

EXPONENTIAL ENTREPRENEURS: ENTREPRENEURS ACHIEVING EXPONENTIAL GROWTH THROUGH DIGITAL TECHNOLOGY AND INNOVATION—A REVIEW

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ABSTRACT

Being an entrepreneur in the digitally connected world is different from what it was 20 years ago. Companies like Google, Amazon, Tesla, WhatsApp etc. have taken less time to grow. 85% percent of Fortune 500 companies listed from 1950's have lost their way. Many companies who have performed very well in the past do not exist today. The business world is changing constantly with rapid adoption of digital technology. Digital technologies have been profoundly changing the ways business function. They have challenged existing business models and giving birth to new business models. The digital technologies have provided platforms for business to connect collaborate and communicate with people. In the next 10 years 40% of the S&P 500 companies are expected to disappear from the list.

Entrepreneurs who think big and adapt the right technology thrive better than others. Entrepreneurship with a blend of technology and innovation creates exponential growth in the form of economic value creation and social impact. Adapting digital technology, thinking big and utilizing crowd power tools are the strategic pathways to create wealth and create an impact upon the world. This new type of entrepreneurs is called "Exponential Entrepreneurs", who are looking to grow bigger by eliminating the incremental or linear way traditional organizations grow. The improvement in digital technology in the form of enhanced computing power, storage and bandwidth is fueling exponential growth of organizations. The organization which has shown 10X (10 times) performance increase than their industry peers are considered as "exponentials", says Salim Ismail, who has studied around 100 companies which has exponentially grown in the last five years. The paper tries to develop a strong conceptual understanding of 'exponential entrepreneurship'. The paper attempts to review what exponential technologies, exponential innovation, exponential growth and exponential entrepreneurs and how digital technology and innovation fosters growth in Indian and International Context.

Keywords: *Exponential Entrepreneurship Growth, Exponential, Digital Technology and Innovation*

INTRODUCTION

Over the past centuries, Entrepreneurship has undergone phases by adopting different approaches. The conventional business entrepreneurs produced goods targeted to customers who could afford and are willing to pay. The products are produced to cater to the needs of the mass customers. Then, entrepreneurs adopted Michael Porter's competitive advantage strategy. The entrepreneurs adopted three generic strategies suggested by porters namely a) differentiate product and sell at a premium price, b) Optimize production efficiency and sell at a lower price and c) serve one segment of the market extremely well. For some time, the above-

mentioned approaches yielded good results. In the next phase entrepreneurs understood the need for strategic thinking and innovation. Entrepreneurs started to think about disrupting the market by bringing in products and services. The entrepreneurs adopted Blue Ocean Strategy with the aim of creating new demand and tapping the uncontested market space instead of competing in the market place. Now, we are witnessing the next phase of Entrepreneurial growth i.e. the digital business. Being an entrepreneur in the digitally connected world is different from what it was 20 years ago. Establishing and running businesses in this digital space means carrying out a kind of electronic commerce by exploiting the internet and other electronic networks.

DISCUSSION

Digital Transformation of Business

The business world is changing constantly with rapid adoption of digital technology such as mobile, cloud, social and big data analytics. Digital technologies have been profoundly changing the ways business operate, innovate and serve customers. They have challenged existing business models and given birth to new business models. The role digital technologies played in effecting changes in business models are categorized under three constructs viz, Automation, Extension and Transformation (Li, 2015) says that any company can use digital technologies to automate its existing activities or process, to support new ways of conducting business to supplement the existing processes and to enable ways of conducting business replacing the traditional ones. Embracing digital technologies help companies to expand into new industries and markets, digitize their products and services, and create a competitive ecosystem and accessing shared resources (Shrimp, 2017). The digital technologies have provided platforms for business to connect, collaborate and communicate with people. The digital technologies have facilitated pervasive changes in business models, specifically in areas such as product offerings, revenue generation, innovation, infrastructure and customer relations (Li, 2015). With the advent of digital technologies, the possibilities of designing and innovating business model throw a lot of opportunities for business firms (Doganova & Eyquem, 2009; Westerlund, Leminen & Rajahonka, 2014).

Digitalization and innovation have become the order of the day. Digital transformation is taking place everywhere. Currency are replaced by virtual money, cameras are replaced by smartphones, maps and atlas are replaced by GPS enabled smart phones, music and books are replaced by e-reader apps, retail stores are replaced by e-commerce companies, class rooms are replaced by MOOCs. The digitalization has changed the fortunes of many companies. 85% percent of Fortune 500 companies listed from 1950’s have lost their way. Many companies who have performed very well in the past but does not exist today. In the next 10 years 40% of the S&P 500 companies are expected to disappear from the list (Salim, 2014). The traditional organizations in the list are replaced by organizations embracing digital technologies and innovation. The improvements in digital technology in the form of

enhanced computing power, storage and bandwidth is fueling exponential growth of organizations.

