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Funding Options for Agricultural Start-Ups in India-Challenges and Opportunities

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This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Review Article

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ABSTRACT

Startup India is a flagship initiative of the Government of India aimed at fostering innovation and building startups. In order to promote entrepreneurship, economic growth, and employment in India through this initiative, the Government intends to empower startup ventures. Global attention has been drawn to India's startup ecosystem. Innovation and scalable technology can enable start-ups to generate impactful solutions. Consequently, they serve as vehicles for economic and social development and transformation. Over the past two decades, the Indian start-up ecosystem has undergone a rapid evolution. In recent years, the business world has witnessed an explosion of ground-breaking start-ups providing solutions to the real problems at a mass level thanks to hundreds of innovative youngsters choosing to pursue entrepreneurship instead of joining multinational corporations and government ventures. Over the past decade, the Government of

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India has introduced a number of schemes aimed at promoting entrepreneurship and growing the economy. These programs have helped a large number of start-ups succeed. As a result of these schemes, the country will move forward and secure the strongest position in the world economy. At different stages of a start-up's development, there are different funding options. The Indian government implements numerous schemes to promote start-ups through a variety of funding options that are easily accessible to budding and existing entrepreneurs. It is encouraging to see India as a country with many opportunities, particularly in the agriculture sector, which lends itself to the development of start-ups and employment creation. A few challenges, funding options and opportunities that Indian start-ups have to face in our current eco-system are discussed in this paper.

Keywords: Startup India; flagship; social development; transformation; foreign direct investment; supply chain.

1. INTRODUCTION

There are a number of start-ups that were established during the 2000s. It was still an immature ecosystem at that time, and there were a very limited number of supportive organizations. As far as Indian start-up scenes are concerned, Bangalore has dominated, followed by Mumbai, New Delhi, Hyderabad, Pune, Chennai, Coimbatore, and so on. India's agricultural sector constitutes a major source of livelihood for more than half of its population [1]. A significant amount of the nation's GDP is generated by the agricultural sector, which accounts for 20%. It is important to note that the export market for agricultural products is vast; in FY19-20, agricultural product exports reached Rs. 2,84,000 crores (US$ 38.54 billion). Among all the countries producing, consuming, and exporting spices in the world, India is the largest. Over the period April 2000 to March 2019, the Department for Promotion of Industry and Internal Trade (DPIIT) reported an inflow of Foreign Direct Investment (FDI) equity of approximately Rs. 67,000 crore (US$ 9.08 billion) into the agriculture sector [2-4]. In spite of this, the sector faces several structural challenges, among which are a lack of capital inflows and operational challenges. In response, several stakeholders have begun to introduce numerous interventions in the form of agricultural technology start-ups, better known as agritech start-ups [5].

1.1 Objective

To study the different stages of start-ups.
To study the different funding sources for start-ups.
To study government schemes which promote agricultural start-ups.
To find out opportunities and challenges of start-ups in India.

2. METHODOLOGY

A variety of government websites and secondary sources were used to gather the data for this study.

2.1 Start-up Momentum in India

In the agritech sector, there are more than 450 Indian start-up companies and Indian companies account for one in nine companies globally. Agrostar, Cropin, Jumbotail, Ninjacart, and Stellops are some of the major start-ups in this field. Several agritech start-ups and investments have emerged in the Indian agritech scene, demonstrating global interest in the Indian agritech scene. NASSCOM reports that these start-ups received funding from top investors including Accel, Ankur Capital, Omnivore, and others. Start-ups raised ~Rs. 1,825 crore (US$ 248 million) as of June 2019. Newer technologies are being adopted and accepted as a result of the growth of the agritech industry [5].

2.2 Business Opportunities and Innovative Solutions

In recent years, the agritech sector has created several market opportunities in India, particularly when it comes to developing and refining market links. Farmer products are being taken directly to consumers, agriculture is being digitised, improved access to real-time information is being provided to farmers, a greater level of transparency is being provided across the value chain, farmers are being provided with better-quality implements for increasing yields and microfinance options are being offered to farmers for managing risks. Agritech start-ups are focused on improving supply chain to increase farmers' share of crop sales profits, as indicated by all of these solutions [5].

