it does not decrease either in quality or quantity when used. On the contrary, it grows. Knowledge in whatever forms it is made available affect the way we operate. We try to understand the world as it is and as it ought to be through the knowledge we have. If our knowledge changes, our understanding of the world also changes.

Several authors have defined the word Knowledge and organizational knowledge in many diverse ways⁽⁴⁾. Whatever the definition one accepts, Knowledge has the enabling property to perform the given tasks in a better and more efficient way than without it. In the present context, performance refers to both theory and practice. The core of knowledge in fact lies in improving the quality of decision-making at all levels and in all contexts. This is the reason why it assumes special significance in the competitive economy.

Knowledge has two broad dimensions viz., Stock and Flow. This being the case, practice or knowledge application adds to both in subtle ways. In this broad framework, the major sources of knowledge growth are found to be: observation, experimentation, validation through application and learning. Of course, reason underlies everything. All knowledge starts with

[#] According to Indian Mythology, Kamadhenu is a mystical holy cow with spiritual powers to bestow all the boons asked of it.

observation and comes back to it for validation. The observation can be either in practice or otherwise, whose outcomes will normally be tacit. This tacit knowledge triggers several interrelated processes subsequently. Hence knowledge is generally built through the tacit route^[5]. Assuming that there is always a given stock of knowledge at a given point in time, it is the application (or the practice) that adds new dimensions and several ramifications to knowledge through idea generation.

Formal knowledge is a codified, structured and systematized body of principles. This codified knowledge can be easily documented, transferred or shared. It is in public domain. Anyone can use it for any purpose. Its utility depends on the user's abilities. On the other hand, tacit knowledge presents an altogether different case. It is mainly individualistic. One learns it through experience or from actions and not from any documented sources or training. It is the product of self learning or learning by doing. It is stored only in the minds of the people^{[5][6]}.

Tacit knowledge refers to our inability to express what all we know during the process of knowledge acquisition either through observation or through experimentation. In other words, the inexpressible and inexplicable component of our knowing either through theory or practice is considered as tacit knowledge. This non-cognizability is its distinctive feature. Unlike codified knowledge, this is difficult to transfer to others though its role is great in several aspects.

The important differences between formal knowledge and tacit knowledge have been identified and presented in a tabulated form below. Implicitly this will also bring out their respective roles in building the organizational competitive strength. More importantly, the nature, the pattern and the rates of diffusion differ between the two. Higher diffusion rates are vital for building not only the organizational competitiveness but also of the nation. *In this way, it is not difficult to show that Knowledge can be considered both as an objective and as an instrument of competition.*

Formal knowledge	Tacit knowledge
1. Codified/documented	Not Codified/not documented
2. Stored in concrete forms	Stored in the minds of people
3. Retrievable easily	Not so easily retrievable
4. Consciously held	Subconsciously held
5. Easily transferable/sharable	Not easy to share/transfer
6. Acquired through secondary/ Codified sources	Acquired through direct experience / primary sources
7. Non-participatory	Participatory
8. Resides in the public domain	Resides in the individual self
9. Lie in "Why of an action"	Comes out of "How of an action"
10. Originates from training; trainable	Originates in doing and leads to skills, competences, abilities; non-trainable
11. Enables Efficiency	Enables Innovation
12. Structured/Focused/clear	Diffused/Unfocused/not clear
13. Easily harnessable	Not easily harnessable
14. For dissemination	For sharing

Table 1 Differences between Formal and Tacit Knowledge

Above all, the tacit knowledge seems to have an ingrained intuitive element. However, it may come to the fore in some form or the other during the process of doing and knowing. Nonaka^[6] tried to rationalize as to how to capture and use the tacit knowledge for enhancing the organizational performance/skills.

1.2. Tacit Knowledge and Competitive Advantage

Efficiency and innovation are said to be or, rather claimed to be the only determinants of competitive strength of an organization or even the nation at the aggregate level. It may be noted that efficiency essentially refers to the levels of performance of a unit (doing things right) whereas innovation implies mainly “newness” (to be perceived by others) in various organizational fronts viz. processes, products or management (doing new things or doing things differently). By implication, efficiency thus refers to the art while innovation to science. *Newism* is the core of innovation whereas productivity (the amount of resources used per unit of output) is the core of efficiency. That being the case, both innovation and efficiency are said to be the vital factors in performance. Hence they are considered as the defining features of a firm’s competitive advantage. In practice, both efficiency and innovation converge leading to higher levels of performance. The market forces are propelling the enterprises to build this convergence for their survival and growth. As a matter of fact, innovation if desired to be beneficial should result in increased levels of efficiency. Thus, both efficiency and innovation are related. In this sense, *efficiency is nothing but an enacted innovation*.

In what follows is a brief analysis to bring out the role and significance of tacit knowledge in this regard and thereby, to show that it is the defining feature of competitiveness. It has a dual role to play in building and retaining the competitive advantage. First it enhances the quality of skills/competences to perform or the efficiency. Secondly, it facilitates and promotes the innovative capabilities by raising the absorptive levels^[7]. In line with this, the analysts started treating both competence and knowledge as major strategic assets.

The competitive efficiency generally takes the following path:

Dexterity (minus monotony) ⇒ Skills ⇒ Competences ⇒ Efficiency

On the other hand, the innovative path takes a different path though concealed:

Learning ⇒ Absorption ⇒ Assimilation ⇒ Innovation

In both the cases, the underlying force is the accumulated tacit knowledge. Thus tacit knowledge, efficiency, innovation and competitive advantage are highly interconnected. The cognizance of this relation will be of much use in R & D investments, harnessing tacit knowledge and formulating the HRM strategies in general^[8]. In this context, the competitive efficiency refers mostly to assembly lines, shop floors, R & D labs and other field level operations; and partly to other functional areas of management.

A logical extension of this argument can be noticed in Lu, I-Y. et al. (2007)^[1] who observe (P 13) that “Innovation provide the critical component of firm competitive strategy. Most knowledge-based technological innovation is difficult to codify, store and transfer, and technological innovation can be considered as tacit knowledge. Knowledge-based technological innovation can only be observed through application, acquired, practice and experience and consequently is difficult to transfer”. This viewpoint is implicitly substantiated in our Diagram 2 in this paper.

Tacit knowledge is found to be the cause as well as the outcome of the application of formal (or explicit) knowledge to various situations and activities[@]. Its main distinctive feature is that it is not copyable or imitable. Hence it becomes a major source of competitive advantage. Further it encapacitates an individual to accomplish the given tasks in more efficient ways with lesser costs. The tacit knowledge gained mainly through practice assumes an *apriori* accumulated stock of knowledge, which will determine the extent of absorptive capacity to learn, assimilate and convert into practice the whole range of external factors (such as technology, market conditions, management practices etc.) for the purposes of commercialization. This absorptive capacity tends to become a major determinant of innovative capabilities^[7]. That being the case, the organizations are struggling hard to capture, harness and codify the tacit knowledge at the right time for the right purposes to build their competitive strength.

[@]This statement may not hold good in the case of knowledge generation through serendipity or intuition.

1.3. The Dynamics of Knowledge Development: Knowledge-building process

In precise terms, ideas are the main instruments of thinking while thinking is an instrument of knowledge building. The feelings and observation is the material-base for the whole process. In between, experimentation and learning act as the facilitating factors. The sense organs, however defective they may be, are said to be the mechanical devices in the knowledge-building activities. Above all language has a very distinctive role and that too, a dual role to play. Language acts not only as a communication channel to transmit the contents of knowledge to the end users but also shapes at times the very thinking processes. The behavioral scientists have done substantial work on these aspects.

We cannot start with pure observations alone without anything in the nature of a theory. Observation is always selective. It needs a chosen object, a definite task, an interest, a point of view, a problem. Thus observation cannot be random or casual. It presupposes interests, points of view and problems. To the scientist, the point of view is provided by his theoretical interests, the special problem under investigation, his conjectures and anticipations and the theories, which he accepts as a kind of background: his frame of reference, his horizon of expectations [Popper, *op.cit*, P 47]^[9]. Observations get their meaning only through theories. It is through the known theories that we learn to observe as also to ask questions which lead to observation and to their interpretations. This is the way our observational knowledge grows. This general knowledge-building

spiral is conceptualized in diagram No. 1. This is self explanatory.

