Online access @ www.publishingindia.com

A Network Based Economy Model Using the Concept of Diversity, Independence and Decentralization (D-I-D)

Yogeshwar P Kosta, G Krishnamurthy & Sujata Krishnamurthy[1]

Speed to foresight, speed to insight and speed to impact

Abstract

Our investigative studies relating to information, networking and connectivity humbly forecast the emergence of a Network Based Economy (NBE). The NBE model is based upon ***Diversity, Independence*** *and* ***Decentralization*** *(**D-I-D**) concept [1,2,3,4,12]. In this paper, the authors, propose and discuss the emergence of a NBE model leading to integration and consolidation, where economies and markets go through rapid cycles of growth, maturity and decline. The model is developed around business & trade, primarily providing an insight to evolution of a new kind of business process activity; envisions creations (ideation, innovation and leadership), work (workforce-people skills and specialists groups, Regions) and management of a business (Business channel, execution, security & monitoring and sustenance), essentially discussing the issues and challenges associated with the networked world. As the world we live get increasingly sophisticated, instrumented, networked, and intelligent, a new conscious of intelligence seems to exist within the networked web- the virtual landscape, attributed to open nature of the system [3,6,7]. The DID concept is based upon the open nature of the web, enables connectivity and networking through the web; a necessity that helps sharing ideas and resources by bringing in people –* ***Diversity****; instrumented, meaning that a mechanism exists to monitor and a capability to gather key data of activities & process in real time to derive information utilizing software's that find hidden trends in data –* ***Independent*** *&* ***Decentralized****) and Knowledge, as Intelligence that help in decision making - Independence in DM through*

[1] *Charotar University of Science and Technology, Changa, Gujarat*
ypkosta@yahoo.com

human cognition and advanced software that utilize Artificial Intelligence. Under, the circumstances, it is pretty obvious that, globally distributed and integrated business enterprise needs something more powerful that will help reach its goal – a new knowledge & intelligence. This "new knowledge & intelligence" combines human cognition reinforced (innovation) with superior computational power (software's) that generates scenarios (starting raw material). Scenarios are powerful tools that creates situations conducive to accurately predict paths and design strategy for future growth through DID concept, compared to conventional sensing and responding - acting to stimulus, as most of the software based data analysis tools today offer only situation based awareness and predictive abilities. The discussions focus upon three broad areas, the first regarding ***Emergence of a Global Network , Systems and Society****, the second regarding* ***Emergence of the virtual work force and culture*** *and the third regarding* ***Emergence of Networked Based Business , Organizations & Economy****. As globalization becomes a phenomenon, know and the lesser known compete for market share. A few noteworthy points have been mentioned that spotlights issues about India wherever necessary [3,6,7,16,17].*

Introduction

In 1970's with the industrial revolution in full swing, business was carried out under the command and control regime of an organization, very soon in 1990's the industrial economy faced a new situation when global markets began to integrate, this invited competition from outside geographic boundary - country. Today, with the maturity of ICT, almost all major technological society is connected and networked (internet technologies) and with advances in wireless technology, even the last mile – abandoned & other remote corners have also been connected and networked with civilizations, while the connectivity continues to grow at a very fast rate so are businesses, undergoing major transformational changes.

Today, with Integration due to advancement in communication and network technology (exploding business), creation of new cross-border policy in trade laws, increased efficiencies in logistics and delivery mechanisms, businesses have become borderless and companies roam the world in search of profits. Thus connectivity and networking being fundamental - the inevitable next, the authors humbly envisage and

present their views regarding the *emergence of a networked based model for business and economy.*
Network as such, will become the modus operandi for business as wealth of data, and information will be available at its core. Businesses will take advantage of this new wealth of information to make more intelligent decisions not only for competitive advantage, but also for spotting new trends in technological, business, govt. policies, customer, societal etc. over the horizon. They will manage process and analyze large volumes of information in real-time by way of incorporating analytics and predictive modeling through newly designed software's and systems, including collection, sharing and transmission of critical information across the entire business channel almost instantaneously and live, this will help delivering truthful, accurate and timely information to the right decision making people anchored at critical points (leverage) across the complete channel – nourishing the channel instantaneously. Our challenge in a fast changing live, complex & growing situation will be to understand the dynamic nature of the new innovation economy and successfully align resources to embrace the same.

