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Literature Review

Multidimensional Impact of Finance on Microenterprises

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A Review of the Literature

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Abstract

This paper provides an overview of the recent academic and grey literature on the impact of access to formal finance on microenterprises in developing countries. It disaggregates the evidence across various sectors and assesses the differential impact of the size of credit injection. It also provides evidence on the level of positive spillover on household wellbeing measured through asset acquisition and human capital development. At various places, the paper argues for the support of gazelles, which are microenterprises of young vintage showing spectacular growth and poised for more through access to credit. Gazelles are associated with disproportionate job creation and introducing innovation. The paper further argues that the effective uptake of credit is determined by factors both intrinsic and extrinsic to the enterprise. While intrinsic factors include aspects like education and psychological make-up of the entrepreneur and the stage of business, extrinsic factors include the state of governance institutions whose writ manifests in the form of taxation, registration costs, and monopoly rent. Such intrinsic and extrinsic factors determine the type and the extent of credit uptake, which plays out every day in the continued prevalence of informal financial instruments alongside formal finance mechanisms. In this milieu, the adoption of digital solutions is identified as a great promise with its ensemble cast of payments methods, social media, and e-commerce options, expected to lead microenterprises towards improved credit flow from formal financial services providers. The review, however, finds a gender gap in the performance of women-led microenterprises vis-à-vis their male counterparts on most parameters and situates it within the social context and norms.

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1 Introduction

The micro, small and medium enterprises (MSME) sector in India has consistently contributed more than 30% to the country's GDP over the last decade (GoI, 2022). The significance of MSMEs in India's economy also arises from both its scale in the country (over six crore enterprises) and employment generation (more than 11 crore direct jobs). Additionally, exports by MSMEs contributed close to 50% of India's total exports in 2018–19 (GoI, 2021).

While these are impressive numbers, it is worth noting that as recently as 2006, India did not use the formal nomenclature of micro, small, and medium enterprises (MSMEs), when the MSME Development Act was legislated. Before the term 'MSME' was adopted in India, the terminology used for such enterprises was 'small scale industries (SSI)'. Usage of the term 'MSME' was a positive policy change as it ensured that the heterogeneous set of SSIs got segmented as per the differences in scale and investment as micro/small/medium. This allowed for focused interventions and support for each category. The revised classification, however, did not capture the structural changes occurring in the Indian economy over the last decade and a half, since the enactment of the legislation. Consequently, in July 2020, as part of the reforms initiated in the wake of Covid-19, a revised definition for MSMEs was formulated (GoI, 2020). The book value of investments as a parameter for classifying micro/small/medium enterprises was revised upwards and turnover was introduced as an additional parameter in classifying MSMEs. Moreover, the distinction between manufacturing and services sector MSMEs was removed in terms of the indicated value of the parameters.

More than 99% of MSMEs in India belong to the 'micro' category, defined with an upper bound threshold of annual investment of INR 1 crores and turnover of INR 5 crores (GoI, 2022). Over 96% of India's microenterprises operate with an annual turnover less than INR 1 crore and roughly 80% under INR ten lakhs per annum (Omidyar Network and BCG, 2018). The microenterprises thus comprise a long fat tail of heterogeneous enterprises, which are at different stages of business growth. A large share of these microenterprises are unincorporated, which means the business is not a distinct entity from the proprietor. Almost all of them belong to the unorganised sector of the economy, i.e. the key labour regulations such as Factories Act and Employees' Provident Funds Act do not apply to them, given they have less than 10 employees (Mehrotra & Giri, 2019). Further, more than 60% of these enterprises are own account enterprises i.e. they do not have any hired workers, and another 35% have 1–5 workers (Muralidharan, Paul, & Basole, 2021).

According to the International Finance Corporation (IFC), microenterprises face an estimated credit gap of about INR 8 lakh crore from formal sources (IFC, 2018). Elsewhere, IFC uses the key proxy of loan ticket sizes of USD 10,000 as upper bound to classify microenterprises, which translates to loan ticket size less than INR 8 lakhs (IFC, 2019). It is important to note that this ticket size closely matches the highest threshold of loans disbursed under Pradhan Mantri MUDRA Yojana (PMMY), at INR 10 lakhs. It is in this segment whose credit needs lie above the microfinance loans but is still not catered to adequately by banks and large NBFCs (except in the absence of

well-intended schemes like MUDRA and priority sector lending) that there is a 'missing middle' market (Shankar, 2016). This middle segment is referred to in various places by IFC in South America and the Middle East & North Africa (MENA) as 'very small enterprises' (IFC, 2014), (IFC, 2016). SIDBI and TransUnion CIBIL also classify this segment with credit needs up to INR 10 lakhs as 'very small enterprises' (TransUnion CIBIL, 2021).

Another way to interpret this long fat tail of microenterprises is by using the lens of household incomes. RBI caps the annual income of the households availing microfinance loans at INR 3 lakhs as per extant regulations (RBI, 2022). This effectively translates to less than INR 25,000 per month. In urban areas, these households fall under economically weaker sections (EWS) for the affordable housing finance category (GoI, 2017). It is logical to assume that the 'missing middle' enterprise proprietors will supersede this ultra-poor category and belong to the marginally poor segment, which is captured by the affordable housing finance market and categorised as the low-income group (LIG) category of INR 3–6 lakhs. This definition is also used by the philanthropic institution supporting this study, in terms of the 'net' household income threshold of INR 25,000 as their investment criteria – 'net' is exclusive of any enterprise-related debt from formal and informal sources and thus if the latter is included the household incomes of these proprietors would fall under the LIG category (MSDF, 2021). At a debt-service ratio of 30–40% preferred by lenders (much below 50% ceiling by the RBI in its extant microfinance regulations), these microenterprises would have a two year tenor loan ticket size range of INR 1–4 lakhs as per general interest rate spreads prevailing in the industry (RBI, 2022). Interestingly, this would correspond to the middle category 'Kishore' in the MUDRA scheme, which can be classified as the heart of the 'missing middle'.

This review attempts to understand the impact of finance on this segment of microenterprises, collecting evidence from various studies done in the last decade or more, both in India and in other developing countries. Since lack of optimal access to formal finance has been identified as one of the key binding constraints faced by microenterprises in the literature on enterprise growth, it is important to examine the evidence regarding the impact of reducing capital constraints for these enterprises on their business operations and growth.

While studying the evidence it is also important to note that microenterprises are not a homogeneous category and there are large variations in productivity and growth. For instance, an estimated 5 -10% of microenterprises grow more rapidly than others (Kumar, 2017). These microenterprises, also known as 'gazelles', are characterised less by size than rapid expansion, with sales doubling every four years (Birch & Mass, 1979). In contrast, the vast number of other microenterprises are tiny workshops and service kiosks, operating on a survival basis and whose business owners are unable to secure formal wage employment (Kumar, 2017). A good way to identify gazelles is to look for younger firms in terms of vintage that show markedly superior compounded annualised growth rates (Ayyagari, Demirgüç-Kunt, & Maksimovic, 2011). Gazelles also account for a disproportionate share, 40–45%, of new employment generated (ILO, 2015), (Fafchamps & Woodruff, 2017). In the note hereafter, evidence

related to gazelles on benefits from access to finance is also cited in appropriate places.

Note to the reader: While at some places the various terms such as MSME and small businesses have been used as this is how the specific literature cites them, the focus has been on microenterprises as defined by the criteria elaborated above.

2 Benefits from capital access

Numerous studies have unequivocally established that access to finance is the most critical barrier to microenterprise growth (Bakhtiari, Breunig, Magnani, & Zhang, 2020), (Włodarczyk et al., 2018), (Ayyagari, Demirgüç-Kunt, & Maksimovic, 2017), (N. Nguyen, Gan, & Hu, 2015), (Thampy, 2010). Providing access to capital can enable businesses to sustain and continue operations far longer than those who do not have access to it (McKenzie, 2017). The sustained growth of microenterprises through external capital injection also increases their capacity for employment generation, directly and indirectly (McKenzie, 2017). Capital support can also be a catalyst for enabling enterprises to formalise the business (Mel, Mckenzie, & Woodruff, 2013). Access to capital also gives scope to risk-taking ability, thereby providing non-linear dividends from innovations (P. A. Nguyen, Uong, & Nguyen, 2020). Finally, access to finance for microenterprises leads to a positive spillover on household welfare in the long run (Berge, Bjorvatn, & Tungodden, 2012). This section discusses the typical facets of microenterprises, their interactions with formal financial systems and sources and the evidence regarding the benefits of access to credit.

2.1 Business performance

Mel, McKenzie, and Woodruff (2008) have shown that the absence of credit markets negatively impacts the long-term growth of small businesses. Improved business performance relates to both increases in sales or revenue over a period of time as well as long-term structural change and qualitative improvements in the scale of operations of the enterprise (Fowowe, 2017). In terms of month-wise performance, a study by Mel et al. (2008) in Sri Lanka found that a capital injection resulted in a 5-7% real return to capital per month. Taking note of this analysis, Cotler and Woodruff (2008) studied the probability of sustenance of microenterprises in Mexico through the lens of investment in inventories and fixed assets. The study involved providing small firms with access to loans for a four-month duration and found that over 85% of the enterprises utilised the loans towards purchasing and expanding their current line of inventory and fixed assets. In a study conducted in Rwanda, Harelimana (2017) noted that access to finance increased profitability and firm efficiency, prevented liquidity problems, and improved firm solvency. McKenzie (2017) extended this argument further by studying the long-term effects (over three years) of capital access on the growth of microenterprises that won cash rewards in a national business plan competition in Nigeria. Testing the results three years after the capital was provided, firms tracked an average of 24% increase in profits. This study highlighted that irrespective of firm size, stage and metrics of evaluation, the injection of capital ensures long-term growth, sustenance

and improvement in business indicators such as sales, revenue and, most importantly, profit.

The impact on profitability is also influenced by the level of investment provided to the microenterprises. Mor, Madan, Archer, and Ashta (2020) analysed the impact of investment size on the profitability of 500 microenterprises in Haryana, India.[1] The results highlighted that firms that invested over INR 1 lakh into their businesses reported over 35% higher profits than those who invested one fourth of that amount. Another study on microenterprises in India also found that enterprises which start with higher seed investments tend to survive for longer durations and eventually expand their operations when compared with their counterparts (Mor et al., 2020). The results show that microenterprises with an initial investment of INR 25,000 were almost three times more likely to survive in the long run, as compared to enterprises that started with an initial investment of up to INR 5,000.

2.2 Jobs, wages, and worker productivity

Nageswaran and Natarajan (2019) show that close to 80% of India's employed workforce is engaged with enterprises that operate with fewer than ten workers, across the formal and informal sectors. These enterprises with less than ten workers are not covered under India's extant social security provisions such as Employees State Insurance Corporation (ESIC) scheme and provident fund. Basole and Chandy (2019) highlight that close to 95% of the enterprises in India employ only up to three workers, contributing close to 70% to the total gross value added (GVA) produced in 2015. They analysed the level of labour productivity among microenterprises in India wherein the scale of operation emerges as an important metric for productivity — firms with even four to five workers are 50% more productive per worker than firms with three or fewer workers.

