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A New Model of Rating to Evaluate Start-ups in Emerging Indian Market

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Abstract:- Conceptualization of an idea to a well framed model is emerging with need of generating wealth at national base. Entrepreneurship is the crucial base of an economy measuring the wealth base thereby contributing to national income. The need for evaluation of these start-ups with some criteria is a pressing priority. The rating criterion has risen these days as the expressional value for an individual assessment for a company or a firm. There is a need to widen the range for rating to full fledge rating model considering financials and non-financial aspects by opening its arms towards the most important segment of economy i.e. start-ups. In consideration of this, the need to launch a well specified rating agency for start-up is need of the hour. Since there is no particular study defining its focus towards such need on national and international level, we want to explore this area of research so as to contribute to existing literature (which is very limited). Considering India, although there is much effort by government to boost start-ups initiatives like Atma Nirbhar Bharat, Start-up India, Make in India and relaxations in budgets etc. but there is no criterion to evaluate these start-ups in order to gain visibility. In this research paper we made an effort to frame a rating model considering the important factors affecting the start-up which can satisfy the need for the model. The model is framed by us considering all financial factors like sources of funds, working capital, financial performance, idle funds etc. and non-financial factors like founder details, descriptive, market variable and future aspects etc. which are essential for a start-up to evaluate and henceforth benefits in longer run-in terms of getting easy funding, financial support and more visibility. An extant literature review is done in order to cover all parameters focusing the evaluation of start-ups with a longer perspective by adding to existing literature and helping policy makers, entrepreneurs, venture capitalists who can use the model to assess the start-ups and henceforth can benefit the economy.

Keywords:- *Rating Agency, Start-ups, Entrepreneurship, Financials Factors, Non-Financials Factors, Review of Literature.*

I. INTRODUCTION

The contemporary challenge of an economy is generation of self-employment despite of upheavals in the corporate world. The most important strategy to meet such challenge is to generate self-employment opportunities for the young and energetic entrepreneur of a country. Entrepreneurship is one of the youngest paradigms in management science (Bygrave 1989b). The next question raises the demand for testing credit worthiness of the entrepreneur. So, the upcoming pressing priority is to widen the scope of credit rating for rating of entrepreneur considering qualitative and quantitative aspects. Grant Thornton for ASSOCHAM India (2016) writes “Start-ups have been the flavour of the season over the last few years for the Indian markets. This has resulted in the emergence of a number of homegrown unicorns across the country. One of the major contributors leading to this development has been the mega funding that has been ploughed into most of these unicorns between the period 2007 and 2015. This has been in line with the global trend dominating the space’.

India is a country in South Asia which is the seventh-largest country by area and the second-most populous country with over 1.2 billion people. A large population implies a large potential market in India and has a heavy employment pressure in Indian society. In recent years, the self-employment consciousness among college students is increasing and the students are less likely to rely on parents or schools or wait for opportunities. Instead, they tend to take initiative to look for new chances for themselves. Many businesses start with a dream, but it takes more than just a dream for them to grow into successful businesses—including the tenacity to overcome many challenges facing start-ups today. Start-ups take time, effort, patience and energy. Funding is a major concern for start-ups and small businesses. The sustainability, stress, venture capitalist selection etc. are equally important to be studied in relation to the evaluation of start-ups along with financials.

Just like start-ups, rating is a need of an hour. Unlike a normal entity that gets a rating on the basis of just their financials, a start-up requires grading on all the factors that generally affects the new age firm.

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- *Research Background*

The dot-com bubble led to the start-up of new companies and ignited the concept of "START-UPS' during 1990s. The evolution of start-up in India took years and years before it was finally been taken up by our government as a start-up initiative named 'START-UP INDIA'. The government of India took an initiative to boost new firms with innovation and ideas in the year 2016. The Ministry of Commerce & Industry defined Start-ups in India as an entity opened less than 10 years ago and has an annual turnover of fewer than ₹100 crores (US$14 million). India is home to numerous start-ups where few are self-financed, few are funded by angel investors, venture capitalists, few are listed and unlisted too. The Indian government started various initiatives like Atma Nirbhar Bharat, Start-up India, Make in India and relaxations in budgets, etc so as to boost and make India a hub for all kinds of start-ups. The current budget (2021) also incentivized the start-ups by tax holiday extension.