Trend spotting – a key element: Professor Michael Porter was the first to spot the new trend of economic development and growth, wealth creation by connecting scattered specialized groups of interconnected organizations through leadership and coordination (motivational, collaborative, appreciative and facilitating leadership) working towards a common set of goals [3,6,7,17].
In this paper we present scenarios detailing mechanism of evolution, envision new approach to workforce development and businesses powered through innovation leading to creation of new gateways for economic prosperity. The following is envisaged;

Emergence of a Global Network , Systems and Society

Astronomical growth in information & communication technologies have successfully connected each and every technological society across the globe, further, advances in wireless and sensor technology have succeeded in catching up with the last mile (knitting and

threading) by creating remote area networks, in the process, successfully connecting abandoned remote corners of society (rural) with the advanced civilization / societies and the world (**networking infrastructure**) - *a wired planet,* giving birth to a network of connected groups and people under a common backbone – the Internet [3,6]. Typical characteristic of the connected groups and people include agility, highly responsive (quick response), vigilant, adaptability, entrepreneur, focused, learn and unlearn, are global players. As the networked world expands in breadth, globally competitive groups from different geographic area will reinforce talents, information, idea, materials and systems to spin out innovative product or services that would contribute to economic growth and development. This will give rise to formation of new community and social networks that will get dense over time, in the process, evolving ***new social technologies***. *The network is a living entity, directing life and other activities on this planet [3,4,5,17].*

Operation, Service and Management - No one owns the network, nor dose anybody command or control. It's like an open estate – virtual space or landscape; all are citizens and anyone can offer or take, depending upon needs and requirements. For example, as almost everything collapses on to the network, anybody would login, and cross private boundaries or even attempt hacking; therefore truth and reliability will become an important/vital certification factor. Virtual company's mostly operated by entrepreneurs and consisting of few people will operate and offer security and authentication services & solutions to people, businesses and organizations. Services include data security, data banks, data management, copyright, process, membership, business channel, access and resources on the network [1,3,5,17]. *As such no one own or governs the net, it's free and autonomous, but virtual service companies will help carry out all activities smoothly, including good security.*

Mining Raw Information – As most organizations get information based, Network will become the single largest open universal bank-of-resource/s in the virtual landscape/estate, and a gateway to access an unending resource of growing data and information archives. Powerful

search engines help undertake scientific research, business surveys or even linguistics by creatively mining live and shelved data or information successfully in less time. Data resident in a number of systems within small, medium or even large organizations can be extracted or retrieved from distributed sources across geographic boundaries of origination through the networked Web. Data and access to data is the primary raw material for new information-based business opportunities – *a source for cognitive intelligence.*

***Internet (Singularity)* -** The most sort natural technological resource, in vein to what blood and oxygen is to human and life on earth. Overtime the net will become more true, reliable and transparent. A third party (virtual companies) will monitor, safeguard and authenticate the information posted on websites to verify its accuracy, clients utilizing such services will pay for the same. *Single backbone of all meaningful manifestations* – S*ingularity* [3,6,7,17].

Network mapping: Computer and communication technology today has helped to build successful, dedicated and reliable networks. One can study existing specialist network/s and connect to build new network/s to strengthen own existing network. This can be affected by mapping specialized networks. Therefore mapping networks will result in synergies due to alignment of specialized group/s that will help power economic activities – as knowledge needs to be integrated into a task to produce something meaningful, else it's useless, and specialized groups are systems that are nothing but organizations. This process can be visualized as a chain of sequential activities consisting of the following: *Network leadership, Network Mapping, Network Creation, Network Specialization, Network Growth, and Network Economy.*

***Network elements & mechanism*:** A way to build home grown network is through the creation of ***Open Peoples Net* (OPN).** Creating a regional regular *on-line* forum through OPN platform on the web will provide an opportunity for interactions by bring in new people allowing them to explore their connections and discuss innovative ideas freely. In the initial stages, while building network, OPN is truly conducive, key attributes being; open and loosely connected, start without commitments, no command and control, is nonstructural,

giving it the natural flexibility to grow. The only concern being, the diversity of the participants, as computer and communication skills of participating people vary widely, thus, on-line collaboration platform must be conductive, simple to use and open, must make work quick, effective and enjoyable through *creative leadership*. A network becomes denser and stable with like minded people and groups exploring and having similar and matching ideas. Further, the power of open innovation comes down to *personal networks* (entrepreneurs) as well. Creative leadership having motivational, facilitating, collaborating and appreciative characteristics is extremely important and could help develop a strong network over a period of time. Integration of groups will lead to specialized functions, processes and activities that would grow over time and help build economy. Thus, mapping specialized groups would make the network a powerful tool [6]. For example, mapping educational institutions, R&D centers, Industries (public and private) and libraries (libraries can act as a platform for meeting forums as they are places of learning and enquiry) will eventually lead to strengthening a network - power of alignment. This is true and universal and applicable for our own home grown people network & resource capita, for economic benefits. Therefore, through the vehicle of creative leadership, groups could align & sync in a network for specialized task or activity ultimately contributing towards growth and development of the regional economy.

The web based network is an efficient and effective tool that promotes quick information retrieval and sharing, Learning faster, Spot opportunity (due to diversity, decentralization and independence) faster, Align resource faster, affect decision making faster, deliver faster and over time will become vibrant, reliable and rugged. The open network powers innovation and drives prosperity, in the process creating regional economies of scale.