The impact of access to finance on job creation is a second-order effect, as it is mediated through the impact of access to finance on business performance (Ayyagari, Juarros, Peria, & Singh, 2016). Improved business performance may not readily lead to the hiring of more workers—firms may invest in capital expenditure and consequently grow output without increasing employee count, though this is more relevant to relatively larger firms. The scale of operations of small businesses makes them rely more on labour than fixed capital; hence access to credit for these enterprises leads to higher employment generation (Ayyagari et al., 2016). Overall, access to credit improved employment rates by 1–3% points compared to firms with no access to finance. This finding is also consistent for microenterprises (having less than ten employees) with access to a loan, reporting an employment growth at almost five percentage points more than their counterparts without a loan (Ayyagari et al., 2016).

Examining sectoral variations, Hasan and Jandoc (2010) find that manufacturing microenterprises in India with 1–5 employees account for 84% of total manufacturing employment. The effect of access to finance on employment is also higher among

[1] The study included a variety of categories of microenterprises owned by barbers, carpenters, electricians, flower vendors, food vendors, ironsmiths, mechanics, painters, and photographers, operating in the informal sector in Haryana.

manufacturing firms as compared to other sectors such as services or trade, as shown by Brixiová, Kangoye, and Yogo (2020), based on the propensity score matching done on firm-level data from 42 African countries. The study found that enterprises in the manufacturing sector created 26 new jobs against one new job in the service sector for an equal level of investment and loan amount.

A study of over 50,000 firms across 70 developing countries found that the introduction of credit bureaus increases employment growth by over five per cent in countries that have credit bureaus as compared to countries that do not have credit bureaus (Ayyagari et al., 2016). In a similar vein,(IMF, 2019) also show from their study in the Middle East and Central Asia that the quality of credit information can increase employment provided by SMEs. Moore's classic study on the law of wages, i.e. wages are higher in larger enterprises as compared to smaller enterprises, has been validated repeatedly in different contexts (Moore, 1911). In a cross-country analysis, Fowowe (2017) found that access to capital leads to a varied impact on the compensation and the productivity of employees, depending on the current size of the business. The typical employee in a 100-worker firm earned around 80% more than his or her equivalent in a five-worker business. Page and Söderbom (2012) highlight that firms with 30 employees have double the value-added per worker than those with five employees, while firms with over 100 employees have three times the value-added per worker. Additionally, employees hired at higher wage rates and larger firms are also compensated with fringe benefits, incentives, business training, and conducive working conditions (Oi & Idson, 1999). While the cost of employee acquisition is lower in smaller firms, employees struggle with higher layoff and firm failure rates, resulting in less job security (Oi & Idson, 1999).

Data suggests that the vintage of the microenterprises also determines the job creation. By virtue of their tenure, older firms account for higher employment generated. However, the younger firms, 'gazelles', are able to generate employment opportunities at a higher rate (Ayyagari et al., 2011). Gazelles are crucial to ensure sustained and long-term job creation potential in the economy, and their biggest inhibitor to growth is accessing finance (Brnjas, Vulićević, & Čanaićević, 2015), (MichaelGrimm, Knorringa, & Lay, 2012). Kaya and Persson (2019) highlight that extending financial support to gazelles can improve their organic growth prospects.

As per an estimate by the World Bank based on the only MSME Census conducted in India in 2006–07, less than one-tenth of the total workforce employed by unregistered microenterprises is considered skilled by the proprietors (S. Sinha & Pental, 2017). Across these proprietors, there is a demand for more than one-third of this existing workforce to be skilled, apart from hiring the rest as already skilled workers. The effect of credit on the skill development of the employees for productivity growth is a second-order effect mediated by the innovations and investments introduced by the proprietor, necessitating skill up-gradation or re-skilling. This is discussed in the business innovation section below.

2.3 Formalisation

Informality has been identified as the primary hindrance holding microenterprises from access to formal finance, government benefits, and market access (Marquez, 1990). A cross-country analysis of 18 countries from Sub-Saharan Africa, South Asia, and Latin America highlighted that productivity levels in informal firms are a quarter of the productivity levels of formal firms (Amin & Okou, 2020). Lack of productivity makes informal firms inefficient in terms of capital-output ratio, leading to low revenue with consequent inability to incur costs of formalisation. As noted by Quiros-Romero, Alexander, and Ribarsky (2021), avoiding taxes and regulatory compliances provides them the only avenue to compete with formal firms with higher productivity and capital allocation efficiency. La Porta and Shleifer (2014) have argued that pushing informal firms towards formalisation would only lead to business closures as they will not be able to compete with established players in the formal sector. Thus, most informal firms rationally choose to remain informal as they weigh the expected benefits of formalising with the costs of remaining informal (McKenzie & Sakho, 2010). The recognition of this fundamental fact about informal firms is a crucial recommendation for the governments to exercise extreme caution while imposing any additional costs of formalisation (Levy, 2008).

In order to overcome these expenses of registration costs among informal businesses, providing them with financial assistance or reimbursement of direct costs or reducing the tax burden acts as an incentives to enable them to register with the concerned government department(s). To this effect, Campos, Goldstein, and McKenzie (2015) conducted a study in Malawi where firm owners were provided costless registration assistance to register their business formally with the government. As a result of this intervention, over 54% of the firms opted for formal registration, and 64–68% of firms opted for bank and government registration assistance as a part of the intervention. Along the same lines, Mel et al. (2013) through their study incentivised informal firms in Sri Lanka to formalise. The results of the study showed that 17–22% of the firms registered when offered LKR 10,000 (USD 88) i.e. under half a month's profits or LKR 20,000 (USD 175), equivalent to one month's profits for the median firm. Additionally, 48% of firms registered when offered LKR 40,000 (USD 350), a full month's profit. A study by Sharma (2014) focusing on microenterprises in India assessed the results from the 2006 World Bank survey of Indian microenterprises and noted that 53% of the informal enterprises had not registered because they were unaware of the process of doing so with the district industries centres (DIC) and would register if they were educated about the process and the provisions that it requires. More importantly, 40% of the sample stated that they were not interested as they were not aware of the potential benefits of registration.

An initial nudge to formalise can create a virtuous cycle wherein hitherto informal firms can seek better terms of credit from financial institutions, and thereby improve their bottom lines and reinvest for growth. Fajnzylber, Maloney, and Rojas (2006) showed that Mexican microenterprises, when formalised, participated in credit markets and businesses associations thereby increasing their profit by 10%. Rand and Torm (2012) through their study of Vietnamese small and medium manufacturing en-

terprises find that formal registration leads to increased profit. The higher rate of business registration is also coupled with higher rates of formal employment contracts being provided to the employees of the businesses. This suggests that the formalisation of businesses is associated with adherence to labour laws and best practices. Along the same lines, Demenet, Razafindrakoto, and Roubaud (2016) found that as a result of formalisation Vietnamese firms could utilise new equipment/utilities such as electricity and internet and operate on a larger scale by increasing size, accessing indoor premises, and keeping written accounts. Formalisation also facilitated better relations with suppliers and customers and enabled easier access to new markets.

One of the ramifications of informality is the lack of information and documents that can be used to prove one's credit worthiness before the financial institutions. Due to this information asymmetry, financial institutions charge higher interest rates to microenterprises, expect a high valuation of collateral and request guarantors (Klapper, 2017). Even when data about informal firms is available for credit underwriting, it is expensive to collect and difficult to organise. The advent of digital banking provides a useful conduit, in terms of payment flows across customers, suppliers, employees and government. A combination of receipts, orders, payments to suppliers, and other expenses like utility bills helps a lender get detailed information for the underwriting and risk assessment process (Mills, 2018). Monteiro (2020) explores the role played by the formalisation of labour contracts in enabling access to credit. The study showed that deploying formal employment contracts increased the probability of obtaining a bank loan by 23%. This occurs as formal employees on payroll are more likely to have a salary account set up in the same bank. This allows banks to establish a relationship and track payment history, reducing information asymmetry and facilitating the extension of cheaper loans. In a study conducted in the US, Turner, Walker, Chaudhuri, and Varghese (2012) highlighted how an individual's utility and telecom payment patterns can be used for credit scoring. This process substantially reduced the share of adults deemed 'unscorable', from 12% to less than 2%. This method of estimation provided greatest benefits to marginalised and low-income communities in the US. It also reduced the loan default rates. With the proposed expansion of account aggregator ecosystem in India, such data logs can be used for microenterprise lending as well in the near future (Nageswaran, Bhandari, & Kale, 2022).

Besides individual firm-level improvements as a result of formalisation, the registration process can have positive spillovers for the economy and larger community as well (ILO, 2017). For instance, as a result of business registration, the tax base increases for various levels of governments, which can be ploughed back into local development and public infrastructure. This is especially crucial in the case of MSME clusters, where the local district and the state government face less transaction costs (origination, application fee, collateral security, credit verification process) with the MSMEs. This can aid formalisation and meet credit needs through lead banks in the form of credit guarantees for technological upgradation loans of higher ticket-sizes (SIDBI & GIZ, 2012). In India, with the advent of the Goods and Services Tax (GST), there is increasing emphasis on registration of enterprises. This allows lenders to develop a credit strategy for these clusters (Narayan & Sundaramoorthy, 2018). It also allows for the provisions of common infrastructure, including new technologies and best practices

from other such analogous domestic and international clusters (NITI Aayog (Planning Commission), 2012).

It is crucial, however, to acknowledge that formality and informality represent a continuum with two ends of fully regulated and monitored (formal) enterprises and unregulated and non-monitored (informal) enterprises (Quiros-Romero et al., 2021). It includes enterprises that have no trace of registration with authorities (and transact primarily in cash for sales and wage payments, do not hold bank accounts, or pay taxes, etc.) as well as those formal enterprises that despite complying with most regulations still find ways to hide part of their earnings legally and reduce their tax liability. Moreover, there are enterprises that obtain operating permits but do not pay the social security component of the wages to their employees. The formal–informal continuum can therefore be used to characterise the varying reach of official interventions across different economic activities (Guha-Khasnobis, Kanbur, & Ostrom, 2006).[2]

2.4 Business innovation

Peter Drucker defines innovation as "the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth" (Drucker et al., 2002). Innovation among entrepreneurs ensures the long-term sustainability of their businesses (Kneipp, Gomes, Bichueti, Frizzo, & Perlin, 2019). Harel, Schwartz, and Kaufmann (2020) classified the broad ambit of innovation into four distinct categories for small businesses: product, process, marketing and organisational, to study the impact of access to finance across these different types of innovation in an enterprise. While over 60% of the enterprises in the sample pursued innovation, most of these constituted either an incremental improvement to a product or process or an innovation already in practice in the wider industry. Only 11 per cent of the businesses presented at least one high-level innovation (new to the local or global market), mainly in product innovations. The Indian National Innovation Survey focusing specifically on MSMEs cites various innovations that the enterprises carry out: product quality and standardisation, new machines, more efficient use of inputs, alternative materials, etc. (Indian National Innovation Survey, 2014).[3] According to the survey, about 70% of MSMEs carrying out innovations did it in the form of introducing new machines, followed by 40% engaging in quality and standard related activities. It also mentions that the skilled workforce of an enterprise increases with its size, and the enterprises depend on internal sources only rather than external capital from government schemes or otherwise to provide skill development training.

