

# Examining the determinants and consequences of financial constraints faced by Micro, Small and Medium Enterprises' owners

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## Abstract

**Purpose** – The Micro, Small and Medium Enterprises (MSMEs) counter numerous financial obstacles concerning business financing and cash flow management. The study, therefore, intends to examine the level of perceived severity of financial constraints on the business growth of enterprises, in terms of sales, profitability and asset growth. An attempt is made to study the influence of owner and firm attributes as the determinants of financial constraints faced by MSMEs.

**Design/methodology/approach** – The data were collected from MSME owners of Northern India through a self-administered questionnaire. In total, 213 responses were analysed using partial least squares-structural equation modelling (PLS-SEM) technique through SmartPLS2.

**Findings** – The findings advocate the role of owner and firm attributes in the severity of financial constraints experienced by the MSME owners. Most importantly, the study establishes a strong link between owner and firm attributes and cash flow constraints. Further, the paper confirms the negative influence of financing and cash flow problems on the growth of the firm.

**Research limitations/implications** – The evaluation and categorisation of perceived financial challenges into meaningful dimensions generate value to the problematic area of MSME operations. Thus, the findings are useful for the policymakers and researchers to contemplate the financial vulnerability of MSMEs.

**Originality/value** – The empirical findings of the present study add worth to the limited evidence of the relationship between owner and firm attributes and severity of cash flow constraints faced by the Indian MSME owners.

**Keywords** MSMEs, Small business, Financial constraints, Entrepreneurial finance

**Paper type** Conceptual paper

## 1. Introduction

In the emerging economies, the sector of Micro, Small and Medium Enterprises (MSMEs) is a significant contributor to exports, employment and entrepreneurship. Often driven by creativity and competitiveness, the industrial and service sector plays a crucial role in propelling growth and development of a country. According to the Ministry of MSMEs (2019), Indian small firms religiously contribute to the socio-economic development with almost 30% share in Gross Domestic Product (GDP) and 45% share in total exports. Moreover, by generating employment opportunities of more than 124 million jobs for skilled and semi-skilled labour, non-agriculture MSMEs maintain equitable growth in urban as well as rural parts of India. Prominent to both developed and developing nations, MSMEs are classified in terms of annual turnover, number of employees and total investments in plant and machinery. In India, the small establishments are defined under Micro, Small and Medium Enterprises Development Act (2006) that categorise small firms based on their business investments and turnover (Ghosh, 2020).

MSMEs face numerous hindrances in regular business operations. Besides the inherited challenges, financial miseries of Indian MSMEs are also stimulated by demonetisation and GST (Goods and Services Tax) implementation. While demonetisation affected business cash flows, implementation of GST led to an increase in compliance costs and operating costs for MSMEs (Behera and Wahi, 2018). Further, the ongoing COVID-19 pandemic has caused



significant inconsistencies in the manufacturing and service sector (Baldwin and Mauro, 2020). Owing to the nationwide lockdowns, migrant crisis, supply chain disruptions and global recession MSMEs are finding hard to cope-up with the financial quandary (Sipahi, 2020; UN-ESCAP, 2020). Further, small businesses are estimated to remain vulnerable for an unforeseeable future due to their direct connections with the channels of economic slowdown (global recession, supply chain disruptions and fallen aggregate demand) (Bouey, 2020; Dev and Sengupta, 2020).

The cascading effects of economic crisis and financial fluctuations threaten the stability of small firms (Thun *et al.*, 2011). In a similar context, Vargo and Seville (2011) elucidated that economic and fiscal disruptions tend to create a financially constrained atmosphere for MSMEs. Even in the pre-Covid business environment, MSMEs were found prone to suffer through capital constraints as compared to large enterprises and corporate entities (Lacina and Vavřina, 2013). In empirical surveys, scholars have confirmed that the intensity of financial obstacles such as insufficient seed capital, inflated interest rates on external credit, elevated insurance costs, expensive carriage charges, training and recruitment costs, reduced sales turnover, high promotional costs, increased bad debts and heavy taxation liabilities threaten the regularity of MSMEs (Edmister, 1972; Pettit and Singer, 1985; Huang and Brown, 1999; Lownes-Jackson *et al.*, 2003; Veskaisri *et al.*, 2007; Naidu and Chand, 2012).

Researchers have also categorised financial constraints into various dimensions to assess the severity of the problem and possible impact on the small firm growth (Lownes-Jackson *et al.*, 2003; Gitman and McDaniel, 2009; Naidu and Chand, 2013). Winker (1999) discussed the negative impact of perceived financing problems on the innovation capabilities of small businesses. Similarly, Becchetti and Trovato (2002) found shrinkage in growth prospects and survival probabilities of financially constrained small firms. Equivalently, Musso and Schiavo (2008) also confirmed the significant influence of financial constraints on the growth rate of small firms. Ojala and Isomäki (2011) also emphasised on the restricted growth and diversification among the financially constrained firms. Similar discussions on the financial constraints, their severity and impact growth prospects have been carried out by Ganesan (1982), Huang and Brown (1999), Radelet and Sachs (2001), Silva *et al.* (2008), Thevaruban (2009), Kuratko (2011), and Yartey (2011). Therefore, the literature thoroughly discusses the empirical and theoretical persistence of financial problems directly influencing the growth opportunities and performance of business firms (Mandal *et al.*, 2008).

