Impact of Financial Literacy on Financial Decision Making of Micro, Small, and Medium-sized Enterprises (MSME) during Crisis

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ABSTRACT
The current economic crisis in Sri Lanka makes the MSME sector even more vulnerable. This study intends to identify the level of financial literacy among MSME entrepreneurs and understand the impact of the current economic crisis on the financial decision-making of entrepreneurs of the MSME sector in the Northern Province. Based on a questionnaire-based survey of 150 MSMEs, the study reveals that the financial literacy rate of these MSME entrepreneurs is below 35% in the Northern province, which hurts financial decision-making and financial performance during a crisis. It was also identified that financial literacy is a better predictor of the financial behavior of MSMEs. Factors such as liquidity of the business, debt level, turnover, and profit have been negatively affected during the crisis, resulting from lack of financial knowledge, poor financial attitude, and financial behavior of the MSMEs. This study contributes to the existing literature on behavioral finance, which incorporates the level of financial literacy to the Prospect Theory, relating the two different stages of decision specifically to the MSME sector.

Keywords: behavioral finance, financial Performance, financial literacy, micro, small and medium enterprises
INTRODUCTION

Financial literacy, or the ability to utilize information and skills to manage financial resources, is crucial for the financial success of MSMEs in emerging nations (Bongomin et al., 2020). According to the publication of the Department of Census and Statistics, Sri Lanka has a notable rate of print literacy. As of 2020, Sri Lanka is the most literate nation in South Asia with a print literacy rate of 92%. However, it is surprising that Sri Lanka’s financial literacy rate is only 57.9 %, according to the Financial Literacy Survey of Sri Lanka conducted by the Central Bank of Sri Lanka in 2021. Further, it indicated that the rate varies based on region, and it is at 12.10% among rural communities. This clearly highlights that there is further scope to advance financial literacy among Sri Lankans, and despite the well-developed financial system with financial infrastructure, many investors still struggle to use these advancements effectively.

Mithula (2015) claims that a lack of basic financial literacy, and discipline to achieve financial stability is one of the major problems for a successful and sustainable firm. In explaining the financial behaviors of investors and entrepreneurs, there are two key theories in the literature: standard finance and behavioral finance. Standard finance assumes that people make perfectly rational economic decisions and involves an impractical set of assumptions. Whereas behavioral finance focuses on identifying and understanding human psychological phenomena, and it is based on the observed financial behavior of investors, assuming they are normal or irrational (Pompian, 2012).

MSMEs have been recognized as an essential strategic sector for fostering economic and social development in Sri Lanka. It is clear that MSMEs are seen as a significant source for creating employment, generating income, eliminating poverty, and regional development on a global scale. Although there is no specific definition provided for MSMEs in Sri Lanka, several definitions have been accepted by various organizations. The importance of figuring out what influences MSMEs' falling into the debt trap needs to be highlighted, given the enormous potential for the success of MSMEs in Sri Lanka.

This study specifically focuses on the Northern Province of Sri Lanka, as MSMEs foster the strength of communities to regain from adversities.
including civil war and the COVID-19 pandemic. Concentrating on the Labor Force Survey results published by the Department of Census and Statistics of 2019, the Northern Province has reported a high level of unemployment and poor labor force participation compared to all other provinces. The microfinance loans have also significantly challenged the businesses and families in this community (Kadirgamar 2020). According to the poverty indicators published by the Department of Census and Statistics, the poverty headcount percentage in 2016 was 4.1 in Sri Lanka, where the percentage stands at 7.7 in the Northern Province, the highest among the provinces in Sri Lanka. Thus, it is vital to identify the level of financial literacy among MSME entrepreneurs and understand the impact of that on the financial behavior of entrepreneurs in the MSME sector, particularly in the Northern Province, to achieve an acceptable level of employment opportunities and for regional and economic development.

This research focuses on a sample of MSME entrepreneurs in the Northern Province. The respondents represented various industries located in the North. Based on the regional distribution of MSMEs, the sample was selected from five districts of the Northern Province. Respondents were selected based on convenience and the ease of access to information. The study was a cross-sectional descriptive survey conducted during a particular time.

This study focuses on how the level of financial literacy influences entrepreneurial finance decisions, and, thereby, the performance of the businesses. This finding will support the Central Bank of Sri Lanka (CBSL) and the government at large to draft a national-level policy for MSMEs to overcome the financial distress due increase of debt in their business.

The paper discusses the key literature related to financial literacy, decision-making and the financial performance of MSMEs, the methodology adopted to collect and analyze data, and finally, presents the key findings of the study.