Access to finance enables entrepreneurs to carry out innovative activities or creative destruction (Schumpeter, 1942). Schumpeter posits the role of banks as the nerve centre of a capitalist economy, beyond the narrow remit of making finance available

[2]Formalisation comprises essentially four items: entry (commercial operations registration), inputs (formal contracts with suppliers and employees), outputs (compliance with health, technical and environmental regulations) and govt. relationship (tax declaration, payment of taxes and formal accounting).

[3]It is to be noted that the sampling frame for the survey consisted of enterprises listed under the Annual Survey of Industries, which focuses on MSMEs with more than 10 employees and is predominantly for the manufacturing enterprises.

at reasonable rates (Schumpeter, 1942). Stressing on 'creative destruction' caused by the upstarts or small firms that lead to the diffusion of innovation in an economy, Schumpeter imagines banks as assisting the market in picking 'winners and losers' by evaluating the potential and performance of business enterprises, especially the new ones (Lambert & Velardo, 2019). Nonetheless, Schumpeter admitted that innovations in advanced capitalist economies will have a tendency to get centralised in large firms that are able to develop their R&D centres, with a consequent decline of the role of small businesses in carrying out the same (Lambert & Velardo, 2019). However, emerging economies are characterised by small businesses which have a large room to grow and flourish, using credit from financial institutions (Godke Veiga & McCahery, 2019) (B. A. Khan & Khan, 2018). Unlike larger established enterprises however, microenterprises face several barriers in accessing formal finance, which can curtail innovation (Hossain, 2015). Using India National Innovation Survey data, Pachouri and Sharma (2016) highlights that the cost of innovation and limited availability of finance prohibits small firms from pursuing innovation.

Access to finance improves competitive incentives that lead to continuous innovation (Westmore, 2014). In a study of Germany's Central Innovation Programs for SMEs, Liu and Rammer (2016) found that access to government funding resulted in a 1.8% increase in the component share of innovative sales (from new-to-firm product innovation) within a year and a 2.3% increase after two years, in contrast to firms that did not receive any funding. Furthermore, S. U. Khan, Shah, and Rizwan (2018) analysed the data of 21 countries from the World Bank's Enterprise Surveys database to measure the role of financial access on a firm's innovation capabilities. According to the authors, access to capital increases the likelihood of introducing innovative activities of various kinds. Bank finance in particular is associated with the introduction of new product lines, and process organisational and marketing innovations. These include new ideation and creation of products, the provision of different types of services, processes that improve production and delivery, the introduction of logistical and distribution processes, and improved organisational structures and practices. Regasa, Diro, Tadesse, and Buta (2021) analysed the performance of Ethiopian firms over the period 2011 to 2015 in order to track the impact of accessing finance on the innovation abilities of firms i.e. introduction of new products or significantly improving an existing product or service. Results from the study suggest that a one per cent uptick in external financing secured by the firm results in an over two per cent increase in the firms' innovative capabilities. Moreover, the gap in the incidence of innovation between firms with capital access and credit-constrained firms is on the higher side at 24%.

Gazelles have the maximum potential for innovation and local economic growth (Benešová, Kubičková, Michálková, & Krošláková, 2018). Gazelles have intrinsic entrepreneurial abilities (Brnjas et al., 2015). This includes the ability to find growth opportunities as well as create additional value. Additionally, gazelles pursue market differentiation strategies for competitive advantage, reducing risks and uncertainties through new knowledge, techniques and innovations. Stone and Badawy (2011) studied the characteristics of gazelles in the Middle East and North Africa (MENA) region and noted that gazelles introduce several new ideas and innovations in both their processes and products (beyond high rates of employment generation in their respective

enterprises). Gazelles exist in all sectors, but are dominant in the services sector (Henrekson & Johansson, 2010). Benešová et al. (2018) highlighted key characteristics of gazelles found in the services sector, such as high knowledge intensity, relatively high entrepreneurship ability and innovation intensity. Production activities undertaken by gazelles are directed mainly at intermediate consumption, by providing knowledge and skills to other enterprises. Lack of access to finance is one of the most significant inhibiting factors for gazelles (Kubičková, Krošláková, Michálková, & Benešová, 2018). MichaelGrimm et al. (2012) also highlighted that 'constrained gazelles' are held back from their highest earning potential due to a lack of access to finance, and this inevitably hinders their potential to create innovative product lines. McKenzie (2017) conducted a study in Nigeria to identify and incentivize high-growth entrepreneurs. The author highlighted that providing capital to newer firms spurs a sense of innovation among them. These firms not only witnessed higher profits but also tracked higher rate of innovation, employment, and ensured long-term business sustenance (more than three years). Evidence by González-Uribe and Reyes (2021) highlights the importance of accelerators (especially in developing countries) that can help mentor gazelles and provide access to its sponsoring networks to source capital.

Over and beyond the financial implications of access to capital, researchers have also explored the social and psychological implications of access to capital on the entrepreneur. One such study by Holtz-Eakin, Joulfaian, and Rosen (1993) noted that microenterprises that can access capital have a significantly longer survival time than enterprises that lack access. Even though providing credit to new small businesses helps the entrants sustain and grow the businesses, more importantly it has a behavioural element attached to it, which enables creating a growth mindset that propels overall enterprise success (Mor et al., 2020).

2.5 Broader economic and psychological well-being of the household

Access to finance creates a multiplier effect by enabling attainment of broader economic, social and psychological well-being of the household members of the MSME proprietor (Ajefu, Demir, & Haghpanahan, 2020), (Dimova & Adebowale, 2018). The discourse on access to finance can thus widen the scope of assessing and measuring poverty by including factors that can enhance capabilities, reduce vulnerabilities, leverage opportunities, enhance social capital, facilitate inter-generational upward mobility and ensure the psychological well-being of entrepreneurs and their households (Santos & Alkire, 2011). Moreover, it leads to positive spillovers for the local communities in terms of providing basic consumer goods and services in low-income neighbourhoods, generating apprenticeship/training/employment opportunities for local youth and initiating social change (ANDE, 2019).

Several researchers have explored the importance of access to various tangible assets that are crucial elements while assessing welfare (Brandolini, Magri, & Smeeding, 2010). To this effect, Adjei, Arun, and Hossain (2009) studied the impacts of small loans provided to microenterprises in Ghana. These loans were given to support the growth of their enterprises, generate income, and increase their financial, human, and

physical capital. The results were multifold, where participants increased their expenditure on various forms of tangible assets for the household, such as the acquisition of refrigerators to improve their living standards. Khosla, Sircar, and Bhardwaj (2019) also states that usage of refrigerators is regarded as a qualitative improvement in the standard of living of low-income households through important asset ownership. Dhanaraj, Mahambare, and Munjal (2018) stresses the importance of refrigerator ownership for Indian women due to its impact on lowering the household burden of work and easing women's entry into the labour market.

Similar to the program effects on physical assets, Adjei et al. (2009) established that access to business loans increased expenditure on children's education. The study showed that for every USD 15 increase in the loan amount, expenditure on children's education increased by USD one. Most entrepreneurs were also able to afford their children's education at private schools where the expenditure incurred is four times more than at public schools (Adjei et al., 2009).

Improved housing conditions also enhance overall household welfare, by positively impacting the mental, physical and subjective welfare of adults as well as family safety (Kling, Ludwig, & Katz, 2005). Findings from a study by Davis, White, Damodaron, and Thorsten (2008) in urban India (800 households in the city of Hyderabad) demonstrated that providing micro-credit to low-income households leads to a substantial number of households investing in better water and sewer network connections. 60% of households stated they would be interested in a loan for water and/or sanitation improvements. Evidently, financial institutions such as Microfinance Institutions (MFI) initially disbursed only income-generating and consumption smoothing micro-credit loans, but have now expanded their product portfolio to include other types of personal loans such as home improvement, WASH, two-wheeler vehicle and education loans. The fact that these financial institutions have diversified their product offerings for the same target segment leads to the inference that proprietors use the income-generating micro-credit as a ladder to seek other credit products as well, aimed at improving their household wellbeing (Bondinuba, Stephens, Jones, & Buckley, 2020), (SIDBI, 2015).

3 Current challenges in accessing formal finance

The earlier section discussed the beneficial impact of finance on microenterprises across a range of outcomes, including enterprise growth, job creation, innovation and well-being. This section discusses the various demand and supply-side challenges that affect an enterprise's access to formal finance. Despite the fact that the MSME sector is instrumental to the growth and development of the economy, the sector continues to be underfunded and faces significant barriers to growth. Specifically, lack of adequate and timely access to credit along with procedural hassles of applying for credit from formal institutions has been a major challenge to credit access. According to the IFC, micro and small enterprises together account for 95% of the credit gap, and there is significant potential for formal financial institutions to address these requirements (IFC, 2018).

3.1 Demand-side challenges

Lack of collateral inhibits small businesses from securing cheaper loans (Kumar, 2017). In the Indian context, cultural and social norms place a high value on land ownership and property rights across various sections of society, inhibiting individuals from pledging land as collateral that would have ensured access to much-needed credit (Krishnan & Panchapagesan, 2016). Even when property is considered as collateral, a lack of clear land titles and property rights create inefficiencies in the market and reduce the perceived creditworthiness of the borrower under the eyes of formal lending institutions (Dower & Potamites, 2005). At best, only the firm's assets can be considered as collateral while securing bank loans. These enterprise assets are typically less valuable and lower in quantity for smaller businesses, thus making it challenging for small business entrepreneurs to secure formal loans from institutions (Rahman, Belas, Kliestik, & Tyll, 2017). Moreover, the presence of collateral is more relevant in the case of manufacturing activities, where there are tangible assets that can be securitized, unlike services firms which have more intangible assets such as brand equity (Rao, Kumar, & Madhavan, 2019). As a corollary, such microenterprises may not be able to access bank or commercial finance until their production levels increase to create business assets in the first place, which can be provided as collateral for secured lending (Biswas, 2014).

Books of an enterprise provide an incisive picture of its financial health, quintessentially critical for accessing finance. However, the lack of record-keeping culture among microenterprises hinders their ability to secure cheaper loans from formal lending institutions (Nikaido, Pais, & Sarma, 2015). The lack of differentiation between household and business finances also make any record-keeping infeasible for many microenterprises (S. J. De Mel, McKenzie, & Woodruff, 2007). Such a lack of differentiation arises due to business stocks being used for household consumption. This is particularly the case with the mom-and-pop retail stores in developing countries that 'dip into the till'. Manufacturing firms are less prone to this tendency, as they are less likely to produce household consumption goods directly.

