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CSR FUNDS: FUELLING VENTURE PROTOTYPES

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Abstract

Over the last few years, the phenomena of trying out new concepts while coping the entry barriers in the market has generated the need of easy access to smaller bits of funding. While trending options of financing like crowd funding, start-up capital, strategic partnerships and angel investments do solve this problem of access to an extent but the need of smaller proportions of funds stay untapped. Moreover, there is an opinion that seed funds in small amounts may work out as alternate option easing out complex processes of attracting investment at the very initial stage of concept proofing and prototype creation. Another emerging option for divesting in start-ups under academic incubators is through funds under corporate social responsibility. For this, corporate social responsibility (CSR) and academic incubators bring important opportunity to develop prototype for an innovative idea. Subsequently, both have a potential to create fund for new start-ups and ventures. Corporate social responsibility funds divestment in the lieu of Companies Act (2013) under section 135 has been defined by Ministry of Corporate Affairs (GoI). Companies which are eligible for CSR funding would be restricted to set aside 2% of average net profit that would generate during the last three financial years from. The regulatory influence of the aforesaid restriction would be impactful on various activities which can fall along the policy.¹ Apart from activities related to social cause as per the focus areas notified, CSR funds can also be channelized to technology incubators located within academic institutions to further extend support to start-ups based on experimental allocation. In this regards, the earlier studies could not provide sophisticated and concrete overview on role of seed fund in start-ups in Indian context. Therefore, the prime aim of the present study is to highlight alternative like seed fund to channelize available funds while judging credibility of the start-ups based on review of literature. It also emphasizes on importance of such alternative may be taken as initiative to boost start-ups growth. It provides the overview of conducted an event (as training) on prototype stage start-ups and micro seed funds at Entrepreneurship Development Institute of India. It identified 16 prototype state start-ups which have received micro seed funds under Gujarat CSR Authority. Finally, it also suggested a viable model to create new ventures and start-ups through prototype activity in India.

Keywords: *Prototype development; Seed fund; New product development; CSR funding, etc.*

1. INTRODUCTION

India as one of the fastest growing economies has come a long way as part of its business journey. It has got advantages of an emerging cost competitive destination with a large pool of human capital (GEM India Report, 2015/16).² As per the NASSCOM report (2016), Indian start-up ecosystem is maturing, with next 2-3 years seeing rationalization and sustainability. This rationalization in ecosystem can be defined by alteration in focus, realigning the funds and strategy and thereby developing sustainable roadmaps. The government over the time has been implementing policies for the promotion of the small businesses which included giving concessional credit; training in entrepreneurial development, market assistance etc. (Sanghi & Srija, 2016). In India, entrepreneurship led economic growth is inclusive, as both centre and state governments took initiatives like 'Start-up India' to promote entrepreneurial practices. Economic development of the country would get significant incentive and

¹ <http://finance.bih.nic.in/documents/csr-policy.pdf>.

² <http://www.gemconsortium.org/country-profile/69>.

greater benefits from entrepreneurship ecosystem in several ways such as creation of employment opportunities, to increase money flow in market, to make India as innovative, utilization of existing technology to develop new goods and services, to increase quality of products in manufacturing industries, infrastructural development etc. (Chowdhry, 2015). The government has introduced the policy framework to enable ecosystem for innovations to achieve several objectives in near future. The initiatives –Make in India (2014), Start-up India, Stand up India campaign (2015), Digital India (2015), Start-up Policy Action Plan (2016), etc. In the start-up enabled ecosystem the path of an entrepreneur starts from conceptualizing an idea to developing that into a viable business model that is ready for commercialization (Sanghi & Srijia, 2016).

Existing studies have identified different stages (e.g., growth, idea, lunch and prototype) of start-ups. Furthermore, seed fund, angel fund, bootstrapped, debt fund and venture capital are the key funding pattern of start-ups. During the process of venture creation, once the concept proofing is completed, the stage of testing the prototype of the proposed idea commences. This process consists of stages as mentioned as business opportunity identification; evaluating the idea for market acceptance and technical feasibility; developing brief profiles on tested concept; and development of business plan ready for pitching and commercialization. As per the current scenario in India, multiple options are available to facilitate seed funds to start-ups through incubator funds, state policy funds and bootstrapping. The major support of funds arises when the product is launched in market and start-up is looking for the scale of operations or expand product basket. A majority of the venture creation based research has been on the concept of identification of opportunities (Stevenson and Sahlman, 1989).