This is how the knowledge spiral and practice/action takes place in a competitive economy. This spiral makes the growth processes continuous. More importantly, the above chart delineates the interconnection and interdependence between theory and practice/action. There is also reciprocity between the two. It also indicates, though implicitly, that the core of knowledge lies in its application. In a sense, the above chart provides a *unifying theme* to the analysis as contained in this paper. Further, it also suggests the ways in which the epistemic base is built at a point in time, which will subsequently be modified, improved and expanded by the succeeding analysts keeping in view the newly emerging socioeconomic environment.

In the context of knowledge building spiral processes, the underlying forces are found to be: (a) Feelings (b) Observation (c) Thinking/reason (d) Ideas (e) Experimentation/Validation (f) Learning (g) Sense organs. These key elements can be arranged in a diagram No.2. The philosophical base for this diagram can be observed in the seminal work (of Michael Polanyi, 1966^[5]). They interact in very many complex ways without any traceable pattern and sequence.

The major problem is that there is no fixed, stable and consistent structure/pattern in the whole process. It is indeed whimsical and moves with the vagaries of the mind and the sense organs, which act in a highly erratic manner. It is mainly individualistic and contextual.

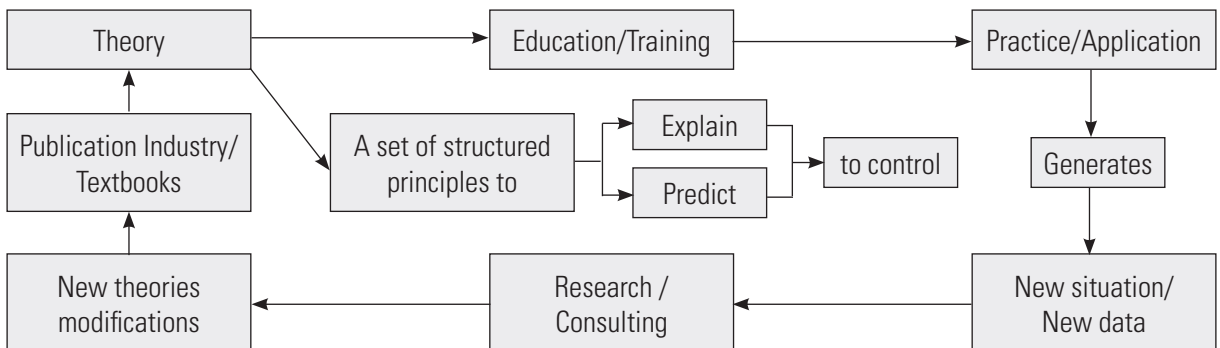


Diagram 1 Knowledge Building: An Endless Process

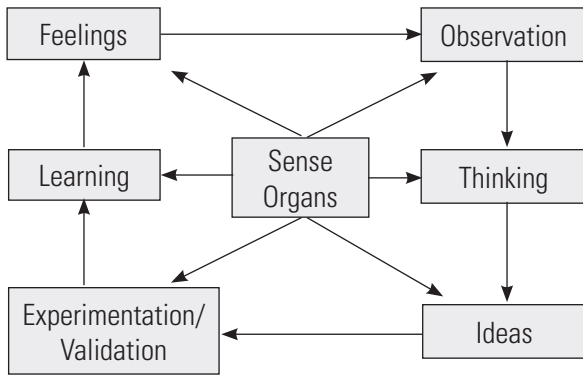


Diagram 2 Key constituents in Knowledge building process

Therefore it is not possible to make any generalization on the pattern of thinking and inference. We can only identify some of the key elements. To make the things more complicated, there is yet the school of Popperism of “trial and error”; and “conjectures and refutations”^[9] ^[10]. All scientific knowledge grows, according to Karl Popper by putting forth the hunches or surmises (hypotheses) to arrive at the solutions of an encountered problem, either in theory or empiricism combined rightly with the “trial & error” method or the “conjectures & refutations”. Therefore the safest generalization is that no uniform generalization is possible in the case of the patterns of thinking and inference.

Knowledge is the product of both learning and knowing in equal measure. Learning refers to the art while knowing to the science. In other words, both refer to

applied and basic research respectively. This being what it is, knowledge has a dual role to play in the overall growth.

The classical approach^[11] to the knowledge development in general is tabulated below:

A quick scanning of literature indicates that the classical approach as presented above could not find its due space either in knowledge development or knowledge management. Therefore, we plead for its due space in all matters relating to knowledge management. The above thinkers of the last century have made an inerasable mark on the processes of knowledge acquisition, systematization and even utilization. In the ultimate analysis and if one stretches the combined arguments of the above classical writers to their logical ends, they lead to an integrated development of a holistic epistemic base by which human lives can be made better off.

1.3.1. Knowledge Creation: Some Dimensions

In a competitive knowledge-based economy, the old, glorious concept of “knowledge is for knowledge sake” lost its significance giving way to the utilitarian approach to the knowledge generation and diffusion. Instead of satisfying only the curiosity instinct, knowledge needs to be useful in action. In isolation both become less effective. Both should be complementary to each other, which would promote competitive strength. Knowledge grows out of action and action grows out of knowledge.

SI. No.	Authors	Premises Assumed	Outcomes	Resulting contributions Knowledge categories
1	John Dewey ^[11]	World replete with Troubles/problems	Problem-solution Approach	Managerial sciences/ Applied knowledge
2	Karl Popper ^[11]	Humans born fallible	Conjectures & Refutations/ Trial & error Method	Basic sciences/ Abstract knowledge
3	Karl Mannheim ^{[11][39]}	Circularity in Knowledge Development/Biases	Unattached Intellectual/ Breakthroughs/ Objectivity	Social Sciences

Table 2 Process of Knowledge Development The Classical Approach

Thus there is a spiraling relationship between the two. The effectiveness of an action as measured by the inputs and the corresponding outcomes depends on the intelligent application of knowledge. Similarly knowledge generation/development depends on the observations and inferences made on the action.

In this context, action can be considered as the application of knowledge aiming to accomplish the identified and stated objectives and goals with a given set of inputs backed up by a decision in the best possible way within a given organizational framework. The outcomes of an action thus considered can be evaluated. That being the nature of action, both knowledge and action converge during the process of doing. Therefore, this process confirms the statement that *"All doing is knowing and all knowing is doing"*. In this context, John Dewey, the great philosopher of last century, [Quoted from Milan Zeleny, 2005, P 25] observed that: "Action is internal and integral to knowledge. Action is not some tool for knowledge "acquisition" or belief "beholding": action is integral to whatever we claim to know. The process of knowing helps to constitute what is known: *inquiry is action*. Reciprocally, what is known by the knower is not stored as data or information, independently of the process of knowing: *action is inquiry*"^[12].

As a matter of fact, John Dewey's assertion is taken to its logical extremes by Karl Weick^[13] who makes the case that environments are constituted by action and stored in the head as cause maps. He further says that *enactment* is a more influential engine in sensemaking as organizations make sense by bracketing ideas with actions of performance. In other words, Dewey's assertion is proved to be correct in Karl Weick's "enactment processes in organizations". Thus action (or enactment) generates knowledge/sense in organizations or anywhere for that matter. Knowledge is generated when ideas are bracketed with action. In this context, it may be noted that the ideas can be independent of actions but the actions are essentially dependent on ideas. Implicit in this, is the popular dichotomy between abstract and applied knowledge.

In this context, a statement from the Chinese Philosopher (Confucius) would explain the case in point. It reads as: "To know what you know and know what you don't know, is the characteristic of one who knows". This implies that the meaning of what one knows can be realized only by its application. In the process, one is also likely to realize what one does not know. This then initiates further efforts to know what is not known. Thus the process tends to become continuous. In a sense, the above statement implies both theory and practice of knowledge.

The prevailing paradigms (in Kuhn's sense) and their shifts will guide and direct the collective thinking processes in a particular socio-economic milieu^[14]. Thus, the paradigms are the invisible forces underlying the general patterns of thinking in a society and subsequently knowledge development.