Many microenterprises avoid seeking finance from formal sources, concerned about their inability to pay in the event of their lack of survival and growth and consequently loss of pledged collateral assets (Madan, 2020). Firm-level attributes such as size and age also affect a firm's ability to secure formal finance (Nikaido et al., 2015). Older firms are able to secure financing with relatively more ease than younger firms as their longer existence presents less risk and higher credit worthiness to lenders. This is despite the fact that the younger firms are able to expand their business more than older firms with access to the same form of financing (Kumar, 2017). Furthermore, the incentive of availing finance is defeated if not provided for the adequate ticket size. In this context, demand for provisioning one's own equity capital significantly hinders the young firms which do not have cash reserves to begin with (SIDBI, KfW and BASIX, 2018). The lack of access to timely credit also acts as a big hindrance, reducing the profitability and growth of microenterprises (Otoo, Fulton, Ibro, & Lowenberg-DeBoer, 2011).

Abraham and Schmukler (2017) highlight that one of the most significant challenges

for microenterprises is that they are more "opaque" as compared to large firms, because they have less publicly available information. Consequently, this can discourage lending, and the lenders can substitute the lack of information with higher requirements of collaterals (Mund, 2020). To this effect, Stiglitz and Weiss (1981) have seminally argued that information asymmetry (on both sides, borrower and lender) leads to adverse selection and a widening credit gap. The primary concern while banks estimate interest rates on the loans they provide is based on the risk-return ratio of their potential borrowers. Intuitively, banks charge a higher rate of interest to potentially risky candidates. The interest rate charged by the bank reflects the bank's intentions rather than the candidate pool itself, through adverse selection and incentive selection effect. Banks thus use the rate of interest as a selection pool to filter candidates based on their discretion and preferences, essentially practising credit rationing. The presence of collateral also does not help alleviate these problems. Increasing the collateral requirement (beyond a point) may decrease returns to the bank. The authors showed that increasing the interest rates or collateral requirements could create a situation of moral hazard wherein the borrowers are induced to invest in more risky projects, enhancing the risk profile of the bank.

Modern finance has typically tried to overcome this problem of information asymmetry, which lies at the heart of financial intermediation and is inherent in dealing with informal or semi-formal microenterprises One of the innovative ways to overcome this has been the birth of the microfinance movement which uses a high touch model as well as social collateral to provide small ticket size loans with high frequency repayment schedules. Morduch (1999) highlights the relevance of the group-lending model, which has been one of the predominant approaches in microfinance. This concept rests on the promise of social assurances to physical contribution (Besley & Coate, 1995). However, while microfinance caters to the daily cash flow needs of microenterprises, the small loan size does not address the long-term growth capital needs of this sector.

3.2 Supply-side challenges

It is a widely held proposition that banks are not inclined to finance microenterprises (C. Singh & Wasdani, 2016). Financial institutions are hesitant to lend to the small business sector, fearing the possibility of default or resulting in a non-performing asset (NPA) (S. Singh & Paliwal, 2017). Overall, the proportion of NPAs for private sector lenders is relatively higher for loans of higher ticket-sizes disbursed to larger companies, as compared to the MSME sector in India (S. Singh & Paliwal, 2017). But this trend is the reverse in public sector lending institutions (IFC, 2018). A comparison of NPA ratios across the scheduled commercial banks' overall portfolio vis-à-vis their MSME portfolio indicates that the NPAs ratios increased overall for this segment (IFC, 2018).[4] This correlates with the fact that the public sector commercial banks remain the largest source of formal credit for the Indian MSME sector (TransUnion CIBIL, 2021). In this scenario, credit guarantees play a pivotal role in aiding private sector

[4]As of June 2019, PSBs accounted for nearly half of all credit disbursed to MSMEs and hence are most vulnerable to MSME-related NPAs. In the June 2019 quarter, 16% of all PSB MSME credit was NPAs (up from 14.5% in the same quarter in June 2017), nearly three times the rates in private banks and NBFCs (Memos et al., 2020)

lending to MSME players (Jena, 2021). Challenges such as adverse selection problems and high default rates consequently increase the transaction costs for lending organisations and results in aversions towards lending to this sector (Jena, 2021).

Typically, transaction costs are a factor of administrative costs and default costs. Lending institutions charge their borrowers this fee to cover their processing and administrative expenses (administrative costs) and an additional provision to cover in case of losses (default costs). One of the predicaments to higher transaction costs rests in the fact that banks need to incur a higher cost of underwriting in the case of MSMEs, due to weak capital base and lack of financial records (IOSCO, 2014), (Moses & Adebisi, 2013). Higher cost and quality of the underwriting process is a key challenge to MSME financing due to the lack of quality data on the track record of MSMEs. In addition to the underwriting process, post-monitoring costs are also high for the MSME sector due to the lack of continuous transparency of business performance. Hence, traditional lending organisations need to incur significant expenses on underwriting procedures, structuring loan contracts, monitoring strategies and mechanisms, which result in credit access being constrained and delayed for micro and small enterprises (IOSCO, 2014), (OECD, 2015).

Relationship banking is a possible alternative given the challenge of obtaining physical and quantifiable transaction data about microenterprises. There does exist evidence of relationship-based lending in India as against the traditional transaction lending approaches such as asset-based lending, factoring, and leasing used to fund SMEs (Thampy, 2010). It is in the best interest of both the bankers and smaller firms to push for relationship banking as the pivotal approach to lending (Baas & Schrooten, 2006). However, agency concerns within large banking organisations, such as giving more authority to loan officers, makes relationship-based lending cost-prohibitive in terms of transaction and supervision costs (Berge et al., 2012).

Commercial banks in most developing countries pursue their MSME lending strategy through short tenure loans, either fully secured or small ticket sizes (Kumar, 2017). Microenterprises are unable to secure more customised solutions like trade financing or leasing or term loans. To aid the development of more variety of financial products based on risk profiles, the establishment of credit bureaus has assumed crucial importance in financial systems (OECD, 2015). Petersen and Rajan (2002) also find that with the coming of credit bureaus, the average distance between the location of the enterprise and the lending bank branch increased, due to the availability of credit bureau scores which helps overcome the constraints of proximity or relationship-based banking. McIntosh and Wydick (2005) highlight that well-functioning credit bureaus have the potential to increase access to capital to the under-banked community of low-income borrowers. These credit bureaus are lately gaining importance in India.[5] All formal financial institutions, including MFIs, have now mandated credit bureau checks

[5]TransUnion CIBIL in 2017 launched CIBIL MSME Rank (CMR) - A credit risk rank for MSMEs. CMR uses machine learning algorithms to predict the probability of an MSME becoming NPA across a 12 month period. CMR provides a ranking to the MSME based on its credit history data on a scale of 1 to 10, CMR1 being the least risky MSME and CMR10 being the riskiest MSME. The higher the CMR, the higher the risk of NPA associated with the MSME.

as a preeminent requirement during the underwriting processes (Shankar, 2019). It has been found that when low-income borrowers are made aware of the credit bureau systems and its impact on their future financial needs, they are able to act responsibly (Lyman, Lythgoe, Miller, Reille, & Sankaranarayan, 2011). This is especially important for those borrowers who are new to credit, to build a formal credit history (Prathap & Khaitan, 2016). In fact, with the arrival of credit bureaus in a country, the customers are encouraged to take up loans from formal sources and thereby start building their credit histories for better terms throughout their lifecycle financing needs.

4 Determinants of successful credit uptake for enterprise improvement

Access to timely and affordable credit is only the final step in achieving the improved business performance of the firm. In fact, long before credit is actually received, the blueprint for its effective use gets prepared by the proprietor. This includes the infusion of credit for technological upgradation, business networking expenses, quality control, skill development, maintenance, repair and overhaul, etc. In this respect, to a lot of extent the successful injection of capital is constrained or enabled by a set of intrinsic and extrinsic factors. The intrinsic factors are made up of an individual entrepreneur's human capital capabilities and the firm's credit absorption capacity. The extrinsic factors include myriad ecosystem conditions such as effective demand and competition, government policy and regulations, raw material and capital goods supply, technological developments, etc., that influence the trajectory of the business. This section elaborates on these factors that affect the successful uptake of credit by microenterprises.

4.1 Individual determinants

Some of the studies argue that returns to capital for small businesses do not differ based on entrepreneurial skill, education or risk averseness (Mel et al., 2008). This reinstates the fact that the injection of capital to microenterprises does improve a businesses' prospects of a return to capital, growth and sustenance of the business in the long term, despite entrepreneurial skill. The caveat, however is that the marginal returns are highest for entrepreneurs with more entrepreneurial ability and those with fewer other workers from the same household (Mel et al., 2008).

On the other hand, some studies underline the importance of educational level as well as the hands-on acquired skills for the economic viability of firms in general (Mor et al., 2020). Educational qualifications of the entrepreneur have direct implications for ensuring the sustainability and growth of enterprises (Amaradiwakara & Gunatilake, 2016). La Porta and Shleifer (2008) explored the roots of the larger productivity levels of formal enterprises compared to informal ones, and found poor attribution for variations in the workforce's human capital. The authors highlighted that between formal and informal businesses a striking difference is the human capital capability of the owner-managers. While in the case of informal firms only seven per cent of the managers have college degrees, around 75% of the formal firms have managers with

such degrees. The study's results show that a significantly higher increase in returns occurs for every additional year of education of an owner-manager as compared to that of a worker. Therefore, it is much harder for managers of informal firms to just start and operate a formal, larger firm without the know-how to survive in the formal sector (La Porta & Shleifer, 2008).

Related to education qualification as a human capital endowment for successful, organic growth of an enterprise is the notion of 'entrepreneurship orientation' (Lumpkin & Dess, 1996). Kiyabo and Isaga (2020) highlight that tangible resources (access to capital, assets, etc.) alone does not determine firm success, but intangible factors such as an entrepreneur's orientation is crucial to ensure improved business performance. Factors such as risk-taking ability, autonomy, pro-activeness, competitive aggressiveness and innovative capabilities determine entrepreneurship orientation for individuals. Entrepreneurship orientation positively affects the firm's competitive advantage, in terms of the ability to create competitive firms that can outperform other enterprises in the market. This finding is corroborated by another study by Amin (2015), which suggests that entrepreneurial orientation enables entrepreneurs to undertake collaborative opportunities and learn new and ongoing business practices that, in turn, creates an agile enterprise.

While speaking of entrepreneurship orientation, it is important to also distinguish between opportunity and necessity entrepreneurs. While opportunity entrepreneurs are considered suitable for GDP growth, formalisation, diversification, innovation and job creation, necessity entrepreneurs are seen as a pathway for self-employment, so as to reduce the dependence on the government (Buheji, 2018). While opportunity entrepreneurs have a growth mindset, necessity entrepreneurs typically have a survival mindset (Spencer & Gómez, 2004). As such, much of necessity entrepreneurship is characterised by imitativeness, rather than innovativeness (Udimal, Luo, Liu, & Mensah, 2020). This reflects on the seriousness of the business venture and its sustainability over the long run. In fact, many informal enterprise proprietors act as entrepreneurs out of necessity and would instead prefer to work as salaried employees in the formal sector if offered avenues, despite wages in the latter getting taxed, unlike the former.