Harnessing the power of web: Internet is truly the ownerless interactive media of the mass, but certainly not driverless – *it is conscious and alive***,** powered by the wisdom of the mass that encompass complex capabilities and multiple resources to suite all

people in terms of understanding and intellectual capacity. A diverse set of professionals will identify, develop and guide these networks for fruitful cause and effect. Thus internet is an indispensable tool that helps to bringing the "know" and the "unknown" under a common platform for an effective on-line collaboration and relationships that evolve sequentially & gradually over many cycle of meetings or sessions (DID), in the process gaining trust. Showcase such as Web-blog and other open source portals are a means to express interest, ideas, concepts and share information. Also through direct publication on the web, this include web portals such as; rise of info sharing sites and creative discussions, specialized forums and chat rooms, allowing users to upload and share video, audio and other presentations – *new social technologies*. [12,14]

The final step before the giant leap – *An important component and perhaps a valid starting point would be, evaluating your own regions capability to innovate by asking a few questions such as: How and to what level/depth is your connectivity & networking, is communications through networking happening? Is OPN conducive & collaborative? Is OPN leadership evolving? Can an assessment on Open collaboration for a given region be done?*[14]

Emergence of the virtual work force and culture

As each entity across the globe gets connected and almost everyone takes to the web, networking, information flow, exchange and access will be 24x7x365 – an inevitable reality when physical distance & space will fuse, and time will hardly matter in the virtual landscape. This phenomenon breaks geophysical boundaries and time conventions, triggering a new type of work culture and signaling emergence of a new kind of workforce. This new kind of workforce - *the virtual workforce,* works constantly across borders independent of space and insensitive to time will emerge, and flag the evolution of a new culture of work (24x7). Traditional jobs concept will become obsolete and job security will depend upon acquiring of newer skills that are in demand through continuous learning, and unlearning the old. The challenge for businesses, managers and workforce will be:

How smoothly we transcend into new business models of economy - particularly for the developing countries; workforce development and training - mass training, manpower development etc.; management and the strategy needed to work across invisible organizations and geo-political boundaries – bringing and making new trade laws and cross border policies etc.; As far as managers are concern, they will also have to evaluate themselves and identify their skills, work and activities, as most of the activities and work will be outsourced, and people will be working for a contractor within a company for a company; and finally for workers - Workers will need to thrive in these networks and to be successful they will need a new set of skills appropriate to business, which requires continuous knowledge & skill acquisition and constant learning - key attributes – a competitive asset/s for self and a business unit. *Network Technologies will greatly reduce human commute and travel, processes and activity time will significantly reduce and real time monitoring will become important; this will help save energy and environment.* [1,3,5,6,7,10,13,14,17]

Downsizing & the era of entrepreneurs (e-preneurs) - According to data from Global Entrepreneurship monitor by Babson College and LSE, *more entrepreneurs start new business every year*, and this tends to be highest in richer and poorer countries but lower in middle-income countries [*www.gemconsortium.org*]. **Downsizing** in most organizations especially business in particular will fuel entrepreneurship; basically due to increased automation and instrumented nature of the systems (ICT and software's), knocking off the middle layer that administrates and coordinates processes and activities – *increased entrepreneurs*.

As the world get connected and networked, connectivity amongst *scientific and academic institutions and industries* will become an activity of prime importance. This process will bring sharing of information and data resources powered by *open source code* movement, ultimately promote collaborative research important for nonlinear growth. Ideas can come from anybody, anytime and from anywhere, interested communities/groups/company can come together to spin out exceptionally high impact value products [3,13]. Here is

how it is possible; We need to take a look at *ways in which the bread is earned* - an example in support of this is the fact that a good number of the high techie's are becoming single-entity-nomadic-floating-company types – *the era of the entrepreneurs* (e-preneurs), it's true that these sophisticated *high techie's* spend most of their time alone, either wondering or moving around, mostly work during moods…, perhaps, waiting for a novel idea to germinate that would ultimately conceptualize and spin out an exceptionally high impact value product, something like the blockbuster types, leading them to a big payoff and fame, similar to "*stardom"* – all possible with zero investment, and still make a company, thanks to the web and the networked world! *Just* ***hook***, ***post*** - *showcase, and* ***conquer***. *[3,6,14,15,17]*

Open source system – The web is an ever vigilant & live network environment, key to rapid progress and prosperity is the ***open source system***. An entrepreneur could generate an idea (investment) and place it across the web (Showcase – web-blogs), interested group could review and provide suggestions or refinements (a road map of execution and leadership), expertise could come together (distributed specialized groups – skills, knowledge and mechanisms) and the whole idea could be translated into economic activity through venture funding (business organization). In such environs/situations, entrepreneur needs almost zero investment, only expertise and skills could contribute, the rest directed and taken over through leadership. Each involved entity is purpose based and contributes professionally this gives rise to virtual teaming, also promotes quality. Thus no one has the resources or is fast and smart enough to venture and risk alone in this wild-wild-web based networked economy. *The key is* ***open source system*** *of innovation for development and growth.*