In India, several agencies have estimated the numbers of start-ups and ventures in various fields based on their own angles. However, these agencies do have unanimity in the number of start-ups and ventures in India. It is obvious that each agency follow their own definition to decide whether a venture would be considered a start-up or not. Report published by NASSCOM (2016), indicates that India has 1400+ technology based start-ups, further it argued that tech-start-ups would grow by 8-10% per annum in the near future in India. Prototyping is something which may be useful for developing a product. Product development and prototyping includes enormous cost in technology based start-ups. Therefore, it is a very difficult task to bootstrap as product development with minimum cost. In addition, private equity would be another challenge because concept proofing requires prototyping which adds to increase in cost. However, prototypes play a significant role in a various aspect of a venture, which can be given as:

- a. It provides strength to team while exploring various concepts to develop business ideas.
- b. It is helpful to avoid the technical uncertainty in a new venture which manufactures goods and services.
- c. Prototyping is essential to communicate and provide financial support to various stakeholders which are involved in new venture creation.
- d. It also increases the in-depth understanding towards product development and product requirements.

Based on aforementioned information, it can be argued that prototyping is a prime tool for innovation which might be useful to develop a new product or to create an idea in an early stage of business (Elverum and Welo, 2014). Hence, prototyping is an essential process in a venture which is keen to introduce new products in market.

2. SCOPE OF THE STUDY

This paper covers the initiative taken by Gujarat State Seeds Corporation Ltd through CSR initiative promoted by Gujarat CSR Authority. Under the support extended, the ventures registered themselves as private limited or limited liability partnership using part of the funds. Conducted literature and online surveys review shows that the access to finance is still one of the main obstacles for doing business and such gaps can be filled by other/alternative resources (Rupeika-Apoga Danovi, 2015). Major quantum

of initial funds requirements suffice for the readiness for integration of various functions of venture creation. Further, the process of attaining credibility in the market, adhering to minimal legal compliance and scanning the entire structure so conceptualized in accordance with market, technology and financial strength of promoters (Talaia et al., 2016). With much awareness and availability of advanced information resources to majority of promoters regarding demographics, broad market trend, technological advances, the process of charting out strategies and allocate resources accordingly becomes easier and faster. With this, the start-ups with clarity on value deliverable are in better position to prioritize expenditure and need of funds.

3. BACKGROUND

Growth of start-ups/ new ventures is directly and indirectly impacted by equity capital acquisition. Capital acquisition is also considered as crucial determinant to boost the launch and sustainability aspects of start-ups and ventures (Hustedde and Pulver, 1992). High innovative capability of a start-up is also an indicator which may be useful to increase growth pattern of start-ups (Venturelli and Gualandri, 2009). It has been empirically proven that higher technology based firms or start-ups have greater success as compared to low-technology based firms (Colombo et al., 2010). Existing researchers have also emphasized that appropriate financial capital accessibility is also a crucial source to create new opportunities in newly oriented start-up or venture (March and Simon, 1958; Bourgeois, 1981; Zahra, 1991; Stevenson and Jarillo, 1990). Furthermore, financial accessibility would be essential to sustain the economic activity of new venture for a longer term. Therefore, it may be suggested that securing early-stage equity financing would be useful for further growth and performance of the start-up/new venture (Cassar, 2004; Wetzel, 1986; Mason and Harrison, 2000). Few studies have also observed that in order to attain the requirement of outside capital, prototyping would play a key role for validation of new ventures including business plan, opportunity cost, market viability, consumer sophistication and appropriate business environment (Alsos et al., 2006). Hence, it is clear that creation of new venture or start-up depends upon various indicators and economic activities in an economy. Hence, the present study is attempted to identify the key determinants of new venture/start-up in Indian context based on selected start-ups. The study would provide few policy suggestions to enhance new ventures in India.

4. CONCISE REVIEW OF LITERATURE

Extensive studies have provided the role of prototyping in creation of new venture/start-ups in developed and developing economies (See Delmar and Shane, 2004; Samuelsson and Davidsson, 2009; Davidsson and Gordon, 2012; Moroz and Hindle, 2012; Becker et al., 2015; Kuratko et al., 2015). These studies have also presented several processes which would increase the number of ventures in an economy. Creation of new venture and start-ups is trending and crucial research topic for most of the economies (Aidin, 2015). It is also essential to assess the factors which have positive relation with newer start-ups. Some researchers provided the ways in which prototyping would be more useful to get greater benefit during product development process. As per literature review, prototyping increases the quality and design of a product in a manufacturing unit. Thus, prototyping is a significant measurement and verification tool for further development process of product in a venture. Thereafter, commercialization possibility of an idea may be ready in market. Hence, prototyping may be useful to increase the commercialization possibility of an innovative idea. Also, prototyping is an essential component to search easily accessible material, physical form of raw material, possible way to use available material in mechanical process and appropriate way to obtain optimum output in a venture. Productivity, efficiency and effectiveness of a venture may be increased through prototyping. In this section, the brief summary of few studies are given, which may be useful to increase more understanding on prototyping and benefits in a venture. Kuratko et al. (2015) provided the conceptual framework on existing premises which may be useful to create a venture or start-ups. The study provides eight premises such as venture financing, corporate entrepreneurship, social entrepreneurship and sustainability, entrepreneurial cognition, women and minority entrepreneurs, global entrepreneurship

movement, family business, and entrepreneurial education. These premises would be imperative to develop a start-up or venture through prototyping in a country.