Conceptually, there is no particular model stating how a start-up should be rated but an amalgamation of various factors states how a start-up should be evaluated. The majorly developed analytical framework as stated by Watson, Hogarth-Scott, and Wilson (1998). This framework incorporates all characteristics that a start-up should possess at the micro and macro level. In addition to this, Organisational life cycle theory (Smith et al., 1985) predicts sequences of phases in the life of an enterprise. Various models as stated by different authors explain the life/phase in a start-up that play an important role in its development like three-stage (Bhave,1994), Four stages (Kazanjian, 1988), Five stages (Galbraith, 1982), Ten stage- Milestone model (Block and MacMillan, 1985).

- *Objective of the Study*

The purpose of study is to develop a framework that can assess the start-ups catering to their financials and non-financial aspects. The model shall consider all the possible aspects which can help in better evaluation and figure which qualifies all the factors. Reducing the gut feeling and getting a figure value can help the start-ups gain visibility in the market. Since there is very limited literature in respect of the rating of start-ups, the paper will contribute to existing literature to the maximum. With this, the existing start-ups benefit in the long run-in terms of getting easy funding, financial support and more visibility.

- *Research Methodology*

The research papers were extracted from various sources like research gate, Academia, Shodhganga, Scorpus and science direct etc. The important related factors were jotted and they were quantified on the basis of various researches. As no specific work related to the present theme is available, possible published works of literature selected on a random basis have been studied. The studies are also limited on international basis but there are few rating agencies that helped to consider all financial and non-financial factors.

II. LITERATURE REVIEW

The attributes like finance, demographics, human relation, stress and sustainability affecting a start-up have different literature suggests different effects with each different variable.

Watson, Hogarth-Scott and Wilson (1998) gave the basic framework for analysing new micro-firms' performance i.e. the start-ups. The finance was the major issue faced by the small start-ups. The multivariate analysis is used considering financial and non-financial attributes including personal attributes and motivators etc. The financial factors cover the facts that how the funds are received, factors constituting the work performance and how this impacts entrepreneurship. While examining the capital structure of the firms, it is found that the firms have lower leverage when founders are wealthy with no prior work experience in the same sector, located in big cities and have a good demand for products. The determinants of creditworthiness and business prospects differ to a certain extent thereby suggesting that the lenders ascribe importance to societal issues in granting loans (Marika Miettinen, 2014).

The financials basically include the type of investment, research and development, initial capital and turnover etc for start-ups evaluation. The working capital for initial expansion followed by financing and its listing status are also well-considered (Roberto Moro Visconti, 2019). Monetary operating revenues and operating costs, low level of indebtedness, presence of significant fixed costs, taxes, trade receivable, operating Net Working Capital, Self-financing via retained earnings is more vividly used to increase ownership stake (Carmen Cotei, joseph Farhat,2017).

The multiple valuation methods used by Dittmann, Maug, and Kemper (2004) stated that the long-term vision outweighs the short-term vision by the venture capital investors. They focused on venture capitalists focusing on discounted cash flow techniques for valuation investments in stable start-ups with a low risk of failure. Personal characteristics, Education and race play a vital role in start-up evaluation (Carmen Cotei, joseph Farhat,2017).

The primary data is used for evaluation of success of a firm using a multiple-point scale with type of funding used, the background of the entrepreneur and other non-accounting characteristics (Marika Rosanna Miettinen and Hannu Littunen, 2013). The credit risk came out to be a major risk to a firm. Many problems came due to less research on the credit risk of a start-up (Jiangru Wei, Yuting Chen*, Jing Zhang and Yonghua Gong, 2019).

The firm survival and the achievement of profit break-even are negatively correlated with financial constraints. Only the impact of venture capital constraints on firm survival is not statistically significant (stucki,2014). To make a successful start, institutions should consider providing access to financial support as an important and compulsory service for customer acceptance and corporate performance. (Swati, 2018).

