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Paradigm Shift in Innovation for Business Sustainability: A Conceptual Study

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Abstract: Entrepreneurship, in a very broad sense, has always been at the heart of any firm. For a long time entrepreneurship is constructed in terms of managing small business or being the owner – manager thereof particularly in Indian context. But now entrepreneurship has taken into new shape in the form of Creativity and Innovation. No entrepreneur or enterprise, how successful and big cannot survive without understanding how the modern business operates in this competitive world of galloping change which always creates new problems, risks and opportunities. To, be successful any entrepreneur has to know how the business is going and able to meet the requirements of its customers, understanding its competitor strategies and contribution towards the society. To achieve the above discussed Innovation and Creativity plays as a fuel for both survival and growth of any entrepreneurship business across the globe. The ideas and discussions presented in this paper by the authors are purely conceptual in nature by referring to various literature reviews on the selected title, and moreover the entire data presented is purely secondary in nature.
Keywords: Entrepreneur, Entrepreneurship, Creativity & Innovation

I. INTRODUCTION

Peter. F. Drucker (1985) mainly argued that innovation is the primary tool for entrepreneurship. And, in addition both innovation and entrepreneurship demands creativity. Here, creativity is a process by which a symbolic domain in the culture is changed. Mihaly (1997) Creativity is the ability to make or otherwise bring something new into existence, or bringing a new solution to problem, or a new method or device, or bringing a new artistic object or form.

In general the concept of Innovation has been described by various authors in various ways. Schumpeter who is regarded as the founder of the theory of innovation as: the use of new combinations of existing productive forces to solve the problems of business. (Timur & Kogabayev 2017)

The main aim of this paper is to analyse the concepts and models of innovation and how innovation is the key for any enterprise to be competitive and to be differentiated from other businesses.

A. Main Objectives Of This Paper

1) To analyse the concept and models of innovation
2) How innovation plays a key role in enterprise sustainability.

B. Materials and Methods Used

The methodology used for this study is completely based on theoretical analysis of literature sources related to the innovation and how innovation acts a driving fuel for the success of any kind of business in this competitive business environment. The concept of innovation was explored by studying various research articles published in famous international journals, EBSCO, J-GATE etc., for better understanding the concept. For the assessment of innovation a number of literature reviews has been analysed.

C. Definitions of Innovation

Innovation the buzz word now used frequently in these days – but it is the word which is using repeatedly to the point of meaninglessness. While not going deep hereby providing various definitions on innovation collected. (Eric Shaver) They include:

1) "Something different that has impact" – (Scott. D. Anthony)
2) "Innovation is significant positive change" – (Scott Berkun)
3) "Is the creation and capture of new value in new ways" (LeAnna J.Carey)
4) "Innovation is change that creates new dimension of Performance" (Peter. F. Drucker)
5) " Innovation = Invention + Exploitation" (Roberts, 1988)

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So, from the above definitions we can understand what innovation is, and to my knowledge the term innovation frequently changes from time to time and it is more complex to define what exactly innovation is. For better understanding the concept of innovation there are 3 approaches associated with the term innovation presented in below figure: 1-

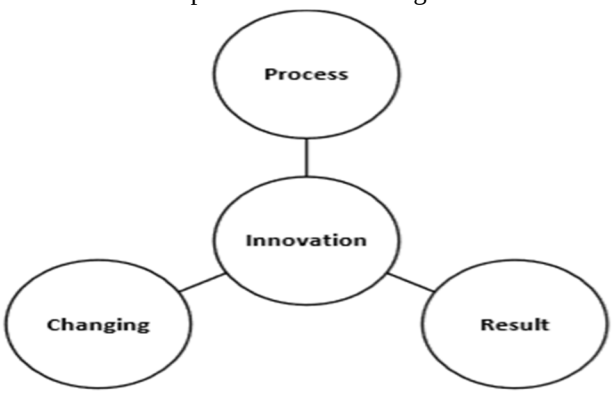

Figure 1: Approaches to the definition of Innovation

Source: (The definition and classification of Innovation (2017): By TimurKogabayev, AntanasMaziliauskas, Holistca, 2017)