Samuelsson and Davidsson (2009) reviewed the process which may be useful to create a venture, the model of Samuelsson and Davidsson's (2009) study was based on earlier study which was undertaken by Katz and Gartner (1988). These studies mentioned three important activities i.e. legitimacy structuring, relationship forming and resource acquisition power to develop a new venture. Delmar and Shane (2004) also presented aforesaid arguments to create a new venture, which were produced by Katz and Gartner (1988); Samuelsson and Davidsson (2009). Davidsson and Gordon (2012) formulated an empirical model to identify crucial determinates of new venture. Findings of this study were based on panel data investigation and imply that budding capacity of entrepreneurs, precursors and socio-economic characteristics, and technological process were the key determinants of new venture. Becker et al. (2015) provides an integrated view of a dynamic multi-stage model to create new venture. The study included extensive theories with regards to entrepreneurship, funding creation, opportunity, etc. Moroz and Hindle's (2012) provided the significant difference among the four types of entrepreneurial process (i.e., static framework, stage and process models, and quantification sequence models). Above literature provides the important perspectives which are essential to create new venture. The present study provides the brief overview of selected start-ups as new venture in Gujarat state of India. It also suggested a viable model to create new ventures and start-ups through prototype in India.

5. THEORETICAL FRAMEWORK AND BRIEF OVERVIEW OF SELECTED START-UPS

With the advent of providing support in terms of tapping resources and mentoring through the stages of concept development, a minimal amount of financial support in order to meet the costs such as pilot testing, product modification, concept testing involved in the very preliminary stages pre commercialization stages. A total of sixteen start-ups had been benefitted from the intervention taken in association with the support of Gujarat CSR Authority. The start-ups were at the stage of developing the product basket with incorporation of technical modifications with the prototype development. In addition to the product related interventions; concept testing and market research are also the cost centres for seed funds utilization. As reviewed in literature cited; the start-ups at initial phases of concept proofing were in need of handholding and major challenge was lack of awareness regarding various channels of resources and whom to approach for what.

5.1 About the intervention

EDII in association with local mentors conducted regional awareness campaigns about the opportunity of presenting conceptualized business model to set of investors and industry experts. Regional boot camps were conducted in five major districts of Gujarat viz. Ahmedabad, Vadodara, Mehsana, Rajkot and Surat. The boot camps emphasised on imparting understanding of utilizing business model canvas in understanding a holistic view of the venture creation process. With the help of allotted regional mentors, start-ups were successfully able to present each component of their journey till then and their planning and expectations in next three years. A total of 40 start-ups were shortlisted for pitching to investors and were mentored further on approaches to ascertain appropriate business model for them as well as including nitty-gritty of pitching.

5.2 Overview of selected start-ups

Following are the start-ups in lieu of various government interventions; briefing on early stage start-ups which showcased their ventures successfully and received seed grant support to further work on their prototypes and market trials. In this section, the overviews of nine start-ups are given in detail, while the overall presentation of selected start-ups is given in sub-section as graphical presentation.

5.2.1 Suggestmychoice.com

Nishil Prasad (Vadodara) started the first kind of suggestion portal to provide the assistance in the buying space. Their patent pending algorithm analyses many parameters with regards to consumer's usage patterns to offer accurate buying suggestions. The start-up utilized the seed grant in the development of IT infrastructure for the services to be delivered. Further, the market research was to be conducted in order to define the target market segment so as to strategize on the market plan. As of now, the promoter has incurred an amount near to INR30 Lakh in developing basic IT infrastructure and providing services in the beta level at initial stages. Currently the start-up is looking for expanding the customer base with connecting experts in market apart from raising further capital up to INR60 Lakh with willingness of diluting the equity.

5.2.2 Savy Electric Vehicles Pvt. Ltd.

Chandan Mundhra from Ahmedabad initiated the venture in 2013 delivering environment friendly vehicles with ease of adoption technology. Being manufacturer and supplier of premium quality range of Battery Operated Rickshaws, School Cart, Garbage Cart, Loading Cart, Electric Bikes and Campus/Golf Car, the start-up has received initial support from incubator namely GUSEC which helped the promoter in getting awareness about various other prevalent resources, one of them is pitching for seed grant. The promoters have incurred INR75 Lakh on infrastructural facility that is fully furnished with the contemporary machines and equipment that are required for the effective manufacturing.