Breakthroughs enlarging the horizons of knowledge frontiers and opening up of new vistas, originate mainly from the paradigm shifts^[14] while growth of knowledge takes place through modifications and refutations through falsifications and then subsequently through replacements by better (theories) knowledge^{[9][10]}. Popper says that this growth path is the characteristic ability of science to advance. In between the two positions lies the tacit knowledge acquisition^[5], which ENABLES the formal knowledge to grow. The tacit knowledge that way is an enabler of knowledge growth. It may be noted that knowledge is generally expressed or held either implicitly (tacit) or explicitly (codified) in the generalizations derived either from deduction (theory) or by induction (practice/doing). Generally all knowledge starts tacitly, which will be subsequently codified or formalized for wider diffusion. Theory/knowledge underlies action and decision. The interrelation between knowledge and action is indeed ingrained in the human systems of thought and action. In "doing", both theory and practice get converged and thereby generate tacit knowledge in the process. The whole phenomenon then enters into the knowledge spiral and thus generates the formalized knowledge.

A quick scanning of some seminal works reveals that knowledge, in general, has three broad interdependent

and reciprocally related components, viz.: a) tacit knowledge; b) applied knowledge; and c) scientific knowledge in that order, if we may be allowed to order so. They interact constantly in very many different ways, perhaps beyond our catch. From this, it follows logically that there is a dire necessity to integrate all the three in a wholesome framework. In this context, the seminal works, among others, of the great thinkers [John Dewey, 1910 & 1916, Kuhn, 1965, Popper, 1959 & 1963 and Polanyi, 1966] need to be integrated and cohesively structured to solve the complex problems faced by the modern complex knowledge-based society. This is the first step.

The next step will be the utilization of knowledge or the intellectual assets thus created to gain competitive advantage at the organizational levels, which has been clearly articulated by Nonaka 1991, 1995; Gilbert Probst et al., 2000; Andrew M Pettigrew et al, 2000 and others^[6]^[15]. The knowledge environment necessitates innovative forms of organizations to develop more creative, responsive and learning-oriented organizations, which can cope with the tougher competitive conditions^[15].

Knowledge development and its application will be impossible without faith in ideas, which are of a purely speculative kind and sometimes may even be vague and obscure. In fact, world is a totality of ideas, not of things; and hence, markets also. Ideas can originate either from Popper's route of "trial & error" or through Kuhn's mode of paradigm shifts; or it may at times be even both.

One can observe that there is a continuous, gradual progression (of contents) from action; tacit knowledge; codified knowledge and then to wisdom in a circular and sequential manner. Wisdom is a thing that is aspired/ desired for due to the declining ethical practices. There is a circular/cyclical flow in the above progression starting with action and all new developments in knowledge coming back to the action. Then the cycle gets repeated to make it an endless process. The search for competitive advantage at all levels lie mainly in the above flows. Tapping can take place at any stage.

There is a general perception that knowledge; thinking and wisdom cannot grow limitlessly/indefinitely. In the

ultimate analysis, both "Retention" and "Recall" of knowledge impose severe constraints on the spiraling growth of knowledge. In this regard:

"The ultimate *"limits to growth"* of knowledge and wisdom are *time* (available to human minds for reflecting, analyzing, and integrating the information that will be "brought to life" by being used) and *capacity* of people æ individually and in groups æ to analyze and think integratively. There are obvious limits to the time each of us can devote to the production and refinement of knowledge and wisdom".

Growth of knowledge in recent times is leading to the compartmentalized developments resulting in separate specializations/disciplines without much communication between them. Thus an expert in one becomes a layman in another. In the process, wholesomeness or the holistic thought is lost due to knowledge segmentation although knowledge growth may seem to be limitless. Whether or not, this is a healthy trend is difficult to answer.

1.4. Role and significance of Ideas

Ideas are *the driving force* in a knowledge based competitive economy. In one sense, knowledge based economy means the idea-based one. Ideas are the product of knowledge. In other words, ideas are the *practicing face of knowledge*. Thus, the applied use of knowledge is achieved through the application of ideas. We do not apply knowledge per se. We apply only the ideas or the outcomes of knowledge in the various fields of human activities. The same is true in the case of skills/competences, which is the reflection of idea-application^[17]. Indeed, it is ideas that develop skills/competences. Thus ideas are central to competitive strength, skills/competences, innovation and efficiency and the knowledge society in general. They are the backbone or the basic foundations upon which the whole market systems together with the socio-economic systems are built.

Consequent upon the realization of the dire necessity of ideas in a competitive world, some new concepts like knowledge managers, idea manager, thinking

managers, ideators etc have emerged in recent years. Ideas are unique and are found to be relative to culture, geographical conditions, values, educational systems, needs, tastes and preferences etc. Ideas can originate from many different ways. The origin and the relativity of ideas will influence their quality and utility. In fact, there is a reciprocal relationship between ideas and socio-economic conditions.

Ideas are nothing but the structured expressions of the outcomes of the thinking processes, which could have been triggered either by tacit observation or a documented form of knowledge. They have a higher degree of relevance and significance, particularly with reference to the tacit knowledge. The tacit knowledge, being what it is, uses ideas as its only instrument in its application and usage. Since, it is considered as a major defining feature of competitive advantage, ideas also assume the same role. Like tacit knowledge, ideas are also not storable and recallable in their original form. Hence, they need to be documented in some form or the other. Further, ideas lie at the root of all skills, efficiency and competencies. It is ideas that mould and shape them and hence the competitive strength.

Ideas are both the inputs and the products of knowledge, which in turn is the recorded experience and a product of history. Action, passion, reasoning and belief are its essential constituents. The analysis on different aspects of ideas as carried out in this paper, throws open several choices before the individual and the policy makers. It has significant policy implications.

1.5. Nature of ideas

Everyone gets ideas almost daily and even routinely. Some reach the cognitive levels with differing intensities; some do not; some come and go. In this way, one can see several patterns and behaviors of ideas coming to mind and going out. Some document them while others ignore them. *More importantly, it is the values that filter them and do the rest.* Ideas may be same across the individuals but their acceptance or otherwise depends on the ideation modes adopted. This makes all the difference. *Ideation is nothing but a form of validation*, which can be carried out

in different ways such as experimentation, reasoning, observation and so on. [See 2.Ideation Process of this paper. Also see Graham and Bachman, 2004^[18]]

It is true that everyone gets ideas; but what makes a difference among people is the level of perseverance in ideating the idea. Some get ideas but do not start pursuing them. They just leave them at the start itself, some do pursue but leave them in the middle before reaching the logical end. The creative minds get ideas like any others but pursue them till their logical end to validate them conclusively. So to say, they have tenacity while others lack. This makes the difference. Accordingly on the basis of tenacity and perseverance, people can be classified in the context of idea generation into:

- a) Non-starters
- b) Starters but leave in the middle and
- c) Starters and goal reachers.

They are the players in the competitive markets though they play different roles. Their interaction is of significance. However, the last category of people contribute to competitive advantage.

In fact, *competition is fought in and on the basis of validated ideas.* It is the ideas that compete in the market place through their applied usage in products. Since each product embodies ideas, the markets are made up of mainly ideas, not products. The products are only indicants of ideas or rather symbolize ideas. Accordingly, there is a clearly distinguishable trade in ideas and also there is a competitive market for ideas e.g. consulting services, talent searching, head hunting etc. With the ever-increasing globalization processes and free trade, the demand for ideas is increasing at much faster rates than ever before. This aside, commercialization of ideas is yet another factor that gave a big push to idea markets. This gives rise to two issues viz., the generation and commercialization of ideas. Both are necessary in a knowledge-based economy. It is the competition that facilitates and promotes both the processes.

It is the process of ideation that transforms the raw ideas into meaningful, usable and saleable ideas. It is nothing but validation. Therefore one has to ideate the raw ideas

to make them more acceptable competitively. It gives value and marketability. Thus, *ideation is considered as a process by which the ideas get legitimacy, credibility and credence as also muster wider acceptance in their favour*. They get duly varnished and become ready for implementation (or usability). Hence, *ideation is a critical step in building the knowledge-based societies/organizations*.