II. LITERATURE REVIEW

1) *Morten (2012):* In, this study article the author tried to focus on achieving short – term advantage by exploiting the existing business models. And, to be a successful business it should go for innovate or it should perish. So, this study main objective is to explore how an innovate business model is linked to create a satisfied customer value, and innovation creates and defines new growth opportunities.
2) *Tang, Allieo, Dorzhiev (2015):* In, this paper the authors tried to understand why the businesses generally fail. And, in their study conducted many of the entrepreneurs and management shows do not care attitude in the initial stage of their business. To, understand why this negligence is shown towards their established business is the main problem identified for their study. And, the main objective of the research study is to bring out a clear understanding on the theoretical exposition of the various concepts and issues involved in creativity and innovation, and also to identify how these 2 factors discussed above shows its impact on the influence on any businesses sustainability and its growth. The, final findings revealed that Innovation and Creativity has the capacity to influence the success of any business performance and can drive the growth of an economy.
3) *Adnan Sarkar (2018):* The key to any successful business is its ability to come up with new ideas to stay in this competitive business environment. So, the influx of new ideas into the business on a regular basis is known as the innovation. Innovation is must for any kind of business to be operational and moreover innovation with a slight twist the businesses can be able to create separate identity in the given market conditions. The authors also quoted a famous saying said by "Steve – Jobs" Innovation distinguishes between a leader and follower". SO, Innovation is not only coming up with newer ideas and products and it is more than that by creating new or modifying the business models, and adapting and responding to the changes to achieve better results.
4) *Chalmers Brown (2018):* In, this article which is published in due, the author has expressed his view that innovation is the key for any kind of businesses to survive and grow. As, per the study conducted by PWC, 93% of the business executives believed that "Organic Growth through innovation will definitely create a greater proportion of their revenues". The study also highlighted that even small business firms also teach big business giants about innovation, and how it shacks the business world.
5) *Alfonso & Juan (2018):* In, this article the authors examined the impact of product, process and organizational innovations on two selected dimensions: 1. Finance, and 2. Operations on the business performance. The entire study is conducted among a few sample of Spanish small and medium sized enterprises (SMEs). The study findings revealed that innovation is the key aspect for both selection dimensions of 1 & 2 indicated above, and these 2 dimensions differ regarding the type of innovation and the performance indicator considered.
6) *Jane C. Linder (2006):* The article throws some light on organizations how it recognized Innovation is the key for their survival and growth. This, paper attempted and suggested about the enterprise level measures that reflects the broadest definition of innovation and its value. The, study is conducted with the help of publicly available financial data of various companies, and

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also collected the required information from executives of these companies selected to measure the rate of innovativeness undergone in their company.

7) *Hao Zhang & Others (2017):* This, paper highlighted why some start – up's in china are successful than the established companies. To, explore this question, a study has been conducted among new Chinese start – ups, were selected for the study. The final findings revealed that: 1. Exploratory orientation is in a positive relationship among the new ventures growth, 2. Business models plays an major role in the success of new – ventures in china and, 3. Internet embeddedness how it played a positive role between exploratory orientation and new venture growth.
8) *Economist (2012):* The, entire study report is prepared by the economist intelligent to understand how innovation is the fuel for any kind of business operating across the globe. Most of the companies across the globe struggled with innovation, because it is very difficult to come up with new products, new ideas every time. This report suggested cultivating the mind – set among their executives to promote and encourage innovation. The, entire survey is conducted among 226 executives worldwide. And, all the respondents are primarily divided among North America, Western Europe, Asia – Pacific region, middle – east, Africa, Latin – America and Eastern Europe. The, research findings suggested that it is the companies has to find various ways to increase their business – led Innovation.
9) *Schumpeter (2009):* In, this article the author explained about the main characteristics of entrepreneur, and how entrepreneur combines the available resources in an optimal way. Schumpeter also throws a light on the differences between Invention and Innovation, and also about the capitalism and how it gives rise to entrepreneurship. He also said an entrepreneur may be capitalist or even a corporate manager.
10) *Ibrahim & Others (2019):* The, main objective of this paper is to explain the relationship between innovation and employment growth among the 27 manufacturing firms in and around Africa. The data presented in this paper is a cross – sectional data collected from World Bank enterprise. In this study the concept of innovation is presented in 2 ways: 1. If, there is any positive and negative relationship between employment, innovation and growth. 2. How both the product and process innovation is related with employment growth rate? The final results indicated that clearly that the employment growth is positively related with product and process innovations, and the relationship between the innovations and employment growth mainly depends upon the quality of the business – environment.