5.2.3 Torchit Electronics Pvt. Ltd.

Hunny bhagchandani being one of the founders of the venture, has developed a handheld device that identifies obstacles for visually challenged—this replacement for the traditional cane helps users navigate around obstacles as well as determine the proximity of objects around them. The start-up utilized the received seed grant in developing and modifying the prototype and to some extent developed the product also. Till now the promoters have spent INR 25,000 in product trials with the support from incubator Innovation and Incubation Centre, Gandhinagar. The start-up is looking for manufacturing process upgradation along with associating to market players for tapping a bigger size of regional market.

5.2.4 Techno Build Cover Pvt. Ltd.

Nikita Maheshwari tried out venturing into brand value creation and online sales of tile trading through tilebazaar.com. The start-up is one of the early birds for technology enabling the B2B segment of building coverings aesthetics industry. The start-up has utilized the seed grant received in the development of online interface for the onset of sales through the platform and addressed the issues of web services pertaining to the demand of the product. In the process of commercialization and developing the basic infrastructure required for operations, promoter has spent INR16 Lakh. As of now, the start-up is in need of real estate mentees helping plan market strategies ahead in order to sustain competition.

5.2.5 M2 Hydrofarms LLP

Monel Gunjaria based at Ahmedabad has ventured into production of pesticide free vegetables and herbs grown hydroponically (without soil) on rooftops and wastelands with less water compared to conventional farm. The start-up has taken trials at EDII with pilot model testing the critical parameters to be taken care of while commissioning large scale farms. The seed grant received by start-up has been used in the process of developing the components to be utilised in the product development and taking the prototype trials. Till now, a total of INR85,000 has been incurred by promoters into the initial steps of concept testing and giving the shape of venture to the entire process. The start-up is looking for raising funds to commercialize the product with faster pace.

5.2.6 Earthlings Infotech Pvt. Ltd.

Gregory Acuna (Ahmedabad) is the founder of Earthlings InfoTech. It is an early stage project which provides help to create a next generation virtual world and maintain social network for teens to bring young people together to learn, create and play. The Planet Earthlings Universe will be permitting an easy to use, with a beautiful design encompassing games, learning, meeting friends and creative tools

for an exceptional user experience. The start-up is incubated at GUSEC and with the seed grant received developed the beta version of the platform. The start-up has till now incurred INR4 Lakh in IT infrastructure development and market research. The promoters are looking for expanding geographically with the requirement of support in connecting education, gaming and organizations. Further, they are looking for office with the plan of hiring staff.

5.2.7 Aishani Enterprise Pvt. Ltd.

Archan Mehta with his co-founder Daxesh Mehta started the venture *Sanburn* with an aim to develop a fully automatic sanitary napkin burner machine with power saver technology, a hygienic way for disposal need of used sanitary pads where napkin gets converted into sterile ash. The duo has registered for patent which was published as well and is also incubated at GUSEC. The team received seed grant which has been utilized in prototype trials and developing the product along with online interface development. The start-up has incurred an amount of INR1 Lakh in the market research and product development. The promoters are looking for raising funds in the range of INR1 Crore against dilution of equity.

5.2.8 Vintage Infra Equipment Solution Pvt. Ltd.

Sunder Veer Rajput, hailing from Ankleshwar started the venture *heavy equipment* focusing on delivering value in the domain of providing used equipment in heavy equipment industry. The start-up has developed an online marketplace from India showcasing used heavy equipment from several sectors like construction, mining, transportation, agriculture, lifting etc. The start-up has started with developing the dynamic platform with the help of seed grant received from this intervention. The promoters have utilized INR10 Lakh in reaching out in market and sufficing offline orders.