Since each product/service embodies ideas, the competition is fought with and among a cluster of ideas. In this sense, it is these embodied ideas that are sold in the markets and not the products per se. This can be extended logically in the context of the current global scenario as facts show that competition is not fought in the market places but in the *R&D labs*, which are nothing but a factory of ideas. The corporates all over the world invest huge sums on R&D because it is the R&D that generates as also assigns commercial value to ideas by applying them to fulfill the "needs and wants" of people in the best possible manner^[19]. R&D is a double-edged weapon. On the one hand, it erects strong barriers to entry due to its capital intensities and on the other, it improves efficiency and innovation and the organizational strength. In effect, R&D gives monopoly power. Since ideas are the products of R&D, they give power. In other words, it confirms the fact that knowledge is power. It gives economic power.

This leads yet to another inference that the economy can build and retain its competitive strength through building of ideas by ideating them relevantly and to convert them into effective tools.

1.6. Ideas and Action : An interface

Ideas underlie the action, which is the mainspring of growth and prosperity^[12]. Action is growth and growth is Action. Action signifies the whole gamut of all human endeavors across all the sectors - be it economic, R&D, political, religious etc. It has both consequences and a set of affected groups, both positive and negative. These outcomes of an action call for an evaluation of the impacts of action both intended and unintended. This feedback will introduce modifications in theory and practice, which trigger new thinking processes,

whose outcomes in turn result in new idea creation and thereafter to more efficient actions. Thus, ideas are said to be the backbone of action or implementation^[20]. In the whole process, the competitive strength of the organizations gets enhanced due to the improved quality of decision-making because of the in-built feedback system. Thus it is an endless process leading to continuous improvements and growth. In realities of the practicing world, there is indeed the precedence of thinking before action. However, when action is initiated, then both action and thinking get converged to go concurrently. In this process, tacit knowledge will be generated.

The interface between ideas and action is diagrammed in Diagram 3. From the above diagram, it follows that ideas have *a dual role* to play, viz.:

- a) In making rational decisions (the conventional role) and
- b) In shaping and building the competitive strength (the contemporary or the newly assumed/assigned role).

Ideas in their newly assumed role determine the pattern, structure and rate of economic development. In fact both the roles co-exist in their own respective ways without any confrontations in a Knowledge-based competitive economy. They trigger innovation and efficiency, which are said to be the basic tenets of competitiveness. *Ideas breed ideas*^[21]. That is their distinguishing quality. That quality is the major contributory factor for "limitless/unbounded growth". If ideas stop, growth also stops.

They cannot be made out directly. *They are the derivatives from or the outcomes of knowledge and various thinking processes*. They also originate from experience and practice/doing. They have varying degrees of utility, applicability and usage depending upon their origin and the ideation processes they undergo. Ideas in their raw form are not sufficient either in theory or in practice. Hence, the ways in which they are derived will determine their value both in theory & practice. *Accordingly, it is the "ideation" that is more important than the ideas*.

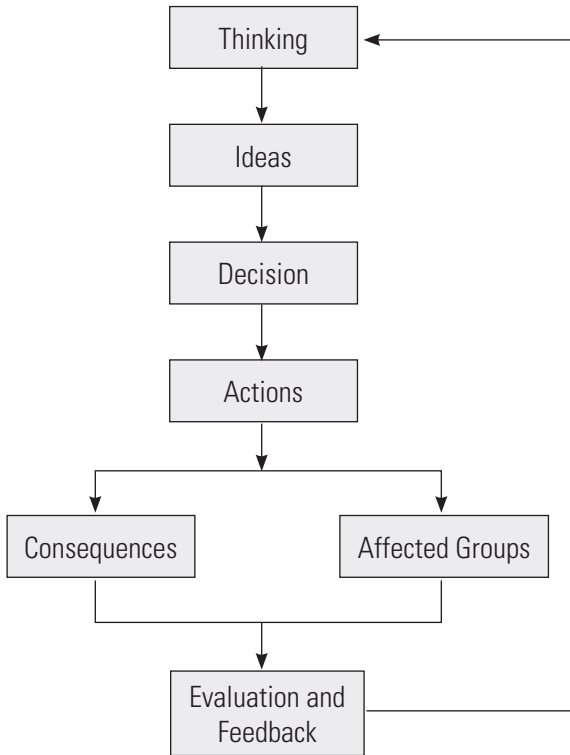


Diagram 3 Ideas and Action: An interface

1.7. Ideas, Knowledge and its application:

How do we apply knowledge to particular situations? To address this question, we need to know the broad meaning of knowledge and how it is built. In simple terms, it can be considered as a systematized and structured body of different clusters of ideas in a particular branch of study, e.g. economics, sociology etc. In that sense, ideas are the lowest units or building blocks in knowledge or theory construction. Thus ideas are like bricks and we *construct the knowledge edifice brick by brick*. Knowledge generation either in physical or social sciences starts with ideas, which are mainly tacit in nature (Level 1). In the second level, there will be abstraction and conceptualization process. These concepts are generally interrelated but unstitched or unstructured. In the third level, the systematization or theory building takes place. In the final level, the outcomes of theory building become Knowledge, which can be either tacit or formal. The whole process can be mental also leading mainly to

tacit knowledge. To reiterate, the ultimate outcome of this whole construction process (i.e. Knowledge generation) can be either formal or tacit.

That being the case, for application purposes, we normally decompose the knowledge into various segments till the lowest unit is reached and then choose the last lowest unit, which is the idea, for application. All knowledge is logically reducible to elementary (or atomic) statements/propositions, which are nothing but ideas that constructed knowledge in the first place. It is this idea, not the knowledge in its entirety that is generally applied to particular situations. In other words, we normally *reverse the process of construction in the sense that we apply the bottom most unit (i.e. idea)*. This process of going up and down in knowledge building implies a double movement of generation and application of knowledge in a continuing process. In the practicing world, we apply selectively relevant ideas after due filtration to the situation on hand. In this context, the situation may refer to an intellectual question or a practical problem or even a specific skill.

This process of construction and its reversal in a knowledge based approach to their various applications can be presented in a pyramid form as below:

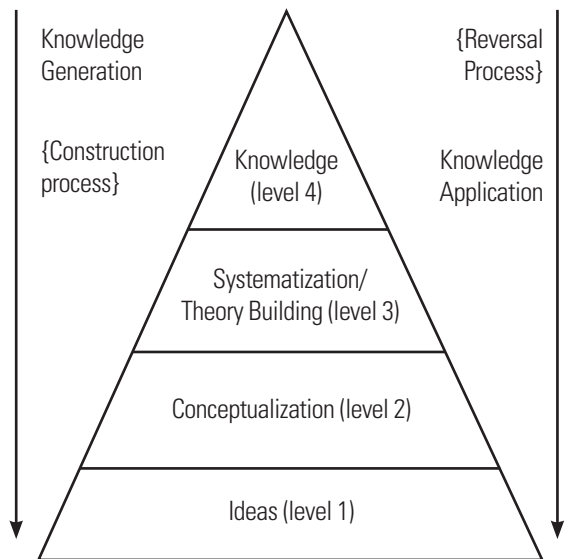


Diagram 4 Knowledge Pyramid & Its Application

The above pyramid explains the ways in which the composition and decomposition of knowledge recur concurrently in a spiraling fashion to generate and apply knowledge through ideas to tackle the problems in theory and practice. Ideas are the inseparable components of both the tangible and intangible assets, which range from patents and brands to reputation and know-how. They underlie all organizational elements. They are gained through experience, experimentation and history. They need to be identified, captured, filtered and evaluated to improve the organizational competitive strength. Ideas are central to knowledge management. Knowledge is nothing but an aggregation of ideas in a systematized manner. Ideas are the raw material for knowledge construction. Thus, knowledge is the systematized body of ideas. Knowledge building starts with ideas and comes back to ideas for its dissemination and utilization. The understanding of this recurring phenomenon would help the knowledge generation, dissemination and utilization to enhance the quality of R & D efforts and to maximize its benefits. The application of knowledge management approaches at the organizational levels^[22] can make use of all the scattered, tacit and unrecorded ideas to enhance the organizational effectiveness.

The significance of Knowledge lies in its application

In a competitive knowledge-based economy, applied knowledge is more important than the basic theoretical knowledge. The utility of knowledge resides in its applied usage. As some author rightly observes: "There is no way of demonstrating knowledge of baking bread other than by baking it".

