

Managing Innovation and Entrepreneurship in the New Normal – Are Grass-roots Innovations the Key to Future Sustainability?

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Abstract

The COVID-19 outbreak, turned pandemic, has forced the whole world to face a new reality. The pandemic has not only created a huge health crisis affecting billions of people but also has had a catastrophic effect on businesses and innovation which has traumatized the global economy. This paper aims to identify the challenges and dynamics to demonstrate the role of grassroots innovations in times of adversity. If provided with equal opportunities, funding, and support from the government as well as the general public, it is postulated that grass- roots innovations and their innovators may as well turn out to be unsung heroes during the current situation where the financial balance in the nation is need of the hour.

Keywords: *grassroots innovations, emergent economy, crisis, pivoting business, entrepreneurialism*

1. Introduction

The COVID-19 outbreak has brought about prodigious changes across sectors sabotaging the existence of various industries around the world. According to a news article in „The Economic Times“, India's April-June quarter GDP contracted by a massive 23.9% year-on- year (YoY) making it the first GDP contraction in more than 40 years and the month of March experienced the highest unemployment rate in years i.e., 24%.

While e-commerce businesses soared to great extent, the restaurant, hotel, tourism, and sports industries were out of capital. For example, Amazon, Byjus, Zomato, Netflix, etc. expanded their territories while PVR, OYO, etc. saw a decline in their market and brand value. Then there are emerging sectors exemplified by the hygiene and pharmaceutical industries which have gained prominence during the crisis. For example, before the pandemic, there were only a handful of brands of sanitisers, however today it is a product that the masses, cutting across economic and geographic divisions, are aware of. The local vendors or shop-keepers suffered huge losses whereas the small businesses working on technological factors didn't face worse situations. This highlights the need for a shift in the regular working models. In the second quarter of 2020, cloud-IT infrastructure investments increased by 35% year on year (Linz,

2020). The future requires more dynamic changes than simply applying digital technologies to what we have always done, faster and cheaper.

As a result of this crisis many institutions have been shedding talented and well-skilled employees, perhaps this will encourage more people to take on the risks associated with entrepreneurialism when an opportunity shows up, rather, is created (De Cuyper et al., 2020). This change has been observed in local spaces for now as people started new ventures after losing regular jobs. For example, garment manufacturers have begun producing masks and other things, local people started fruit and vegetable businesses. There is an ever-increasing surge in creativity, but what is needed is the right platform to turn creativity into innovation.

Managing innovation and entrepreneurship in the new normal environment is no gag but one way to look at it is to not look at the changes that we are faced with but perceive this as the new landscape and apply adaptive nature and innovativeness to rediscover solutions and construct an emergent economy.

2. Literature Review

A 'New Normal' environment for business and innovation has emerged in the years after the 2008 financial crisis based on numerous changes in the world's economical, technological, demographical, and socio-political factors (Ahlstrom et al., 2020, 411-437). Situations have transformed no matter what geographic boundaries are considered. This crisis has changed the associative relationships between countries and states, presenting fresh encounters with diverse circumstances, new stakes, new risks, new threats (health and climate). This crisis will widen the gap between winners and losers. Temporary management is not deliberate and hope is not a business model, therefore the time has come to reinvent and not depend upon the cliché techniques. To quote Peter Drucker, “The greatest danger in turbulence is not turbulence; it is to act with yesterday’s logic.”

Business experts from Salesforce presume that the regular 9 to 5 work model will not be effective post-pandemic (Hartmans, 2021). The company has even laid down new guidelines which offer employees three options for how they would be able to work: flex, fully remote, and office-based. New start-ups and entrepreneurs have been more opportunistic during the pandemic, pivoting their businesses and redirecting already existing knowledge, skills, people, and networks to new needs that have emerged, e.g. producing and selling face masks and shields to local taxi start-ups turning into grocery delivery companies, the nature of innovation is often incremental but at the same time essential for survival.

Grass-roots Innovations (GI) are dynamic, relational phenomena that evolve with grassroots innovators' beliefs, expectations, resource availability, and the desire of the innovator to produce novel and beneficial products (Joshi et al., 2016, 399-409). Grassroots innovation can be aimed at fostering inclusion as a process (e.g., fostering participation in the design of technology), as an outcome (e.g., providing services for marginalized groups), or even endeavour to produce structural change (e.g., enabling broad and diverse participation in the shaping and priority-setting of policies and institutions oriented to promoting science, technology, and innovation, STI) (Fressoli et al., 2014, 277-292).

The People's Science Movement, operational since the 1960s aims to popularize science and scientific outlook among people which lays the foundation for more innovations by local people. The National Innovation Foundation was established to search these grass-roots innovators and help them to commercialize their ideas into products. The Government of India, in the 2021-year budget announced 50 thousand crores for the National Research Foundation (NRF) to strengthen innovation in India and make the country independent under the „Aatmanirbhar Bharat“ scheme (Basu, 2021).