Lifelong learning will be the salvation of life – rapid changes in the job market and work-related technologies will require continuous training for almost every worker; it goes without exception that a substantial portion of the workforce will be in job retraining program. Companies will recognize this fact; educational institutions will train both youth and adults, will be forced to operate multiple shifts with

increased academic hours stretching beyond conventional hours. [3,16,17]

Education – Skill based mass education will be the key for development of the workforce, especially for developing countries like India. As the digital divide vanishes, people, especially in the lower and middle class income band/category at the bottom of the societal structure will be able to afford buying a computer and also logon to the internet. Computer and internet access will become a part of everyday life, in almost every home. As education takes to the internet, anyone and everyone will have access to education. Most educational institutions/universities will offer flexi-education and time including tailor made courses, and will be able to market their programs/courses to distant students; course quality will also improve in the process. Teachers will function as facilitating managers for the teaching system. *Openness and Interconnectivity will enable share and access to resources***.** As people and organizations get connected via web, Open source technology will become fundamental/basic building block of a web-based-learning portal. [3,10,13,15,16]

The web will be useful in the following ways, first - *the greatest advantage and benefit of Web based portal in education will be its reach and penetration* - especially to a highly populated & developing country like India that needs to mass educate its young and energetic youth for a competitive economy, second – *web will provide access and opportunity to all through distant-mode this includes all kinds of learners* - the young and old, distant and near, single or group etc. , third - *it will offer a low cost solution offering a variety of need based tailor made course/programs*, fourth - *an instrument of mass education* for skill & training simultaneously, effectively, efficiently and in lesser time, fifth – *consistent in quality and content* – maintain & preserve, sixth – *instrumented - online monitoring and delivery ; evaluation metrics*, seventh – *instantaneous feedback and results*, eight – *flexibility* in terms of convenience and schedule , tailor made [16,17].

Networked and Connected (India context: Rural and remote education) –

The web will offer through the arm of distance-learning-mode discussed above, opportunities for rural & poorer students in an effort to bridge the economic gap between them and affluent cities of the country – *economy convergence*. Web solutions and technologies will enable teachers and education experts to connect systemically across geographic borders - state or regional borders, etc., share high-quality and high-impact valued learning material content/s, at the same time, help collaborating on critical topics. Technology would enable access to latest education content, computing systems, data bases and storage resources including application software's to every student enrolled in colleges and universities. A rural student enrolled in a village school or college can learn about arts, crafts and science through an interactive 3-D animation, including other documented resources such as demonstrations and laboratory exercises as their counterparts of a modern high-tech city school student will be doing, performing or experiencing. Interactive website will allow stakeholders and parents to track academic progress, know student marks, attendance, etc. at the same time also compare with other associates including overall performance of the school/s or college/s. Website will offer language translational facilities to facilitate parents and other stakeholders to access information and data round the clock and across the year. *This makes web a powerful tool that provides insight towards functioning of the overall system, critical monitoring, highlighting inherent deficiencies in learning system, providing valuable information related to system improvement, and continuous feedback that helps us to utilize the information needed to work with teachers, school, college or universities.*

Instrumented - As the education systems become **instrumented**, it is possible to build in checks and balances across the entire chain, starting from source to sink. This will help to capture critical data. Data captured may be processed to derive useful information, such as: monitor attendance, marks and enrollment in activities etc and also the collective performance of the overall health of the system. Information relating to all data points could be collected and known in real-time, how a student or school is doing, when & where intervention is

needed, and what is working across institutions and throughout their lifetimes. *Summing up, due to Instrumented nature of the network system, systems ability to gathering critical data and monitoring will provide real time health information and also help to maintain checks and balances in the system.*

Knowledge/Intelligence: Processed data & analyzed information will provide insight for better decision making and help advance learning through generation of intelligence/ knowledge. An **intelligent** education system can provide its leaders with the tools and insights they need to make smarter decisions at the system level. Education systems are working with leading organizations/company to develop data systems that gather, integrate, analyze and present information about key performance indicators such as attendance, marks, and other literacy benchmarks set by regulatory & statutory bodies. Leaders and teachers can obtain complete information of student performance and make decisions at the system level that can enhance learning, discover problems, spot troubling trends at an early stage and take action, and instill a sense of direction in working toward goals.[3,4,17]
Technology advancement in cloud computing, open source systems, language translation, audio, graphics & visuals, virtualization, and analytics can help education systems refresh outdated infrastructures with new functionality. They can become more interconnected, instrumented and intelligent

Emergence of Networked Based Business, Organizations and Economy:

Challenges and Issues

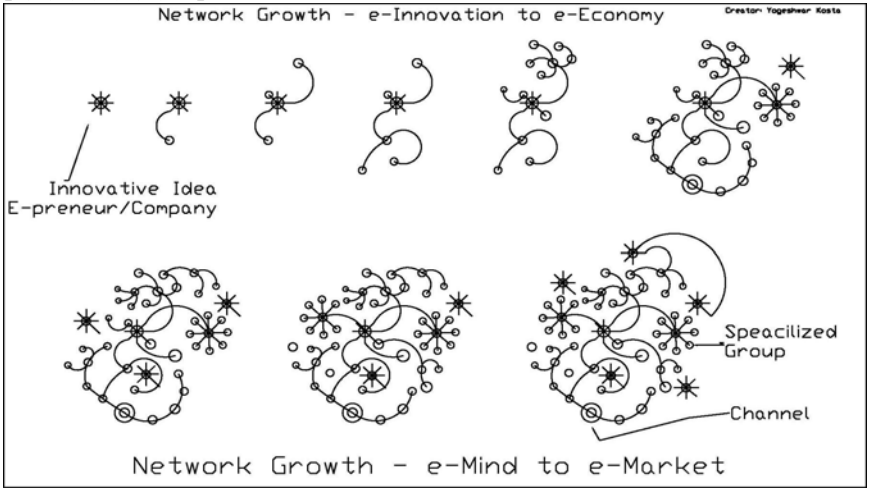
The digital economy will ride on networks through the exchange of bits and bytes on the web, driven by knowledge products, knowledge services and knowledge consumer /customer. Public & private organizations, including government will come forward and contribute to establish e-infrastructure. And those who utilize them shall pay for usage (bandwidth and speed). Exchange of Bits and Bytes (shuttle) riding these networks will result in wealth creation. Most organizations will offer services and products via such network/s; through such

transactions leading to growth and economy – as discussed earlier. *Efficient and cost effective creation of the network platform and interconnectivity between them will not only be the key but also a challenge to people, businesses and organizations*. Most organizations will become information based, will depend on specialized teams to accomplish specialized task or needs including security, this will need a new vision and a new type of leadership for success. As technology advances for betterment or to meet demand, business organizations will invest on employee for retraining and training new recruits.
Exchange of bits and bytes across the network will bring in economic development and growth.

Emergence of Networked Businesses: Today most companies are creating lucrative open platforms on the www such as OPN's, for the purpose of associations & collaborations. This helps company's in the following ways; company's are connecting to people and communities, OPN's helps to bring in new ideas & information, to sense the pulse of the market – strategy, direction, etc., share people experiences about product or service, feedback on a existing product/service, maintain market share, identify new products/service etc.

Business model: Although, the basis of business and basic economic rules never change, the strategies employ to translate these principles into actions have changed drastically over the years, especially as the world transcend from the information base to knowledge base. Not long back, the size of the company and its employees showcase the nature and the magnitude of the business and its successes, but in a networked economy this hardly has any impact and its effect is very limited – if at all. Therefore, the emergence of a new kind of business model is envisaged. Businesses will integrate knowledge and information directly into its products and services, fusing the differentiation that presently exists between products and services. Businesses (company/firm/organization) rely on innovation, for example, OPN that brings diversity to power their business models and build value based networks achieving their economies of scale through networks. *In fact the growth rate and size of the network in the virtual landscape will decide the success of an organization or business.* Today we recognize the fact that 21st century is the era of the

entrepreneur, and business opportunities lies in entrepreneurship, knowledge & innovation, supported through small firms – *the entrepreneur*, specialized taskforce- *knowledge integrated into a task* and people- *ideation for innovation*. Therefore, the economy contribution to GDP of any nation whether developed, developing or otherwise will be built on an entrepreneurial economy, ICT will facilitate & promote this in a big way and e-preneurs will derive the maximum benefits, further, major slice of GDP contribution in a developed country comes from SME's and entrepreneurs - @ 80% based upon open innovation, powered through networks and supported by specialized groups for business outcomes and success. Another quintessential is the strong need to stop brain drain and also retain research scientists – especially for developing countries, this is important for India. [1,2,3,4,5,8,9,14].



Model Concept and Working – a business perspective: As depicted sequentially, moving from top-left to bottom-right – two rows as in the figure above, most activity start with ideas freely floating in the virtual landscape – *the process of ideation*, watched live, constantly monitored by company's, specialty groups, people, financers etc. - constantly

analyzing; finally gravitating to one innovative idea - *resulting in collective recognition*; once the zeroing of an idea occurs (through recognition by upper management) by a company (business powered through innovation) or group/s – attachments begin to occur and a basic network begins to form. The free floating idea upon acceptance becomes the intellectual property of a company or a group. Specialty functions are integrated or even brought into this is accomplished through leadership attributes by scrutiny - bringing in quality and other associated functionality leading to realization of a complete business chain or an ecosystem. At this stage, the master cluster network is fully formed, having all the fundamental and primary business components. Niche alignment of the business functions; help translate to a successful business activity. Slave clusters; eventually add on as extension service arms offering expansion and growth. The cluster grows into a huge network and the magnitude of the cluster and time of sustenance decide the success of the product or service, resulting in growing economies of scale until it's supplanted by the next revolutionary big idea.