III. PROCESS OF INNOVATION

Innovation now has become a buzz word for all the organisations across the globe. There are several ways that the companies can go for innovation process categorized into three: 1. Product, 2. Process and 3. The Business Model Innovation. (Salem. B) In understanding the process of innovation it has to pass number of stages starting from the laboratory inventions and ending with the new products and processes appearing in the market. The major stages involved in the innovation process are presented schematically through Figure 2. The figure 2 illustrates a traditional (linear) model of Innovation Process and Commercialization. The innovation process generally consists of various steps: In beginning with Problem identification/ requirement analysis to idea generation, idea evaluation, project planning, product – development, testing and finally going for the commercialization process. The entire steps of innovation presented above may sometimes overlap with each other.

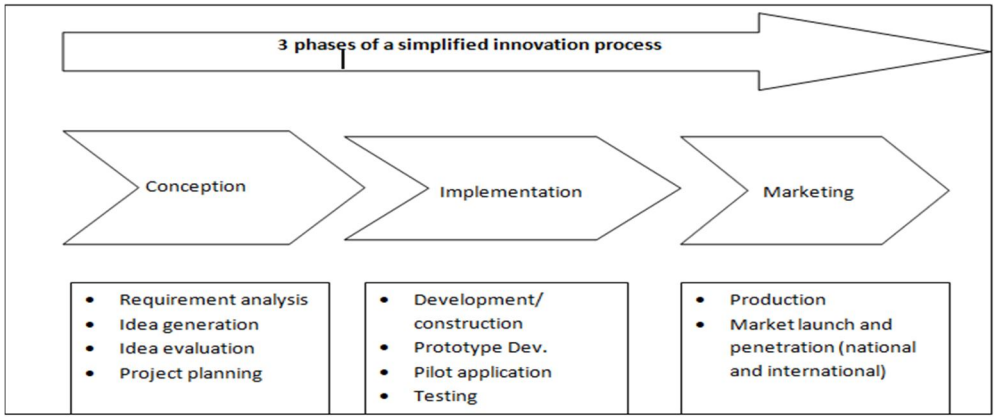

Figure 2: The three phases of a simplified Innovation Process

Source: (The Innovation Process, By Rajnish Tiwari, Global Innovation Net)

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A. *Innovation Models*

Understanding of the innovation process has been evolved over decades from time to time from simpler to complex models. (IPACSO) As, per the article of IPACSO the innovation process can be divided into five generations. Below information presented indicates the list of five generation models.

1) *First & Second Generation Innovation Process Model:* The first generation Push era model represents a simple linear model based innovation structure, shown through this following figure 3. And the second generation can be called as Pull era. The basic distinction between the 1st and 2nd model is rather than concentrating on product – development, new ideas has to be generated to satisfy the market needs.((IPACSO) The 1st and 2nd generation is outlined with the below figures:

Market Need – Development – Manufacturing – Sales

Market Need – Development – Manufacturing - Sales

Basic Science – Design & Engineering – Manufacturing – Marketing - Sales

Figure 3: First & Second Generation Model of Innovation, IPACSO

Source: The innovation framework for ICT Society, IPACSO

2) *Third Generation Innovation Model:* This model was basically developed to overcome the shortcomings of previous linear type model indicated as above. This model strongly believed that innovation is combination of using both science and technology together in the market place. This generation model is in particular non – linear based with feedback loops, consisting of various stages of innovation is shown through the below figure 4.