There is yet one more aspect to knowledge growth. Knowledge grows by sharing and dissemination like the water in the well. For instance, the more water we draw from the well, the purer water springs up in the well. Otherwise, water gets polluted and useless. In other words, its application is not subject to the law of diminishing returns. In effect, the "sharing and dissemination" of knowledge become one of the major determinants of the extent of applied usage of knowledge. But the person possessing the knowledge

should not have any inhibitions to share. Therefore, in the ultimate analysis, it all depends on the mutual trust and expectations, which presume a mature society.

The ultimate effect of all knowledge is to organize things or people in ways that are different from the ways they were before. More importantly, there is no such thing as 'useless knowledge or useless idea'. The fact is that we have not yet learned how to use either all ideas or knowledge although they maybe at times contradictory or divergent. Only we are not capable of using them at the right time and for the right purposes. Some may have immediate use, while some deferred use. That is all.

2. Ideation Processes

2.1. Ideation Processes

Ideas are stealable but not the ideation process, which is concealed and known to the originator only. Ideas do not come just like that. Observation and learning lie behind the ideas. An equally important element is experimentation, which is nothing but the trial and error method[9]. Thus the three (viz. observation, learning and experimentation) together constitute the basis for knowledge. All the three constituents of knowledge can take place either simultaneously or with lags depending on the nature of subject matter. In this context, an important point to be noted is that the demand for ideas is undergoing both qualitative and quantitative changes due to the global economic reforms, which has changed the very landscape of decision making processes at all levels. The numbers of variables to be considered now are many more than ever before in the past. Consequently, the nature and complexities of ideation processes have become very complex.

As explained earlier, ideation is more important than ideas. The ideation process takes place through several modes such as:

- The scientific thinking process
- Imagination/intuition
- Chance/serendipity
- Experience/interactions or
- Practice/doing

There seems to be a possible confusion between the sources of ideas and the sources of ideation processes. In some cases, they merge. Therefore, it requires a bit of explanation. The former refers either to the theoretical concerns or the practical concerns or even both, which generally emanate from the prevailing socio-economic milieu including the environment. To put it in simple terms, the sources of ideas lie mainly in the socio-economic milieu, which is the fountainhead of all problems - theoretical and practical. On the other hand, the sources of ideation processes refer to the various validation modes to elicit wider acceptance both from the academic community and public at large.

In the case of *scientific thinking*, both the origin of ideas and their modes of ideation converge and merge. They are in fact in-built together because validation is generally an integral part of scientific thinking.

In the case of *experience*, ideation takes place through periodical observations in an ex-post facto manner. Observation can be on one's own experience, or on others' experiences, with little or no controls on the on-goings.

The mode of *practice/doing* presents a slightly different picture. This refers mainly to the applied-usage of knowledge; may be in the workshops/shop floors/assembly lines or in the R&D labs. Its focus is mostly on the skills/competences - the core of competitive strength. In this case, the doer gets ideas while doing - may be in doing differently or more efficiently. These kinds of ideas get ideated/validated through repeated doings and thereafter, it forms a part of skills/competences. This is how the very application of knowledge generates more knowledge. In this way the tacit knowledge is acquired, formed and stored in the minds of doers. In fact this forms the core of competitive strength. In a competitive market economy, we for one to believe that the knowledge, in general, acquired through and validated from "practice/doing" mode will have higher propensity to improve competitive advantage. It will have higher practical value than the rest.

Intuition and serendipity are at times considered one and the same, though there could be subtle differences.

The problem is that, unlike other modes they are highly abstract and intangible. They have even religious connotations because some thinkers only get them while majority don't. Whatever their philosophical moorings, they are mainly related to the fundamental ideas resulting in the expansions of the frontiers of basic/theoretical knowledge [23]. In intuition and serendipity, the ideation/validation is in-built because when thinkers are deeply involved and are in agony over an issue, serendipity/intuition comes suddenly to their rescue by triggering an idea (or the solution) whose ideation is already in-grained in their deep involvement and intense agony. In this special case, both idea and ideation thus takes place simultaneously. It may be true that both are beyond our explanation. However, we can only say that ideation is already grained in the deep thinking process.

On the whole, it can be surmised that the *ideation processes define the quality, effectiveness and utility of ideas*. In other words, ideation defines the saleability of ideas as also the nature and type of ideas. It may be noted that the above modes of ideation are not mutually exclusive but mutually reinforcing and reassuring.

To make the ideas more effective and more useful in a competitive world, there needs to be among other things, two important factors, viz: (a) *timeliness*; and (b) *faster rates of diffusion*. Needless to say, both of them need strong scaffolding of various institutional and infrastructural facilities. Then their capacity to propel growth and development through innovation and efficiency will be much more than otherwise. The extent of diffusion of knowledge and innovation including the sharing of both tacit and formal knowledge depends on the motivational levels and the incentive systems including recognition that prevail in a society. Further it also assumes free mobility of individuals between occupations and across geographical regions with no social rigidities to impede such free movements.

Ideas in their raw form will not sell well in the market place. Experience shows that there are two factors that enhance and promote saleability and marketability of ideas in competitive idea markets. They are:

- a. Wrapping/packaging and
- b. Presentation.

Wrapping/packaging of ideas can take place through three different modes:

1. Mathematical style
2. Modeling/systemic and
3. Literary style.

Their choice depends mainly on three factors:

1. The requirements of end users
2. The complexity of the idea/problem and its impacts and
3. The skills, tastes and competences of the ideator.

The second parameter viz presentation can be exhibited in two different ways. They are (a) Oral and (b) written communication. Normally both are used to reach the target audience. In practice, one can observe: *“how one says is more important than what one says”*. This is more often than not true in real life situations. Both wrapping and presentation together will influence the extent of saleability of ideas. Therefore, selling the ideas is as important as getting the ideas. Both require different types of skills. The cognizance of this aspect will be of much use in R&D.

An analogy would explain the case in point. According to the tradition in Hindu Temples, the natural water becomes holy water by pouring it in a “Sankha” (a big-sized sea shell called “couch”) for distributing it to the devotees. In the same way, the raw ideas become saleable and hence usable if they are wrapped up in some chosen, elegant style such as Mathematical or modeling/systemic presentation. All these factors are presented systematically in the following diagram 5.

2.2. The Concept of Saleability/Marketability of Ideas

Since the concept of saleability/marketability is raised in the flow chart, it may be noted that all the shortcomings of marketing techniques/strategies will also equally apply in the case of idea marketing. Such techniques have a high degree of propensity

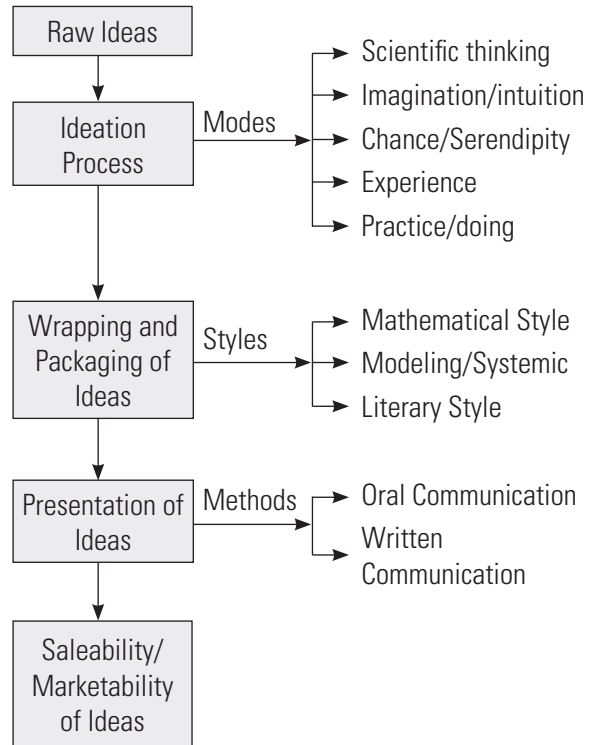


Diagram 5 Ideas & Ideation: A Thinking Process Model (with its components)

to distort the intrinsic merit of ideas/products. This needs to be kept in mind while evaluating the ideas for their quality, relevance and usefulness. At times, in marketing strategies some products of lesser quality are marketed through aggressive advertising techniques and other promotional campaigns. It is also true for ideas. For instance, the brand equity and the promoted brand image may distort quality levels and their perceptions significantly. So to say, we cannot conclusively say that the unbranded products are of lesser quality proportionally than the branded ones. It is also true in the case of idea marketing. (Example: consulting services). In this context, a distinction may substantiate the case in point. It is:

- a) Real ideas with intrinsic worth and innovative value (Class I) and
- b) Projected/ over-marketed ideas, which are normally projected more than their intrinsic worth/merit (Class II).