The era of the e-preneur: As the society gets connected & networked, almost all activity collapses on the net, the net will become the primary resource and the backbone for all activities, be it technology, business, education, healthcare or even societal. The networked society will prompt & promote entrepreneurship in a big way. Of the many reasons, the most important being, "*Zero investment*" to kick start a business – all you need is an innovative idea, and a sequential series of events that follow..; discussed earlier.

With the era of the e-entrepreneurs kicking in, the net will be the electronic brain – an ever live habitat that contains many floating innovative ideas in virtual landscape to grapple with, while many will be born and many would die, unknown entities and leaders will emerge, in the process displacing the known spontaneously, or even making a place overnight. Groups and people will recognize the potential and acknowledge the impact of floating innovative ideas from the net – mostly of free lancing high techies (e-preneur/s). Overtime, company's, specialized groups & people will attach , supporting the innovative idea, under the circumstances, an e-preneur could start with

zero finance, the only investment being the powerful innovative idea of high impact value, market: people, organizations etc., will soon take decisions as to which one will hit successes and which one will die, this decision is a sequential process and takes time, the time is a dependent on market response, actually market and consumers through the OPN platform will winnow out the losers and winners, faster the rate the better, saving time, energy and resources – in economic terms, lesser resources will be drained or lost in innovation process, experiments etc.; the winner emerges and the market recognizes the same resulting in network growth. A careful look at the figure will show these steps sequentially – groups include financials, services, manufacturing and of course the response of the people/consumers/customers etc. [1,3,5,10,17]

Vanishing Labor unions – Due to globalization and emergence of a globally competitive workforce most companies will be easily able to find nonunionized workers around the world for work-contract. Due to this phenomenon, company's contract out a substantial portion of business activities, especially growing businesses, this could include design, manufacturing, marketing or even setting up a new unit, mostly to nonunion firms. This threatens existing jobs, making labor union leaders/chiefs orphans and representation in company's useless & inexistent by stripping the power and say of the labor unions - *vanishing labor unions*. Labor unions will soon loose their say, rights to secure workers, and to make representation to shape or amend public policy in regard to workplace issues. Global workforce will advocate job to be done under concessions as workers in the parent company and country compete directly with low-wage workers in developing countries - else the management could contract work overseas. Further, increase automation will knockout a major portion of the company's workforce, leaving behind fever technicians and few highly educated professionals who generally tend to resist union membership. [2,3,5]

Vanishing work ethics – A survey reported through *careerbuilders.com* revel that more than one-third of the workers in developed country (USA) notoriously reported sick three times in 12 months, if not worse, similar is the situation in developing countries as

well. Ethic has never been better at the top, Multinationals' like Enron, WorldCom, Tyco International – these companies have been implicated in deceptive accounting practices, looting of corporate assets and other misdeeds. Involvement of political leaders in corruption is reported almost daily.

Leaders & CEO **-** Organizations will have to make special efforts to prepare professional specialists to become business leaders having motivational, collaborative & appreciative leadership attribute. Further, the Board experience of the kind needed by a CEO no longer comes naturally during an executive's career in an organization/company, thus homegrown CEO is unlikely. Therefore finding top key managers to run major business gets difficult. *With promotions to top positions difficult within company most of the upper-level executives will come from outside the firm or industries including CEO.*

In a business world, Customer is all powerful and supreme **- As** internet enables consumers to readily share information and consult each other for product information instead of relying upon professional critics. Companies will adapt to this situation by offering more and more customer-to-customer forums. It starts with and as a subset to OPN, whose geographic work area & domain is limited to existing customers or groups, company's will ask existing customers/groups to market to other consumers/groups, resulting in expansion and growth; the initiation of this series process and act will result in displacing celebrities from product advertisements – all these attributes to the changing nature of business environments and consumer.[3,17]

Work culture and lifestyle: The era and culture of going to office to work is more or less over, in a networked world/society one can work from a coffee shop - Barista, an airplane – *space network* or from a sailing ship in mid ocean to accomplish the task or work assigned. Going beyond, space age – inter planetary internet as well. [6,7,15,17]

Workforce development (organization level and country level) & Issues: *Training and retraining the only constant*. The most important challenge is to produce and train a large amount of manpower on a continuous basis. As today's, business models needs a continuous pointer type of mechanism to align its processes and activities, at the

same time respond and also balance to the dynamics of the situations – internal and external [3,16,17].