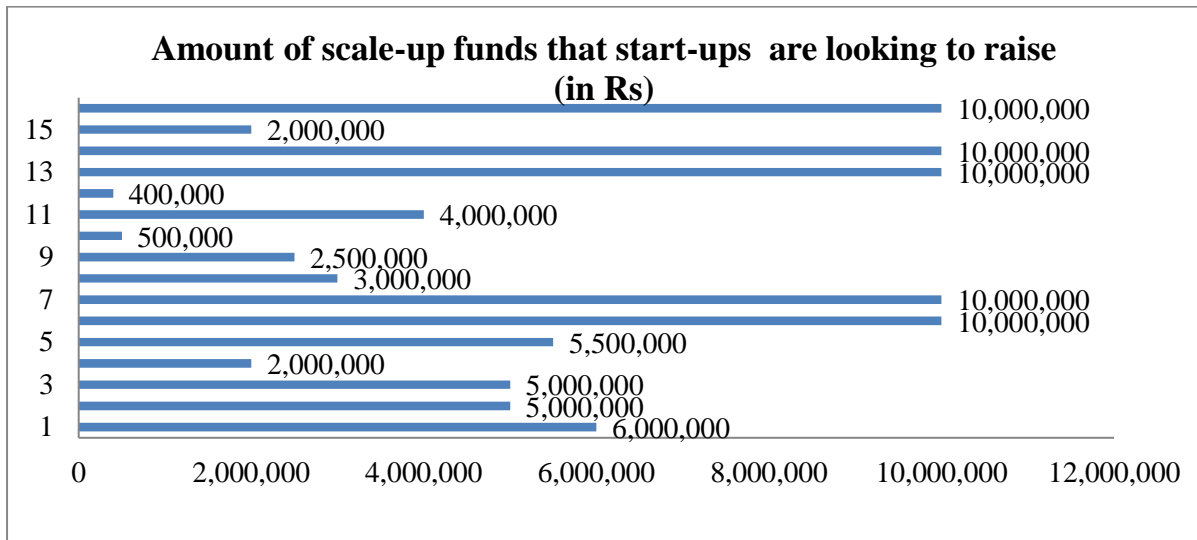
5.2.9 Study Marvel

Yash Bodane, has started venture on existing books a "second life" by providing additional interactive content in form augmented reality and enhances learning four-fold. The start-up has developed prototype of the beta version of the platform by utilizing the seed grant. Till now, promoters have incurred INR 90,000 in developing the online interface and backend support. The start-up is looking for raising an amount of INR 25 Lakh with an aim to expand to various other regions and is exploring for getting education and technology mentors.

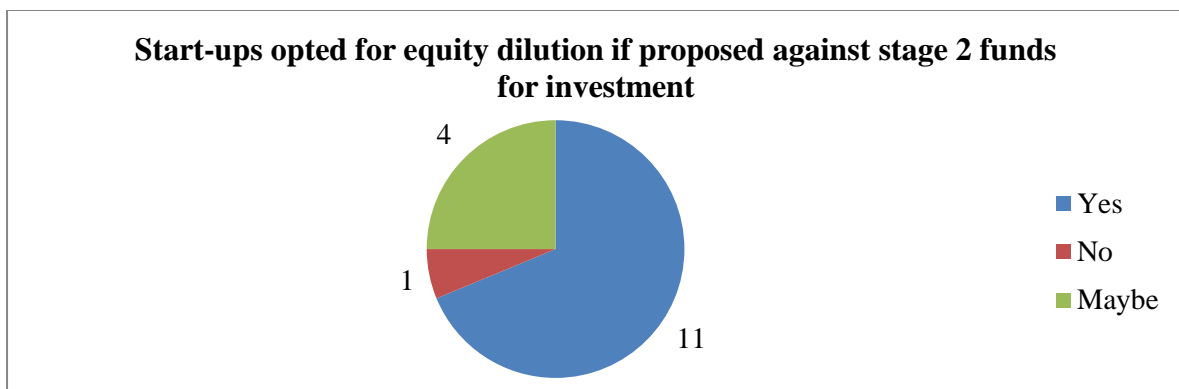
5.3 Graphical presentation of selected start-ups

Important information which represents the requirements of start-ups during the process of developing the prototype and modifying till commercialization are given in this section. As the selected start-ups were providing services in different sectors, therefore these do not require the same amount for scale-ups their position (Refer Graph 1). It is also evident that more than 60% start-ups opted for equity dilution for further growth (Refer Graph 2). There was high and insignificant variation in amount incurred by promoters to selected start-ups (Refers Graph 3). Around 45% start-ups were receiving support from incubator. Thus, incubators do have an insignificant contribution in start-ups (Refer Graph 4). The seed grant received by start-ups under various heads is also different (Refer Graph 5). As per the structured feedback compiled from all the start-up beneficiaries, 58% start-ups utilized funds for development of product; 66% start-ups used for prototype modification and trials.