2.3 Key Players and Business Models

There have been a number of business models developed to address agricultural opportunities. In general, these can be categorized into five categories:

1. Model of upstream marketplace - Agrostar, BigHaat, Agrevolution, Agronxt, Ninjacart, Agrihub, and FarmGuru are the main players that use this model.

2. Downstream 'farm-to-fork' supply chain model – This mechanism is being used by start-ups such as Krishi Star, Crofarm, Sabziwala, and Bharat Bazar in an effort to increase efficiencies.

3. Farming-as-a-service model – In order to ease the burden on farmers who need to make large capital investments, companies such as Far Mart, EM3 Agri Services, RAVGO and Oxen offer farm equipment rentals.

4. IOT or Big Data-led innovation model – Farmers can gain access to timely information and increase productivity with the assistance of FlyBird, Cropin, and Exabit Systems.

5. Engineering led-innovation model – This field is being driven by innovative players such as Kheyti, Drip, Kamal Kisan and Nanopix.

In recent years, numerous public-private partnerships have been made possible by the proliferation of start-ups and investments within this field. According to NASSCOM, Cropin and Kisan Raja are two agritech start-ups that have successfully established partnerships in this area [5].

2.4 Development of a Start-up: The Build Up

A start-up cannot achieve success overnight, and it is essential to recognize that running one requires patience, perseverance, and a realistic assessment of its stage of development [6]. According to start-upcommons.org, a start-up evolves from an idea to a product, and then to an organization as it grows from the perspective of "a talent to a team, to a real organization". There is a lifecycle to every business, just as it is to everything else that grows. A start-up, in particular, moves through a series of stages during its development. In spite of the fact that the duration of each stage will vary from company to company, there are six main stages that must be completed. Listed below are the six stages of a start-up as well as what each can be expected to accomplish [7,8].

2.5 Different Stages of Developing Start-ups-Key Features

Stage 1: Idea generation

- An entrepreneurial ambition on the part of the founder(s)
- Developing the product or service idea for a market that is large enough
- Developing some initial business models and ideas about how the idea could create value or generate revenue
- Existence of a single individual or a vague team of individuals
- The team structure has not yet been confirmed nor have roles or commitments been made

Stage 2: Concept development

- Determination of the start-up's mission and vision in conjunction with its initial strategy
- Identifying key milestones and goals for the next few years
- Establishing a core team comprised of cofounders with complementary skills, as well as setting up ownership plans and rights for the company
- Assist with the development of additional skill sets as well as ownership by including some additional members.

Stage 3: Commitment

- The founding team is composed of a committed group of individuals with a balance of skills and values
- The development of a Minimum Viable Product (MVP) that enables users to test the idea of a business
- An agreement between the co-founders is signed, which is referred to as the Shareholder Agreement (SHA)
- Milestones must be achieved in order to complete this project
- Shared commitment of time and resources by all shareholders

- A three-year SHA has been signed with vesting provisions

Stage 4: Validation

- Founders, employees, initial customers, and angel investors consider this to be the most important stage of the business
- KPIs (Key Performance Indicators) identified at the beginning
- Product strategy and brand positioning are among the issues founders are currently experiencing when trying to attract potential Series A/B venture capital investments
- This is the stage of business when most start-ups lose their way

Stage 5: Scaling up

- Concentrate on key performance indicators (KPIs) to increase the number of users, clients, and revenues in the target market
- Rapid growth potential
- Series A funding has been received for the start-up
- Investing the most amount of time in hiring and training resources, improving and distributing the product to the target population, and implementing new or existing processes

Stage 6: Establishment of start-up

- There has been great growth at the company, which is expected to continue
- The process of attracting funding and customers has become easier
- The organization will continue to function "like a start-up" in accordance with its vision, mission and goals
- An investor or founder may decide to exit or continue to work with the company

Start-up firms are concerned not only with how these financing sources are acquired, but also how they are implemented once available, since these firms lack the expertise and experience necessary to deal with core business activities [9]. There is no doubt that start-up financing is entering a disruptive period. An entrepreneur may find himself or herself relying on a hybrid combination of different sources of funding in order to survive. In such cases, the sources of funding may come into play in no particular order. It is still important to become familiar with the different stages of investment in order to fully understand the new age of start-up financing. A start-up cycle consists of the following major investment phases:

1. Pre-seed stage (Early stage, Pre-product stage)

As a starting point, this stage is where the founder(s) attempt to develop the concept into a business opportunity. There are a few key employees within the company, including the founder and certain key personnel. A small amount of funding will be required for this stage of research to assess the viability of an idea, determine whether similar things have been done previously, determine the cost of developing the product, and formulate a business model. During this stage of a business' development, there are a number of possible sources of funding, including self-financed (savings), family, friends, and foes (FFF), angel investors, accelerators, and recently a new method of funding known as crowdsourcing. In order to survive and progress to the next stage, there is a high risk of failure. Since funds during this stage are limited, the main focus should be on refining and (re)aligning the product. Several adjustments are required in order to ensure that the product is upgraded and that it does not fall into the "Valley of Death," where perfectly good concepts lay idle due to a lack of funding [7,10-12].

2. Seed stage (Early stage, Immature product)

A company in this stage is oriented toward the broader market and has gained a deeper understanding of what consumers want and how the product can be tailored to meet those needs. It is one of the early stages of a product or service, which may be almost complete or that is still in the infancy stage. Despite the fact that the product or idea is still in its infancy, it has a name, a brand, but the majority of funding is still sourced through bootstrapping, crowfunding and incubator and accelerator funding. It is at this stage that micro venture capital firms and investment syndicates have begun to appear to fund start-ups. It is important at this stage to achieve a product-market fit and build the product as a whole. Gaining traction in the target market is another important aspect of this stage. In addition, owners should seek any necessary partners such as development companies, designers and creative agencies, as well as potential public relations and marketing firms during this stage [11,12].

2.6 Early-stage Deals

2.6.1 Series A (Early stage, Maturing product)

With the Series A funding, the start-up will be positioned for future growth, all the cards will be in order and the start-up will be prepared for future growth. At this point, the idea should be gaining traction and should be generating a great deal of buzz among the technology and business press, as well as among key influencers within the target market. It is also necessary to optimize the business at this point, correct any financial deficits that may have arisen, correct any mistakes that may have been made along the way, and most importantly, discover new markets and demographics. Venture capitalists and angel investors support the start-ups during the Series A stage in order to refine, improve, and grow the original concept, hire new employees, find partners, reduce the burn rate, and establish solid unit economics. In a nutshell, this is the time to prepare the start-up for future growth and success. It is also at this point that the company begins to become known within its target audience and begins to expand to other groups beyond its original audience. A variety of publications begin to report on the growth and unique selling proposition of the start-up. In this stage, an idea is developed from a seedling to become a viable business (Anon., 2016c); [11,13].

2.6.2 Series B (Early stage, Established product)

It is expected that the start-up at this stage will have established the company and its products fairly well. As such, the main focus for the start-up should be expanding both internally by expanding the team and externally by expanding its target audience or by possibly acquiring complementary companies and/or technology. Prior rounds have been motivated by early signs of growth, from a promising idea, to a leading indicator of product-market fit, to early traction, and subsequent revenue growth. It is time for continued growth in all forms. With Series B funding, start-ups can expand into different markets, experiment with new revenue streams, or even acquire businesses with competitive advantages. In practice, Series B investments may allow start-ups to hire extensively (in business development, strategic accounts, marketing and customer success). Understanding that investors are seeking the next stage of growth: the ability to apply everything that they have learned from previous stages to a more advanced level is important. Due to this, this stage of the venture capital process attracts a greater amount of funding from investment banks, private equity firms, and larger venture capital firms (Anon., 2016c); [11,13].

2.7 Late-stage Deals

2.7.1 Series C, D, E (Late stage, fully matured product)

As a result of Series C+ investments, the owners, as well as the investors, are very cautious when it comes to financing this round. There is a gradual release of equity in a business as more investment rounds are completed. An investment in series C enables the company to expand on a large scale, such as entering a new market (generally international) or acquiring complementary businesses. It is theoretically possible for a start-up to raise an unlimited number of investment rounds after the Series C round; some companies will raise funding even after the Series D round. It is important to note that the number of start-ups that make it to this point is relatively small, which also results in a wide range of investments being raised (Anon., 2016c); [11,13].