Kumar (2017) argues that identifying necessity entrepreneurs that have the potential to become opportunity entrepreneurs is the key to productivity and employment growth in developing countries. The promotion of gazelles can transition an economy towards a higher productivity frontier. Such promotion creates conditions for a greater churn in the economy where the most efficient firms survive and grow over a period of time. Since the developing countries have historically been inundated with necessity entrepreneurs, it becomes crucial to understand the ways in which they can be transitioned into opportunity entrepreneurship. Incentives for formalisation also allow this to play out even more intensely, eventually contracting the informal sector which is rendered too unproductive to compete with the most efficient formal gazelle firms. Literature shows that not all necessity entrepreneurs shall make the cut, but those that do will add to productivity growth, job creation and degree of formalisation. Such necessity entrepreneurs are motivated by both pull as well as push factors, which in turn leads to their success. The challenge is to be able to identify these 'gazelles'.

Fafchamps and Woodruff (2012) suggest use of tools like psychometric testing for the identification of gazelles in targeted programs (apart from the growth trajectory and vintage mentioned earlier in this paper).

While psychometric testing and community referrals can be used to determine ex-ante entrepreneurial capabilities, there exists further room to inculcate this mind-set among the 'gazelles' (Campos et al., 2017), (Glaub, Frese, Fischer, & Hoppe, 2014). Qualities like personal initiative, self-starting nature, autonomy, future-orientedness and persistence can be built over a period of time (Fay & Frese, 2001). In this regard, it is perhaps crucial to acknowledge the limitations of traditional business training. Applying principles of modern cognitive psychology, a paradigm change is taking place in imparting business training. Rather than focusing on conventional topics such as bookkeeping, business plan development, or production management, psychology-based training focuses on developing entrepreneurs' innate attributes such as proactive, innovative and self-starting behaviour (Alibhai, Achew, Strobbe, & Coleman, 2020). Training for 'gazelles' must thus go beyond the traditional classroom training on business fundamentals and instead chisel their raw entrepreneurial mindset (McKenzie, Woodruff, et al., 2012).

Within 'gazelles', it is important to focus on youth specifically as they are the harbinger of new ideas and create higher employment. Youth-run MSMEs have been identified as an important target segment within MSMEs, as they are likely to have 1.6 times more entrepreneurial capabilities than others (Kumar, 2017). Even within the youth segment, it is the 25–29 age segment that has been found most active in starting enterprises, generally less than three years old. Crucially, enterprises run by this segment are also more likely to employ fellow young people.

Kinship taxation as a factor has also been considered a crucial factor impeding the entrepreneurial journey of a microenterprise proprietor. Intuitively, access to personal and kinship networks have always been beneficial for an entrepreneur's journey. Social networks have been shown to be beneficial for securing jobs in the labour market, and for entrepreneurs to aid in entering into risk-sharing models and informal employment agreements (Calvó-Armengol & Jackson, 2007). But recent literature highlights the negative implications of social networks and how they can impair entrepreneurial success in the long-run (Grimm, Gubert, Koriko, Lay, & Nordman, 2013). For instance, social and kinship networks call upon the entrepreneurs to divide business successes and profits with other members of the social network (Nordman, 2016). This inevitably results in the entrepreneurs gaining a sense of pressure, societal coercion and eventually exclusion. In the long-run, the concept of sharing success with social networks reduces business efficiency in the eventuality where the entrepreneurs cannot cope with the rising family demands. Squires (2018) evaluated the impact of kinship taxation on microenterprises in Kenya, highlighting that transfers from the business by the entrepreneur to their kinship distorts the productive capabilities of the business in the long-run. The presence of social constraints and kinship tax reduces the productivity and reinvestment ability, especially being a determining factor for marginalised male entrepreneurs. C. H. Nguyen and Nordman (2018) studied the effects of kinship and social networks impacting entrepreneurial success in Vietnam and highlighted that

kinship ties through coerced hiring of family members as employees or pressure of diverting profit of the business to the family inevitably reduces enterprise productivity and hampers growth prospects. Jakiela and Ozier (2016) find that pressure from societal networks results in entrepreneurs undertaking extreme measures of hiding their income and willingness to forgo potentially higher returns on their business investment decisions, in order to avoid sharing it with their kin. Another approach is to increase conspicuous consumption, and this explains to an extent why it is observed among certain households among the poor (Squires, 2018).

4.2 Firm-level determinants

Various authors have highlighted that access to capital at different stages of business impacts their growth and development differently. C. Singh and Wasdani (2016) define four stages of an enterprise: (1) start up, (2) survival, (3) growth, and (4) sustenance. The focus of enterprises in the start-up and survival stage is on establishing the business in the market and breaking even on invested capital, while in the growth stage, it is to expand to more markets. Businesses in the sustenance stage have usually established themselves in their target markets. The financing needs of enterprises, therefore, also vary drastically across these stages. The increased size of initial capital injected into microenterprises at the start of the venture improves the long-term prospects of success. This aligns with findings from a study by Mor et al. (2020) which examined the impact of access to capital on small businesses in India in their nascent stages of growth. These nascent businesses are 2.8 times more likely to sustain in the long term when provided access to credit.

Nikaido et al. (2015) highlight that access to cheaper credit and the ease of access also depend on the size of the enterprise, which invariably affects growth and productivity prospects. Larger firms have increased access to resources and can take advantage of economies of scale, which inevitably affect overall firm profitability and productivity. Coase (1988) famously posits that the efficient size of a firm is determined at the frontier where the marginal intra-firm transaction cost equals the market transaction costs. Transaction costs occur for a firm in the regular business operations such as contracting, bargaining, and supervision. While the larger firms benefit from lower intra-firm transaction costs, the smaller firms are able to compete in terms of costs only by keeping the wages low. Page and Söderbom (2012) showed that the earnings of the average worker in a 100-worker firm are about 80% higher than his counterpart in a five-worker firm. The value added per worker increases twofold and threefold for firms with 30 and 100 workers, respectively, as compared to firms with five workers.

There has been a growing body of knowledge in analysing the benefits resulting from formal management practices being adopted by small businesses. Forth and Bryson (2018) tested this hypothesis and noted that despite the fact that small businesses are less likely to adopt formal business practices, the ones that do adopt witness considerable improvement in their businesses' productivity and other performance indicators. The authors noted that businesses that specifically invest in employee training and development witnessed the greatest business returns. Earlier, Guest, Michie, Conway, and Sheehan (2003) studied the role of small businesses adopting human resource

management principles highlighting that it led to lower employee turnover and, more importantly, increased per-employee profitability rates in the business. McKenzie and Woodruff (2017) showed that implementation of business principles and management standards resulted in a 35% increase in labour productivity and 22% in total factor productivity. Moreover, business practices also ensure long-term survival and growth — the study showed that improved business practices are associated with seven per cent higher growth over one year, and with 15% higher growth over a period of more than five years of business.

Formalisation has also been considered a critical factor that determines a firm's performance. La Porta and Shleifer (2008) highlight that the decision to formalise is a rational one, wherein firms compare the benefits of formalisation with its costs, and choose to formalise only when the former outweighs the latter. Mel et al. (2013) note that the formality decision is similar to the process of deliberating any other investment decision taken by a small business. The business calculates the costs of being formal (initial registration costs, taxes, etc.) against the proposed benefits (government schemes, access to cheaper loans, government contracts, etc.) of the same. The case to formalise in the situation of smaller, less productive firms does not hold strongly as most do not require or seek the proposed benefits from formal institutions such as banks. The decision to formalise or remain in the informal realm is thus a rational economic decision taken by the microenterprise proprietor independent of the credit uptake (McKenzie & Sakho, 2010). It is pertinent to note that the goal of informal firms to remain so may not necessarily be to evade taxes and social security contributions or to bypass government regulations; however, in the daily process, these activities may end up bypassing regulations and taxation (Quiros-Romero et al., 2021).

4.3 Environment/ecosystem determinants

Marquez (1990) identified that registration costs stand out as a major barrier for informal enterprises. It is too expensive for small businesses to complete the formal registration process and, moreover, pay running costs to comply with the associated regulations after the one-time registration. McKenzie and Sakho (2010) studied informal firms in Bangladesh and noted that the primary hurdle to registration was paying taxes and dealing with the cost and process of registering. The high costs are not only in terms of registration but also the opportunity cost of time. Mel et al. (2013) studied the hurdles amongst small businesses in Sri Lanka and noted that microenterprises lacked the necessary documentation and knowledge to complete the paperwork that was required to be filed at the time of registration, which involved drawing up land agreements with landlords on whose property their businesses operated. Hence, the argument is made for governments to streamline their registration process along with urging formal lending institutions to aid small businesses in this process as well.[6] Along

[6]In India, the new registration scheme, Udyam Registration, is voluntary and there are no fees involved in completing the registration process. As per the (NSSO, 73rd Round), only 32% of enterprises in the unorganised sector are covered under the ambit of various legislation such as the Shops and Establishment Act, Municipal Acts, state DIC Entrepreneurship Memorandum, etc. Coverage under these legislation improves the visibility and identification of these enterprises. As such, these laws do not mandate any action on the part of these enterprises in terms of occupational safety, employee social security benefits, etc. In this way, these types of registrations are different from those that render them

the same lines, Campos et al. (2015) conducted a study in Malawi where firm owners were being provided cost-less registration assistance to register their business formally with the government. This intervention resulted in over 54% of the firms opting for formal registration, and 64–68% of firms opted for bank and government registration assistance as a part of the intervention. These results reiterate the notion that the cost and complexity of registration are holding informal firms from formally registering and availing government benefits.