According to National Innovation Foundation (NIF), India is a Frugal (turns constraints of limited resources into a competitive advantage) Innovations leader. It also states that rural India is a hotbed of innovations, they come from the bottom of the pyramid and have powerful connotations. Dr Anil Gupta, a retired professor at IIM Ahmedabad is the father of Frugal Innovation in India. He has helped some of the innovators to make sales across all the continents. He has started the Honey Bee Network (HBN) – a volunteer-based network that seeks innovative ideas produced at the grassroots level by individuals and communities and disseminates them to the wider ecosystem. Some innovations backed by these organizations, randomly chosen by the researcher include Natural Non-Stick coating for pans, herbal medication for poultry, solar power silk reeling machine, water lifting pump, Mitticool fridge, Venus portable washing machine, etc. (National Innovation Foundation, n.d.).

3. Research Gap

Although the challenges faced by grassroot innovators are generalized in this paper, it is strenuous to identify the exact difficulties that are encountered by them. India is a country with a large informal sector having minimal access to policies and schemes formed for the development of Indian Innovation. This limits the boundaries of the research conducted for identifying the risks associated with grassroots innovations. According to a survey done by the researcher to study people's response and views about grassroots innovations, it has come

to light that as much as 57.7% of people who recorded their responses didn't know what grassroots innovations were and about 38.5% didn't know about the existence of the National Innovation Foundation. People belonging to a developing country like India should be equally aware of innovations and opportunities in India as they are about the global trends but it turns out they are not. This also serves as another reason why this study on grassroots innovations is essential.

4. Research Objectives

1. To identify the contribution of grass-roots innovations in strengthening the economy post the pandemic.
2. To determine the opportunities and challenges in developing low-cost solutions for problems faced in day-to-day lives.
3. To study the social, political, economic, and environmental factors that affect the growth of grassroots innovations.
4. To analyse the effect of the COVID-19 pandemic on women innovators/entrepreneurs.

5. Research Methodology

The research is based on an amalgamation of primary as well as secondary data analysis. The primary data is collected through a personal survey consisting of a questionnaire by the researcher to obtain the view of people about grassroots innovations using google forms. The secondary data analysis emphasizes the contribution of grassroots innovations in managing the economy post-pandemic. The data has been collected through websites such as the World Economic Forum, National Innovation Foundation, Honey Bee Network, etc., and daily newspapers and books.

6. Scope of the Study

The scope of this study is limited to understanding the challenges and opportunities for grassroots innovators in India belonging to all age groups from the perspective of innovators as well as the consumers of the products i.e., the general public.

7. Data Analysis and Interpretation

COVID-19 crisis brought with itself huge demand for medicines and clinical equipment, this created opportunities for medication-based companies to rise (small as well as large scale). E.g., Serum Institute of India has been the global producer of vaccines to date. Factories that were shut down due to lockdown became operational again only this time manufacturing masks, PPE kits, ventilators, etc. to secure their existence.

Table A: Frugal innovations during the COVID-19 pandemic in India.

| Innovation | Use | Innovator(s) | Cost/Efficiency |
|-------------------------|--|--|--|
| Automatic Mask Machines | Eliminate the import of N-95 masks due to shortage. | Engineers from NIT, IIM Calicut, and a start-up from Bengaluru. | Around 40% cheaper. |
| Ruhdaar – ventilator | Low-cost ventilators for the urgent need in hospitals. | Engineers at Design Innovation Centre (DIC) & IIT Bombay students. | Around Rs 15000 |
| Low-cost PPEs | Solves the ventilation issues of the PPE kits. | A doctor in the Indian Navy | Made of a special fabric with high breathability. |
| Advanced washbasins | Feet operated hand-wash machine | Jammu and Kashmir police team | No physical touch to basins to avoid the spread of the virus. |
| COVISAPE | Transportation of Covid-19 patients | Doctors in Nagpur | Box that is airtight and filters the air that comes out when the patient breathes. |
| Sanitizer Tunnels | Organic disinfectant tunnel on the road | A nodal officer from Chikballapura | Built-in just 2 days with local material |

Source- (Varude, 2020)

Table B: Identifying people's mind-set and knowledge about grassroots innovations.

| Questions | Answers | | |
|--|---------|-------|-------|
| | Yes | No | Maybe |
| Do you know what grassroots innovation is? | 42.3% | 57.7% | - |
| Did you know organizations like NIF & GIAN exist to support innovation locally? | 61.5% | 38.5% | - |
| Would you mind switching to local products? | 50% | 0% | 50% |
| Do you ever think of starting a start-up or have an idea for innovating something? | 53.8% | 3.9% | 42.3% |

Source - Personal survey

Table C: Classification of the views and suggestions of people about grassroots innovations and entrepreneurialism.

| Question | Answers (most common answers explained shortly) |
|--|---|
| How would you contribute to support grassroots innovations? | Suggest these products to friends and family by explaining the advantages we experience. |
| What do you think makes the products manufactured „out-of-India“ much more recognized than local brands? | Quality, service, support post-sell-out, marketing strategies, better results, product positioning, people's fantasies about using globally famous products, capital power of the company, etc. |
| Any suggestions for local inventors? | Maintain originality, innovate according to the needs in India, try to collaborate with other inventors, use quality material, improve marketing strategies, and don't try to give too much quantity in exchange for quality. |
| Challenges that stop you from trying innovation? | Proper planning, finance, human resource skill sets, lack of confidence, support and funding, etc. |

Source - Personal survey

The data in **Table A** reflects that people were operational by innovating low-cost solutions for the new problems during the pandemic. These innovations have made India's fight against COVID-19 robust.