Scholars have also acknowledged the role of owner and firm characteristics in predicting firm growth (Woldie *et al.*, 2008; Islam *et al.*, 2011). Storey (1994) found a strong link between firms' age and their growth rate. Audretsch and Klepper (2000) confirmed an association between firms' size and growth possibilities. Carter and Jones-Evans (2000) supported the influence of owner' education in propelling the growth of small firms. Mazzarol *et al.* (1999) approved the positive impact of firm owners' experience on the success of small enterprises. Similarly, numerous studies have reported strong linkages between owner-manager personal and firm attributes and firm growth (Kauranen, 1996; McMahon, 2001; Raziq, 2014).

Although few studies measure the role of owner and firm characteristics on firms' access to finance, scant studies focus on the influence of owner and firm attributes on the severity of financial problems faced by firm owners. Additionally, the mentioned relationships have not been explored much in the Indian context. Therefore, the present study analyses the influence of firm and owner characteristics on two dimensions of financial constraints faced by MSME owners of Northern India. It further assesses the impact of severity of financing and cash flow constraints on the growth of MSMEs. These aspects contribute to the research gap and likewise adds value to the concerning area of MSME financing. In this regard, the remaining part of the paper is followed by a theoretical review and construction of research hypotheses, methods, results, discussion and conclusion.

## 2. Theoretical background

### 2.1 Financial constraints and categorisation

A country expects an economic boom when its significant population migrates from primary to secondary and tertiary sector (Ramarao, 2012). The business investments made by MSME owners prosper in terms of economic activities and contribute to the domestic production of the country (Kannan and Sudalaimuthu, 2014). Hence, the MSME sector by virtue of its operation is the dynamic growth engine that minimises regional imbalances and generates national wealth (Katyral and Xaviour, 2015; Mamun, 2016; Gade, 2018). However, smaller firms face broader set of challenges in order to remain a profit-earning mechanism. Various problems from different spectrum of business environment tend to create unfavourable situations for small businesses (Parvin *et al.*, 2012). Financial and non-financial constraints such as limited knowledge of marketing techniques, low bargaining capabilities of the firm managers, stiff market competition, non-existent advertising and promotional campaigns, poor control over cash flow management and strict regulatory environment are responsible for inconsistent growth among small firms (Huang and Brown, 1999; Marwa, 2014; Mukherjee, 2018).

The prioritisation of the MSME sector by its government is necessary owing to the budgetary constraints faced by the small firms of a developing country (Wonglimpiyarat, 2015). The macroeconomic events such as crisis and economic downturns negatively affect the operations and survival of small businesses (Runyan, 2006; Cowling *et al.*, 2014; Simón-Moya *et al.*, 2016). Also, the limitation of financial resources further reduces the survival possibilities for MSMEs (Heckmann *et al.*, 2009; Singh and Kaur, 2019). Other than operational-financial constraints, scholars have confirmed that financing issues, credit gap, insolvency and bankruptcy negatively affect the survival probabilities of small firms (Awasthi, 2011; Yadav, 2012; Nag and Das, 2015; Gautami, 2018; Sekhar and Radha, 2019; Rao *et al.*, 2017; Bansal *et al.*, 2019).

Finance is the most critical and essential to the smooth operations of a business entity (Yusuf, 1997). While small businesses have been the strengthening pillars of economic development, the severity of financial constraints has also been the concerning area for MSME owners (Datta, 2010). Studies by Edmister (1972), Rajan and Zingales (1998), Carpenter and Peterson (2002), Scott (2007), Giroux (2009), Naidu and Chand (2012) carried out empirical and theoretical research to measure the impact and severity of financial constraints faced by MSMEs. Further, to create an explicit picture of severity, categorisation of financial constraints into meaningful dimensions such as internal-external financial problems, financing-financial management constraints and production-personnel-marketing-financial constraints has been prioritised by Huang and Brown (1999), Lownes-Jackson *et al.* (2003), Cromie (2009), Gitman and McDaniel (2009), and Naidu and Chand (2012).

### 2.2 Financing constraints and cash flow constraints

A small enterprise endures various financial problems in day to day operations; however, the problem of insufficient capital is one of most concerning and problematic part of small business management (Bose, 2013). Availability of funds through owners' equity and external sources is a matter of extreme difficulty for many MSME owners (Thevaruban, 2009; Hamilton and Fox, 1998). Since MSMEs are not able to compete with the large enterprises due to constrained cash inflows and savings, the accessibility to outside credit becomes significantly low for smaller firms (Laxmi and Kumar, 1999; Osei-Assibey *et al.*, 2012; Yadav and Tripathi, 2018). The difficulty in obtaining formal finance is preoccupied with issues such as easiness, availability, flexibility and affordability; therefore, most firms remain seriously constrained or resort to unorthodox means of financing (Neeley, 2004; Rao *et al.*, 2017).

