

# Determinants of Financial Bootstrapping in Small and Medium Enterprises (SMEs): A Developing Country Perspective

### Deepa Gunarathne<sup>1</sup>, S M Ferdous Azam<sup>2</sup>, Siti Khalida Binti MD Yusoff<sup>3</sup>

<sup>1</sup>Department of Accountancy, Wayamba University of Sri Lanka, Kuliyapitiya, Sri Lanka <sup>2,3</sup>Graduate School of Management, Management & Science University, Shah Alam, Selangor, Malaysia Email address: deepa@wyb.ac.lk <sup>1</sup>, drferdous@msu.edu.my<sup>2</sup>, Khalidah@msu.edu.my<sup>3</sup>

Abstract— The SMEs around the globe play a decisive role within the economies irrespective of the development status. Nevertheless, these businesses suffer from severe obstacles due to financial constraints and Financial bootstrapping (FB) is a perfect last resort in that regard. Thus, this study examined the determinants of FB within a developing country context. Human capital, social networking, and entrepreneurial perception were identified as the independent variables and use of FB was identified as the dependent variable. A cross-sectional survey was conducted to collect data. Structural equation modeling of least squares (PLS-SEM) was the main analysis method. We contribute to the knowledge by discovering the positive and significant impact of human capital and entrepreneurs' perceptions on the use FB techniques. And, future researchers are encouraged to study potential moderating effects generated by gender, firm age, and business type.

**Keywords**— Developing country: Financial Bootstrapping: PLS – SEM: Small and Medium Enterprises.

#### I. INTRODUCTION

Financial bootstrapping (FB) is an alternative resource management approach that avoids market-based resource transactions (Grichnik et al., 2014). The concept was viewed by Winborg and Landstrom (2001) as a creative way to achieve resource utilization without long-term external financing. Meanwhile, Jayawarna et al., (2015) provided a simplified view of the accumulation of resources through informal channels. Accordingly, FB is recognized as a means of fundraising without channeling traditional formal sources. The development of various FB techniques provides strategic solutions to the prevailing financing needs of companies. Specifically, entrepreneurs try to meet their respective financing needs in different ways because business activities and financing needs differ (Malmström, 2014). Therefore, in recent decades, scientists have discovered various FB methods (Freer et al., 1995; Winborg and Landstrom, 1997, 2001; Harrison et al., 2004; Perry et al., 2011; Tomory, 2011).

However, the literature shows that the use of numerous FB strategies in businesses is determined by a number of factors. The human capital components of managerial experience, entrepreneurial experience, educational level and business training influence the determination of FB usage (Grichnik et al., 2014). Experienced entrepreneurs are able to anticipate the financial constraints that will arise and choose alternative methods to meet these demands (Waleczek et al., 2018). To

succeed in a turbulent market, owners and managers of small medium-sized businesses should focus on relationships with external partners, financial institutions and government officials. As Haron (2020) explains, customers and suppliers are crucial to small businesses. With the help of networks, entrepreneurs are informed about alternative financing options. In addition, they have access to alternative sources of financing through networks (Seghers et al., 2012). The digitization and popularization of social media platforms has facilitated the further development of social networks in the recent past. Entrepreneurial perception is another important consideration analyzed in the literature. Perceived risk and ability have been found to influence FB (Carter & Van Auken, 2005). Entrepreneurs evaluate the perceived risk associated with numerous sources of financing. In particular, the potential risk is comparatively high when external formal financing is considered. However, there is a greater tendency to choose less risky alternative sources. Additionally, high perceived abilities lead entrepreneurs to have strong selfconfidence. Consequently, they are buoyed towards external formal financing.

In general, FB provides the necessary financing to companies in need and has difficulty channeling formal sources of financing to start, expand, innovate or enter into cross-border trading activities. To this end, FB acts as an excellent intermediary for SMEs, rather than large corporations. SMEs are considered as driving engines of the economy due to their remarkable contribution regardless of the level of development (Deyshappriya and Maduwanthi, 2020; Wijayarathne and Perera, 2018; Yogendrarajah et al., 2017; Hironaka et al., 2017). In addition, countries in the South Asian region rely heavily on SMEs. Most residents of these developing countries earn their household income through self-employment or service provision (Manzoor et al., 2019). Accordingly, SMEs are seen as key players and dynamic force in income generation and job creation, contributing to economies around the globe achieving economic development goals (Weldeslassie et al., 2019).