The ***system of education*** starting from primary schooling and then branching into various paths needs to be accessed. For specialized streams such as scientific, engineering and technology need to be started and developed, these must be purpose based with vertical integration capabilities. The present system is discrete & compartmentalized and operates in silos, all this need to be broken and revamped. It also means crossing organizational boundaries, establishing collaborations, networking and political boundaries as well [2,12,16]

***Open participation and effective leadership direction*:** Here the challenge is to balance openness with focus, invent new way to come together, platform for linkages and leverages, which will translate ideas into actions leading to doable solutions including long term evolution (LTE).

Building the foundations for Agility and Foresight utilizing D-I-D – In the stormy billows of the fast changing world, we need a Leadership with the skills to encourage participation among different people, groups and organizations (***Diversity*** – *in participation*), that would generate ideas through brainstorming, conversation amongst diverse people having different background (heterogeneous-group). This participatory process having no commitments provides a sense of what is happening – a crude direction. The process develops scenarios, generating different perspectives on complex problems, which lay the foundation/s for a possible potential solution (***Independence*** – *opinion sharing & generating scenarios, getting out-of-the-box*). By choosing perspective scenarios, quintessential elements are assemble and perspective scenarios simulated to finally test our assumptions and theory and making adjustments through information analysis if necessary to take strategic action (*a mechanisms exists within the company to aggregate the information that help decision making*) for decision making, all these need to be done quickly (***Decentralized*** - *empowering team leaders; due to quick changing nature of the world – dynamic and volatile*) – quickly focus upon a small number of transformative initiatives.

The need to channel into the finer details of these ideas so that we can get clear understanding of what a potential collaboration would look like, to agree on a potential solution, an answer to a question, to define product or service with clarity that will gradually leads towards execution are critical and important components of the DID based business ecosystem. The above steps envisage aligning the resources, setting up milestones and an action plan who dose what and by when? Once we begin implementation, we need to stay in constant communication with each other as we move forward. We need to evaluate what is working and where we are getting off course – instrument the ecosystem.

***Importance of people participation*:** Transformation initiatives: Creation of public process, as they are more open and flexible; in fact there are no rules to public process (people participation, OPN), unless we impose them on ourselves; most communities do not have public process, public designated spaces/areas for infrastructure and discussions (exchanging ideas and move ahead), public collaborations thrive with a new type of leadership, command and control dose not work. As we transcend to the networked economy these public processes must be more vibrant, flexible and focused, public processes that generate feasible collaborations [3,5].

Model for leadership (regional): The nature/type of strategic activity/doing set forth the discipline for the types of conversations we need in order to move our communities and region forward. To guide these conversations, we need a new type of civic leader. This will need that the leader be well versed in the skills of "*creative leadership powered by characteristic features as motivational, facilitating, collaborative and appreciative*". This will come from persons who are willing to engage and are capable of unleashing the energies of others for our own common prosperity. Instead of focusing on what we don't have, what we can't do and how deep and wide based our problems are, the appreciative leader focuses on what we can do, what we can share and what we can accomplish together; as we all have different talents and skills, a leader can help compose and participate to contribute equally towards a common shared goal, at the same time, to

develop our talents and also have opportunity to learn from participation & associations – working as a team.

For a region to move ahead, it is important to guide public conversations, as this helps to explore opportunities around. As a leader, he understands fundamental insight of human behavior. An equally important attribute for a leader is, skills required to guide conversations, the reason being that people tend to move in direction of their conversation and through such guidance help translate their ideas into action, from bare thoughts that existing in minds to raw market through motivational, collaborative & appreciative leadership qualities. *Thus it is important when working across boundaries the leader focus around a potential opportunity, which could hit a higher probability of success. People are motivated to work together*. Coming together will be the dawn of a humble beginning, staying together will contribute to progress and coordination; finally working together will ultimately lead to successes [8,9,11]

Diversity in Workforce – People making the workforce on move will exacerbate social conflicts. Increase migration of workers from developing countries to developed countries will fill the gap of workers shortages in host countries. But many of the migrants will be impoverished. Social-security systems and urban infrastructures will strain to accommodate them. Native backlashes will become more common. The challenge will be to having a political consciousness, to give citizen's rights to immigrants and to accommodate them into our social system. [3,7,17]

This will bring new type of challenges and opportunities to *people, organization, business and countries*. From business perspective, virtual workforce will work across border, independent of time and physical distance, in the process, challenging the nature of business and the ways in which business is done. Thus, it is quite obvious that *business is anytime, anyplace and from anywhere (24x7x365) across the globe.* Therefore ***connectivity and networking would be the key element***, critical not only for *econoedge* (meaning, economic edge and advantage), but also to sustain growth and development and a secure future [3,6].