Over the years, researchers have debated the factors responsible for the financing constraints faced by MSMEs. According to Boot (2000), MSMEs tend to have less developed

relationships with financial institutions which predict unwillingness of MSMEs to borrow and hesitance of financiers to lend. Moreover, MSME owners are discouraged by the procedural difficulties involved in obtaining formal mainstream finance (Lam, 2010). On the similar note, high cost of finance, insufficient collateral and lack of loan guarantee make borrowing a cumbersome process (Biswas, 2015; Savignac and Sevestre, 2008; Jagoda and Herath, 2010). Therefore, the struggles involved in dealing with banks and bureaucracies turn into financing constraints for firm owners (Beck *et al.*, 2005; Domeher *et al.*, 2014; Erdogen, 2018). Other than the demand side financing constraints, supply side factors such as information asymmetries, credit rationing, insolvencies in MSME sector and trust deficit between financiers and MSME borrowers contribute to the financing problem of the small firm owners (Landström, 2003; Johansson *et al.*, 2009; Ramlee and Berma, 2013; Mphuka *et al.*, 2013). Apart from financing constraints that restrict MSMEs to obtain external finance, inability to raise internal funds and expensive start-up costs are another troublesome aspects of MSME financing (Fielden *et al.*, 2000; Naidu and Chand, 2013). Financing barriers to small firms are not just limited to inaccessibility to mainstream finance; it includes fear of financial failure, lack of financial support from family, government and its agencies (Sarani *et al.*, 2013).

Unlike financing constraints, cash flow problems directly belong to business operations and profitability. Insufficient working capital, sales and debtor problems, operating and administrative costs, training and development costs and other operational expenses and liabilities restrict firms to grow and flourish (Naidu and Chand, 2012). Insufficient cash inflows are responsible for causing interruptions and fluctuations in the smooth operations of the business (Shaikh *et al.*, 2011). Similarly, expenses such as raw material costs, losses due to breakage and scrap, heavy rates of taxation, equipment and maintenance costs and advertising and marketing expenses disturbs the firm owners' ability to keep control over working capital (Prewitt, 2002; Rasool and Botha, 2011; Kraybill *et al.*, 2011; Venkateswarlu and Ravindra, 2012; Lahiri, 2012; Singh and Janor, 2013; Chandraiah and Vani, 2014). Other than operating expenses, delay in account receivables, decline in sales turnover and high cash collection period also create an imbalance in cash flow management (Longenecker *et al.*, 2010; Siddiqui, 2015; Chanu and Sharma, 2015).

### *2.3 Determinants of financial constraints: owner and firm characteristics*

Owner characteristics are the specific personal traits attributable to a firm owner such as age, educational qualification, gender and entrepreneurial experience. Different studies have taken different parameters to explain owner characteristics. Vos *et al.* (2007) undertook age and education of the firm owner to describe owner characteristics. Buferna *et al.* (2005) and Wu *et al.* (2008) included owners' experience along with education and age personal attributes. Most studies have acknowledged gender as one of the major personal attributes of firm owners (Coleman, 2000; Cassar, 2004; Gebru, 2009; Osei-Assibey, 2012). Limited studies have included owners' native status, ownership status, credit rating status, employment status and marital status in explaining owners' personal characteristics (Storey, 1994; Boden and Nucci, 2000; Zhang, 2008).

Firm characteristics are the traits specific to the firm such as size of the enterprise, location of the firm, industry of the firm and age of the firm (Kira and He, 2012). Various scholars have studied the relevance of different firm characteristics. Berger and Udell (2002), Gilbert (2008), and Fatoki and Asah (2011) prioritised the role of firms' location. Hall *et al.* (2000), Barbosa and Moraes (2004), Abor (2007) discussed the importance of industry of small firm. Similarly, Burkart and Ellingsen (2004), Cassar (2004), Honhyan (2009), and Fatoki and Asah (2011) magnified the role of firms' size in crucial decisions of small firms. Further, Chandler (2009) and Klapper *et al.* (2006) included firms' age in crucial firm attributes. Few studies also discussed the firms' collateral and legal status as essential indicators of firm characteristics (Coleman and Cohn, 2000; Barbosa and Moraes, 2004).

The connections between MSME owners' financial decisions and their personal and firm characteristics have been thoroughly discussed by the academicians (Kozubíková *et al.*, 2015). The lack of external equity funding obliges small firms to depend on debt mode of finance; however, due to the problems associated with accessing debt finance, firm owners are left to count upon retained earnings and informal sources of finance (Garwe and Fatoki, 2012). The amount of difficulties associated with accessing finance is usually bothersome for small firm owners because of the various deciding factors such as gender of the owner, type of business industry, type of firm ownership, financing behaviour and capital structure preferences of MSME owners (Pareek and Bagrecha, 2017; Kent Baker *et al.*, 2020). Researchers have supported the debate over the direct relationship between firms' physical attributes and its accessibility to external mainstream finance (Paul *et al.*, 2007; Irwin and Scott, 2010). Since larger firms are more likely to be financed through formal channels as compared to smaller firms, therefore, firms' size is relevant in measuring the severity of financial constraints faced by the firm owner (Holmes *et al.*, 2003; Cassar, 2004; Degryse *et al.*, 2012). For the assessment of financing constraints, personal traits of firm owners such as educational qualification, entrepreneurial experience, age and gender were also found relevant by the researchers (Coleman, 2000; Cassar and Holmes, 2003; Neeley and Van Auken, 2012). Scholars have therefore highlighted the importance of personal characteristics of small firm owners in deciding their finance accessibility and problems associated with it (Mac an Bhaird, 2010). The discussion on the relationships of owner and firm attributes and financing constraints faced by MSMEs helps us to formulate the following hypotheses:

- H1a.* Entrepreneurial experience of the owner influences the severity of financing constraints faced by MSMEs.
- H1b.* Gender of the owner influences the severity of financing constraints faced by MSMEs.
- H1c.* Ownership type influences the severity of financing constraints faced by MSMEs.
- H1d.* Enterprise type influences the severity of financing constraints faced by MSMEs.
- H1e.* Industry type influences the severity of financing constraints faced by MSMEs.