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Financing is the pillar behind every successful and innovative start-up. (*Okrah, James and Nepp, Alexander,2017)*. The start-ups exit the market because of bankruptcy. The lack of financing does not help them bring out a new innovative product and services which means those companies that have the ability to support research activities tend to be the ones always lead the market.

Demographics have a blurry effect on small start-up firms where women, the retrenched and the public sector employees are more to be focused (Tim, Thierry, Noelle, Vicki, 1999). The structural equation modelling is framed to study significant effect on demographics in entrepreneurship (Alexandros, Evangelos,Alina B, 2014). The data of federal individual income tax group analysis for the year 1981-85 concluded effect of inheritance on entrepreneurship. (Douglas, David and Harvey, 1994). The attitude approach to the study of entrepreneurship among the undergraduates who minored in entrepreneurship and the non-minor entrepreneurship undergraduates for attitude measurement is done (Mohd Noor and Mohammad, 2009).

The empirical evidence that affiliation is an ordinary economic good for which factors seeking association will face a price-reputation trade-off. The finding is consistent with the view that VCs' reputation (which in turn depends on their experience, information network, and direct assistance to the portfolio firms) may be more distinctive than their functionally equivalent financial capital (Davis, 2004).

The studies related to impact of human resource management (HRM) on firm performance has increased since the end of the nineties (Sofhie and luc, 2014). Stress has also contributed as a factor for start-up success (Kumar, 2017). The research results will help design start-ups recognizing the important variables in developing their enterprises and businesses. The implication of this study is that many start-ups in Korea expect to receive investment and support from overseas investors (kim, kim, jeon, 2018).

This study was conducted to empirically determine the factors affecting business sustainability and the survival rate of start-ups as established from worldwide government support policies since the 2000s in an attempt to secure new growth engines and create jobs. The results of the analysis showed that the entrepreneurship had a positive effect on business sustainability with flow experience and entrepreneurial satisfaction as the mediators in start-ups based on government support (lee and kim, 2019).

- *The Model*

The factors affecting a start-up is divided and studied in two parts; financial and non-financial. These factors were compiled to frame a model as shown in the figure 1 after reviewing all studies that lay emphasis on factors which are important for a start-up. This model is a framework that comprises contribution of major factors to the effectiveness of the start-up.

- *Financials of a Start-Up*

The financial analysis of a start-up for rating is identical as normal rating done by credit rating agencies and includes valuations of start-ups on the basis of liquidity, solvency and profitability ratios. The pecking order theory and financial growth cycle theory (Berger & Udell, 1998) plays a major role in predicting the capital structures of newly formed firms investing more through self-owned funds. Investment through self-financing is followed by various restrictions and regulations of the state. So, the need for external financing rises. There are studies which state that finance is the core of a start-up and falling of this leads to major failures.

The financial support is relevant to make start-up innovative. Many start-ups exit the market because of bankruptcy and lack of financing. It does not help them bring out a new innovative product and services. Thus, the companies which have the ability to support research activities tend to be the ones that lead and dominate a given market for a long period of time. Financing can be stated as a pillar behind every successful start-up. Prior research quoted working capital management as a keen feature of start-ups. Liquidity management is the planning and controlling of cash flow by owner-managers in order to meet their day-to-day commitments (Ekanem, 2010). The Start-up future relies majorly on finance which is major component of working capital management.

Financial factors further include operating cost, working capital and the source of funds**.** The next question arises whether the start-up is self-financed or there is a role of the venture capitalist. With the role of a venture capitalist, the start-up gets a different view. Venture capitalist reputation also plays a great role in the overall evaluation of a start-up.

Finance plays a role as an individual element but it has major significance when lined to the stage of start-up. The interrelated need of financials with various factors like age, gender and equity etc. of the founder is well depicted by Marika Miettinen (2014) in her paper. The work done by Roberto Moro Visconti, Carmen Cotei, joseph farhat, Dittmann, Maug and Kemper also explained numerous financial factors which are to be evaluated. The evaluation shall be done on a rating scale of 1-10 considering their dependability towards importance in the evaluation of start-up.