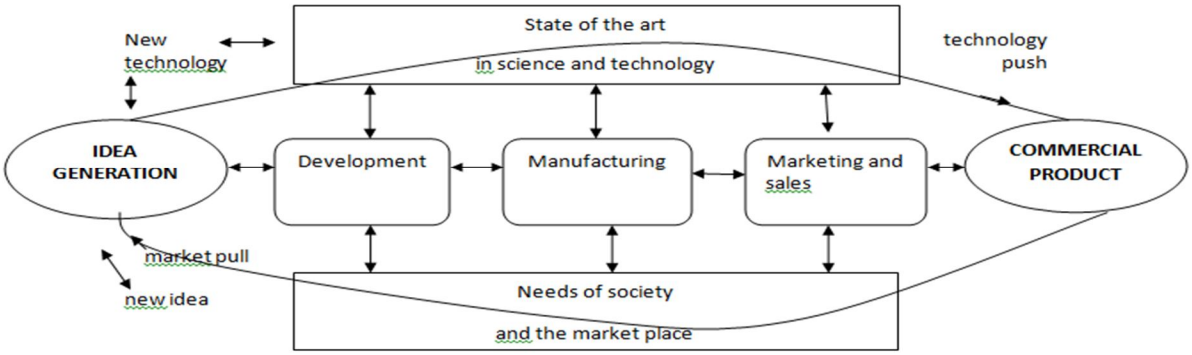

Figure 4: Third Generation Model of Innovation, IPACSO

Source: The innovation framework for ICT Society, IPACSO

3) *The Fourth Generation Model:* This generation model termed as the models of functionality and is characterized largely by development of parallel simultaneous products instead of the sequential involvement mode of the company's departments that are responsible for designing and developing new products. The model is presented in the following figure 5 clearly.

Figure 5: Fourth Generation Model of Innovation

Source: Wiebke & Wolfgang, a Literature Review on Innovation Process

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4) *Fifth Generation Model:* Extending the above models, this model mainly emphasized that innovation is like a distributed networking process that requires continuous changes within and also between the firms which is characterized by external factors. The fifth generation models are characterized by the introduction of ICT systems to increase and accelerate the innovation processes and communications across the networking systems to raise development efficiency and to speed up the market through strategic – alliances shown through the below figure 6.

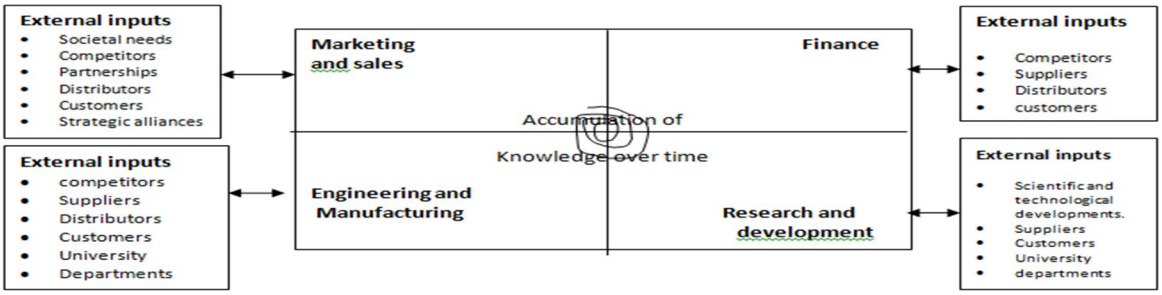

Figure 6: Fifth Generation Model of Innovation

Source: The innovation framework for ICT Society, IPACSO

If, we observe closely all the above generation models, it is understood that the 1st & 2nd generation models were largely criticized because these models were simple, linear, discrete and sequential nature of innovation process. The 3rd model mainly discusses how various business functions interact during the innovation process. The main criticism of this model it does not consider the influence of environmental factors. And, finally discussing about the 4th & 5th generation models are those which are widely accepted and implemented by many firms. But, my literature study revealed that there is no one size that fits to all of the business needs, and when taking from the Innovation perspective it largely depends upon the organisation's policy and ideology, and moreover to understand that innovation process and its implementation differs from organization to organization.