The SME sector in Sri Lanka has achieved a strategically important status within the country's economy due to its significant role in terms of production, employment and the ability to promote growth and social development (Wijayarathna and Perera, 2018; Niranjala and Jianguo, 2017).



SMEs account for 75% of the total number of active enterprises in the country, provide 45% of jobs and contribute 52% of the gross domestic product (GDP) (Deyshappriya and Maduwanthi, 2020). According to the International Finance Corporation (IFC), 65 million companies, or 40% of formal SMEs developed in developing countries, have unmet annual financing needs of \$5.2 trillion (World bank, 2020). Menike (2019) explains that inadequate availability and accessibility of finance has restricted the growth of SMEs in the Sri Lankan context. From a supply perspective, the risk aversion of financial institutions leads to strict conditions and from a demand perspective, the lack of collateral and lack of eyecatching projects are important when raising capital (Jabbouri and Farooq, 2021).

Prior scholarly work provide evidence on the types or techniques of FB (Winborg and Landstrom, 2001; Fatoki, 2014; Horváth, 2019; Alvarado and Esquival, 2020; Pal et al., 2020; Block et al., 2022), motives and Benefits of bootstrapping and the impact of FB implementation on business performance (Al Issa, 2020; Khalil et al., 2020; Kum et al., 2020). In addition, the influence of various factors on the adoption of FB in companies has been studied (Khan and Ouaddus, 2020; Mabonga, 2020; Muo et al., 2020). However, the majority of previous studies on FB have been conducted in developed countries, leading studying of FB a novel concern in developing countries (Khalil et al., 2020). To the best of our knowledge there is a dearth of studies on FB within the Sri Lankan context. Hence, it remains unclear what are the considerations that affect the utilization of FB and the present study fulfills that gap in the literature. Next, the study contributes to the knowledge from a developing country perspective. Moreover, the results generated will facilitate the owner/managers of SMEs, in understanding the factors to focus on and the policy makers to take necessary actions.

Thus, the present study was designed with the objectives of examining the impact of human capital, social networking and entrepreneur's perception on the use of financial bootstrapping by the SMEs. As per the results generated, human capital and entrepreneur's perception significantly affects the use of FB and social networking negatively and insignificantly affect the use of FB.

#### II. LITERATURE REVIEW

#### Pecking order theory (POT)

The concept of pecking order was created by Donaldson in 1961. This theory emphasizes that companies prefer to use internal financing rather than external sources of financing (debt and equity) whenever possible. Later, Myers (1984) and Myers and Majluf (1984) expanded the theory to focus on shareholder relations and valuation. The information asymmetries, the need for mortgages, the comparatively higher costs associated with issuing debt and equity, and the fear of loss of control lead entrepreneurs to follow the pecking order (Minola and Cassia, 2013). Therefore, the entrepreneurs are enthusiastic about using internally generated funds over external sources to overcome the challenges posed by information asymmetry, financial requirements and excessive costs associated with debt and equity (Padachi et al., 2012).

SMEs are widely accepted as more financially constrained companies that are not listed on the capital markets. And they have lower management capacity and organizational skills compared to large companies. Since most SME entrepreneurs have difficulty raising capital through external sources of financing, they need to adopt financial bootstrapping methods (Osei-Assibey et al., 2012). This explains the financing tendencies of the owners of SMEs lies within the framework of the pecking order theory. Furthermore, the empirical studies concluded that the owners of these companies prioritize internal sources of finance over external options at every potential occasion (Atherton, 2012; Padachi et al., 2012).

#### Resource dependency theory (RDT)

Resource dependence theory (RDT) states that the tangible and intangible resources owned by firms are numerous (Penrose, 1959). These various resources are important for the proper functioning of a company (Pfeffer and Salancik, 1978). RDT argues that it is challenging for a company to survive and grow alone rather than interacting with other companies to meet resource needs. Accordingly, networking becomes the fundamental feature in FDT. Therefore, companies need to maintain good relationships with each other to enable a quick and easy flow of resources. The literature review shows that RDT is the basis for most academic work on financial bootstrapping (Grichnik et al., 2014; Malmstrom, 2014; Jayawarna et al., 2015; Winborg, 2015; Khan and Quaddus, 2020; Block et al., 2022). FB completely depends on and will only be successful on networking, which is a key element emphasized in RDT. Thus, the theoretical lens of RDT is best suited to explain the use of FB by SMEs (Ebben and Johnson, 2006).