There are few and limited quantifiable attributes that establish strong linkages between owner and firm characteristics and financial constraints faced by the firm owners (Singh and Kaur, 2019). Jenson and Meckling (1976) predicted probability of firm growth and the severity of financial constraints based on the size of the small enterprise. Orser *et al.* (2000) found firm size as an essential item that interrelates with the firm's ability to endure financial problems. Similarly, owners' gender is also a deciding factor for the financial constraints faced by the firms. Chaudhari *et al.* (2020) asserted that female-led small enterprises are more prone to face financial difficulties such as credit market discrimination and relatively fewer growth opportunities than male-led firms. Presbitero *et al.* (2014) also found women-led firm owners struggling to meet financial liabilities more than men-led firms. Apart from firm size and gender biases, the entrepreneurial experience of the business owner decides for the firm owners' ability to bear financial obstacles (Ucbasaran *et al.*, 2010). Other demographic factors such as type of the industry and ownership status also explain the business expenses and problems (Biswas *et al.*, 2018). To further explore the relationship between cash flow constraints and owner and firm attributes, we develop the following hypotheses:

- H2a.* Entrepreneurial experience of the owner influences the severity of cash flow constraints faced by MSMEs.
- H2b.* Gender of the owner influences the severity of cash flow constraints faced by MSMEs.
- H2c.* Ownership type influences the severity of cash flow constraints faced by MSMEs.

H2d. Enterprise type influences the severity of cash flow constraints faced by MSMEs.

H2e. Industry type influences the severity of cash flow constraints faced by MSMEs.

### 2.4 Consequences of financial constraints: firm growth

MSMEs differ from larger enterprises due to the dissimilar and limited growth possibilities. According to Beck *et al.* (2005), the growth rate is negatively affected in the case of financially constrained firms. Obstacles such as liquidity constraints and financial frictions influence the capital structure decisions of small firms and further deteriorates firms' growth rate (Beck *et al.*, 2006). Bandari and Bajpai (2005) concluded that when small firms are frequently in the financial crisis, the debt burden begins affecting their growth and profitability. Indarti and Langenberg (2004) confirmed that capital access and financial health determine the success of small enterprises. Rajamani and Nirmal Raj (2019) discussed financial obstacles as one of the major deciding factors for the performance of MSMEs. Mouelhi and Ghazali (2018) explained determinants of MSME growth by means of financial constraints, entrepreneur characteristics, firm characteristics and the innovation effort. Similarly, Choudhury and Goswami (2019) found financial constraints as a significant hindrance to MSME growth. Similarly, the discussion on the financial obstacles as the critical determinant of firm growth is polarised by Donaldson (1961), Jenson and Meckling (1976), Myers (1984), Tucker and Lean (2003), Johnsen and McMahon (2005), Gebru (2009), Bhama *et al.* (2017). The above discussion therefore enables us to propose the following hypotheses:

H3. Financing constraints faced by MSMEs influence their firm growth.

H4. Cash flow constraints faced by MSMEs influence their firm growth.

The hypothesised relationships of the research framework are shown in Figure 1.

## 3. Method

### 3.1 Sample design and data collection

The target population of the present study is the MSME owners and managers of manufacturing, service and trading enterprises (wholesalers and retailers) of Northern India.

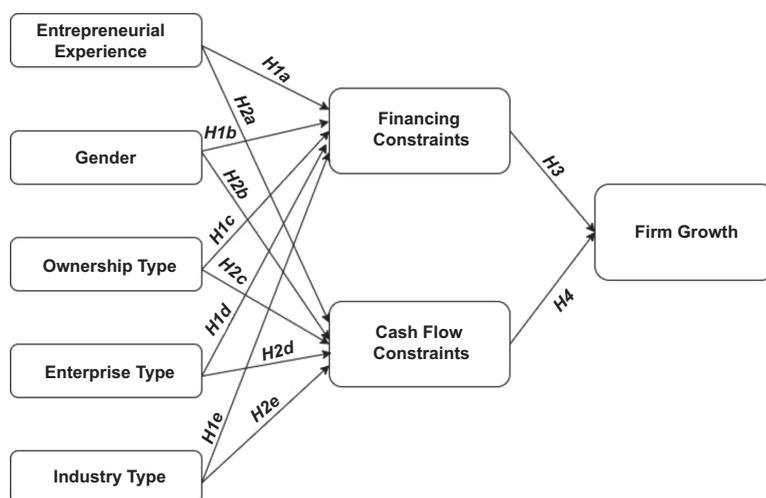


Figure 1.  
Research framework

Since the study follows a quantitative approach to test the severity of financial constraints, the research is entirely based upon the primary data. The survey questionnaire is an effective method of collecting data in the case of a geographically scattered population (Robson and McCartan, 2016). Therefore, MSME owners of Tier I and Tier II cities of Northern India including industrial areas and trading markets of Delhi, Amritsar, Ludhiana, Bathinda, Ambala, Chandigarh, Gurgaon, Noida and Faridabad were approached through a self-administered questionnaire. However, due to the ongoing health calamity, nationwide lockdowns and social distancing norms, the responses were obtained through telephonic and digital platforms.