- *Non-Financial Factors*

The non-financial variables also play a vital role in start-up ecosystem evaluation. Non-financials are being divided into various subcategories like characteristics of the founder, descriptive of start-up, the human element, challenges and miscellaneous ones.

Characteristics of founders basically include age, education, experience, co-founders and gender. The venture capitalists suggested that the industry experience, experience in start-up and managerial experience contribute well to funding a start-up. Henceforth, they contribute as a significant qualitative factor in start-up evaluation. (Tarek Miloud, Arild Aspelund & M athieu Cabrol (2012). On the

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basis of founder and co-founder background, age plays an important role because the increasing age leads to less growth whereas the young owners' age has a higher possibility of growth and expansion (Kangasarju, 2000). It states that younger entrepreneur has less experience leads to more failures but on contrary the young minds today are the leading champions of the entrepreneurship era. Similar is with qualification, education, and gender. Education too plays an important role in the growth of the start-up. (Ratzinger, D., Amess, K., Greenman, A, 2018). The studies suggest that positives overpower the negatives as such qualitative aspects are an important part of a start-up evaluation. Thus, such inclusions are to be considered in the evaluation.

Descriptive of the start-up is majorly to affect start-up ecosystem. The stage of the start-up has a great impact on the start-up ecosystem. Overall valuation of start-ups is effected with the life cycle growth model. Following the stage, the PESTEL (political, economic, socio-cultural, and technological) factors play a vital role. The sector has an individual impact on the start-up as with the change in the sector the evaluation gets impacted. For instance, technology or software start-up varies to some extent to that of an agriculture-based start-up.

Researches have evaluated that human capital also plays an important role as employees and co-founder of a start-up becomes a crucial part of this ecosystem. Following these major challenges, legal structures, future aspects and miscellaneous factors like organization structure and CSR play a major role in building this ecosystem. Carmen Cotei, joseph farhat; Marika Rosanna Miettinen and Hannu Littunen; Jiangru Wei, Yuting Chen*, Jing Zhang and Yonghua Gong; stucki; Swati; Okrah, James and Nepp, Alexander; Tim, Thierry, Noelle, Vicki; Alexandros, Evangelos,Alina B; Douglas, David, and Harvey; Mohd Noor and Mohammad; Sofhie and luc; Davis; Kumar; kim, kim, jeon and lee and kim have considered it. The evaluation scale shall be similar to that of financials but we shall convert the non-financials to a numeric on basis of equal scale and stage of start-up.This leads to the following diagram of all factors which are to be considered for evaluation.