#### Financial Bootstrapping

Comparatively, most small businesses face particular difficulties in obtaining the necessary finance as the risk is increased due to the lack of guarantees (Schinck and Sarkar, 2012). Therefore, raising funds for capital needs has become a difficult task. Therefore, there is a need to provide SMEs with a set of procedures for managing, negotiating, sharing and borrowing cash. This need led to the creation of FB. As cited in (Horváth, 2019), FB first appeared in the Harvard Business Review with the outstanding work of Bhide (1992), and its definition is derived from the well-known quote "Pull yourself up by your own bootstraps," which implies one's own efforts matters in developing self-managed businesses.

The development of various FB techniques provides strategic solutions to the prevailing financial needs. Therefore, in recent decades, scholars have discovered various methods of FB (Freear et al., 1995; Winborg and Landstrom 1997, 2000; Harrison et al., 2004; Perry et al., 2011, Tomory, 2011). The study by Winborg and Landstrom (2001) revealed 32 bootstrapping techniques used by the SMEs. Further, they identified six different FB clusters. They are; delaying bootstrappers, relationship-oriented bootstrappers, subsidy-oriented bootstrappers, minimizing bootstrappers, privately funded bootstrappers and non-bootstrappers. Ebben and Johnson (2006) studied the link among the financial condition



and the usage of FB, adopting the survey of Winborg and Landstrom (2001). As per the results most of the firms were using "customer-related", "delaying-payments", "owner-related", and "joint-utilization" bootstrapping techniques. Furthermore, Waleczek et al (2018) investigated that initiation behavior is a strategic choice rather than a desire. Khalil et al., (2020) disclosed evidence upon the existence of a positive and significant impact of motivation, growth intention and prior family business exposure on the use of FB. Besides, Block et al., (2021) has recently explored the role of FB under the Covid 19 pandemic and revealed that there exists a positive relationship among the severity of crisis and the use of FB to fulfill the resources deficits.

#### Human capital and financial bootstrapping

The entrepreneur's HC can be predicted as a potential agency that influences the implementation of FB activities at the firm level. In particular, people with prior business knowledge try to look for substitutes to avoid traditional factor markets (Grichnik et al., 2014). According to Neeley and Van Auken (2009), business owners with higher education are more likely to use FB (self-financed) methods than respondents without higher education. Self-funded bootstrapping methods include foregoing a salary, using personal credit card for business purposes, working another job for a salary, and paying lower wages to relatives. In addition, the tailored business training can provide the specific knowledge and skills to successfully carry out the entrepreneurial activities (Grichnik et al., 2014). Further, there is an influence on participation in trade fairs and seminars (Thrikawala, 2011). Although improved HC has been shown to promote FB adoption, the pooled empirical findings have produced mixed results. According to the findings of Neelev and Van Auken (2009), self-financing bootstrapping techniques were often used by educated people. This finding is supported by Irwin and Scott (2010) and Grichnik et al., (2014). In contrast, Schinck and Sarkar (2012) concluded that a greater use of FB is observed among SME owners with low levels of education. Surprisingly, the results of Pretorius's (2010) work emphasize that training is not a significant factor in the choice of FB techniques. Furthermore, Waleczek et al., (2018) add that experienced entrepreneurs are able to anticipate the financial constraints that will arise and choose alternative methods to meet these requirements. Accordingly, it is proposed;

 $H_1$ : Human capital is positively associated with the use of financial bootstrapping.

#### Social networking and financial bootstrapping

Owners, managers, policy-making bodies and the academic community are increasingly paying attention to collaborative connections and networks as an important strategy for the development of the small business sector (Dasanayaka and Sardana, 2010). Social networks enable entrepreneurs to acquire knowledge, acquire skills and obtain information through communication with other members of the network (Jones and Jayawarna, 2010; Seghers et al., 2012). In addition, the network relationships contribute significantly

in creating the opportunity to access various resources such as technology, information about market requirements and business support services (Dasanayaka and Sardana, 2010). Sri Lanka, being a developing country, does not have a large market and many SMEs are involved in subcontracting materials to the large companies in the form of raw materials or finished products. Therefore, the SMEs are able to increase their sales volume by establishing and maintaining network relationships with the large companies (Nishantha, 2011). In the early stages of startup, SME owners or managers need encouragement, influence and seed capital, and there is an opportunity to meet these needs through social networks. Although there is a classification of different forms of network relationships, both the weak and strong network ties create a platform for meeting key resource requirements, avoiding market transactions and enabling FB (Grichnik et al., 2014). Strong ties include family and friends, weak ties include government customers, suppliers and institutions. Furthermore, Jayawarna et al., (2015) provide evidence for the statistically significant relationships between network connections and the FB techniques used. According to Anwar and Ali Shah (2020), a young company faces numerous challenges in its early stages, but networking allows it to access the necessary resources to overcome these challenges efficiently. Haron (2020) also emphasizes that customers and suppliers are crucial for small businesses. Hence, following hypothesis is proposed;