The sample size was estimated at 280 enterprises at the confidence level of 90% for around 173 lakh MSMEs of Northern India. Therefore, after the elimination of unanticipated errors, the questionnaire was sent to the participants. The response rate was considered adequate as per the suggestion of Nulty (2008) at 84% with 235 responses. Further, 22 responses were discarded due to the presence of outliers and missing values. The final sample of the study, therefore, reduced to 213 responses.

Among the participants, 185 respondents were male and 28 were female. In terms of educational qualification, 68% of the owners identified as graduates, 21% as postgraduates, and 11% of the participants belonged to the no formal education category. The average entrepreneurial experience was found to be eleven to fifteen years. Of the total firms represented, 95% of the enterprises were confirmed operating in urban areas. The sample consisted of 156 micro enterprises, 42 small enterprises and 15 medium enterprises. Also, 57% firms belonged to the manufacturing industry, 32% to the service industry and rest to the trading industry.

### 3.2 Measurement of variables

The present study undertook five exogenous single indicator variables to measure owner and firm characteristics, namely: entrepreneurial experience, gender of the owner, type of firm ownership, enterprise type and industry type. Similarly, financial constraints are measured through two variables: financing constraints and cash flow constraints. The only endogenous variable of the study is firm growth. The conceptual model is examined through the SmartPLS using partial least squares-structural equation modelling (PLS-SEM) approach. The PLS-SEM technique is an exploratory method to measure the hypothesised effect of exogenous constructs on the endogenous constructs (Reinartz *et al.*, 2009; Hair *et al.*, 2012; Wong, 2013). The constructs and their latent items were identified from the thorough literature review.

*Owner and firm characteristics:* The study considered a total of five variables to measure owner and firm attributes. The concrete constructs were measured through single indicator as per the suggestion of Petrescu (2013). The first variable, entrepreneurial experience (Exp) was measured on the basis of the number of years spent in owning and managing a business (Robb and Walken, 2002). However, researchers have defined experience through the management and work experiences (Zhao *et al.*, 2013; Ahlin *et al.*, 2014; Symeonidou *et al.*, 2017). But, at the same time scholars have also measured experience in terms of years of functional experience (Marino and De Noble, 1997; Politis, 2005; Kor and Misangyi, 2008). The second variable, gender (Gen) is simply measured based on male and female classification (Ansara and Hegarty, 2014). The third variable, ownership type (Own) is an essential parameter of assessing control over an enterprise, and it further outlines whether the firm has a single owner or multiple owners (Chaudhuri *et al.*, 2020). Hence, the variable was measured based on sole proprietorship, partnership, cooperative entity, private company and public company mode. The fourth variable, enterprise type (Ent) was measured under micro, small and medium category of MSME Act (2006), that classifies firms in terms of their size and

investments. The fifth variable, industry type (Ind) was measured by classifying business industry into manufacturing, service and trading enterprises.

*Financial constraints:* Various financial problems were categorised into two dimensions namely: financing constraints (FC) and cash flow constraints (CFC) to measure financial constraints (Huang and Brown, 1999; Lownes-Jackson *et al.*, 2003; Naidu and Chand, 2012). The variables were measured on the scale of severity, where 1 represented low severity and 5 represented extremely high severity.

*Firm growth:* Firm growth is a crucial indicator of business performance. In the present study, firm growth is measured on the parameters of change in sales, profit and asset growth, where 1 represented highly declined and 5 represented highly increased (Wu, 2009).

#### 4. Results

The health of data in terms of missing values and outliers was ensured with the help of SPSSv23. Further, the normality of the data was confirmed through skewness and kurtosis values. The analysis was carried out on SmartPLSv2 through measurement model and structural model. The measurement model explains the relationship between the latent constructs and their concerning variables; whereas, the structural model explains the cause and effect relationship between the independent and dependent variables (Chin, 1998).

##### (1) Measurement Model Assessment

Initially, the measurement model was assessed for common method bias. As per Podsakoff *et al.* (2003), the variance of a single factor should not be more than 50% for model assessment. The variance of the first factor obtained in the present analysis was accounted for 37%; hence, the concern of common method bias was eliminated.

The reflective measurement model was then evaluated on the parameters of reliability and validity (Coltman *et al.*, 2008; Hair *et al.*, 2011). Indicator reliability was checked through the values of outer loadings and was found under the prescribed threshold of more than 0.7, as shown in Table 1. The internal consistency of the model was evaluated through the values of Cronbach's alpha and was found within the acceptable range of 0.7–0.9 (Nunnally and Bernstein, 1994). Therefore, the measurement model was found internally consistent

| Constructs | Items                                          | Outer loadings | AVE  | CR   | Cronbach alpha |
|------------|------------------------------------------------|----------------|------|------|----------------|
| CFC        | CF1 - Insufficient working capital             | 0.67           | 0.55 | 0.82 | 0.72           |
|            | CF2 - Sales and debtors problems               | 0.71           |      |      |                |
|            | CF3 - Business operating costs                 | 0.68           |      |      |                |
|            | CF4 - Decline in sales turnover                | 0.87           |      |      |                |
| Ent        | Type of enterprise                             | NA             | NA   | NA   | 0.94           |
|            | Entrepreneurial experience                     | NA             | NA   | NA   |                |
| FC         | FC1 - Expensive start-up costs                 | 0.91           | 0.89 | 0.96 |                |
|            | FC2 - Difficulty in obtaining internal finance | 0.96           |      |      |                |
|            | FC3 - Difficulty in obtaining external finance | 0.96           |      |      |                |
| FG         | FG1 - Change in sales                          | 0.78           | 0.73 | 0.89 | 0.81           |
|            | FG2 - Change in profit                         | 0.87           |      |      |                |
|            | FG3 - Change in asset growth                   | 0.90           |      |      |                |
| Gen        | Gender of the owner                            | NA             | NA   | NA   |                |
| Ind        | Type of industry                               | NA             | NA   | NA   |                |
| Own        | Type of firm ownership                         | NA             | NA   | NA   |                |