Marquez (1990) also highlights that irrespective of the presence or absence of any formal costs associated with setting up and starting a business, there is an undercurrent of unofficial payments and costs that are levied on businesses in developing countries, which add to their preliminary costs and make the process of operation expensive for new microenterprises. Noting the undercurrents of bribery costs levied on these enterprises, Sharma (2014) notes that as per the government regulation in India, the classification of small businesses is based on the value of investment and turnover in plant and machinery. Any changes to the existing level of operations (i.e. if businesses exceed the limits of investment and turnover started from the time of their original registration documents) is required to be communicated to the local District Industries Centre (DIC) during a 30-day window. These requirements and short time intervals, along with high levels of red-tapeism in the country, have led to opportunities for government officials to act as rent-seeking, which becomes increasingly challenging and expensive for smaller firms. Hasan and Jandoc (2010) also highlight a crucial element pertinent to the Indian business climate: the prevalence of labour laws that dictates firm sizes and employment across the various states in the country. They prove that labour regulations affect the firm's size adversely and restrict growth. Due to these stringent policies, most firms decide to stay informal.[7]

A country's institutional structure also affects the degree and quality of entrepreneurship in terms of the entrepreneur's confidence to take up enterprising, commercial activity (Bruton, Ahlstrom, & Li, 2010). Beyond the decision to become an entrepreneur, it also affects the type of business they start. Protection of private property rights also provides entrepreneurs with a conducive environment to thrive in terms of the guarantee of their investment. Further, a high tax burden can reduce the working capital available to entrepreneurs, frustrating their daily business operations and plans for expansion (Estrin, Mickiewicz, & Stephan, 2013). The following are the criteria on which favourable governance can be measured for starting a business: number of procedures; number of days; costs incurred as a percentage of income; minimum capital as a percentage of income. Other criteria include: number of procedures for obtaining a license; number of days taken for obtaining a license; the cost of obtaining a license (as a per cent of income per capita); time taken to close a business (years); cost of closing a business (as a per cent of estate); and the recovery rate for closing a business

into the organised sector: Companies Act, 1956; Factories Act, 1948; and, Beedi and Cigar Workers (Conditions of Employment Act), 1966. Firms under the latter kind of registrations would constitute less than 2% of total microenterprises (Mehrotra & Giri, 2019).

[7]The Government of India has taken the step to revamp the labour laws by integrating them into four uniform labour codes across the country (GoI, 2020). This is expected to alleviate the concerns of both firms and workers.

(cents on the dollar).

Supply chain management processes are also crucial for small businesses as it enables striking long and stable business relationships, improving the business growth prospects sustainably over a period of time. Bedi, Chopra, and Bedi (2018) finds that many MSMEs in India are well versed with best practices in supply chain management in terms of partnering with suppliers, preserving customer relationships, outsourcing, and adopting ICT and logistics solutions, to improve their day-to-day performance. In recent times, SMEs are playing a pivotal role in global supply chains and establishing international business networks (Hvolby & Trienekens, 2002). Although international business networks enable small businesses to compete internationally, it is a double-edged sword. Due to their inherent smaller sizes, as compared to larger players, small businesses typically have less bargaining power in negotiations (Nguyen Trung & Belihu, 2010). Additionally, due to their small business size and functionality, larger players pit small businesses against each other on an international scale and coerce them to cut costs and compete on international exchange rate policies. Beyond competitive disadvantage, one of the largest issues small businesses face is rested in delayed payments from their customers (RBI, 2020). The MSME sector in India is plagued with the challenge of delayed payments from both the public and private sector customers.[8] These delayed payments invariably affect their cash flow, deferring investment and innovation plans, and ability to build reputable credit scores to secure their working capital requirements (Hopkins, Paul and Richmond, Kenny and Kane, Kevin, 2017). As highlighted by Ackah and Vuvor (2011), this challenge of delayed payments perpetuates the notion that the MSME sector is one of 'high risk'. The high rates of default or delayed payments from their suppliers is linked to the SMEs' inability to build a credit score or pay back existing debts to lending institutions.

The economic trajectory of a country also shapes the vibrancy of the MSME sector. The past two fiscal years have seen a massive shock to the MSME sector due to the Covid-19 pandemic (Bartik et al., 2020).[9] The spillover effects caused by the lockdowns that were implemented to curb the spread of the virus included reduced aggregate demand. Microenterprises struggled more with reduced demand, with their sales shrinking by a greater degree than large firms, and their cash reserved draining at a faster rate (Adian et al., 2020). Compared to larger firms, microenterprises have

[8] According to a survey by the RBI in December 2019, 44 percent of manufacturing MSMEs experienced payment delay (RBI, 2020). Even if half of the cash held by large firms in India are released, it is predicted that the MSME sector will gain close to INR 1.6 lakh crore in liquidity, reducing their cash flow problems. Even public sector undertakings delay their due payments to MSMEs (Brickwork Ratings, 2020). A survey conducted by the CII of 450 MSMEs to whom payments are pending indicated reported delayed payments worth INR 1,819 crores of which public sector/government departments including state departments owed the MSMEs INR 1,709 crores (CII, 2020). In order to tackle this mammoth challenge of delayed payments the government has launched various portals and schemes over the years to alleviate these challenges yet the extent of delayed payments continues to affect the functioning and growth prospects of small businesses.

[9] A multi-dimensional study of 1461 microenterprises conducted by LEAD at Krea University and Global Alliance for Mass Entrepreneurship (GAME) in 2020, showed that while the majority of these businesses displayed high levels of recovery sentiments, more than half of them lack a strategy to actually recover. Additionally, most of these businesses are dipping into their personal savings to keep their businesses afloat (Ideas for India, 2021).

less liquidity and are unable to sustain during demand shocks, and the pandemic is no exception. Additionally, microenterprises also had to tackle labour shocks triggered by lockdowns, affecting productivity.

5 Role of informal finance

The motivation to opt for informal sources of finance arises in part due to the complex nature of formal credit contracts (Wu, Si, & Wu, 2016). Informal debt is attractive to microenterprises because of its lower initial transaction fees, relatively faster speed and absence of collateral requirements. While the interest rates offered by formal sources may be lower than informal sources, a longer loan processing time and stringent contracting conditions can deter the borrower in seeking formal finance. The inherent flexibility of informal financial sources makes it persistent and popular with the borrowers (C. Singh & Wasdani, 2016).

This is in line with the pecking order theory of finance, which outlines the rationale and order of preferences for accessing finance from various sources (Donaldson, 2000). Myers (1984) notes that the choice of internal financing precedes external sources. C. Singh and Wasdani (2016) also confirm the pecking order theory when they state that enterprises at the nascent stage access finance from trusted informal sources such as family and friends, gravitating towards external informal sources such as moneylenders and also avail trade credit from suppliers for sustenance capital. B. Nguyen and Canh (2021) suggest that demographics and cultural factors majorly influence the entrepreneurs' financing decisions in terms of affinity towards personal or internal finances for their business. The study highlights the importance of social capital in terms of building strong network connections that enable businesses to access finance, reducing information asymmetry which affect formal financing. When it comes to external sources, firms prefer debt instruments, then hybrid structures like convertible bonds, and eventually, look to issue equity as a last resort. Constraints in obtaining debt capital, however, arise in cases where there are no clear property titles or ability to transfer titles (Atogenzoya, Nyeadi, & Atiga, 2014). Interestingly, the proprietors are not interested in equity infusion in small businesses because of the dilution of control, although this has to be calibrated against the growing interest in promoting micro-equity in microenterprises (OECD, 2015),(S. De Mel, McKenzie, & Woodruff, 2019).

5.1 Local network

In developing countries, entrepreneurs in the nascent stage of operation primarily reach out to their local networks first for any form of financial support for their business (Putnam, 1993), (Lee & Persson, 2016). This is because finance from family members is effective, has shorter turnaround time, and, most importantly, is cheap. Collins, Morduch, Rutherford, and Ruthven (2009) highlight that among low-income communities, loans from family members are most commonly interest-free.

Recent research finds that entrepreneurs are moving away from financing options

from within families to other forms of informal lending (such as money lenders and informal chit funds). Guérin, d'Espallier, and Venkatasubramanian (2013) highlighted that a majority of small business owners preferred sourcing finance from alternative informal sources to their households and families, because "they did not want to lead their family into debt". Bygrave and Hunt (2007) noted that while small business entrepreneurs realise that debt would get expensive if sourced from outside their immediate social networks, they were ready to accept this trade-off as it would ensure that this would help them better take strategic business decisions. Along the same lines, Lee and Persson (2016) show that while borrowing from family may be a cheaper alternative (below the market rates of interest), undercurrents of social and emotional ties imply a 'shadow cost' that entrepreneurs have to consider while borrowing from these sources.

5.2 Moneylenders

Beyond immediate family sources and local networks, microenterprises in developing countries typically borrow from established informal sources like moneylenders and pawn shops (Mungiru & Njeru, 2015). These sources typically are invoked when the need is urgent and self-financing sources have either been exhausted or cannot be diverted towards business operations because of other pressing and competing household requirements. Formal lending organisations tackle information asymmetry through requesting high rates of collateral, interest on borrowers, lengthy turnaround times and detailed credit checking mechanisms, but informal money lenders undertake unconventional means of securing their loan amount from their borrowers by placing monopoly control (Bottomley, 1964). This includes but is not limited to leveraging personal relationships and controlling the enterprise's supply chain to coerce borrowers to repay the loan amount with higher rates of interest (Aliber et al., 2015). The interest rates charged are far higher than formal sector players, and to an extent, can be explained through regional monopoly and cooperation among the lenders in the space (Aliber et al., 2015), (Madestam, 2014).

5.3 Chit funds

Chit funds, operating at the intersection of the formal and informal world, are popular among small businesses in India.[10] The model operates by mobilising large amounts of small savings and in return allows members to access a lump sum of money when there is a need. Mohanty and Pany (2014) find that efficient and easy access to finance makes it a preferable form of capital financing for small business entrepreneurs. Chit funds operate on fewer requirements in terms of documentation and collateral as compared to more formal sources like banks and, most importantly, allow borrowers to fix their preferred interest rates. The preference for chit funds over formal finance is found more in traders and other self-employed persons, as they experience more income volatility. Specifically, traders use the chit fund platform to connect to new business

[10] A study by IFC concluded that the size of the registered chit fund market in India is estimated to be INR 0.35 trillion (USD 5 billion) while the unregistered chit fund market is approximately 100 times bigger. The overall chit fund market is expected to grow 10-15% annually. 40–45% of the members of chit funds are proprietors or MSME owners (IFC, 2018).

partners, exchange market information, and build reputation (Agarwalla, Barua, Jacob, & Varma, 2016).[11]

Kapoor, Schoar, Rao, and Buteau (2011) find that registered chit funds fulfil the gaps created by the banking sector. Rao and Buteau (2018) find that chit funds are unique in how they approach microenterprises. They depend on intuitive rules of thumb to assess the viability of the business and can clearly identify repayment behaviours through human judgement. However, while this ability to understand microenterprises is commendable, in order for the industry to sustain and continue to support these enterprises at scale, there is a need to standardise risk assessment methodologies in order to identify and mitigate credit risk.

5.4 Gold loans

Gold loan financing is especially popular in a society like India, since the metal is intrinsic to Indian culture, wherein most households would own gold due to societal and/or religious beliefs and traditional customs (Sharma, 2014).[12] A gold loan is easy to get processed, making it a useful choice in those scenarios where financing from family and friends is not preferred, and there is a disdain for moneylenders (Kanungo & Chakrabarti, 2021). For low-income people, gold loan products offer greater flexibility in terms of repayment schedules and interest rates, in comparison to traditional microfinance (MFI) loans.