H<sub>2</sub>: Social networking is positively associated with the use of financial bootstrapping.

#### Owner's perception and financial bootstrapping

An entrepreneur's decision to start and operate a business is influenced by numerous factors. The different personal insights about skills, opportunities and threats are decisive. Because, these personal insights can stimulate financing decisions related to the choices (Neeley and Van Auken, 2010). In particular, the entrepreneur's perception of the business environment and his or her own capabilities appears to be of great importance when making business decisions (Carter and Van Auken, 2005). As Neeley and Van Auken (2010) further point out, the entrepreneur's perceptions can play a role in a small business's financing strategy. Further, the way an entrepreneur perceives and believes the environment around, results to inspire in decisions on the financing methods to be adopted (Grichnik et al., 2014). On the other hand, financial theory clearly explains the relationship between investment choice and risk (Fama and Miller, 1972). Although financial theory states that investment and financing decisions are independent of each other, the risk perceived by the entrepreneur is decisive for the choice of financing sources. Accordingly, entrepreneurs who perceive that their ventures are exposed to comparatively higher risk, identify FB as more significant than the entrepreneurs perceive lower risk (Carter and Van Auken, 2005). Use of FB can reduce the burden on an entrepreneur in terms of the risk involved. However, when an entrepreneur has less confidence in own skills and abilities, there is a higher likelihood of avoiding FB methods (Neeley and Van Auken, 2010). Therefore, it is worth



examining the relationship between perceived risk, perceived ability and use of FB. Thus, the following hypothesis is proposed;

H<sub>3</sub>: Entrepreneur's perception is associated with the use of financial bootstrapping.

Accordingly, the researchers' conceptualization on the present study is illustrated in Fig.1.

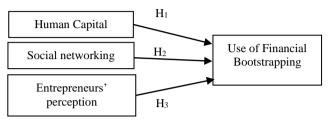


Fig. 1. Conceptual Framework

As demonstrated in Fig.1, this study involves four latent constructs, i.e. human capital (HC), social networking (SN), entrepreneurs' perception (EP) and use of financial bootstrapping (FB). There were three sub dimensions under HC as level of education (LE), managerial experience (ME) and business training (TR). SN was consisted from two dimensions namely, strong ties social networking (ST) and weak ties social networking (WT). Further, perceived ability (PA) and perceived risk (PR) were recognized as the sub dimensions of EP. Finally, for FB two sub dimensions contributed knowingly joint utilization (JU) and owner financing (OF). The operationalization of these constructs were facilitated by the measurement scales employed by the prior scholars (Bosma et al., 2004; Hasan and Almubarak, 2016; Fatoki, 2011; Davidson and Honig, 2003; Anwar and Ali Shah, 2020; Carter and Van Auken, 2005; Winborg and Landstrom, 2001).

#### III. METHODOLOGY

The present study lies within the positivist paradigm as it satisfies the ontological and epistemological foundations by the positivist philosophical emphasized Accordingly, the quantitative research method was followed within the framework of the deductive approach. Furthermore, the research was designed as a non-experimental crosssectional study. The population of the present study consisted of owners or managers of SMEs in Sri Lanka. To identify SMEs, the definition provided by the Department of Census and Statistics (DCS) of Sri Lanka was applied. The DCS has identified the number of engaged people as the most reliable and consistent variable for defining SMEs. 81,531 SMEs (2013/14 economic census) were recognized accordingly. The researchers considered the entire 81,531 SMEs as the population of the present study. And a sample of 384 SMEs was selected based on the sample size determination formula developed by Krejcie and Morgan (1970) with a confidence level of 95 percent and a precision level of 5 percent (Sekaran and Bougie, 2016). The unit of analysis was an individual as the required data was collected from the business owners or owner managers. The simple random sampling technique was used for sampling because it specifically assigns every

element in the universe an identical chance of being included in the sample (Kothari, 2004).