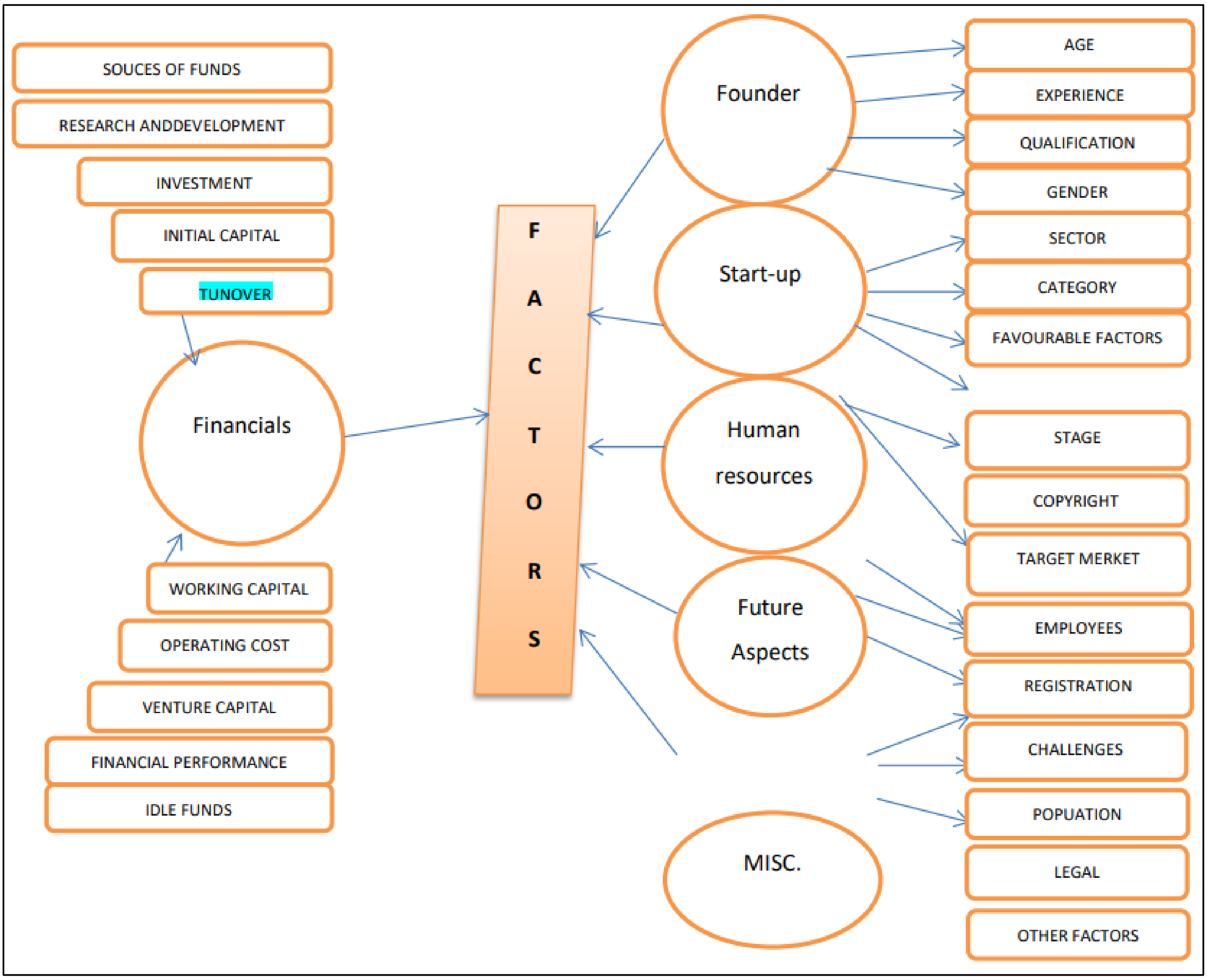

Fig 1 Non-Financial Factors
(Source- Compiled by authors)

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The evaluation shall be followed by a criterion wherein start-ups reach out to the agency. The rating agency shall require information on four major areas. Initially, the evaluation should start with descriptive information like industry, population coverage and experience etc. The qualitative information will be quantified on equal scales and with respect to literature as described above. Similarly, the second phase of evaluation will be on the basis of the founder and his descriptive characteristics like age, skill set and gender etc. Followed by furthermore evaluation of financials just like evaluating capital, working capital, taxation and various ratios like current ratio, liquidity ratio, etc. In addition to this, another category of evaluation includes various non-financial factors like competition, stage of start-up, employment generation, challenges, future perspectives and other miscellaneous factors. The criteria for evaluation are shown in the following diagrammatic form.