IV. THE IMPACT OF INNOVATION IN ECONOMIC

A. *Development of an Economy*

Studies revealed that innovation is the key indicator for the economic progress of any nation. Due, to innovation it brings new products, new technologies that addresses the global challenges, and innovation creates more jobs and thereby improves the quality of people's lives. (Gerguri) As stated in a research paper written by Torun and Cicekci there is a theoretical exists between Innovation and Economic Growth and this was early discussed by the father of economics Adam – Smith in the late (1776).

Recently, a report has been published by Maastricht Economic Research Institute on Innovation and Technology (MERIT) and Joint research centre both have analysed the scorecard of European Innovation Scorecard (EIS) which is regarded as the instrument to measure the progress of innovation in EU member states. In, this report they included two parameters: 1. Innovation Indicator 2. Trend – Analysis for EU 25 member states plus new two states recently added: Bulgaria & Romania. (Gerguri) The following Figure 7 & Table 1 outlines the summary innovation index and its Trends along with the list of the countries Represented:

S.NO	Innovation Leaders	Followers	Trailing	Catching - Up
1.	Slovenia	United States	Spain	Slovenia
2.	Finland	Belgium	Italy	Czech- Republic
3.	Switzerland	United – Kingdom	Estonia	Portugal
4.	Japan	France	Croatia	Bulgaria
5.	Germany	Netherlands	Hungary	Lithuania
6.	Denmark	Ireland	Malta	Poland
7.		Iceland	Slovakia	Latvia
8.		Austria		

Table 1: Summary Innovation Index and its Trends along with the list of the countries

Source: Source: Maastricht Economic Research Institute on Innovation and Technology (MERIT) and the Joint Research Centre - Institute for the Protection and Security of the Citizen, European Innovation Scoreboard 2006, InnoMetrics, 2006, p. 4.

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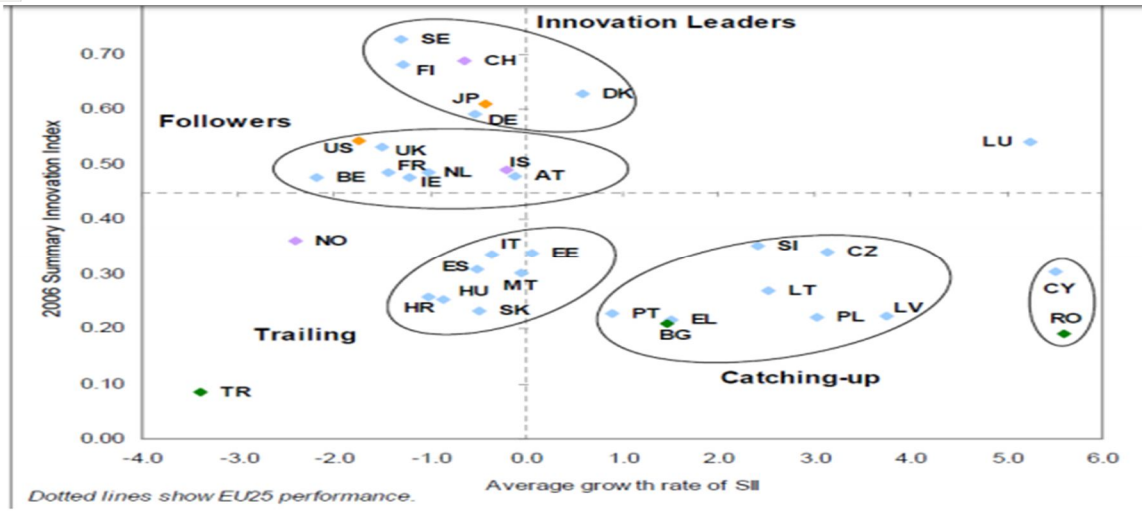

Figure 7: The Summary Innovation Index (SII) and its Trends

Source: Maastricht Economic Research Institute on Innovation and Technology (MERIT) and the Joint Research Centre - Institute for the Protection and Security of the Citizen, European Innovation Scoreboard 2006, InnoMetrics, 2006, p. 4.