We collected data using a cross-sectional survey. The chosen research method was consistent with the applications of previous scholars in the field of FB (Winborg and Landstrom, 2001; Neeley and Van Auken, 2009, 2012; Ebben, 2009; Fatoki, 2014). For data collection, an adapted structured questionnaire consisting of four sections was selfadministered. Part I of the survey instrument included the demographic profile of the respondents (age and type of business, geographical location, number of employees, education level and managerial experience of the owner). Part II included 11 items covering two types of FB techniques; owner financing and joint utilization (Winborg and Landstrom (2001). Part III included 12 items measuring HC components (Bosma et al., 2004; Hasan and Almubarak, 2016; Fatoki, 2011). Part IV included 11 Items measuring the SN components of strong ties and weekly ties (Bosma et al., 2004; Davidson and Honig 2003; Fatoki, 2011; Anwar and Ali Shah, 2020) and 6 items measuring entrepreneurial perceptions as perceived risk and perceived ability (Carter and Van Auken, 2005).

This study employed structural equation modeling (SEM) for data analysis. SEM has recently increased its prominence in economics and social sciences (Henseler et al., 2016). SEM is divided into two categories. The first approach, covariance-based SEM (CB-SEM), is extensively used and recognized, whereas the second, partial least squares SEM (PLS-SEM, PLS path modeling) focuses on the analysis of variance (Wong, 2019). Consequently, all the best practices pertinent to PLS - SEM were followed.

#### IV. RESULTS AND DISCUSSION

After compiling the survey instrument, researchers conducted a pilot survey for preliminary testing. The pre-test was to ensure the validity and understanding of the questions and the small number of respondents (Sekaran and Bogi, 2016). When piloting a questionnaire, a sufficient number of respondents should be selected to conduct a systematic analysis (Rattray and Jones, 2007). Thus, the survey instrument was piloted among 33 respondents.

TABLE I. Reliability Analysis

Maniahla	Dimension	Cronbac	h's alpha	Number of items	
Variable	Dimension	Initial	Final	Initial	Final
	LE	0.889	0.859	4	4
HC	ME	0.848	0.755	4	4
	TR	0.898	0.917	4	4
PA		0.737	0.784	3	3
PR		0.832	0.749	3	3
SN	ST	0.704	0.784	5	3
SIN	WT	0.915	0.877	6	5
FB	JU	0.914	0.868	5	5
LD	OF	0.755	0.808	6	4

A Cronbach's alpha of over 0.7 is considered desirable and indicates that all items in the questionnaire are highly reliable (Sekaran and Bougie, 2016). In the context of this pilot study, Cronbach's alpha analysis showed a distribution range of



0.704 to 0.915. It is well above the threshold (0.7) and all scales demonstrated a high level of internal consistency reliability. The survey produced a response rate of 34.2%. The lower response rate was largely due to the economic turmoil. Out of the returned questionnaires, 16 were removed due to extensive missing. From the balance of questionnaires, 21 (4.22%) were identified as having non-extensive missing. To convert them into usable questionnaires, mode imputation was applied. Thus, the final sample consisted of 497 usable questionnaires. The researchers then conducted a detailed screening process and systematic preliminary analysis to ensure the accuracy of the data used in this study. Data screening ensures the accuracy of PLS input (Wong, 2019). Therefore, the possible non-response bias was examined. According to Armstrong and Overton (1977), extrapolation is a highly recommended strategy for assessing non-response bias in cross-sectional studies. Therefore, the mean of the answers from the first 50 respondents was compared with those from the last 50 respondents. For this purpose, a paired sample t-test was performed in SPSS. The test was conducted with a null hypothesis assuming a mean difference of zero. According to the output, 51 of the 56 pairs had a p-value > 0.05 suggesting that there is no significant variance in the means of both subgroups. Thus, the results confirmed that non-response bias was not a problem for the present study. The presence of common method bias (CMB) was then assessed using Harmans (1976) single factor model. Since, the analysis of variance using common methods is one of the crucial concerns in empirical studies (Hair et al., 2017). The factors FB, HC, SN, and EP produced total variances of 15.433%, 47.909%, 43.110%, and 36.457%, respectively. Since all factors are below 50%, the non-existence of the CMB is assured.