That being their difference, there is generally a danger in the competitive markets that the class II ideas may create distortions in the idea markets. Due to many and varied kinds of distortions and market imperfections, some ideas are prone to get overvalued/overrated as also better appreciated while others get under rated/undermined or even may go unnoticed. This is to say, markets do not reflect fairly clearly the true intrinsic worth/merit of ideas. For instance, some good ideas are subdued at times by the overselling of lesser ones. However, if ideas are documented in some form, they can't be destroyed. Good ideas will never die. In this context, an analogy is worth noting. Like the fake, duplicate, imitated and smuggled products in the bazaars, more or less the same attributes can be observed in the case of ideas also. The irony is that both have their own respective markets existing simultaneously as also thriving well. This is not difficult to establish in the present day realities of the world.

The saleability of ideas and the efficacy of idea marketing in general are guided by as also influenced by such factors as: the age and reputation of the ideator, his networking skills and his connections with the implementing agencies, the nature of ideation processes employed and so on. The users/buyers/ implementing agencies look for some important attributes in the ideas before they accept them such as: innovativeness, technological implications, product durability, compatibility, imitability, ease in implementation, cost implications and so on. Briefly, this gives the mechanics and the dynamics of the idea marketing.

The above distinction of ideas between the "Real ones" and the "Projected ones" has a very significant implication in building a country's competitive strength. By their very nature and by implication, the real ideas can build and retain a sustainable competitive strength. On the other hand, the other class of ideas may enhance a short term and unsustainable competitive strength. They may give some short-term benefits, which are not durable. The net effect of market distortions and imperfections in the idea

market may create several distortions and deviations in the growth path of an economy and consequently, in the sustainability of competitiveness in the long run. In place of a holistic perspective, the undue importance placed now on the IT, FDI and service sectors, for instance in the Indian economy, would substantiate the case in point.

3. Classification of Ideas and its Linkage with Building Sustainable Competitive Strength

There are in fact an infinitely large number of ideas springing up and operating simultaneously in the economy while at the same time contributing in varying degrees to competitiveness at different levels. Therefore an attempt is made to classify them into a few divisions without pretending to make an exhaustive classificatory system.

3.1. Ideas and Risk Levels in Practice: (A division of Ideas into Original and Replicatory)

In practice, ideas bring about *change, which is essentially risky* as it refers to the unknown future. In this context, ideas can also be categorized under two broad types. Some are *original* belonging to the basic research. Some are *replicatory or confirmatory*, mostly belonging to applied research. The latter ones confirm, through replication, the former ones. In the process, the confidence levels of the users go up enormously. Both are important though the former ones may be more important but more risky. Because, the original ideas normally refer to the future, which is inherently uncertain and risky. Hence, risk is always associated with the original ideas. That element of risk can be reduced by the confirmatory ideas. In that sense, both are complementary to each other. This division assumes a special significance in the context of ever increasing competitive conditions.

This division of ideas into original and replicatory finds its relevance mostly in social and managerial sciences. Besides raising the confidence levels of the usage, the very replication at times adds to the knowledge generated by the original ideas as it is carried out in a totally different setting. Therefore, they need not be undermined in knowledge building.

3.2. Fundamental and Instrumental ideas:

In the same vein, one more distinction can be made between ideas. They can be categorized on the basis of their *orientation and concern* as goal oriented and means oriented. It is:

- a) **Fundamental ideas (Goal Oriented) and**
- b) **Instrumental ideas (Means Oriented)**

It is to be noted that their meanings and scope overlap and shades off into one another making the distinction very subtle and thin.

The former type of ideas are concerned with and directed towards bringing *structural changes* in all the systems such as: Markets, S&T, Socio-economic etc. *They are mostly related to inventions; and in a sense, they are concerned with the ends in which there will not be divergences/differences but convergences.* This is their characteristic feature. In fact, they attract the convergence of all, which is their characteristic ability. This is perhaps due to their lesser numbers than the means, and thus generally restricting their width of choice. All agree on ends/goals but diversity exists in means to be adopted. In this context, the invention can be considered as the creation of new or hitherto unknown products, services, science & technology, production techniques and the supportive institutional mechanisms. The fundamental ideas are normally generated through basic/theoretical research. This is the reason why it is rightly called the fundamental research generating the fundamental ideas for bringing several structural changes.

On the other hand, the instrumental ideas transform or convert the fundamental ideas into their *"applied usage"* to improve efficiency, minimize costs, enhancing organizational effectiveness and of sort. In other words, they assign utility or the applied usage to the ideas generated by inventions. *The instrumental ideas are mostly related to innovations and in a sense they are concerned with the "means" in which there can be divergences and differences in perspectives.* In this context, innovation can be considered as the *practical refinement and transformation* of an original invention into a

usable technique or new design/modification of the existing ones; or new processes and practices to apply creativity in every aspect of the organization's value-chain, which in effect, lead to the development of new and better ways of creating more value with the same inputs^[24]. Comparatively, the instrumental ideas can be larger than the other one, which may give rise to divergences in opinion and thus giving the scope for wider choice.

3.2.1. Diversity and Creativity:

It may specially be noted that diversity and differences exist and persist with regard to the creation of divergent instrumental ideas but not so much in the case of 'fundamental ideas'. In this case, convergence takes place while diversity persists in the other. In other words, there is normally consensus and agreement on "ends/goals" but diversity and difference are often seen in the "means" to achieve goals. For example, one can see consensus on social and organizational ends/goals such as: removal of poverty, employment generation etc and raising productivity, profitability etc respectively; while diversity exists in the means to achieve those goals.

However, there is a merit in diversity and differences. There exist diverse perspectives, diverse interpretations and inferences, diverse solutions to problem and so on mainly due to *diverse value-frames* and conflicting interests. The merit in diversity is this. The variability or the variation is another name for diversity and difference. The variation or variability is the basic foundation for any kind of research inquiry or investigation for any purpose including policy making. If there is no variation in the phenomena and if there is perfect homogeneity or equality, there arises no research activity of whatsoever kind. No effort is possible to see the patterns, structures, correlations, order, sequences, uniformities or regularities, forecasting/prediction etc. Therefore, diversity and not homogeneity, is the basic source of all knowledge growth as also gives a reason to understand the world. Thus variation/diversity is the precondition for all efforts in research, policy-making and decision-making. In other words, *Variation/diversity triggers both innovation and invention.*

Therefore, the organizations whatever they are need to encourage diversity/difference among their employees to enhance their potential for creativity, invention and innovation^[25].

Diversity should not be curbed because it is the fountainhead of all creativity. Accordingly, a country can build its sustainable competitive strength through identifying, assessing and harnessing its diversity/differences in ways that encourage and buttress creativity in all spheres of human activity. The constant interaction between the fundamental ideas (or the ends-related ones) and the instrumental ideas (or the means-related ones) will lead to the overall growth. If ethical dimensions are added to these interactions, one can expect the *ethical growth* in place of the unscrupulous growth. Given the present state of affairs globally, there seems to be no other credible alternative to ethical growth^[26].

Ideas can be both constructive and destructive in nature. Since ideas can be either way, they need to be controlled and directed towards the ethical path. How of it, can become contentious because it encroaches upon the freedom of thought. The only solution seems to be self-restraint and self-regulation. Whether or not it will work is an open-ended question.

It is the ideas, whatever the form they assume, that take the overall growth to the next level. To be more specific, *the fundamental ideas take the growth to higher levels through inventions while it is the instrumental ideas that take the competition to the next level through innovation and efficiency.*

Thus, both invention and innovation are complementary to each other. They are reciprocally supportive to each other. One triggers and promotes the other. Building and retaining competitive advantage needs both in right proportions.