A Networked legal system (Instrumented) – World's legal system will be networked, containing a global database of local and national laws of developed and developing countries and many more participating and becoming members in the next few years. [9,11]

Organization (Business) – Most organizations will restructure to gain greater flexibility in operation and management. Management levels will be reduced to half in the coming few years. As organizations get information based, the old command-and-control model of management will cease to exist. Most organizations will compose of specialists who rely on information from colleagues, customers and head-quarters to guide their actions. Management levels (hierarchy) will drop significantly, reducing opportunity for advancement in an organization. Now such *Downsizing in organizations will strongly promote and encourage entrepreneurial trend* – the era of the entrepreneur. Entrepreneurship will provide services to companies outsourcing their secondary functions, including potential job opportunities to employees who lost job due to downsizing. *Thus downsizing, restructuring, reorganization and cutbacks on white color jobs will continue and so will outsourcing.*

Government – New consensus for regulations will arise, overlaying a standard regulatory structure on all national systems can be expected to crystallize amongst the member countries for international and cross border trades. Government regulations will continue to take up a growing portion of the manager's time and effort. Regulations are necessary, unavoidable and often beneficial; however, it should not cause unnecessary friction that slows both current business and future economic growth [9,11]. Most will be forced to adopt or perish. [17]

Economy strategy*:* In order to prosper one need to do three things, the first being, to simply increase the inflow of revenues by creating product and services to all those consumers and customers that lie beyond our geographic boundary by offering innovative & competitive business products and services to the international market – *inbound money*. The second, to reduce the flow of money against purchase of goods and services from outside our geographic boundary – *negation of the former*, by reducing outside purchases and having homegrown raw materials and stuffs, including control over students and worker

migration – *outbound money*. The third, we increase the speed of circulation and the volume of money within our own geographic boundary by promoting local business, tourism and retailing – *this would increase employment as well*. [9,10,11,14,16,17]

India Initiatives

According to our diagnosis, our submission is; India should invest heavily in education, in primary, secondary and professional – that's the medicine we propose, and the fact that as the world and its activities get networked; a Network Based Economy Model will not only help us to gradually transcend into the 21st century, but would be the window to prosperity – the government must create this infrastructure quickly and network all economic elements and society under one roof.

India needs to deal with three major issues - over population, poverty & unemployment and a constant risk of religious violence. This is a question in real time: How do we solve this problem and resolve issues relating to the same. Solution to this has three levers, First, Education (primary & secondary) is the only reliable vehicle to favor family planning acceptance. Second, only mass education (Professional: vocational, scientific & engineering) can alleviate poverty and solve unemployment, this will help achieve higher & better growth rate. Third, education is the only way to appease religious conflicts - which are increasing and spontaneous.

References

Cynthia G Wagner, *Innovation and Creativity in a Complex world, ISBN 13: 978-0-930242-66-4*

Timothy C. Mack, *Creating Global Startegies for Humanity's Future, ISBN : 0-930242-63-7*

Peter F. Drucker, *Managing in a time of great change, Publisher : Dutton Adult Publication Date : 1995-11-01, ISBN : 0525940537*

Jerome C Glenn, Theodore J. Gordon, and Elizabeth Florescu, *2009 State of the Future, ISBN: 978-0-9818941-2-6*

Jeffrey Sachs, *The End of Poverty – How we can make it happen in our lifetime,* Penguin Books, 2005.

Toffler Alvin, *The Third Wave,* Macmillan, 1981

Toffler Alvin, Future shock, 1970

Kassides Christine, *The Contributions of Infrastructure to Economic Development, World Bank Discussion Paper 213,* The World Bank, 1995.

Lem Lewison Lee, *Promoting Economic Development by Improving Transportation Infrastructure for Goods Movement,* Economic Development Association, US Department of Commerce, 2002.
Tajika Eiji, Yui Yuji, *Social Expenditure and Economic Growth – Sharing Growth in a Japanese Way,* World Bank Institute Working Paper, The World Bank, 2002.

Klerman David M, Legal Infrastructure, Judicial Independence, and Economic Development, *Global Business and Development Law Journal,* Vol. 19, 2007.

Berg, L. van den and Klaassen, L.H. (1980) "The Contagiousness of Urban decline", *Foundations of Emperical Economic Research,* 6, Netherlands Economic Institute.

Pressman, N.E.P 9ed.) (1981) *Creating Livable Cities,* University of Waterloo, Waterloo.

Brotchie J.F. The Future of urban form: the impact of technology, *International council for building research studies and documentation.*

May, G H . (1998). New Technology and urban environment, Leeds Metropolitian University, Futures, Vol. 30, Issue 9, pp 887-899..

Roy D Pea. .Planning for two transformations in education National research Council (US), National academic Press. ISBN 0-309-08954-9 (pbk)

Dunn, J. P. & Preston, H. L. (1991). The Future South (A Historical Perspective for the 21st Century), University of Illinois Press, Urbana and Chicago, ISBN 0-252-01776-5.

Note: *References have been cited collectively in this paper at the end of a paragraph or a topic, as most of the materials are extracts of wide readings and findings selectively picked up to make and arrive at meaningfully designed concepts.*