The data-cleaning process began with the removal of monotonous responses. Monotonic responses are responses that have no variance and provide little or no added value to an analysis (Roni and Djajadikerta, 2021). Since monotonic observation was not possible with a large sample, the VAR.S function in MS Excel was used. The results ensured that there were no cases with zero (0) variance. Therefore, the data set of the present study was found to be free from monotonic responses. The next step was to observe the presence of outliers. An outlier is an extreme answer to a particular question or extreme answers to all questions (Hair et al., 2017). It is an observation that lies at a considerable distance from other responses and a small number of outliers can reverse the statistical significance of an analysis in either direction (Sullivan et al., 2021). Therefore, it is important to eliminate outliers to determine the statistical accuracy of estimates within an empirical study. In SPSS, the presence of outliers can be checked using a boxplot. The boxplots created showed the presence of outliers for some of the elements (OF1, OF3, OF4, JU3, JU5, LE2). Therefore, it was necessary to investigate whether these outliers had the potential to bias the analysis. Accordingly, compared the mean and the 5% trimmed mean. The mean is the average of the variables, while the 5% trimmed mean is a recalculated mean after cutting off 2.5% of the upper end and 2.5% of the lower end of the data distribution (Roni and Djajadikerta, 2021). The comparison showed that the differences were not large and the outliers therefore had no influence.

The next step was to examine normality. The parametric tests assume that the data distribution is normal. If this is violated, researchers must use nonparametric tests for analysis. Visual assessment of normality is possible by examining the bell-shaped curve developed on the histogram and using Q-Q plots. However, researchers are more comfortable with objective measurements of normal distribution than with visual inspection (Roni and Djajadikerta, 2021). Therefore, Kolmogorov-Smirnov and Shapiro-Wilk tests were performed. According to the results, all items in both tests were significant at a 95% confidence level, rejecting the null hypothesis of normally distributed population. Consequently, the data set under analysis was accepted to be non- normal and that led the researchers to apply non-parametric tests for data analysis.

The present study covered eight (8) demographic concerns. These were; type of business, age of business, number of employees, source of start-up funds, gender of the entrepreneur, level of education, industry in which the business operates and the province in which the business is located.

TABLE II. Demographic Analysis

	ABLE II. Demographic Anai	Frequency	Percent
Business type	Sole proprietorship	345	69.4
Business type	Sole proprietorship	343	07.4
	Partnership	75	15.1
	Joint venture	41	8.2
	Private company	36	7.2
Firm Age	0-5 Years	151	30.4
	6-15 Years	209	42.1
	16-25 Years	77	15.5
	26-35 Years	43	8.7
	Above 36 Years	17	3.4
Number of Employees	4 or less	120	24.1
	15-May	230	46.3
	16-35	80	16.1
	36-75	51	10.3
	76-199	16	3.2
Source of startup funds	Own savings	226	45.5
_	Family and friends	124	24.9
	Bank loan	134	27
	Government subsidy	5	1
	Other	8	1.6
Gender	Male	401	80.7
	Female	96	19.3
Level of Education	G.C.E. (O/L)	65	13.1
	G.C.E. (A/L)	197	39.6
	Diploma	106	21.3
	Bachelor's degree	114	22.9
	Master's degree or above	15	3
Industry	Trade	150	30.2
	Services	137	27.6
	Industry and	210	42.3
	constructions	210	42.3
Province	Western	275	55.3
	North Western	44	8.9
	Central	41	8.2
	Sabaragamuwa	38	7.6
	Southern	51	10.3
	North Central	30	6
	Uwa	18	3.6



The analysis discovered that the majority of the SME owners/managers (69.4%) were from sole proprietorships in contrast to the lowest (7.2%) from private companies. The company age analysis revealed that most respondents (42.1%) have been operating their company for 6-15 years. However, there were 3.4% who had been in business for longer than 36 years. In addition, 46.3% of the SMEs subjected to the analysis were having employees within a range of 5 to 15. And 3.2% were operating with 76-199 employees. Own savings (45.5%) and family and friends (24.9%) were the two main sources of startup funds for these businesses. Yet, there were 1% of SMEs initiated with government subsidies. Besides, 80.7% of the SME owners/managers were males and female ownership was limited to 19.3%. Further, the majority (39.6%) of the respondents were with the G.C.E.(A/L) qualification and only 3% were qualified with a master degree or above. Furthermore, 42.3% of the SMEs who participated in the survey were businesses in the industry and construction sector followed by 30.2% in trade and 27.6% in services. The geographical dispersion of the businesses was also subjected to consideration in the study. Consequently, it was discovered that more than half (55.3%) of the SMEs were located in the Western province. Being the capital city located within this province, easy access to airports and harbor, and the establishment of many supporting governmental organizations may have affected this. And 3.6% of the businesses were recognized as located in Uva province, the remoteness of location, lack of required infrastructure, and agriculture-based economy within this area may be the reasons affected.