2.7.2 Mezzanine financing & bridge loans (Later stage, Maturing to Mature product)

The term bridge funding refers to a short-term loan provided to a start-up business by investors to assist it in reaching the next round of funding. The investors receive their money back upon the completion of the next round of funding. To keep a start-up company afloat, it is primarily used as a bridge between investments. To facilitate the transition to a significant round of funding such as equity or a sale of the company, start-ups use bridge financing. Alternatively, mezzanine financing is generally available to companies with a record of success in their industry, a distinguished reputation and product, a history of profitability, and a viable expansion plan, such as an IPO, an acquisition, or an expansion through acquisitions. In most cases, these types of loans last between six and twelve months and should be repaid by the funds raised during an IPO, since they serve to bridge the gap between the end of late stage and the maturity of a business. Usually, start-up companies (if they can still be considered start-ups after reaching this stage) are valued at least $100 million (Anon., 2016c); [11,13].

2.7.3 IPO (Late stage, fully matured product)

In order for a start-up to achieve success, its initial public offering is a crucial point. In other words, it is a sign of success. As well as its benefits, it also has some disadvantages. In this stage, a company reaches the point where it is ready to trade publicly, is valued at more than $100 million, and its brand has become recognizable within its sector or industry. As soon as the company has been listed on one of the international stock exchanges, it is time to celebrate and join the public market. It may also be possible to launch more products, approach secondary markets, or expand into new areas. As soon as a company is listed on the public market, it marks the end of the road for most entrepreneurs. It is important to consider other factors as well as the money. The success of an initial public offering is indicative of the company's success. Providing this kind of recognition can generate interest and act as a signal to top talent in the industry that this company has achieved success. The organization's success can also be a source of pride for its employees (Anon., 2016c); [11,13].

2.8 Start-up Finding Sources

2.8.1 Personal investment

There is a high probability that a founder will invest his or her own money into a start-up. It is an inexpensive and readily available form of finance that can be accessed by a wide range of people. The founder can maximize control over the business by investing personal savings. As well as being a strong signal of commitment to investors or financiers, it is an indication of how committed the company is. Supportive friends and family members contribute funds directly to the founder or to the business. In comparison with a bank loan, this can be faster and cheaper to arrange (certainly when compared with a regular loan) and the interest rate and repayment term may be more flexible. The risk of stress that an entrepreneur faces when borrowing this way is high, especially if the business becomes difficult [14].

2.8.2 Angel investors

Capital is provided by angel investors for the start-up of successful businesses, usually in exchange for convertible debt or equity ownership. A venture capitalist, on the other hand, pools money from numerous investors in a fund and strategically manages it, while angel investors use their own money. It is usually individuals that provide angel investors with funds, but they can also be businesses, trusts, or investment funds. A successful angel investor's portfolio has an effective internal rate of return between 20 and 30%. Investors may think this is a great opportunity and entrepreneurs may find it too expensive, but such businesses do not typically lend to banks at a lower cost. During the start-up phase of their business, entrepreneurs who are struggling financially can benefit from angel investments [14].

2.8.3 Accelerators

Entrepreneurship has repeatedly proven to be a challenging field without accelerators, whose assistance makes the difference between success and failure. Money is a major reason that entrepreneurs and founding teams choose accelerators. Seed money is usually offered to start-ups in exchange for equity. Depending on the situation, this might range from $10,000 up to over $120,000 [15].

2.8.4 Crowdfunding

The concept of crowdfunding refers to a method of raising capital for a new business venture by pooling the funds of many people. Using social media platforms and crowdfunding platforms, this strategy leverages the collective efforts of a large number of individuals for a greater reach and exposure. Globally, there are over 600 crowdfunding platforms, according to the research firm Massolution, with crowdfunding reaching billions of dollars each year [14].

2.8.5 Micro venture capital firms

Like its name suggests, micro venture capital funds are smaller versions of traditional venture capital funds. It is also referred to as 'seed stage funds.' Micro Venture Capitals generally have the following characteristics. The fund has an asset value of less than $100 million (though many are less than $50 million). The investment ranges from $25K to $500K.