From, the above figure 7 it is very clear that on the vertical axis the summary innovation index (SII) is shown, and on the horizontal axis the growth rate of SII is indicated. The Countries that are above the horizontal dotted line are with Innovation above that of EU 25, and countries that are falling to the right of vertical dotted line represents that they have a faster average increase of SII compared to EU 25. If, we summarize on the summary innovation index (SII), the countries can be divided into four clusters shown below through this Table 2:

S.NO	Summary Innovation Index	Details
1.	Innovation Leaders	The countries SII Scores are high that of EU25 and other countries
2.	Innovation Followers	SSI Scores below the countries representing Innovation Leaders, but higher than EU25 Countries
3.	Catching Up Countries	Countries like Slovenia, Czech Republic, Lithuania, Portugal, Poland, Latvia, Greece and Bulgaria where the scores were below of the SSI and well below the EU25, but with faster than the average innovation performance improvement.
4.	Trailing Countries	With SII scores well below that of the EU25 and the innovation leaders, and innovation performance growth which is either below or only just above that of the EU25.

Table 2: Showing the countries divided into four clusters

Source: Maastricht Economic Research Institute on Innovation and Technology (MERIT) and the Joint Research Centre - Institute for the Protection and Security of the Citizen, European Innovation Scoreboard 2006, InnoMetrics, 2006, p. 4.

B. Global Innovation Index 2019

Recently Global Innovation Index (GII) Rankings, 2019 India stood in 52nd position, and jumped to 5 positions when compared to last year and 29 places from last five years from 81 to 52 nd position latest. Coming to the top spot at GII, it is occupied by Switzerland once again and Israel for the 1st time occupied its rank in the first ten countries list at GII. (Shariq-Khan) India has improved its ranking in four out of seven pillars of GII SUCH AS: Knowledge and technology outputs (Jumped to 11 spots to 32nd), Market Sophistication (Up to 3 spots to 33rd), Human Capital and Research (Up to 3 spots to 53rd), Institutions (Up to 3 spots to 77th). But, in contrast coming to Business Sophistication (65th), Infrastructure (79th), Creative outputs (78th) India lost one, two and three spots respectively. (Asit Ranjan Mishra)

The following table 3 shows the latest GII country's rankings for the year 2019:

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S.No	Country/Economy	Score (0-100)	Rank	Income	Rank	Region	Rank
1	Switzerland	67.24	1	HI	1	EUR	1
2	Sweden	63.65	2	HI	2	EUR	2
3	United States Of America	61.73	3	HI	3	NAC	1
4	Netherlands	61.44	4	HI	4	EUR	3
5	United Kingdom	61.30	5	HI	5	EUR	4
6	Finland	59.83	6	HI	6	EUR	5
7	Denmark	58.44	7	HI	7	EUR	6
8	Singapore	58.37	8	HI	8	SEAO	1
9	Germany	58.19	9	HI	9	EUR	7
10	Israel	57.43	10	HI	10	NAWA	1

Table 3: List of Country's along with their respective rankings under Innovation

Source: Article published in Economic Times, on 25-07-2019

If, we observe the scenario of GII the two economic powerhouses like China and India have transformed the geography of innovation and this reflects that the country's respective governments played a key role in framing deliberate policy action to promote innovation. India also stands out in the GII ranking of the world's top science and technology clusters, with Bengaluru, Mumbai and New Delhi featuring among global top 100 clusters,"Co-Published by World intellectual property organisation (WIPO), Cornell University, INSEAD and the Global Innovation Index (GII) published the annual rankings of various countries regarding Innovation.(Shariq-Khan)

The following figure 8 clearly shows Top 3 Economies by Region as per the Global Innovation Index (GII) Report for the year 2019