**Table 1.**  
Indicator reliability,  
internal consistency  
and convergent  
validity of  
measurement model

(Urbach and Ahlemann, 2010). Further, adequacy of convergent validity was investigated through composite reliability (CR) and average variance explained (AVE) values (Fornell and Larcker, 1981) The CR values were obtained in the acceptable range of 0.7–0.9. Also, the AVE values were found adequate as per the suggestion of Bagozzi and Yi (1988).

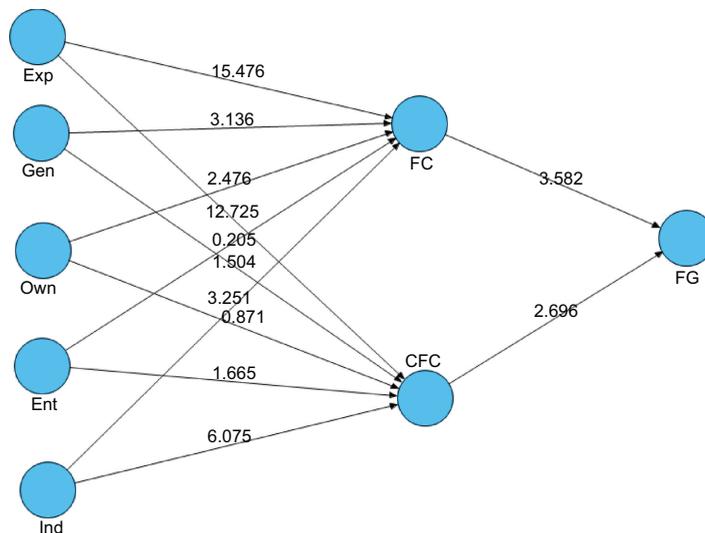
Discriminant validity was checked through Fornell and Larcker (1981) criteria to ensure the degree of differences between the constructs (Hair et al., 2012). In Table 2, the off-diagonal values represent the inter-correlations between the latent constructs, and the diagonal values explain the AVE square root. Since the square root of AVE values was found more than the inter-constructs correlations, the discriminant validity of the reflective measurement model was also confirmed.

(2) Structural model assessment

The assessment of structural model (Figure 2) is based on collinearity examination, assessment of the significance of structural model, coefficient of determination ( $R^2$  value) and predictive relevance ( $Q^2$  value) (Cohen, 1988). The collinearity check was done through variance inflation factors (VIFs) to examine the problem of multicollinearity among the exogenous constructs (Henseler et al., 2009; Hair et al., 2012). The VIF values obtained through SPSSv23 with the help of latent variable scores were found in the acceptable range of less

**Table 2.**  
Discriminant validity

|     | CFC   | Ent   | Exp   | FC    | FG    | Gen  | Ind  | Own |
|-----|-------|-------|-------|-------|-------|------|------|-----|
| CFC | 0.74  |       |       |       |       |      |      |     |
| Ent | 0.19  | 1     |       |       |       |      |      |     |
| Exp | 0.69  | 0.30  | 1     |       |       |      |      |     |
| FC  | 0.64  | 0.25  | 0.74  | 0.94  |       |      |      |     |
| FG  | -0.50 | -0.08 | -0.56 | -0.55 | 0.85  |      |      |     |
| Gen | 0.48  | 0.24  | 0.62  | 0.55  | -0.30 | 1    |      |     |
| Ind | 0.20  | 0.87  | 0.32  | 0.27  | -0.12 | 0.16 | 1    |     |
| Own | 0.24  | 0.90  | 0.37  | 0.29  | -0.11 | 0.24 | 0.91 | 1   |



**Figure 2.**  
Structural model

than 5, as shown in Table 3; hence, the absence of multicollinearity was ensured (Hair *et al.*, 2012). Since the outcomes of collinearity test were obtained satisfactory, the significance of relationships of structural model was assessed. The bootstrapping algorithm of PLS-SEM was applied and using the original cases, a sample of 5000 random cases was generated to test the significance of the relationship of constructs (Henseler *et al.*, 2009; Hair *et al.*, 2012). The results of significance testing of relationships between exogenous and endogenous constructs are shown in Table 4.

Post hypothesis testing, coefficient of determination ( $R^2$  values) was found to be adequate as per the suggestion of Cohen (1988). Lastly, predictive relevance ( $Q^2$  values) was obtained through the blindfolding algorithm by using  $D = 7$  as the omission distance. The  $Q^2$  values (cross-validated communality), as shown in Table 5, were found more than 0 and were considered adequate (Hair *et al.*, 2012).