Early-stage companies receiving micro venture capital are typically seeded with smaller amounts of funds than those getting traditional venture capital. Because of their lower initial cost basis, micro venture capital firms generally focus on start-ups at their seed stages. Micro venture capital firms are willing to invest in start-ups despite the fact that the majority of them won't survive long enough to reach Series A funding, and because they believe it only takes a few successful businesses before they are profitable [14].

2.8.6 Corporate venture capital (CVC)

Corporate Venture Capital (CVC) is another branch of VC. CVCs are multinational companies that invest corporate funds into small, innovative startups to acquire a target market, talent pool, or technology. In addition to marketing expertise or strategic direction, CVCs can provide startups with lines of credit or strategic direction. A startup's chances of success are enhanced when it is associated with big names. An equity stake in a startup is exchanged for funding from a CVC. CVCs in India include Mahindra Partners, Reliance Ventures, and Brand Capital, a company run by the Times Group Chemmanur et al. [15].

2.8.7 Venture debt funds

Funding startups with equity is expensive. The non-banking financial corporations (NBFCs) provide debt financing to VC-backed startups via a hybrid scheme known as venture debt funds. When a startup needs working capital and is expanding, bank loans or equity are not viable options. An equity warrants or non-convertible debenture is used as collateral to obtain venture debt financing. Indian startups can obtain venture debt financing from Alteria Capital and Trifecta Capital [16].

2.8.8 Government grants & funds

As part of the 'Startup India' program, the government of India enhanced funding for Indian startups beyond angel investors and venture capitalists. In addition to 80% rebates on patent costs, startups enrolled in the program can benefit from a three-year income tax exemption. A loan from the government is disbursed through the Small Industries Development Bank of India's (SIDBI) Fund of Funds Scheme. Venture capital and alternative investment funds (AIFs) are invested in through the scheme. An early-stage startup fund, Startup India Seed Fund, was also launched by the government last year. A total of INR 1,000 Crores has been allocated for the Startup India Seed Fund Scheme (SISFS) for the current year.

2.8.9 Banks

Bank loans still remain a conventional funding option for Indian startups despite all the new funding options. Each type of loan has a different term, depending on the type of loan. For example, banks offer loans for equipment, loans for startups, and loans for working capital. Business loans are available at all stages. A startup at the idea stage typically requires more collateral, as well as other sources of income. Omozing.com and Fullerton India are two popular NBFCs that offer loans to Indian startups [17].

2.9 Funding and Investment Activity

According to the Indian government, agritech start-ups are growing by 25% in the last 12 months. A total of Rs. 1,840 crore (US$ 250 million) has been raised in venture funding by start-ups in 2019. In terms of the amount of funding raised, this was three times more than what was raised in 2018. Over the next few years, the sector is predicted to attract more than Rs. 3,680 crore (US$ 500 million). There were early investors in the sector such as Aavishkaar, Accel, Ankur Capital, Beenext and Omnivore. A number of funds have recently made investments in the industry, such as Blume, Nexus, Sequoia, Tiger Global, and RTP.

Across equity, venture debt, and conventional debt rounds, more than 20 agritech start-ups raised more than Rs. 920 crore (US$ 125 million) in 2020 [18].

2.10 Government Schemes and Initiatives

Agritech's growth has been fuelled by the government. A National Centre for Management and Agricultural Extension has been established in Hyderabad (MANAGE). Furthermore, the Department of Science and Technology of the Government of India organized a food and agri-business accelerator in partnership with a-IDEA, the TBI of NAARM. Through mentoring, industry connections, and investor pitching guidance, the program aimed to accelerate the start-up of agri-businesses.

As part of this initiative, the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) has also been implemented and is devoted to conserving water and increasing irrigation coverage. An investment of Rs. 56,340 crore is being made under this scheme for end-to-end solutions on source creation, distribution, management, field application, and extension. Furthermore, the government plans to grant Rs. 2,000 crore (US$ 270 million) to computerize Primary Agricultural Credit Society (PACS) for the benefit of cooperatives.