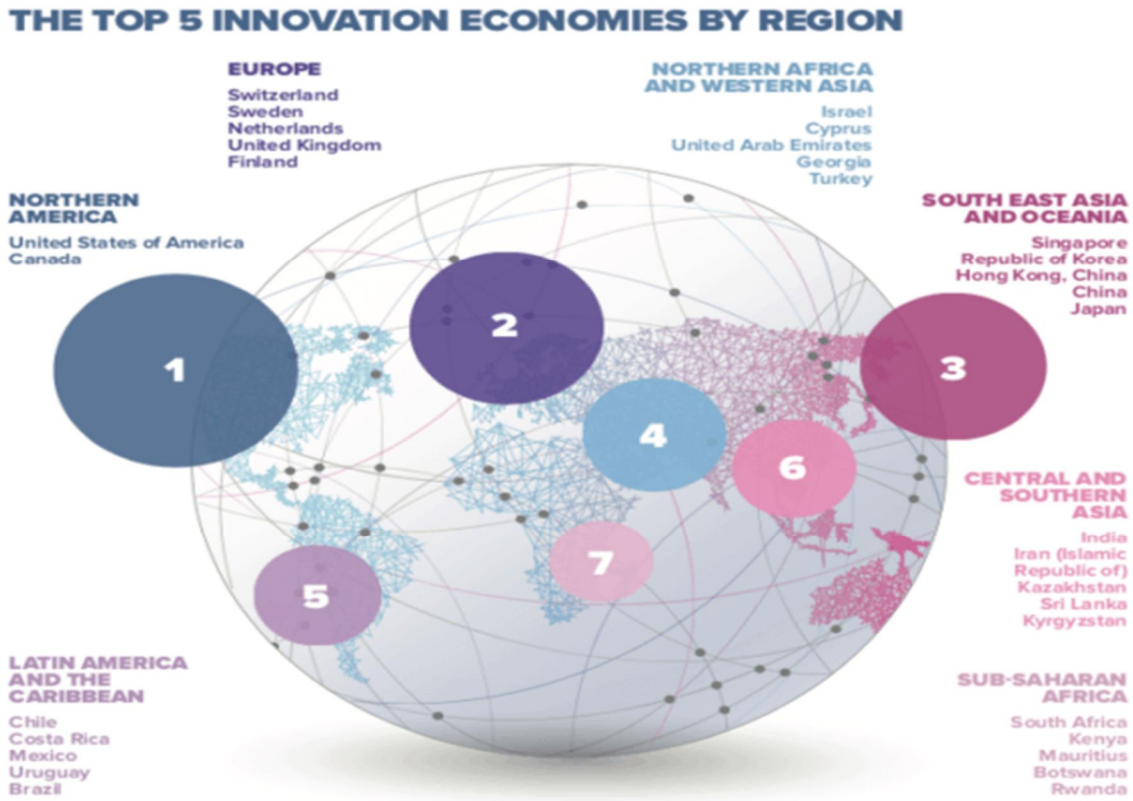

Figure 8: Top 3 Economies by Region as per the Global Innovation Index (GII)

Source: Source: Article published in Economic Times, on 25-07-2019

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V. CONCLUSION

From, the above study for the progress of any economy entrepreneurship contributions and their innovations holds the key. The Innovation generations has clearly shown how innovation has evolved from generation to generation. This paper also clearly revealed that innovation is must for any businesses or the economies to survive and be competitive. Innovation brings new technologies, products and new jobs into the economy helping to boost the one's country economic growth rate. If, we observe the innovation index countries across the globe falling into 4 clusters: Innovation Leaders, Innovation Followers, catching up and Trailing behind innovations. And, recently as per the Global innovation Index rankings once again Switzerland topped the chart from the past few years (Since 2011). The main reason for this is Switzerland is country where almost all of its natural resources have been running down, and the lack of cultivable land drives them to go for continuous innovations and be top from past years. And, coming to India's position in recent rankings it has improved its position by pushing from 81 to 52. Thanks to the various governmental support mechanisms in promoting the entrepreneurial spirit throughout the country. And, to conclude my study innovation is essential for sustainable growth and development. In, this modern world which is constantly changing Innovation is crucial for value creation, growth, and employment.