### 5. Discussion

The paper presented an empirical investigation of the financial constraints faced by the MSME owners. Owner and firm characteristics such as gender and experience of the owner/s,

| Constructs | VIF values |
|------------|------------|
| CFC        | 2.093      |
| Ent        | 4.035      |
| Exp        | 3.266      |
| FC         | 2.488      |
| Gen        | 1.787      |
| Ind        | 3.229      |
| Own        | 2.047      |

**Table 3.**  
Multicollinearity  
examination

| Hypotheses | Path coefficients | <i>T</i> -statistics | <i>p</i> -value | Decision      |
|------------|-------------------|----------------------|-----------------|---------------|
| CFC → FG   | -0.2481           | 2.69                 | 0.05            | Supported     |
| Ent → CFC  | -0.0513           | 1.66                 | 0.10            | Supported     |
| Ent → FC   | -0.0069           | 0.28                 | 0.05            | Not supported |
| Exp → CFC  | 0.6504            | 12.72                | 0.05            | Supported     |
| Exp → FC   | 0.6431            | 15.47                | 0.05            | Supported     |
| FC → FG    | -0.3919           | 3.58                 | 0.05            | Supported     |
| Gen → CFC  | 0.0869            | 1.50                 | 0.05            | Not supported |
| Gen → FC   | 0.1586            | 3.13                 | 0.05            | Supported     |
| Ind → CFC  | 0.0542            | 6.07                 | 0.05            | Supported     |
| Ind → FC   | 0.1848            | 3.25                 | 0.05            | Supported     |
| Own → CFC  | -0.0275           | 0.87                 | 0.05            | Not supported |
| Own → FC   | -0.1500           | 2.47                 | 0.05            | Supported     |

**Table 4.**  
Hypothesis testing

| Endogenous variable | Coefficient of determination ( $R^2$ ) | Predictive relevance ( $Q^2$ ) |
|---------------------|----------------------------------------|--------------------------------|
| CFC                 | 0.48                                   | 0.26                           |
| FC                  | 0.57                                   | 0.87                           |
| FG                  | 0.34                                   | 0.72                           |

**Table 5.**  
 $R^2$  value and  $Q^2$  value

firm ownership and enterprise and industry type are found to be the crucial determinants of the severity of financial constraints faced by the owners. Further, the study confirms a significant impact of financing and cash flow constraints on firm growth. The summary of hypothesis testing is shown in [Table 6](#).

### 5.1 Owner and firm characteristics versus financial constraints

Results of [Table 4](#) discuss the relationships between owner and firm attributes and financing constraints faced by the MSME owners. [H1a](#) and [H1b](#) predict a positive significant relationship between severity of financing constraints and owners' entrepreneurial experience and gender ( $t = 15.47, p < 0.05$ ;  $t = 3.13, p < 0.05$ ). The findings of the study indicate that the entrepreneurially experienced and female firm owners tend to face severe financing problems pertaining to the internal and external mode of funding. Similarly, [H1e](#) predict a significant positive influence of MSMEs' industry type on the degree of financing obstacles faced by the firm owners ( $t = 3.25, p < 0.05$ ). Interestingly, [H1d](#) show an insignificant impact of the type of small business enterprise and the severity of financing constraints experienced by the owners. Therefore, it has been found that the size of the enterprise does not make a significant difference in the severity of financing problems encountered by the firm owners. However, [H1c](#) support a negative and significant relationship between ownership type and financing constraints ( $t = 2.47, p < 0.05$ ). It can be interpreted that sole proprietors are more constrained in terms of employing sufficient internal and external funds into the businesses as compared to other modes of ownership.

[H2a](#) to [H2e](#) discusses the influence of owner and firm attributes on perceived cash flow constraints. [H2a](#) and [H2e](#) indicate a significant positive influence of owners' experience and firms' industry type on the severity of cash flow constraints faced by the MSME owners ( $t = 12.72, p < 0.05$ ;  $t = 6.07, p < 0.05$ ). Owners with maximum entrepreneurial experience and firms operating in trading industries are found to be facing severe operating-financial problems. Through [H2d](#), the study establishes a significant negative relationship between enterprise type and cash flow constraints ( $t = 1.66, p < 0.10$ ). It has been found that smaller firms tend to experience severe cash flow problems such as working capital mismanagement, operating costs and expenses and sales and debtor problems. However, the present study does not support [H2b](#) and [H2c](#) and indicate the insignificant influence of gender and ownership status in predicting the severity of cash flow constrained experienced by the MSME owners.

| Hypotheses                                                                                                    | Decision |
|---------------------------------------------------------------------------------------------------------------|----------|
| (H1a): Entrepreneurial experience of the owner influence the severity of financing constraints faced by MSMEs | Accepted |
| (H1b): Gender of the owner influence the severity of financing constraints faced by MSMEs                     | Accepted |
| (H1c): Ownership type influence the severity of financing constraints faced by MSMEs                          | Accepted |
| (H1d): Enterprise type influence the severity of financing constraints faced by MSMEs                         | Rejected |
| (H1e): Industry type influence the severity of financing constraints faced by MSMEs                           | Accepted |
| (H2a): Entrepreneurial experience of the owner influence the severity of cash flow constraints faced by MSMEs | Accepted |
| (H2b): Gender of the owner influence the severity of cash flow constraints faced by MSMEs                     | Rejected |
| (H2c): Ownership type influence the severity of cash flow constraints faced by MSMEs                          | Rejected |
| (H2d): Enterprise type influence the severity of cash flow constraints faced by MSMEs                         | Accepted |
| (H2e): Industry type influence the severity of cash flow constraints faced by MSMEs                           | Accepted |
| (H3): Financing constraints faced by MSMEs influence their firm growth                                        | Accepted |
| (H4): Cash flow constraints faced by MSMEs influence their firm growth                                        | Accepted |