Table B data indicates that most of the people are unknown about organizations like NIF, GIAN, and HBN. For these organizations to reach people in every nook and corner of the country, a proper marketing strategy should be adapted. It is also noted that people want to explore and innovate. It is estimated that people would recognize local innovations in the future.

From the data in **Table C**, it is evaluated that people expect quality, originality from the grassroots innovators and it depicts all the challenges faced by the people thinking of a start-up.

8. Contribution and Conclusion

Many people think that India does not produce any innovations (*Eranki, 2015*). The imagination of the Indian mind to extract the maximum with minimal investment is the ingenuity of Indian Innovation. India's Mars Mission is a shining example of the above-stated

attribute. It is one of the most innovative countries in the world. In recent years, the country has been able to evolve from a position of technology borrower to a role that of a technology innovator. E.g. Unified Payments Interface (UPI) was created by the National Payments Corporation of India. Although why people still don't recognize the power of Indian Innovation is indefinite and this serves as a limitation for the research to be continued. The traditional Indian practices didn't allow women to work, these beliefs still have their roots in some rural areas and even in urban India, although this has been changing for years. For example, there are around 2,00,000 women 'sarpanchs' or heads of the village as of today, relatively a lot more than what it used to be 10-20 years back (*Sakal Times, 2021*). This gender bias restricts women from exploring the real world, brainstorming to find solutions due to lack of exposure and experiences which results in less creativity as compared to what it shall be. Though there are organizations supporting women's development, they are not enough as India is a country with a whopping population of 1.3 billion of which 48.5% accounts for females (*Census 2011*). Schemes like „One Stop Centre“ that provide women with basic facilities, great opportunities to become financially independent have to be built so that a woman instead of being a victim of domestic violence, assault, and harassment, be an independent person with the confidence to innovate new things. India being a developing nation, still has to adapt to certain lifestyle changes to support grassroots innovations. Innovations are of utmost use when accepted by society to bring reforms to the age-old customs. But the question here is, 'Are the people of India ready to accept and support local products and technology?'

Entrepreneurs can change the view of the economy in the coming years. Solution development should be co-created with the users to get a better understanding and avoid failures due to misconceptions. Innovators should always start with a problem, not technology. E.g., Civil – a company that aspires to end the decline of newspapers using crypto-currency. While Civil's intentions were clear, why crypto-currency was needed to save the newspaper was unclear and therefore, its initial coin offering stalled. Solutions should be developed without looking at the pre-existing solutions available in the market. Data Analytics and Artificial Intelligence have proven to be a boon for industries and frugal innovations exemplified by Smart Agriculture set to determine the fertility levels of soils. AI cannot replace creativity and problem solving but rather eases the workload. Frugal innovations don't mean they are cheap, rather we can say they are affordable qualitative products. While these innovations require a lot of support to gain global recognition, they

prove to be advantageous in the following ways: affordable, eco-friendly, efficient, economy stays within the country, innovators gain recognition.

Challenges that innovators face are determined to be: Lack of support, finance, confidence, human resources, etc. People should be fortified to innovate new things by their peers. Criticism not only daunts their creativity but they often lose confidence. Remember Akshay Kumar's character - Laxmi Kant from the movie Padman (2018) based on a social activist Arunachalam Murugantham. He had to face harsh criticism from society for trying to produce low-cost sanitary pads. In times of COVID-19, the financial status of people is already shaken, with this they don't need to face dismay on trying to fashion innovative things. It has taken years for Indian society to partially smash this patriarchy and so-called communalism which acts as the barrier between people and development. Therefore, open-mindedness both of the innovator and the consumer plays an important role in the expansion of grassroots innovations. Despite facing these challenges many innovators have risen to great heights in the past and so will, in the future.

9. Scope for Further Research

The contribution of frugal innovations would help to reimagine a stronger economic future as it is historically proven that lack of basic facilities like electricity, healthcare, education, safety, job security, etc. and/or desire are the major factors that lead to the development of innovative solutions. Student's Educational and Cultural Movement of Ladakh (SECMOL) -a campus running on solar energy with no use of fossil fuels for cooking, lighting, or heating is designed by Sonam Wangchuk (an Indian engineer and innovator with 400 patents) with a group of students. This is an example of how powerful and efficient grassroots innovations can be today as well as in the future.

War not only destroys but also creates opportunities for those who are resilient and keen to build (Bagaria, 2020). Napoleon Hill in his book 'Think and Grow Rich' quotes: 'Desire is the starting point of all achievement.' Some of the most successful and interesting companies have been created in times of a crisis, so this means, there are great opportunities for great leaders with the primary requirement being 'Desire'.

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