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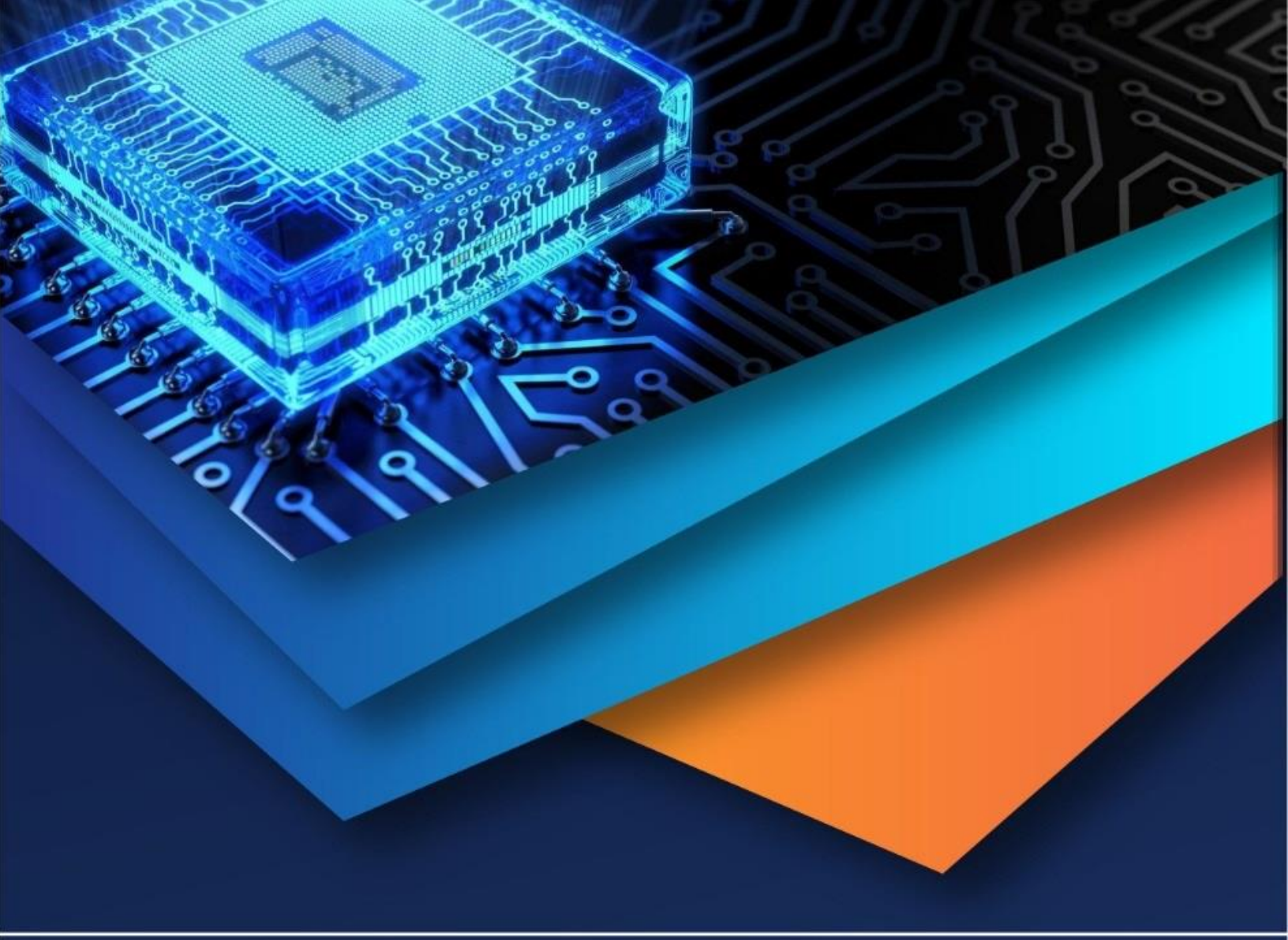

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