Exponential Organizations:

The entrepreneurial growth is leaning towards exponential path from linear. The business world has learned to scale technology, but the organizations are still following the same linear path. The question is how to scale the organizations? In the past five years the world has seen the birth of Exponential Organization, proposed first in 2008 at Singularity University, with the mission of helping a person or a company positively impact the lives of a billion people (Ismail, 2015). An ExO is defined as “one whose impact (or output) is disproportionately large—at least 10x larger— compared to its peers because of the use of new organizational techniques that leverage accelerating technologies (Ismail, 2015). These exponential organizations are built upon Information Technologies which blends both the physical and digital world. The exponential organizations make use of the abundant external resources instead of owing and securing assets. Salim Ismail and his co-researchers have studied around 100 companies which has exponentially grown in the last five years and identified the common traits across all the exponential organizations. The organizations have a Massive Transformative Purpose, IDEAS (5 internal attributes) and SCALE (5 external attributes) in common as explained in the table below:

Table 1: Exponential Organizations

Common Attributes	Definition& Examples
MTP	Higher, Aspirational purpose of the organization. Examples: TED – Ideas Worth Spreading Google – Organizing the world’s information Quirky – Make Invention Accessible
IDEAS (Internal Attributes)	Interfaces: ExOs configure interfaces for their external constituents. Example: Uber’s interface with customers and drivers Dashboards: To track and monitor performance, ExOs use real-time metrics and performance -tracking techniques like the Objectives and Key Results methodology. Example: Google Ventures relies on Lean Metrics, Objectives and Key Results to manage 225 portfolio companies Experimentation: ExOs use approaches such as lean production for rapid experimentation and process improvements through fast feedback loops. Example: General Electric implemented Fast Works Program inside organization to stimulate innovation and experimentation. Around 40,000 employees involved in 300 pilot projects.

	<p>Autonomy: ExOs are extremely flat organizations, sometimes with no management layers. Example: Valve: a gaming company with completely flat organization. its 300 employees have full decision-making authority resulting in higher revenue-per-employee number than competitors.</p> <p>Social Technology: File sharing and activity streams drive real-time, zero-latency conversations across the organizations. Example: Atos: Uses Internal networks blue Kiwi to reduce the email load and better conversation.</p>
SCALE (External Attributes)	<p>Staff on demand: ExOs leverage external resources instead of maintaining large employee bases. Example: Procter & Gamble-to check how and where its merchandise is being placed on Walmart Shelves a round the world uses Gig walk platform to instantly leverage thousands of people who are paid a few dollars.</p> <p>Community and crowd: ExOs build and join communities to achieve rapid scale. Example: GitHub - GitHub is an open source developer community with 6.5 million members and 14.2 million repositories. The members rate, review and collaborate on further improvement.</p> <p>Algorithms: As the world turns to big data, ExOs excel in the use of algorithms and machine learning. Example: UPS - 55,000 trucks in UPS's American fleet make 16 million deliveries daily. By applying telematics and algorithms, UPS efficiently reroutes the trucks, saving 85 million miles a year, resulting in cost savings of \$2.55 billion.</p> <p>Leased assets: ExOs access, share or rent assets to stay nimble. Example: Square - The popular square payment device was prototyped at TechShop. The company did not have to buy expensive machinery to build the prototype but could use the assets Tech Shop provided.</p> <p>Engagement: Techniques such as gamification and incentive prizes are core to ExOs' ability to quickly engage markets. Example: Allstate - The insurance company Allstate ran a contest on Kaggle to improve its Claim algorithm. It was bested in 3 days by 107 competing teams. when the contest ended, Allstate's original algorithm had been improved 272%.</p>

Organizations which adopts any four of the above-mentioned attributes can achieve exponential growth (Salim, 2014). Accessing or sharing works better in an abundant information-based world is the key for exponential organizations.

Exponential Technologies:

Exponential technologies are generally described as technologies that generate or evaluate double times data at half the associated cost with it (Friebe, 2017). Exponential technologies could lead to a dramatic change in the way the products and services are delivered. Diamandis and Kotler has conceived 6D's or six phases that an idea, a product, or a technology pass through a "chain reaction" to make a massive impact (Diamandis & Kotler, 2015). The first three D's helps to understand how technologies are changing the business

models and environment. The next three D's are more potent to foster exponential growth. The final three 3D's can make companies obsolete and disrupt industries in short time. Inevitably organizations must embrace technology adoption and change their linear approach towards growth. The table below gives us an idea about the 6D's and how it can foster exponential growth in an organization.