**Table 6.**  
Summary - hypothesis testing

The research, therefore, confirms the role of owner and firm attributes in perceived severity of financing constraints. The findings of the study are in accordance with Coleman (2000), Robb and Wolken (2002), Cassar and Holmes (2003), Paul *et al.* (2007), Irwin and Scott (2010), Neeley and Van Auken (2012), Degryse *et al.* (2012) who established the fair role of owner and firm attributes in hindrances faced by small firms in procuring and accessing adequate finance. It also establishes a significant connection between the owner and firm characteristics and severity of operating costs, delay in debtor payments and other cash flow constraints encountered by MSMEs. In this regard, the empirical findings of the study add value to the theory and practice of financial constraints and their determinants in the area of MSME-entrepreneurial financing.

### *5.2 Financial constraints vs firm growth*

Smaller firms are known to have poor access to formal finance and constrained financial resources. The nature of the operations, macroeconomic uncertainties and limited managerial skills of small firm owners create growth constraints for MSMEs. The hypothesised relationships, therefore, help in understanding the impact of financial constraints on firm growth. H3 and H4 predict significant negative impact of financing and cash flow constraints on the sales, profit and asset growth of MSMEs ( $t = 3.58$ ,  $p < 0.05$ ;  $t = 2.69$ ,  $p < 0.05$ ). The negative relationships depict that severe financial problems diminishes the possibility of the firms to grow and flourish on the desired rate. Further, it has been established by means of data analysis that the more is the severity of financial constraints experienced, the lesser shall be the possibilities for firms to grow. The findings of the present study, hence, line up with work of Donaldson (1961), Jenson and Meckling (1976), Myers (1984), Tucker and Lean (2003), Johnsen and McMahon (2005), Bandari and Bajpai (2005), Bhamu *et al.* (2017), and Rajamani and Nirmal Raj (2019), who suggested and predicted slower growth rate for the financially constrained firms.

## **6. Conclusion**

India is an emerging country that is in dire need of strengthening its industrial and small business sector. Crucial to the innovation, entrepreneurship, production and job creation, MSMEs are small businesses of utmost importance. Hence, the government has been on their toes to create a facilitating environment for MSMEs to perform well through the means of Make-In-India campaign, Skill Development campaign and recently launched Aatma-Nirbhar Bharat (self-reliant India). Although financing schemes and assistance through MUDRA Yojana, credit guarantee programs and other collateral-free debt facilities are being offered to Indian MSMEs as concessional rates, the financially constrained business environment trouble small firm owners. The obstacles faced in raising funds through formal mainstream channels, debt inaccessibility and cash flow problems tend to impact the functioning of small establishments severely.

The present study categorises financial problems into financing and cash flow constraints for the assessment of severity and division of monetary problems into better explanations. These dimensions are necessary to develop strategic policies and facilitate decision making for firm owners. Further, various cost-cutting and cost-diverting decisions can be made following these arrangements, and thus financial management can be done more effectively. Scholars have considered financing problems as a massive setback for MSMEs. While operating problems are solved by balancing cash flow activities, financing problems such as insufficient capital and formal finance inaccessibility are not in the personal control of firm owners. The influence of financial constraints is also noticed on the firms' capability to grow. This study empirically underpinned on the relationships between financial constraints and firm growth. The negative effect of financing and cash flow

constraints on the sales, profit and asset growth shed critical insights over the repercussions of financial obstacles on the growth prospects of MSMEs.

Further, the consequences of the financially constrained environment evoke the need for improved financial accessibility for the sector. The findings are, therefore, crucial for the government, policymakers and financial intermediaries to create a more financially inclusive atmosphere for MSMEs to operate. Personal assistance in the form of the straightforward loan application process, rapid evaluation of documents and acceleration of the underwriting process should be provided to MSME owners opting for mainstream finance. Hence, simplification and uniformity in the lending process are required for the small business sector. Financial institutions should also address the problem of credit gap and supply side financing constraints. Moreover, governments should enable financing model to facilitate crowdfunding for investors who intend to invest in the constructive business idea of small firms. Cash flow constraints considering the operational and administrative areas of small business that may include human capital costs, infrastructural costs, taxes and expenditures, delay in debtor payments and decline in sales turnover create unfavourable business outcomes for firms. Therefore, incentives such as tax concessions and custom and excise duty relaxations are required for the struggling sector of MSMEs of India. Further, entrepreneurship can be encouraged through the enabling environment in terms of testing facilities and innovation centres.

India is a country of enormous resources and great potential. The innovative ideas of the young and bright entrepreneurs can be converted into profitable mechanisms through consistent support. Hence, the scope for future research also maximises in the area of entrepreneurial finance. The inherent and acquired problems of MSME financing can further be evaluated on the parameters of other firm attributes such as location, asset structure and age. Similarly, future research can also be extended in the critical area of financing constraints and financial practices of MSME owners.

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### Further reading

- U K Sinha (2019), *Expert Committee on Micro, Small and Medium Enterprises*, Reserve Bank of India, New Delhi.

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