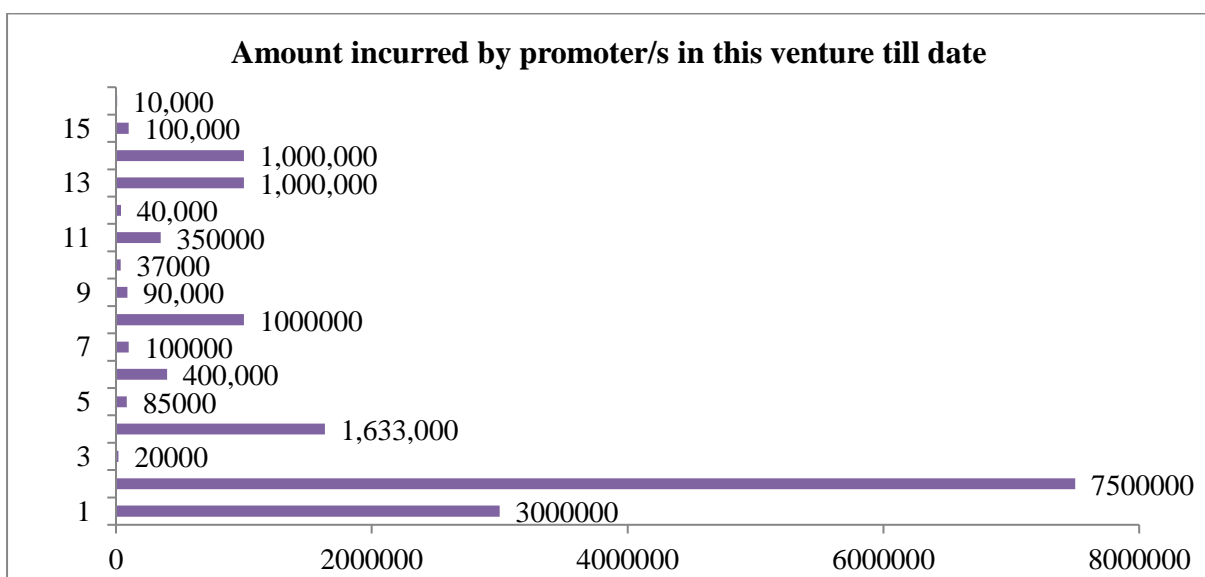
Graph 1: Amount of Scale-up Funds for Selected Start-ups



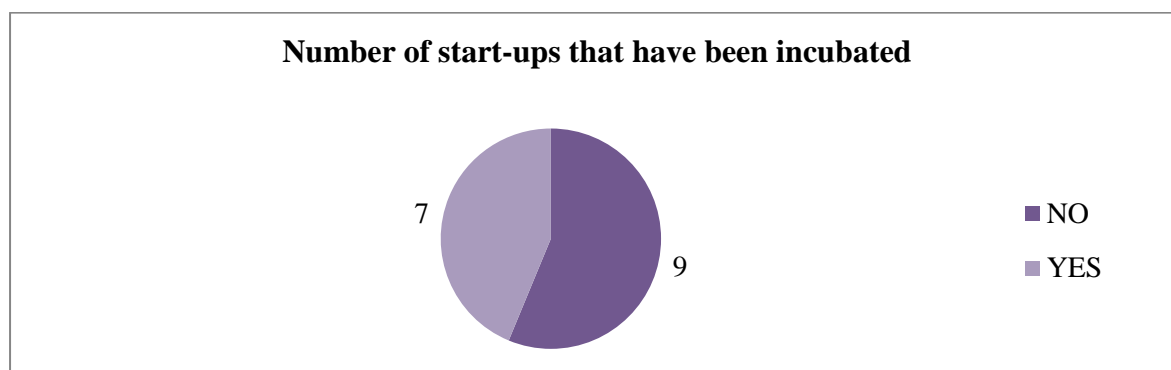
Graph 2: Start-ups that have opted for equity dilution



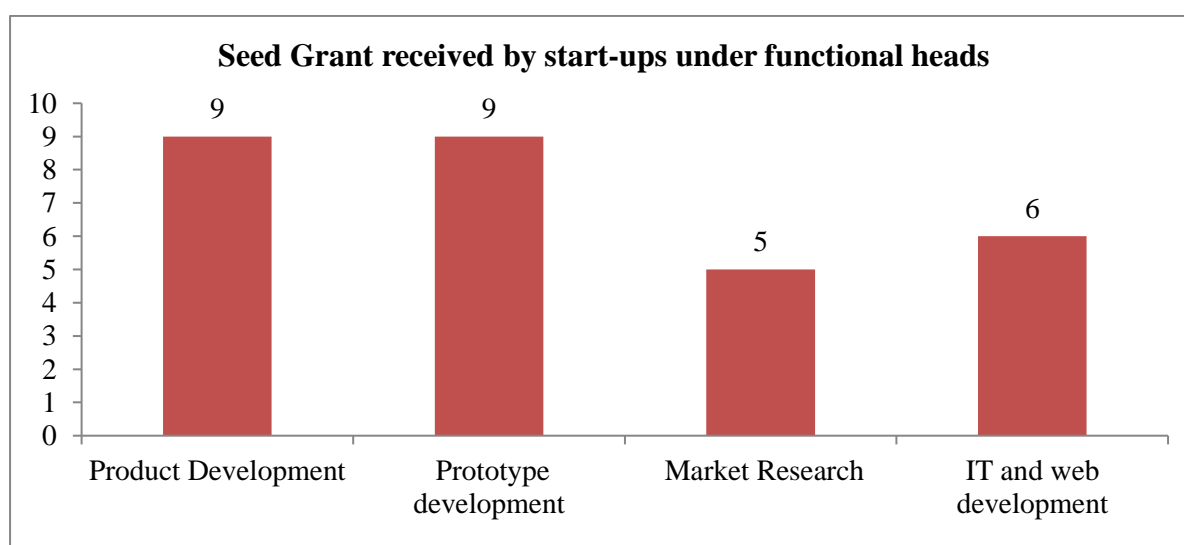
Graph 3: Amount incurred by promoter(s) in all start-ups