Despite the growing relevance and importance of this source of credit, one of its major drawbacks is its price volatility (KPMG, 2020). Gold prices hinge on the overall market performance of the commodity, which invariably affects its prices, values and liquidity constraints of the loan provider. This manifests in the loan-to-value ratio (LTV) pursued by the financial institutions, essentially leading to sub-optimum credit

[11] Institutional semi-formal sources like chit funds are particularly popular as compared to formal finance because of the flexibility inherent in the former (Agarwalla et al., 2016). This is despite the fact that chit funds are not completely full-proof in accessibility due to factors like bidding— an average chit fund member participates in four auctions before being able to claim the loan, which implies there is a significant unmet demand that can be addressed by formal financial service providers (Rao & Buteau, 2018). A crucial finding is that both formal finance and chit funds are used simultaneously, as they cater to the different needs (Agarwalla et al., 2016). The size of the chit fund (lump sum after foreman discount) determines whether it shall be able to address the business need (in terms of raw materials, capital stock, etc.) and will the microenterprise operations be better served by formal financial institutions. Another big reason why some microenterprise proprietors might seek financing from chit funds is because of their lack of good quality credit score (Agarwalla et al., 2016). This leads to a demand for higher collateral value from formal financial service providers. This is contrasted with chit funds where even though collateral is also required, the conditions are much less stringent (Rao & Buteau, 2018). It shall be interesting to see the evolution of this space over the next few years as chit funds aim to overcome the technological inferiority it faces in comparison to big banks (Ambika & Lingappa, 2019). Particularly, they aim to digitise their subscriptions through innovative credit scoring models by partnering with fintech start-ups (Inc42, 2022).

[12] According to a recent report, India accounted for over 23% of global demand for gold between 2009–18 (KPMG, 2020). Predominantly most of India's gold holdings are concentrated in the rural pockets of the country — over 66% of India's gold is concentrated in its rural pockets. The total gold loans outstanding in the organised sector in 2019 are estimated at 5.5% of the total household gold holdings in India, indicating low market penetration.

access relative to the pledged gold (Kanungo & Chakrabarti, 2021),(RBI, 2013).[13]

5.5 Trade credit

Trade credit has been observed to be a popular source of finance for working capital management specifically. The prevalence of trade credit is especially in those cases where there is strong competition among suppliers (Fabbri & Klapper, 2008). The authors show that suppliers with a relatively higher degree of competition tend to extend their products on trade credit in order to build relationships and build a sense of match between the receivables and credit supplies being traded. Most importantly, trade credit is concentrated heavily based on industry applications and networks among businesses. Such scenarios provide avenues for retailers to ask for an extension of trade credit which allows them to tide over the daily uncertainty of sales. It is also useful for the suppliers as it provides them a peek into the business health of their partner retailers, and adjusts their distribution networks and forge partnership strategies accordingly.

Trade credit extends from merchants to its buyers as well (Klapper, Laeven, & Rajan, 2012). Smaller firms tend to extend trade credit to their largest buyers as a testament to their quality and business compliance. In most cases, this has become customary to business expectations and a climate where smaller businesses are encouraged to provide their products on credit and discounts to build relationships.

6 Contours of MSME digitalisation and its impact on business performance and credit access

There has been an increasing focus on digital adoption by small businesses over the world (Hervé, Schmitt, & Baldegger, 2020). Digitalisation of small business operations is aimed at essentially solving four operational problems faced by them: payments and banking, inventory management, accounting and taxation (Mills, 2018). Digitalisation, characterised by access to a smartphone and internet connection, leads to improved business performance and greater access to capital (Maiti & Kayal, 2017). The adoption of these solutions has been seen insofar as they are simple to use through one click, plug-n-play mode. A human touch or a 'phygital' approach through feet on the ground customer support has also been seen to be instrumental in promoting adoption of these enterprise solutions, particularly among new users — enterprises want one person whom they can directly call in case of any query with the product. This is consistent with the technology acceptance model (TAM), which focuses on the perceptions of the usefulness and ease of use of a new technology, rather than cost-benefit analysis by the users (Kapuria & Nalawade, 2021).

In today's digital age, businesses can improve their revenues by focusing on social media marketing (Sharif, Rosli, & Ahmi, 2017). Social commerce is a burgeoning industry to increase the market share (Islam & Roest, 2020), (Suryani et al., 2020). Globally

[13]Currently, RBI has set the LTV at 75% (RBI, 2021).

in 2021, social commerce had a market size of USD 492 billion and is expected to grow at 26% CAGR by the year 2025 (Accenture, 2022).[14] In India as well, social commerce is gaining traction, with women entrepreneurs using various social media platforms to seek new customers and orders (Theis & Rusconi, 2019).[15]

Digitalisation has also opened up different inorganic revenue streams for small firms (OECD, 2020). India's tech platforms are onboarding small businesses as their fulfilment partners to reach the end customers. A couple of these include: (1) Human ATM outlets: People unable to find the nearest ATM can go to hyperlocal mom-n-pop shops onboarded by fintechs, transfer the amount of money to the latter using the app and get cash in return (2) Delivery outlets: Hyperlocal mom-and-pop shops act as logistics partners to e-commerce players for delivery of parcels placed by end customers, with the further increased possibility of earning when the customers come for the pickup and end up purchasing other items from the shop as well (Ramanathan, 2020), (Vijayaraghavan, 2019).

With the full stack merchant digitalisation, the pulse of Indian retail economy is already apace with initiatives by the government, large e-commerce companies, and other private players (Buteau, 2021), (Kapuria & Nalawade, 2021). Initiatives such as 'Google my business' launched by Google enables small businesses to expand on their digital presence and acquire new customers (Kumari et al., 2018). Microsoft also created their cloud solution model for small businesses across India and enabled them to improve their functionality and build concrete linkages with other small businesses in their network. Collectively these models have improved both the geographic footprint and access for India's small businesses to increase their top line revenue, customer acquisitions and growth (Kumari et al., 2018). Digital payments infrastructure is the pre-eminent entry point for the all-round digitalisation of microenterprises, feeding into their aforementioned contours. This is particularly pertinent as a study by Suri and Jack (2016) finds that the ability to send and receive money digitally can directly improve the overall economic well-being of low-income households. M-PESA, the celebrated digital payments solution in Kenya, has lifted close to 0.2 million Kenyan households out of poverty in the last decade.

Digital payments also open avenues for layering other relevant financial products. Similar outcomes have been observed in many other countries where mobile money has

[14] Social commerce has proved itself to be a powerful tool especially for small businesses. A recently published report highlights that about 60% of buyers prefer to buy from small businesses through social commerce or social media channels as opposed to the businesses' online website (Accenture, 2022).

[15] A recent publication by Bain & Company estimated India's social commerce industry at USD 1.5 billion to USD 2 billion GMV in 2020, would be worth USD 16 billion to USD 20 billion in 2025 and USD 60 billion to USD 70 billion by 2030 (Bain & Company, Inc and Sequoia India, 2020). India's social commerce sector is expected to double the current e-commerce market within ten years. The share of social commerce in India's e-commerce market is expected to register a compound annual growth rate (CAGR) of 65% between 2020–25. The report estimates that over 85% of retailers using social commerce are small, offline entities who have found that social channels can help tap into avenues for growth. A subset of resellers are often first-time entrepreneurs earning INR 5,000–10,000 per month and leveraging their existing social networks for sales. Furthermore, social commerce is expected to unlock the potential of over 40 million small businesses and entrepreneurs.

taken root (Bill & Melinda Gates Foundation, 2019). Digital payments can make transactions between entrepreneurs and suppliers, employees, customers, and governments faster and at a lower cost (Klapper, 2017). Push towards digital payments adoption in MSMEs in developing countries happens through social peer influence, pressure from trading partners/suppliers, and nudge from customers (Igudia, 2017), (Kwabena, Qiang, Wenyuan, Qalati, & Erusalkina, 2019). The use of digital payments enables MSMEs to establish stronger relationships with customers, suppliers, trade partners, and the government (Kwabena et al., 2019).

There is nonetheless a fair distance to travel to make a paradigm shift towards digital adoption by microenterprises. Those microenterprises which are able to overcome the motivational, infrastructure and form factor related constraints cite the loss of capital by way of taxes as restraining their full-fledged use. Ligon, Malick, Sheth, and Trachtman (2019) found that over 80% of transactions at small merchant outlets happen in cash, which shows that digital adoption and cash pervasiveness can occur simultaneously at an enterprise. This also confirms the points highlighted in the above sections about the continuum across the process of formalisation in India. The study finds that those adopting digital payments were more likely to have a valid tax identification number as compared to those not adopting digital payments. While it is argued by proponents of digital payments that it helps enterprises pay their taxes efficiently and hassle-free, it is precisely the fact that the accounts are verifiable in the digital platform that makes them worry about preferring digital payments solutions in toto. Indeed, the merchant adoption of digital payments has proceeded due to active usage and preference by digitally savvy consumers who have been incentivised through cashbacks and discounts by cash-guzzling third-party fintech apps (UPI/wallet).

In the world of credit scores, traditional data usually refers to the repayment history of the customer, which is the central data point used by credit bureaus around the world. However, this requires the customer to have received a loan in the past in order to be in the credit bureau in the first place which creates a chicken and egg situation and means that a lot of potentially good customers are left outside of the lending system. Thin file, informal microenterprises need more visibility of their non-traditional digital data points to secure credit. All round digitalisation of microenterprises helps create a valuable aggregated information set for a lender. A combination of receipts, orders, payments to suppliers, and other expenses helps a lender get granular details for the underwriting and risk assessment process (Mills, 2018). This provides lenders the ability to track and profile a borrower not through traditional models of historical repayment structure but through more granular payment patterns. This plays a pivotal role for these enterprises as detailed credit information and transaction history is absent (Klapper, 2017). Some of these lending models also provide for flexible repayments wherein MSMEs can repay less in periods with lower sales and make up for it in periods of higher sales. To this effect, the platform economy allows extensive data trails on the income side that can help in credit scoring of the hitherto informal economic activity participants (Van Alstyne, Parker, & Choudary, 2016). For instance, ride-hailing services may be able to provide information on the value of transactions—and hence the income—and the location of the service providers (drivers).

The focus has shifted towards building and assessing the entrepreneurial traits among the microenterprise proprietors who may be deemed as necessity entrepreneurs (Alibhai et al., 2020). Personality or character traits measured through a psychometric assessment, geo-location, social media interactions, call log details, app usage, user device usage, SMS data, etc. are being used to assess entrepreneurial capabilities (Frost, Gambacorta, Huang, Shin, & Zbinden, 2019). Psychometric tools have also proved useful in identifying high-performance entrepreneurs for financial services providers. Historically, psychometric tests have proved effective in identifying human traits that are synonymous with success. Schmidt and Hunter (1998) show that psychometric tests help assess the performance of candidates on general human intelligence, personality traits, and integrity. Arráiz, Bruhn, and Stucchi (2017) applied psychometric assessment on small enterprise owners to assess their credit risk and repayment ability. These tests proved effective in identifying entrepreneurs (especially ones with no credit history) and did not lead to defaults. The partner bank was able to extend its credit portfolio to SMEs across the country, and this tool showed conclusive results.