A strong impetus has been given to this sector by the Indian government, which aims to double farmers' incomes by 2022. Through ATMA (Agricultural Technology Management Agency), data can be retrieved and entered from web-based portals using a regular mobile phone (without the need for Internet access). For farmers and other supply chain stakeholders, they are operationalizing a number of innovative technology services, such as USSD. Furthermore, a number of favourable government policies and initiatives are benefiting farmers and stakeholders across the value chain, such as PM-KISAN, PM-AASHA and PM-KMY. Technology appears to be uniquely positioned to disrupt agritech.

2.11 Schemes implemented by Government of India

2.11.1 Start-up India seed fund

A seed fund worth INR 1,000 crore was launched by Prime Minister Narendra Modi on 16 January 2021 to support start-ups and ideas from budding entrepreneurs. It is important that the government strives to ensure there is no capital shortage for start-ups in India. PM Modi said that the government is taking a number of measures to ensure this. The Union Budget of 2022 announced a reserve fund of Rs 283.5 crore for the Start-up India Seed Fund initiative, which is higher than the revised estimate of around Rs 100 crore for 2021-22 [19].

2.11.2 Start-up India initiative

Start-up India was launched by the Prime Minister of India on 16th January of the same year. Increasing wealth and employability is accomplished by giving wings to entrepreneurial spirit. By June 3, 2021, more than 50,000 start-ups had been recognized via this scheme, which provides tax benefits to start-ups. A long-term project is being pursued by the Department of Industrial Policy and Promotion. Furthermore, start-ups are now limited to seven years of age instead of two. Moreover, biotechnology firms need to be ten years old by the date they are incorporated. This government-sponsored start-up scheme offers several concessions to entrepreneurs, making it one of the best for start-up businesses [20].

2.11.3 Start-up leadership program

Founded to empower outstanding entrepreneurs and innovators, the Start-up Leadership Program is named as such. Founded in 2016, SLP is designed as a 6-month program that provides world-class training and lifetime networking opportunities. Over the past decade, this initiative has helped 2000+ start-ups, influenced 3600+ entrepreneurs, and raised more than $2.4 billion in funds [19].

2.11.4 A scheme for promoting innovation and rural entrepreneurship (ASPIRE)

A prevalent scheme that the Indian government has implemented in this regard is ASPIRE, which has been designed to improve the economic and social conditions of rural areas of the country. An initiative promoted by the Ministry of Micro, Small and Medium Enterprises (MSME) called A Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship (ASPIRE) [19].

The program mentioned above was established in 2015 to give entrepreneurs the knowledge needed to start a business and become employers. In order to promote entrepreneurship and innovation in rural areas where 56% of the Indian population resides, the government has introduced this scheme. In rural India, ASPIRE is designed to increase employment, reduce poverty, and encourage innovation. In the meantime, the focus is on promoting the agrobusiness sector. Economic development at the grassroots has been an aim of the Ministry of Medium and Small Enterprises. In total, the scheme was initially budgeted for INR 62.5 crores between 2014 and 2016 [19].

2.11.5 Pradhan Mantri Mudra Yojana (PMMY)

A new generation of banks called Micro Units Development Refinance Agency (MUDRA) has been established for the purpose of enhancing credit facilities and stimulating the growth of small businesses in rural areas. As a means of supporting small businesses in India, the government has created this scheme. Start-up culture in the country was promoted with a budget of 10,000 crores in 2015. Small and micro businesses and enterprises of non-corporate and non-farm nature rely on MUDRA banks for start-up loans of up to INR 10 lakhs. The MUDRA program was launched on 8 April 2015 as part of the Pradhan Mantri Mudra Yojana (PMMY). Tarun, Kishore, and Shishu are the three types of loans. No collateral security is provided and the assets are created using the bank's financing [19].

2.11.6 Digital India GENESIS

As part of his Digital India GENESIS initiative, Modi launched the program on July 4, 2022. This scheme supports innovative start-ups through GENESIS, which stands for "Gen-next Support for Innovative Start-ups". As part of its initiative to empower the nation's deep-tech start-ups, the government of India has launched this scheme. It is disclosed that this program and Digital India Bhashini have a total budget of around Rs 750 crore [19].