The above distinction of ideas also gives rise to a *similar distinction in knowledge*. From that point of view, knowledge can be considered as having two broad components. This distinction may be of some use in knowledge management approaches. Knowledge can be broadly decomposed into two components, viz:

- a) That part of knowledge which is related to the ends or goals, resulting mostly from the fundamental ideas (or the fundamental knowledge) and
- b) That part which is concerned with the means or the instruments to achieve the agreed upon goals, resulting mainly from the instrumental ideas (or the applied knowledge).

The essence of this distinction will hold good at the micro, macro or even at the societal levels. Though this distinction is more perceptual than otherwise, it is based on the impressions gathered after making a cursory scanning mentally across various disciplines within the constraints of our limited exposure. However, it appears to stand to logic and reasoning.

On general grounds, one can see that it is not difficult to work out consensus and convergences on part (a) of knowledge, while conflicts and disputes can persist in part (b). In view of this, it can be said that the knowledge management in part (b) need to be considered in a *paradigm of conflict rather than of rational choices*.

The fundamental ideas generally expand the frontiers of knowledge whereas the instrumental ideas assign and promote the applied usage of knowledge. In a competitive economy, both are equally important but the latter assumes more importance and significance. In this context, a suggestion can be tendered to maximize the benefits of R&D efforts and a better utilization of human intellectual capital at the global level in a formalized and structured manner. The creation and diffusion of the *fundamental ideas* through R&D can be undertaken on *co-operative lines* either globally or nationally instead of on purely competitive basis, as is seen now. On the other hand, the generation of *instrumental ideas*, which are mostly country-specific, can be left to the *individual countries*. Without going into its wider and deeper implications and meanings, this appears to be more optimal than the existing arrangement. When once this is accepted in principle, its modalities of sharing of costs, benefits etc can be worked out on mutually agreeable lines by the participating countries.

This implies that the existing system of undue and uneven concentration of R&D in a few countries seems to promote inequalities as also make some countries to depend heavily on others^[19]. This is in fact an exclusivist approach, which may be counter productive in the long run. Besides, it constricts the freedom of choice among the nation states over their respective destinies with respect to the goals/ends and means and thus, giving rise to the anti-globalization sentiments. Instead, the suggested inclusivist approach may be more beneficial to the global economy. Because, each country has its own intellectual endowments, which need to be harnessed fully.

The above discussions have been diagrammed briefly in *Diagram No.6*. In reality, a number of multilateral interactions take place constantly among the components in the above diagram. The net effect of all these interactions will be on the rates of growth, managerial and organizational practices, science & technology and so on. There could be lags of different durations in the resultant outcomes. It is, therefore, difficult to capture all the intricate on-goings in the socio-economic systems. The stories of development of the developed countries will explain them in an ex-post facto framework. To put it in simple straightforward terms, it is the ideas that drive development along with concurrent social and organizational changes.

In a sense, all this implies the ethical considerations also. Because, ethics is all about action – its motive, purpose and its consequences along with the affected groups, both animate and inanimate[§]. Further, its defining feature of maximum good to maximum numbers as also not making anyone worse off than before the action is also implied in this context. Above all action is growth and vice versa*. Therefore, the diagram in that sense implies an ethical growth path if the ramifications of an action are considered in their totality. (Also see the earlier subsection on Ideas and Action: An interface).

In the present context of ever-increasing competitive conditions, it appears that most of the ideas are mainly the products of the forces of profit motive, corporate

growth and expansion. In the larger interests, this needs to be tilted in favour of the forces of environment, sustainability and social interests.

By implication, the above analysis of ideas and their ideating processes as well, has a high degree of relevance and utility in knowledge management in a competitive environment^[28]. Because, knowledge can be viewed as a systematized body/structure of ideas, which is generally expressed in the form of statements. Further, ideas underlie the concepts and the conceptualization process. E.g. demand function, production function, elasticity, market segmentation and the list goes on and on. In view of this and from the essence of the analysis as presented in this subsection, it can be hypothesized that “ideating the ideas” is the first and the foremost important step in knowledge-building or a knowledge based economy. In this regard, a few case studies in some representative situations of knowledge management are given in Murray E Jennex, 2005^[29].

3.3. A Digression on Ethical Considerations

To promote peace, prosperity and order in society, growth alone is not sufficient, but it may be a necessary condition. The sufficient condition being, the inclusion of ethics in all matters relating to the growth-oriented decision-making. As of now, law is the only instrument though surely deficient, to implement ethics. Since the corporates are said to be the engines of growth, they need to incorporate ethics explicitly in all their decision-making. The ethical dilemma is always between self-interest (growth) and integrity (ethics).

The society can achieve the ethical growth mainly through: 1) economics (growth) and 2) ethics (decision-making). A judicious combination of these two parts will result in “wise development”^[26]. This can be achieved only through the creation, diffusion and utilization of appropriate knowledge in which ethics will have to be given its due space.

Conservation, Preservation, Use and Consumption are the basic elements in the growth-ethics framework. For

§ In a sense, ethics is nothing but “good and bad” made difficult. But beauty lies in resolving these complexities in the larger interests of society as against the partisan interests.

** Action is used in its broadest sense encompassing all the human endeavors including projects, activities and many more.*

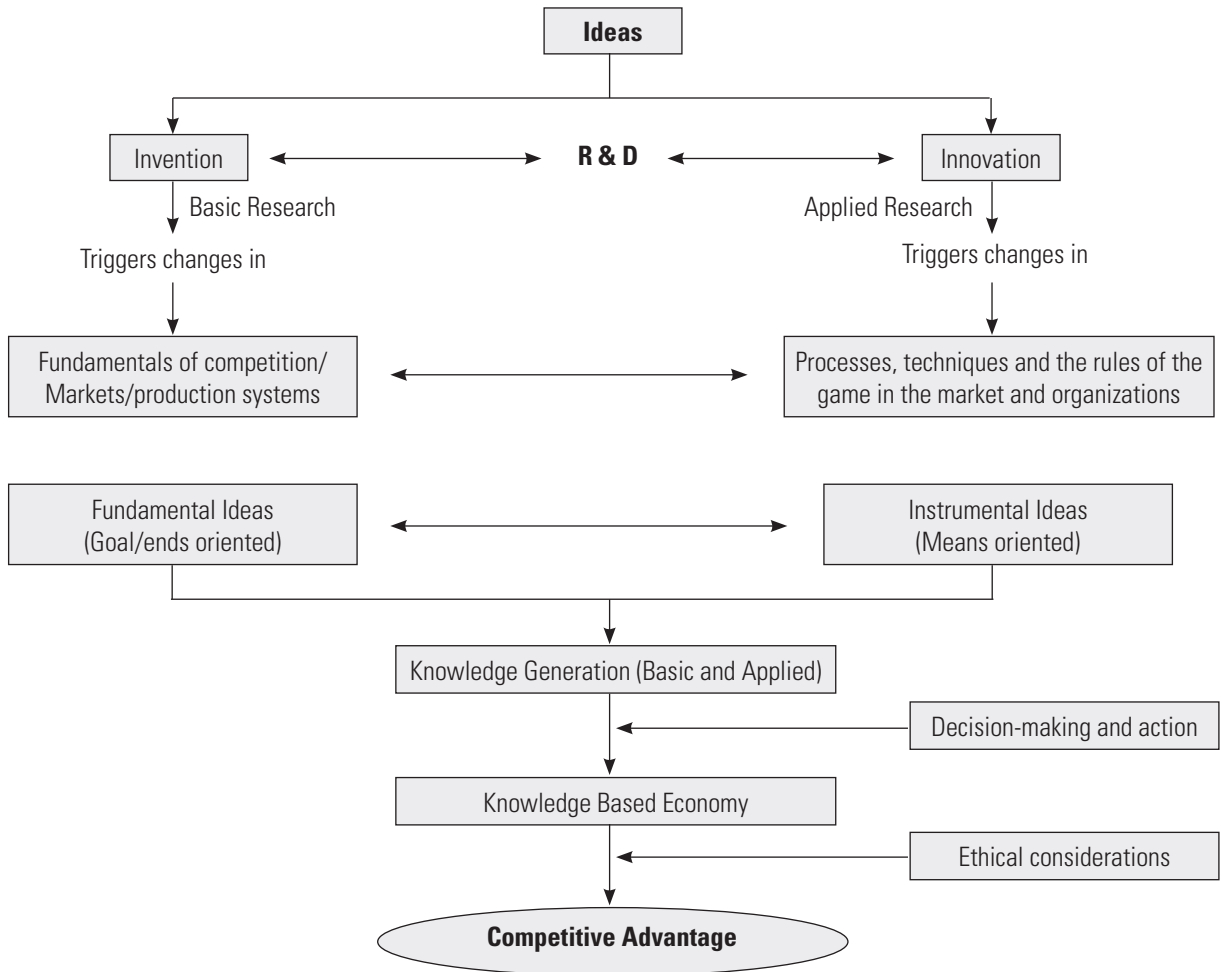


Diagram 6 Showing the Relation between Ideas and Competitive Advantage

the sake of brevity and understanding these four key concepts can be classified under two broad categories viz. (a) 'Conservation and preservation' aiming to achieve and promote sustainability in growth and its sources; and (b) 'use and consumption' can be considered as the cause and consequence of growth. In that sense, they need to be considered as the basic tenets of growth. Conservation does not advocate abstinence but parsimonious or the wise use of scarce, precious and non-renewable resources. Preservation refers mainly to the maintenance and safeguarding the ecological and environmental balance to maintain nature's cycles including the bio-chemical cycles, food chains etc. All these things can be put under the broad rubric namely the