Graph 4: Start-ups incubated



Graph 5: Seed grant received by start-ups from different heads



5.4 Prototype funding in start-ups in India and some selected economies

Prototype is a something which may be useful for a venture under the various assumptions.³ It may be basic version of products manufactured by a venture, which would be useful to increase the satisfaction rate of consumers. Technology and innovation are the crucial determinants of prototyping. Angel investors or venture capital provide the fund to develop a prototype (Refer Table 1).⁴ In some other economies like Manitoba, government has started a financial support for new business programme. The program provides the financial support at three different stages such as \$50,000 for product development that includes registration of IP, to develop prototype, and obtain product clarification.⁵ European government also provide financial support to develop technology and lab-scale prototypes.⁶ Nebraska Midwestern state of USA also introduced Nebraska Innovation Fund (NIF) to provide the

³ <https://www.franchiseindia.com/entrepreneur/article/managing-a-business/finance/How-to-raise-funding-for-a-prototype-550/>.

⁴ <https://www.franchiseindia.com/entrepreneur/article/managing-a-business/finance/How-to-raise-funding-for-a-prototype-550/>.

⁵ <http://www.gov.mb.ca/jec/busdev/financial/csb/>.

⁶ http://ec.europa.eu/environment/circular-economy/pdf/seminar/7%20DG%20RTD_Public%20support%20for%20CE%20Support%20though%20Horizon%202020.pdf.

financial support to individual for developing a prototype on an idea. The financial support would be \$4 million per year as per the availability of fund.⁷

In India, NIDHI-Promotion and acceleration of young and aspiring technology entrepreneurs (NIDHI-PRAYAS) provide the support idea to prototype.⁸ NIDHI-PRAYAS program also address the existing gap in the prototyping funding. Hence, the primer aim of NIDHI-PRAYAS program is to translate of an innovative idea to a prototype.⁹ As per NASSCOM report, incubators provide following facilities: office space, research lab, library, start-up boot camps/e-summits, alumni support, and faculty & industry mentorship. Further, accelerator also facilitates following support to develop prototype: shared resources, developer tools, co-creation/co-innovation, and client-specific solution, investor connect/VC sessions and business mentorship.

Table: 1 Some Sources of Prototype Funding in India

| | |
|---|--|
| 1 | Department of Science and Technology (DST), Govt. of India – National Initiative for Developing and Harnessing Innovations (NIDHI) developed program for technology based startups through one of its components NIDHI – PRAYAS. |
| 2 | "Promoting Innovations in Individuals Start-ups and MSME" (PRISM) an initiative of Council of Scientific and Industrial Research, Govt. of India promoting, supporting, funding untapped creativity of individual innovators. |
| 3 | Gujarat Start Startup Scheme, January 2015 – Nodal institutes across Gujarat mediating financial assistance to innovative startups. |
| 4 | Various state and national level startup contests and competitions aiming to support idea and proof of concept stage startups with seed grants. |
| 5 | Sector specific assistance – For, biotechnology based startups, Biotechnology Industry Research Assistance Council (BIRAC) keeps on introducing newer opportunities in terms of product development like Biotechnology Ignition Grant (BIG). |
| 6 | NewGen Innovation and Entrepreneurship Development scheme under National science and technology entrepreneurship development board (NSTEDB) providing financial assistance and selective non-recurring grants to various sector specific startups through institutional mechanism via NewGen IEDC. |