2.11.7 Ministry of skill development and entrepreneurship

Previously, different departments and government agencies were responsible for promoting entrepreneurship. This sector was designated an entire ministry by the Prime Minister in 2014, as he felt that the government should exert more effort in skill development. A gap-funding and skill development initiative is also being launched by 2022 with a goal of reaching 500 million people on a global scale [19].

2.11.8 Dairy Processing and Infrastructure Development Fund (DIDF)

As the country's apex development bank, the National Bank for Agriculture and Rural Development (NABARD) carries out investments across the country. The Union Budget of 2017-18 announced the establishment of the Dairy Processing and Infrastructure Development Fund under NABARD to benefit farmers sustainably. Fund corpus is INR 8000 crores, spread over three years (2017-18 to 2019-20) [19].

Under the project, milk-producing companies, milk-unions, multi-state milk cooperatives, NDDB subsidiaries, and state dairy federations are eligible to borrow money from NABARD. End borrower contributions would be 20% (minimum rate) and 80% (maximum rate). 6.5% interest rate will be charged on the loan. Repayment will take place over a period of 10 years. Governments will be responsible for guaranteeing repayment of loans. The state government may also step in if a borrower cannot make the required contribution.

A total of Rs 1.31 lakh crore was allocated to the departments under the agriculture ministry in the 2021 Budget, and it has been raised to Rs 1.32 lakh crore in the 2022 Union Budget. Agritech start-ups and rural enterprises relevant to farming will be financed by a fund consisting of blended capital raised via NABARD through the co-investment model. Moreover, Nirmala Sitharaman, the Finance Minister of India, expressed her hope that the use of 'Kisan drones' will facilitate the use of technology for crop assessment, land digitization, and spraying of insecticides and nutrients [19].

2.11.9 Credit Guarantee Fund Trust For Micro And Small Enterprises (CGTMSE)

Micro-level businesses, small-scale industries, and start-ups can apply for zero-collateral banking loans through the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE). A highly subsidized interest rate can be obtained without requiring any form of security by businesses by using this facility. Under this scheme, the government provides a maximum of INR 100 lakhs for rehabilitating and boosting new enterprises through SIDBI (Small Industries Development Bank of India). The loan can be taken out in the form of working capital or a term loan, mainly for manufacturing units [19].

2.11.10 The venture capital assistance scheme (VCA)

Venture Capital Assistance (VCA) was introduced by the Small Farmers' Agri-Business Consortium (SFAC) for farmer-entrepreneurs' welfare and for the development of their agribusiness. Financial institutions regulated by the RBI are approved to participate in the scheme. To assist farmers with meeting capital requirements for their projects, it intends to provide term loans. In order to foster agribusiness, the VCA trains and nurtures agribusiness entrepreneurs. Approximately 26% of the promoter's equity is going to be invested in the loan (40% in hilly regions). Under this scheme, a maximum loan amount of 50 lakhs will be provided [19].

2.11.11 Dairy entrepreneurship development scheme

In order to generate self-employment opportunities in the dairy sector, the Department of Animal Husbandry, Dairying, and Fisheries operates the Dairy Entrepreneurship Development Scheme (DEDS). As a result of providing back-ended capital subsidies for bankable projects, these opportunities in the mentioned sector will consist of activities such as improving milk production, procuring, preserving, transporting, processing, and marketing milk. As part of the scheme, NABARD has been implementing agricultural and rural development financing [19].

2.12 Issues and Challenges of Start-ups

In this article, we discuss a few of the key challenges and issues:

2.12.1 Financial resources

A startup's ability to obtain sufficient funding is critical and always a challenge. In addition to family and friends, there are many other finance options available, such as loans, grants, angel financing, venture capitalists, crowd funding, etc. The business requires more and more resources as it progresses. Infusion of capital at the right time is essential for scaling a business. The success of startups depends on proper cash management. It was recently reported that 85% of new companies are underfunded, indicating a high risk of failure for these companies [20,21].

2.12.2 Revenue generation

In the early stages of a business' growth, many startups are unable to generate enough revenue to survive. Startups become less focused on the fundamentals of conducting business as expenses rise with reduced revenue, forcing them to focus on funding. Thus, generating revenue and effectively managing burn rate are critical for startups, which is an indicator of how much money they spend in the beginning. Generating enough capital isn't the only challenge, but also expanding and sustaining the business [20,21].