nature's balance. The term "use" in this context refers to the exploitation and utilization of natural resources (both renewable, and non-renewable) for satisfying the human needs. If overuse or over exploitation is resorted to due to the substitution of human wants/desires to human needs, then the question of ethics comes to the fore. Want/desire-induced consumption and not on the need-based one implies greed as against need. Hence growth entails ethical choices. Consumption has two dimensions viz. (a) Production and depletion and (b) Waste generation. The first one is related to 'conservation and preservation', while the second one to the capacity and sustainability of environment to receive, absorb and assimilate the wastes ranging

from kitchen residues to nuclear residues. Hence the consumption (the very objective of growth) implies in the ultimate analysis, the ethical issues.

If the four concepts were combined in right ways, they would certainly ensure sustainability. Any deviation from the 'right mix' will jeopardize sustainability. They are indispensable in the growth processes. Sustainability demands their practice across all the sectors both in letter and spirit. Besides, they can also be considered as some of the major determinants of 'good life', which is defined by ethics. Thus they have the in-built ethical dimensions in them.

To make globalization strong and stable, a different long run strategic framework is required in which the environment and the societal sustainability find their due space in managerial decisions. As a matter of fact, the ethical decision-making is not anti-development or anti-corporatization nor is it anti-profit. It is not an exclusivist concept but an all-inclusive one. Therefore the "*Profit-Market-Customer*" centric decision-making of the modern corporate/organizations can be replaced by substituting the ethical decision-making, which is considered to be "*Environment-Sustainability-Society*" centric. In one word, it merely substitutes society to markets without sacrificing growth. Thus the primacy of society over markets is its ethos. This makes all the difference.

Society needs growth. It is an indispensable process in a dynamic society. No one can question this. However, the "Environment-Sustainability-Society" centric approach pleads though implicitly, for the quality of growth and not growth as such[30]. As said earlier, action is growth and vice versa. Decision-making underlies all actions leading to growth. This needs to be guided by and adhered to the ethical norms, which will result in the aspired and desired growth (or the ethical growth). ***This would ensure a wholesome approach to growth and its major causal factor i.e. knowledge.***

The concept of wise development thus implies the one that is conservation-oriented and environmental friendly with a larger focus on human needs than desires. In other words, when ethics is applied to the

developmental process, it tends to become a wise developmental mode. Thus, a judicious balance between ethical considerations and growth is imperative. The ethical debate can be concluded as: ***Ethics without growth is deprivation. And, growth without ethics is disastrous.*** Both together would ensure a society worth living in. This is Wise Development. Needless to say that this can be achieved through reorienting and refocusing the knowledge generation towards ethical dimensions in growth processes.

Conclusions

Since competition is not fought in the market places but in the R&D labs, and since ideas are the formalized expressions of R&D efforts and knowledge in general, ideas assume greater role and significance in a knowledge-based competitive economy. Idea generation alone is just not enough to achieve growth through competition and free trade. It needs to be diffused through proper communication channels to all the segments involved i.e. uses and users as well. In that sense, practical questions take precedence over the intellectual questions (for R&D) in a competitive economy. ***The generation and diffusion of ideas after ideating them in an ethical framework need to be geared towards achieving sustainable competitive advantage. This the knowledge has to achieve.***

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17. David D Dubois and William J Rothwell, *"The Competency Tool-Kit"*, Vol. I & II, HRD Press, US and Canada, 2007.
18. Douglas Graham and Thomas T Bachman, *"Ideation: The Birth and Death of Ideas"*, John Wiley, New Jersey, 2004.
19. *"World Investment Report: 2005 - Transnational Corporations and the Internationalization of R&D"*, UNCTD, UN, 2006; Based on a survey of 700 largest R&D performing firms.
20. Vijay Govindarajan and Chris Trimble, *"Ten Rules for Strategic Innovators: From Idea to Execution"*, Harvard Business School Press, Boston, 2005.
21. A brief account of autopoietic epistemology is given in Georg Von Krogh, Johan Roos and Ken Slocum, *"An Essay on Corporate Epistemology"*, Strategic Management Journal, Vol 15, 1994, pp 53-71. According to this approach, ideas breed ideas and knowledge breed knowledge. This inherent feature could be due to the ever increasing epistemic base by which the capacity to produce knowledge increases; the outcomes of which go to increase the base. In a sense, this implies self-generating processes. This logic can be extended to the innovative systems leading ultimately to the continuous growth processes.
22. Rishi Agnani and Dhiti Nanavati *"Knowledge Management: An exploratory study of Few Companies in Gujarat"* in Rajesh Kumar Jain et al (Ed.), *"Enhancing Enterprise Competitiveness"*, Nirma University, Allied Publishers Pvt. Ltd., New Delhi, 2007, pp 149-163.
23. An excellent account of serendipity and its role in basic sciences, literature and social science along with its relationship with the Kuhn's paradigm concept is given in the seminal work of Robert K Merton and Elinor Barber, *"The Travels and Adventures of Serendipity"*, Princeton University Press, Princeton 2004, See Chs. 1, 5, 7 & 9.
24. In the context of growth, mere innovation is not of much use unless it is diffused widely across the industry and markets through effective communication channels. This aspect is explained elaborately in: Arvind Singhal and James W Dearing (Ed.), *"Communication of Innovations"*, Sage Publications, New Delhi, 2006, pp 15-60, 83- 110.
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28. An excellent account of Knowledge Management to develop core capabilities and expertise and thereby to build and sustain competitiveness at the enterprise level, is given in Dorothy Leonard-Barton, *"Wellsprings of Knowledge: Building and sustaining the sources of Innovation"*, Harvard Business School Press, Boston, 1995, Chs. 1, 2 & 6.
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32. Mitsuru Kodama, *"Knowledge Innovation: Strategic Management as Practice"*, Edward Elgar, 2007, pp 11-43, 137-160.
33. Kevin Gibson, *"Ethics and Business"*, Cambridge University Press, 2007 Chs. 1-3 & 9; pp 1-77, 203-239.
34. Christine W Soo, Timothy M Devinney and David F Midgley, *"External Knowledge acquisition, creativity and learning in organizational problem solving"*, *Intl. Journal of Technology Management*, Vol. 38, Nos. 1/2, 2007; pp.137-159.
35. Stephen B Young, *"Fiduciary Duties as a Helpful guide to Ethical decision-making in Business"*, *Journal of Business Ethics*, 2007, pp 1-15.
36. Vimal Kamleshkumar Bhatt, *"Sustainable Competitive Advantage through the knowledge-based approach: An empirical Evidence"*, Conference Volume on *"Global competition and competitiveness of Indian corporate"*, organized during 18-19 May 2007 at Indian Institute of Management, Kozhikode Campus, pp 13-20. See also, Dr. Anil Srivastava and Dr. Raj Karan Gupta, *"Leveraging Knowledge management for organizational innovation and creativity"* in the same volume.
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38. Nicholas S Timasheff and George A theodorson, *"Sociological theory – its nature and growth"*, 4th ed., Random House, New York, 1976, pp 306-318.