- *The Journey of Evaluation*

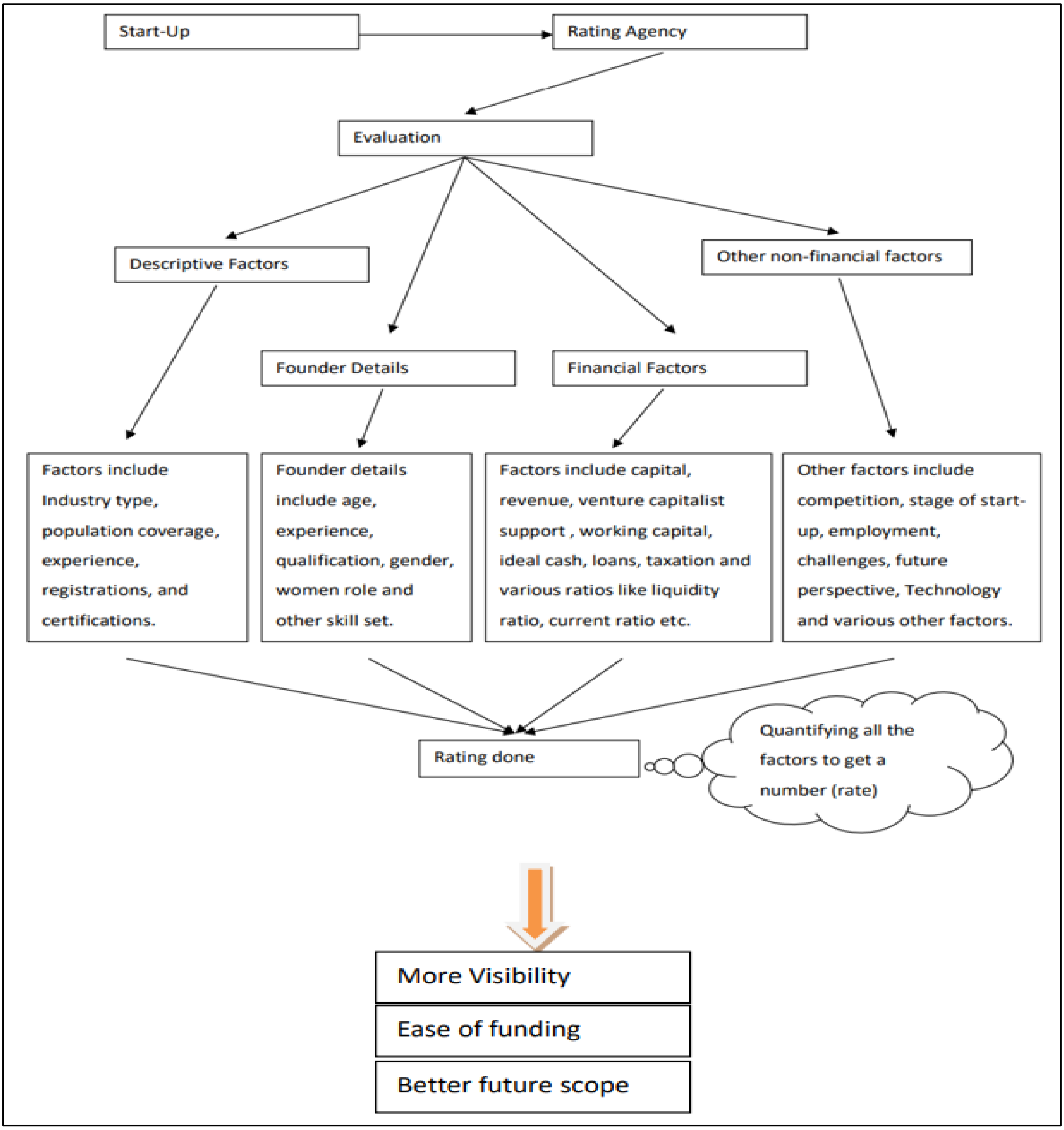

Fig 2 The Journey of Evaluation
(Source – Compiled by authors)

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III. CONCLUSION

The need for a scoring model is the need of the hour. With India being the third-largest start-up environment as per the start-up India ranking 2019 report, the evaluation criteria should be simplified and be available even to a small start-up with no registration at the larger level. Improvising the valuation criteria which is initially based on mere evaluation of large, registered start-ups with just focus on following of good practice and state comparison; the evolution should expand even to smaller venture with little population target. The above model considers little financial and non-financial aspect which is neglected while considering the credit rating. Considering strengths and weaknesses with consideration of their age will be helpful in transparent valuation and future prediction of usage. This evaluation will not only justify the role in ease of credit but will maximize the visibility, encourage the funding and help in the better establishment of a start-up. Every factor has individual importance which can help the venture to sustain itself in the longer run. The factors after being quantified on an equal scale shall give more value to the viability of the start-up. With this, we want to widen the scope of start-ups in this new era of development.

FUTURE PERSPECTIVE

With this framework, the calculator considering all factors is being made by us on equal scale of calculation which will simplify and ease the understanding of rating. The one figure resultant calculator will help the start-ups in longer run.

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