7 Impact of finance on women-run microenterprises

Globally, women-run microenterprises have been characterised as less productive than their male counterparts, as a result of a multitude of factors such as lack of social and physical capital, inherent social biases, and cultural perceptions (Fairlie & Robb, 2009). The business performance of women-led MSMEs in India has been found to considerably lag behind their male counterparts, reflected by almost a one-third lower output (Chaudhuri, Sasidharan, & Raj, 2018). Even after controlling for size, age, social background, and industry and state difference, women-run and/or managed firms' performance in terms of output, employment, labour productivity, and total factor productivity is significantly behind their male-owned and/or managed counterparts (Chaudhuri et al., 2018). Through their research, Hardy and Kagy (2018) also find a growing profit gap between men-run enterprises and those run by women (in the same industry) in Ghana. A plausible reason for the same cited by the authors is that women create their businesses out of a growing necessity — caring for their children and their households. The women in this study cited childcare and security as their primary reason to enter self-employment, as opposed to men who entered this space out of commercial opportunity. The authors conclude that factors influencing women's decision to enter self-employment would affect their motivation — this invariably affects the profit of the enterprise, explaining the growing gender-wise profit gap.

From a study in South Africa earlier, it is known that a lag in business performance for women-run microenterprises leads to a lower survival rate in terms of sustenance in the long run when compared to those run by men (Woodward, Rolfe, Ligthelm, & Guimaraes, 2011). Among other reasons for the same are the prevalent gender norms which rigidly define the boundaries for women to provide any additional income or earnings to the family. A study by Bernhardt, Field, Pande, and Rigol (2017) in India, Sri Lanka and Ghana empirically validate this by showing that the returns to capital are lower for households where both the male and female entrepreneurs (in the same

household) are enterprise owners as compared to households with the woman being the sole enterprise owner. Along the same lines, a study by Jayachandran (2021) shows that a husband's business invariably improves its performance and profitability rate when his wife is endowed with grants or loans — the capital or grant extended to women entrepreneurs is diverted towards their husband's business or for household expenditure. Blattman, Fiala, and Martinez (2014) show from a study on skilled self-employment in Uganda that while social constraints limit the efficient scale of women-run enterprises in the short-run but in the long run the returns to capital are equal to and if not greater than those compared to male-run enterprises.

Investing in high-growth, young women-run businesses has been found to increase customer loyalty for the financial services provider vis à vis men-run businesses (IFC, 2020). While women who were able to realise their objectives and earn profits reported being motivated to expand their venture, most tend to remain risk-averse when it comes to credit and investment (EdelGive Foundation, 2020). Systemic barriers arising from social, economic and cultural contexts have resulted in women-run enterprises facing a higher degree of challenges while securing access to finance (Tripathi & Singh, 2018). Alleviating financial constraints thus holds more promise for closing the gender gap in microenterprise returns.[16] Notably, in a 2020 study, only 0.6% of women entrepreneurs who were aware of relevant government schemes availed of any of those benefits; most were discouraged due to unavailability of documents and complex application procedures (EdelGive Foundation, 2020).

The requirement of collateral is also one of the biggest hurdles that prevents women from accessing optimal finance (P. Sinha, 2003). In many lending institutions, holding titles and land rights is imperative for borrowers as property is usually pledged as collateral to access credit from banks. In most cases, women do not have access to their household property rights as it is usually held in the hands of their husbands or fathers. This lack of property rights translates to a woman's inability to pledge collateral and lack of access required for optimal business credit (Kabukuru & Afande, 2016), (Ekpe, Mat, & Che Razak, 2011). The IFC reports from its survey of women entrepreneurs in India that 25% of them could not source external capital from formal sources to finance their business venture in the absence of collateral in their own name (IFC, 2018). To this effect, the IFC recommends the governments to promote policies such as joint property registration that would enable women entrepreneurs to use household assets as a stake in collateral for financing loans (IFC, 2014).

Access to finance results in job creation among enterprises run by women, albeit the levels are lower than for enterprises run by men (Fairlie & Robb, 2009). This gap has

[16] According to IFC, women-owned MSMEs, registered and unregistered, across all segments, have a total annual credit requirement of around INR 1.95 lakh crore (USD 30.5 billion) (IFC, 2018). Of this, 28% was for fixed assets and the remaining 72% was for working capital needs. Within the women-owned microenterprises segment, IFC also came up recently with a sub-segment, women-owned very small enterprises (WVSEs), whose credit needs belong to the 'missing middle' between unsecured, microfinance loans and secured loans offered by large banks and NBFCs. It estimates that around 18% of all women-owned microenterprises are WVSEs and pegs their credit needs at INR 83,600 crore (USD 11.4 billion) (IFC, 2022). Close to one-third of their credit need is for fixed assets and the other two-third is for working capital needs.

been attributed to varied factors such as the number of hours devoted to enterprise, goals associated with running the business, having less capital and lack of acquired business experience. But as shown by Fafchamps, McKenzie, Quinn, and Woodruff (2013) through their cash and in-kind grant intervention in Ghana, the established women entrepreneurs who had successfully operated enterprises prior to the study increased the employment potential in the firms multi-fold. After controlling for the sector, age and structure of the firm, Qasim and Cirera (2014) find that, globally, women-run firms generate more female employment as a share of the total workforce. Similarly, in India, it has also been found that while women-run microenterprises suffer from more constraints than men-run microenterprises, they generate relatively more employment for women: women represent more than three fourth of the workforce at women-run microenterprises (Basole & Chandy, 2019).[17] The rationale behind this tendency of women-run enterprises to employ women is driven by pre-existing gender divisions in society and access to only the immediate networks consisting of family and relatives.

The lack of support networks and mentors, and a lack of access to information and communication technology are critical challenges for women's entrepreneurship in India (Revenga & Dooley, 2020), (Chatterjee & Ramu, 2018). Several key players in the Indian women entrepreneurship ecosystem have echoed their concerns over well-intended government interventions that fall short due to their lack of robust ground-level implementations (Smeltzer & Fann, 1989). Eliana Carranza and Love (2018) Positive peer experiences for small businesses run by women impact their business acumen and enterprise growth. Field, Jayachandran, Pande, and Rigol (2016) studied the network effects of women-run enterprises by providing them business training, along with a friend of their choice. It was found that training alongside a friend increased the likelihood of a woman taking a business loan. They also reported higher revenue and volume of transactions from their business venture. The influence of a friend could result in the entrepreneur feeling more confident in a supportive and conducive environment that enables her to grow the business. Also, the support from a friend could mean financial aid or an acting mentor that provides constant encouragement and advice. Social norms dictate that women should not discuss financial and business-related queries with their families. So, a supportive network of other successful women would offer them mentorship and network support which is crucial to overall business growth and sustainability.

One of the principal barriers to registration for women-run businesses is the accompanying cost (Campos, Goldstein, & McKenzie, 2018). The study found that drastically reduced registration fees (close to zero) resulted in three-fourths of women-run businesses preferring to do so. However, besides the information and cost barrier, women are significantly more likely than men to need their spouses' permission to register their businesses. Babbitt, Brown, and Mazaheri (2015) finds that women-run enterprises are likely to be more informal as compared to men-run enterprises, owing to the social norms that affect their networking opportunities as well as makes them primary caregiver for the families, restricting their scope of business activities. This informality results in business opportunities being restricted for these women and running

[17]This is to be also seen in the context that this workforce is very concentrated in terms of their skill sets, as just about 10 industries account for 90% of the women-run firms in India

smaller businesses that invariably have a lower rate of production, turnover, and growth prospects.

In South Asia, common constraints faced by women business owners are low levels of education, limited access to credit, and gender-based discrimination, which leads to less training and lower levels of technical know-how resulting in a lower capacity to adapt to changing markets (Tripathi & Singh, 2018) (De Vita, Mari, & Poggesi, 2014). Women entrepreneurs tend to face time poverty, in terms of double burden in attending to care-giving and domestic chores (Warnecke, 2013). Mobility constraints also limit travelling long distances to approach banks for finances (Klapper, 2017). And, women entrepreneurs in India typically depend on middlemen for the conduct of business due to mobility constraints (EdelGive Foundation, 2020). In such an environment, digital payments are important for women entrepreneurs. Digital payments help them get rid of such constraints through seamless access to markets (Suri & Jack, 2016). Women entrepreneurs have more control over their income in the digital form as it helps them keep away money from other family members or friends who may stake a claim on the latter for their own discretionary needs (Klapper, 2017).

Physical infrastructure development plays an augmenting role in increasing the participation of women-run enterprises in the economy. Better quality infrastructure services such as transport, access to water, and sanitation at the district level are associated with a larger local share of female entry into entrepreneurship (Ghani, Kerr, & O'Connell, 2012). Further, while women-run smaller enterprises (those registered, formally with the Government) have increased in urban areas, the numbers have gone down in rural areas (Samantroy & Tomar, 2018).[18] This may further support a correlation between the quality of district infrastructure (or lack thereof) and the number of women entrepreneurs entering the market.

In the final analysis, it is important to note that women's agency is influenced by social norms prevailing in the family and society. To the extent and degree to which these forces enable or restrict them, women's entrepreneurship takes varied forms (Field et al., 2016). More proactive policy support, stringent implementation of laws and effective behaviour change campaigns are required to overcome the myriad barriers that women entrepreneurs face in different contexts (Karim, Kwong, Shrivastava, & Tamvada, 2022).

[18] Between the Fifth (2005) and Sixth (2013) Economic Census, the percentage of women-run enterprises has more than doubled. The majority of women-run enterprises are still in rural areas, but women-run enterprises increased in urban areas from 26% to 35% whereas it declined in rural areas from 74% to 65% (IWWAGE and IIST, 2022). The number of registered women-run enterprises is higher in urban areas (41%) as compared to rural areas (21%) as per the (NSSO, 73rd Round) and this can be attributed to a number of factors including mobility, education and access to technology (GIZ, 2019).

8 Conclusion

This literature review was undertaken to inform the research design of an ongoing evaluation that examines the impact of access to finance on a specific sub-set of microenterprises belonging to the 'missing middle'. This segment is overlooked by the traditional banks and large NBFCs on the one hand, and is beyond the scope of the MFIs on the other. The literature review provides global evidence of how microenterprises benefit from access to finance in multiple ways, primarily in terms of improving sustainability of their enterprises and spillovers to household welfare. In varying levels and contexts, access to finance also leads to second order effects such as entrepreneurial development, employment creation, formalisation and digitalisation. Along with the expert panel workshop organised by LEAD to gather views from the subject matter experts, this literature review has been used to identify the outcome variables for the impact evaluation study and develop the survey tool accordingly.[19] The baseline survey is in progress at the time this literature review goes to publication.

[19] A series of three workshops with key subject matter experts was organised in Sep '21 to better understand the characteristics of microenterprises in India. The themes explored in the workshop included ways to estimate business performance, identify robust measures of entrepreneurial orientation, track job creation and quality, and come up with proxy indicators to identify low-income households in urban areas, among other things (LEAD at Krea University, 2021).

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