2.12.3 Team members

The founding team of a startup usually consists of trusted and complementary individuals. The members of a team usually specialize in different areas of operations. To be successful, a startup needs to assemble a great team. Without one, the startup can fail [20,21].

2.13 Supporting Infrastructure

Incubators, science and technology parks, business development centers, and other support mechanisms are significant components of the startup lifecycle. Such support mechanisms are not readily available, which increases the risk of failure [20,21].

2.13.1 Creating awareness in markets

Inadequate attention to market limitations leads to startups failing. In general, startups face more challenges than established firms since their products are unique. Startups have more difficulty building new products since everything must be created from scratch [20,21].

2.13.2 Exceed customer expectations

Assessing market demand, current trends, and existing markets are the next biggest challenges. Startups must adapt their product offerings to meet market demands, thus innovation plays a crucial role (Skok, 2016). Moreover, an entrepreneur must have deep domain knowledge to develop effective strategies to counter competition. A challenge to innovate over an earlier innovation is pertinent in light of the emergence of new technologies [20,21].

2.13.3 Tenacity of founder

Starting a business requires tough decision-making from its founders. In the early stages of starting a new business, delays, setbacks, and problems arise without appropriate solutions. Perseverance, persuasiveness, and never giving up are the traits entrepreneurs need to be successful [20,21].

2.13.4 Regulations

Permissions from government agencies are required before starting a business. Despite a noticeable change, registering a company remains challenging. As far as labor laws, intellectual property rights, disputes are concerned, Indian regulations are stringent [22].

2.13.5 Lack of mentorship

The Indian startup ecosystem faces many challenges, including a lack of appropriate guidance and mentorship. Due to a lack of experience in the business, industry, and market, startups often have great ideas and/or products but are ill-prepared to bring them to market. It is a proven fact that a brilliant idea cannot succeed unless it is promptly implemented. A potentially good idea could be stifled by a lack of adequate mentoring or guidance [22].

2.13.6 Lack of a good branding strategy

Startups cannot flourish at a faster pace due to the lack of an effective branding strategy. According to Hemant Arora, Business Head-Branded Content, Times Network, branding is crucial as it gives a brand its identity and occupies a unique space in the minds of consumers [22].

2.14 Opportunities for Startups

There are many opportunities for startups in the Indian market despite challenges and problems. Startups are encouraged to consider the following opportunities.

2.14.1 India's Large Population

The Indian population is one of the country's greatest assets. As far as working age demographics are concerned, the working age population is expected to surpass non-working age demographics by 2025. Any startup will be able to take advantage of this unique demographic advantage. The bottom-of-the-pyramid market and infrastructure issues would provide startups with immense opportunities [22].

2.14.2 Change of mind set of working class

Indian startups are replacing traditional career paths. Talented people would be attracted to startups if they were given challenging assignments and offered good compensation packages. Additionally, some high-profile executives are leaving their jobs to work for startups or start their own businesses [22].

2.14.3 Royalty tax

There is a reduction in royalty taxes paid by businesses and startups in India from 25% to 10% [22].

3. CONCLUSION

India's economy is in an expansionary phase at the moment. A number of liberal policies and initiatives are being introduced by the Indian government to increase GDP growth from the grassroots level, including 'Make in India', 'Startup India', and MUDRA, among others. 'Make in India' is a great opportunity for start-ups in India. There are different funding options available for start-ups at different stages. Indian government is continuously implementing numerous schemes to promote the start-ups with help of different funding options which is easily accessible by the budding as well as existing entrepreneurs. India is having lot of opportunities particularly in agriculture sector which help to develop the startups as well create the employment opportunities. The government could improve the availability of local talent by developing entrepreneurs, preventing brain drain and enhancing startup companies' ability to hire locals. These schemes are not only being promoted to benefit the existing group of start-ups, but also to motivate budding entrepreneurs, start-ups, and students from all domains, who are increasingly independent and leading Atmanirbhar Bharat forward. The Indian start-up ecosystem has been developed through these initiatives. It appears that India is now heading towards a golden era of entrepreneurship, where, if everything goes according to plan, it will host more entrepreneurs by 2030 than the USA or any other leading nation.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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