This study used Smart PLS for analysis. Smart PLS is a standalone software specialized in PLS path models. The disjoint two-stage approach was employed to analyze the data. Further, the reflective measurement scale was identified as appropriate. Mirror patterns are defined when the structure is related to the sign and the signs are closely related and transitive. Complying with the requirements of reflective models, a first-order validation of the constructs was carried out, analyzing reflective indicator loadings, internal consistency reliability, convergent validity, and discriminant validity (Hair et al., 2019).

Table 3 presents the factor loadings. Factor loadings show how well an item represents the underlying construct. A factor loading over 0.70 is recommended (Vinzi, Chin, Henseler, and Wang, 2010). As per the results obtained, irrespective of the loadings of OF 5 (0.636) and WT 2(0.653) all others are well above the threshold. However, one should not delete an item if the loading is less than 0.70. Instead, it is essential to examine whether deletion of an item would significantly improve the Composite Reliability (CR) and Average Variance Extracted (AVE).

The construct reliability was ensured with Cronbach's alpha and CR (Table 4). Though all other constructs met the threshold, Cronbach's alpha for PA (0.643) and ST (0.619) are slightly below 0.7. However, the results derived for CR have satisfied the requirement.

Next, convergent validity was ensured using AVE. Convergent validity is statistically established when the AVE

is > 0.50. The results in table 4 indicate that all values have satisfied the requirement. In a research study, discriminant validity is established to ascertain the distinctiveness of the constructs in the study. According to Fornell and Larcker Criterion, Discriminant validity is established if the square root of AVE for a particular construct is greater than its correlation with all other constructs. Table 5 revels that the present study has ensured the discriminant validity.

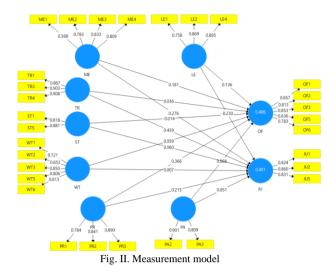
			TABL	E III. Fa	ctor Lo	adings			
	JU	LE	ME	OF	PA	PR	ST	TR	WT
JU1	0.824								
JU2	.860								
JU5	.831								
LE1		.758							
LE2		.869							
LE4		.895							
ME1			.568						
ME2			.783						
ME3			.833						
ME4			.809						
OF1				.857					
OF2				.813					
OF3				.853					
OF5				.636					
OF6				.783					
PA2					.901				
PA3					.809				
PR1						.784			
PR2						.841			
PR3						.890			
ST1							.818		
ST5							.881		
TR1								.867	
TR3								.903	
TR4								.908	501
WT1									.721
WT2									.653
WT3									.850
WT5									.806
WT6									.813

	TABLE IV. Construct Reliability and Convergent Validity					
	Cronbach's	Composite	Average Variance			
	Alpha	Reliability (CR)	Extracted (AVE)			
JU	0.790	0.877	0.703			
LE	0.795	0.879	0.710			
ME	0.749	0.839	0.571			
OF	0.849	0.893	0.628			
PA	0.643	0.846	0.733			
PR	0.789	0.877	0.704			
ST	0.619	0.839	0.723			
TR	0.873	0.922	0.797			
WT	0.829	0.880	0.596			

	TABLE	V. Disci	riminant `	Validity	(Fornell	and Larc	ker Crite	rion)	
	JU	LE	ME	OF	PA	PR	ST	TR	WT
JU	0.838								
LE	0.344	0.842							
ME	0.477	0.643	0.756						
OF	0.633	0.536	0.472	0.79					
PA	0.178	0.228	0.28	0.23	0.856				
PR	0.338	0.615	0.379	0.56	0.164	0.839			
ST	0.327	0.871	0.579	0.49	0.261	0.577	0.85		
TR	0.558	0.447	0.489	0.31	0.112	0.259	0.379	0.893	
WT	0.34	0.662	0.623	0.44	0.31	0.416	0.622	0.389	0.772



After ensuring that all the thresholds of the reflective model were satisfied the measurement model diagram in the Fig. II was obtained.