Table 2: 6D's of Exponential Technologies

Six D's Characteristics	Example – Paytm
Digitalization: Product transition from physical to digital	Paytm – virtual money or e-money
Deception: Period when exponential growth goes unnoticed.	Rise in smartphones and mobile internet usage fueled use of e-wallets like Paytm
Disruption: Follows deception, disruptive technology is any innovation that creates a new market and disrupts the existing one.	Paytm has disrupted the payments industry with technology and innovation.
Demonetization: Removal of money from the equation.	Enabling merchants to accept money directly into their bank accounts using Paytm QR codes.
Dematerialization: Vanishing the goods and services themselves.	With one Paytm account you can do a lot -Payments Bank, Shop, Pay Bills, Mutual Funds, and Insurance etc.
Democratization: Goods and services become cheaper. Becomes accessible and available to everyone.	A. Mobile Internet becomes cheaper, Transaction cost becomes cheaper. Faster and reliable instant payments backed by UPI, Aadhar Based Payment Systems etc.

The technology is exponential, but organizations and humans are linear says the authors. The average half-life of a business competency has dropped from 30 years in 1984 to 5 years in 2014 (Ismail, 2014). Emerging technologies like 3D Printing, Additive Manufacturing, Industrial Robots, Drones, Solar Energy, Sensors, Neurotech, Nanotech and Biotech etc. are in the exponential growth curve. These technologies are expected to disrupt many industries and accelerate growth. Companies like Google, Amazon, Tesla, WhatsApp, Paytm etc. have taken less time to grow faster.

Exponential Innovation:

Improvements in digital technologies are fueling exponential innovation. The disruptive potential of exponential technologies is amplified when they interact

and combine in innovative ways (Hagel *et al.*, 2013). The cost of the computing power, storage and bandwidth relative to their performance has been decreasing exponentially. The increase in affordability of smartphones, wireless networks and platforms to connect and interact with customers are providing opportunities for organizations to innovate. These technologies coupled with open platforms and ecosystems reduce the investment and lead time required to drive the wave of innovation. Technology alone is not enough to succeed; it must be complemented by innovation. There are plenty of entrepreneurs from different industries who have grown exponentially or trying to grow exponentially but the journey is not so easy. Trend sensing, ecosystems, experimentation, and edge scaling are the key drivers of exponential innovation (Hagel *et al.*, 2013). Adapting the right technology and enhancing the innovation capabilities are crucial to become an Exponential Entrepreneur. Entrepreneurs who think big and adapt the right technology thrive better than others.

Exponential Entrepreneurs: Entrepreneurs achieving Exponential Growth

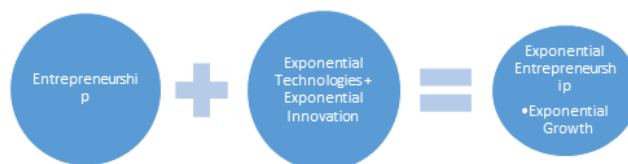
The new type of entrepreneurs called “Exponential Entrepreneurs”, are looking to grow bigger by eliminating the incremental or linear way traditional organizations grow. Entrepreneurs wanted to grow exponentially by offering products and services which can be better, cheaper and more customized simultaneously (Exponential Organisation, 2016). The top 100 organizations who have achieved exponential growth have used the crowdsourcing, crowdfunding and cloud solution to scale quickly. The successful exponential organizations are from different industries ranging from software, hotels, travel, webhosting, health care, automotive, hospitality, e-commerce, retail, banks, property, media, telecom, education, smart phone makers etc. (Ismail, 2014).

Exponential Entrepreneurship

Entrepreneurship with a blend of technology and innovation creates exponential growth in the form of economic value creation and social impact. Adapting digital technology, thinking big and utilizing crowd power tools are the strategic pathways to create wealth and impact world (Ismail, 2014). The three stages of exponential entrepreneurship are therefore an adoption of exponentially growing technology, utilization of advanced psychological strategies and harnessing of "crowd-power tools" that allow companies to organize

and communicate with their target audiences more effectively than ever before (Kotler & Diamandis, 2015).

Fig 1: Exponential Entrepreneurship



Entrepreneurship blended with adoption of exponential technologies and innovation will grow exponentially. Such entrepreneurial ventures impact billions of people and provide solutions to biggest problems around us. Finding solutions to the problem's paves way to exponential entrepreneurship.

CONCLUSION

Entrepreneurship is a buzzword. Entrepreneurship is driven by various factors such as business opportunities, access to finance, entrepreneurial culture, digital ecosystem, digital skills and knowledge base. In India, we have Entrepreneurs from chaiwala to a tech-savvy individual. But we have not seen entrepreneurs who have scaled their ventures. Indian entrepreneurs should look at exponential growth rather than incremental growth. The biggest problems around us viz. climate change, sustainable agriculture, cultural diversity, responsible consumption, reducing inequality and preserving natural resources opens tremendous business opportunities. Finding solutions to the problems which can impact lives of billion people paves way to exponential entrepreneurs. The future growth of entrepreneurship lies in the adoption of right technology and innovation. Still we are in nascent stages of technology adoption and innovation. An attempt is made in this paper to understand the exponential entrepreneurs. The scope for future research is to explore exponential growth capabilities of Indian organizations.

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