Source: Various Government Information Portals

6. CONCLUSION AND POLICY SUGGESTIONS

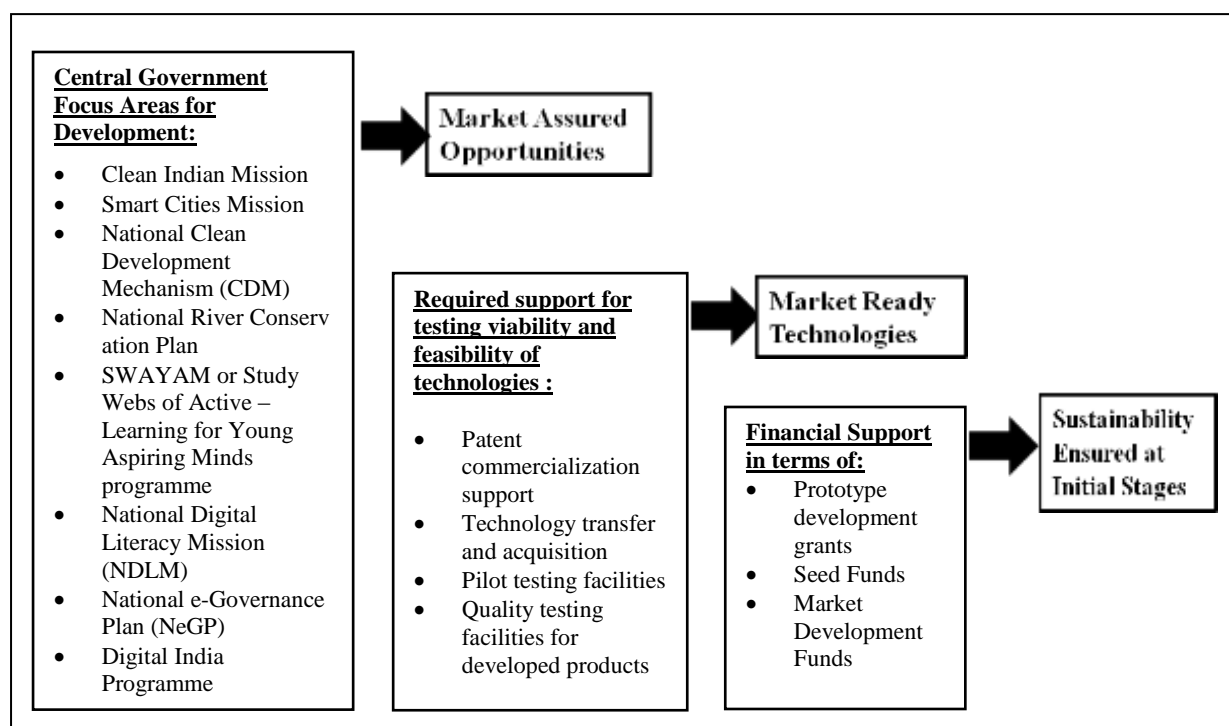
The present study provides the sophisticated and actual overview on seed fund and prototyping in Gujarat based start-ups. It concludes that there are several models which might be essential to create a new start-up/ venture. Kuratko et al. (2015) has provided the eight major ideas which may play a crucial role to create new start-ups and new venture, which is given as: (1) Appropriate financial accessibility for venture, (2) To promote corporate entrepreneurship, (3) To maintain social entrepreneurship and sustainability, (4) To encourage entrepreneurial cognition, (5) To promote women and minority entrepreneurs, (6) To increase global entrepreneurship movement, (7) To create platform for family business, and (8) To create entrepreneurial education system.

⁷<http://opportunity.nebraska.gov/files/businessdevelopment/talentinnovation/businessinnovation/PrototypeGuidelines.pdf>.

⁸ http://www.nstedb.com/New_Programmes/NIDHI-PRAYAS.pdf.

⁹ http://www.nstedb.com/New_Programmes/NIDHI-PRAYAS.pdf.

Figure 1 Suggested model to enhance start-ups through prototyping in India



It also provides evidence that prototyping funding have a positive and significant association with growth of new start-ups and venture. It also suggested a viable model which would be useful to increase number of start-ups and venture in India (Refer Figure 1). Government needs to provide financial support to research institutions to make greater utilization of existing technologies. It may be useful to develop prototyping from the innovative idea and potential product as well. Thereafter, research organization may be invited to industrial delegates to buy the same. It would be beneficial to create more funding for start-ups under CSR policy. Furthermore, here it is also suggested that selected start-ups were providing services in different sectors; therefore these need different amount for scale-ups their position. It also indicates that more than 60% start-ups were preferred for equity dilution for further growth of start-ups. There was high and insignificant variation in amount incurred by promoters to selected start-ups. Hence, promoters also have a significant contribution to increase number of start-ups. Around 45% start-ups were receiving support from incubator. Therefore, it is recommended that incubators are required to take effective action to increase the number of start-ups. The seed grant received by start-ups under various heads is also different; it implies that different types of seed grants were identified like product development, prototype development, market research, and IT and web development. However, product development and prototype have a greater contribution in seed grant as compared to market research and IT & web development. Hence, it would be imperative to give more focus on prototyping development and product development to increase number of start-ups.

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