The second-order constructs were then validated. The higher-order constructs were tested to determine construct reliability, convergent validity, and discriminant validity (Sarstedt et al., 2019). The validity and reliability of secondorder constructs were determined using Cronbach's alpha (0.671, 0.775, 0.769 and 0.767) and composite reliability (0.709, 0.867 and 0.895) for the variables EP, FB, HC and SN, respectively (significant at 95% confidence Furthermore, convergent validity was ensured by the AVE values (EP-0.567, FB-0.816, HC-0.685 and SN-0.811) above the threshold of 0.5 (significant at 99% confidence level). If the evaluation of the measurement model is satisfactory, the next phase in evaluating the PLS-SEM results is to evaluate the structural model (Hair et al., 2019). The structural model tested within the study is illustrated by Fig. III.

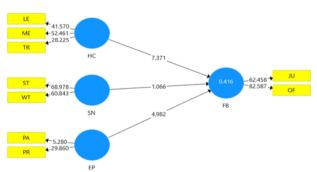


Fig. III. Structural Model

The structural model assessment includes several phases; evaluating structural model collinearity, examining size and significance of path coefficients, analyzing  $R^2$  of endogenous variables and predictive relevance ( $Q^2$ ) (Hair et al., 2019). As per Hair et al., (2019), multicollinearity of the structural model would be critical when VIF  $\geq$  5 and VIF below 3 would be ideal. Table 06 shows that in the present study, VIF values are

well below 3 and there is no room for multicollinearity to affect the model.

TABLE VI.	Multicollinearity (Inner VIF)
•	FB
EP	1.584
FB	
HC	2.675
SN	2.987

This study developed and tested three hypotheses. Results obtained from the hypothesis testing are produced in Table VII. Accordingly, two hypotheses (EP -> FB , HC -> FB) were supported at a 99% confidence level while one hypothesis (SN -> FB) was not supported.

		Decision			
,	EP -> FB	0.297	4.982	0.000	Supported
	$HC \rightarrow FB$	0.505	7.371	0.000	Supported
	$SN \rightarrow FB$	-0.081	1.066	0.287	Not supported

 $R^2$  values of 0.75, 0.50 and 0.25 are considered substantial, moderate and weak respectively (Hair et al., 2019). The adjusted  $R^2$  amounted to 0.412 at 99% confidence level (table 08). This asserts that 41.2% of the variance of the endogenous variable was explained by the exogenous constructs incorporated within the structural model.

	TABLE VIII. R square adjusted				
	R <sup>2</sup> adjusted	T statistic	P value		
FB	0.412	7.820	0.000		

Further, the predictive relevance of the model was assessed by employing  $Q^2$ . The  $Q^2$  of the study amounted to 0.322. As explained by Hair et al., (2019), values larger than zero are meaningful and a  $Q^2$  of 0.322 indicates a medium level predictive accuracy.

#### V. CONCLUSION

The present study examined the determinants of FB in a developing country setup. Entrepreneurial perception, human capital, and social networks were identified as determinants of financial bootstrapping (Grichnik et al., 2014; Neeley and Van Auken, 2009; Carter and Van Auken, 2005; Neeley and Van Auken, 2010; Schinck and Sarkar, 2012; Waleczek et al., 2018). The results showed that there is a significant influence of EP and HC on FB. This result is consistent with (Irwin and Scott, 2010; Schinck and Sarkar, 2012), Grichnik et al., 2014). However, SN had an insignificant negative influence on FB. This contradicts the theoretical explanations and previous empirical findings (Grichnik et al., 2014). As explained by RDT, networking provides a better opportunity to acquire and attract external resources.

Based on the results of the study, the authors suggest that increasing HC in terms of education levels, management experience and business training in developing countries would be ideal as the use of FB can be improved. Thus, a solution to the burning problem of financing through formal

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mechanisms can be found. Furthermore, there is a significant relationship between perceived risk and ability to use FB. Therefore, remedial measures to minimize potential risks perceived by entrepreneurs and capacity building programs to enhance confidence should be implemented by relevant policymakers.

The authors suggest future researchers to further investigate the connection between social networks and financial bootstrapping. It is essential to explore that aspect with a developing country perspective in order to arrive in to a conclusive outcome. And any moderating effects generated by the gender, firm age and business type can be examined.

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