LITERATURE REVIEW

Micro, Small, and Medium Enterprises (MSMEs)

Majumdar (2008), citing the work of Baumol (2004), indicates that small and medium-sized firms and entrepreneurs are essential to the
development of emerging nations like Sri Lanka. According to Fairoz et al. (2010), the main goal of assisting MSMEs is to ensure that these companies utilize resources effectively. By doing so, they help to promote pro-poor growth and the creation of jobs because MSMEs use more labor than capital. These MSMEs compete in narrow markets, with flexibility and close customer relationships (Mujumdar & Ghosh, 2008).

MSMEs play a vital role in the modern economy because the highly developed economies are led by a network of MSMEs (Mulhern, 1995, as cited by Gou and Huang, 2019). Several studies have recognized the importance of MSMEs because they contribute to social and economic development by fostering both urban and rural communities and providing income (Israel et al., 2014). To assist this industry, including tax breaks and the progress of innovation, numerous definitions are provided by various authorities and institutions. Any business with less than 99 employees meets the World Bank's definition of an MSME. An MSME is defined by the Industrial Development Board (IDB) as an organization whose investment in machinery and plant does not exceed Rs. 4 million (US$42000) (Gamage, 2003). Similar criteria are used by the Department of Census and Statistics to identify small and medium-sized enterprises (SMEs), with entities with up to 149 employees being classified as medium-sized enterprises.

An MSME is defined by the Task Force for SME Sector Development as an organization with less than $50 million in investment and less than 30 employees. The Task Force was established in December 2002. The task force's 2002 report revealed that Sri Lanka's SME sector is still underdeveloped and not yet very vibrant, despite the government's various reforms and assistance from donor organizations. It also stated that the MSME's ability to grow is limited by both internal and external causes. Additionally, it is clear that the uncertainty caused by the many definitions of MSMEs that have been adopted by various institutions has prevented MSMEs from being properly identified for a variety of supportive measures (Gamage, 2003).

Numerous studies have documented how various elements of entrepreneurial environments affect the entrepreneurial orientation of MSMEs (Fogel, 1994, as cited by Mai and Gan, 2007). Studies demonstrate a strong relationship between experience, education, and religion and an individual's level of entrepreneurship as well as their cultural beliefs (Altinay, 2008;
Senbet & Wang, 2012). Nooteboom (2002), quoted by Majumdar (2008), made the case that the success or failure of a business is determined not just by the personal traits of the entrepreneur but also by how those traits interact with environmental variables in the context in which the business functions. According to the research of Gartner (1985), Mai & Gan (2007) mentioned, socioeconomic characteristics, credit availability, physical amenities, and technological. Socioeconomic variables, financing availability, physical facilities, technical support, and information access are some of the primary infrastructure facilities needed by small businesses, according to a study by Gartner (1985) referenced by Mai and Gan (2007).

**Financial Literacy**

According to Bongomin et al. (2020), financial literacy is the capacity to acquire, understand, and assess the necessary information required to make financial decisions and selections, as well as understand the possible financial consequences. This skill is necessary for MSMEs in emerging economies to survive and have access to financial services. The OECD INFE describes financial literacy as the awareness, knowledge, aptitude, attitude, and behaviour required to make informed financial decisions and finally achieve individual financial health. According to Gallery (2011), there are number of definitions of financial literacy, but it is generally used to relate to the ability to conduct thoughtful analyses and make proactive decisions involving financial resources. To maximize opportunities for growth and poverty reduction, it is important to understand how knowledgeable a population is about financial matters, according to the literature that is currently available (Heenkenda, 2014). The ANZ Survey of Adult Financial Literacy in Australia classified financial literacy into four broad categories using the updated UK Adult Financial Capability Framework (2003, 2005, 2008). The following four areas are: 1. financial comprehension; 2. financial competency; 3. financial attitude; and 4. financial responsibility.

Bongomin et al. (2020) found that business owners of all ages frequently make decisions about how to allocate, use, and achieve resources. According to FSA (2006), cited in the work of Gallery (2011), financial competence is said to comprise three interrelated elements: knowledge, skills, and attitude. Capability is also said to include concepts that go beyond only facts.
Entrepreneurs must be financially savvy for these decisions to be successful because these events are always financially significant. Some studies maintain a more narrowly defined definition of financial literacy, focusing only on the fundamental tools of fund management, such as budgeting, saving, investing, and insurance. Yet, other studies define financial literacy as having a general awareness of economics and how the environment and conditions of the economy affect financial decisions (Worthington, 2006, as cited by Gallery, 2011). Heenkenda (2014) asserts that despite the financial sector's rapid expansion and the creation of sophisticated financial tools and models, financial literacy continues to be a significant barrier to financial inclusion. Financial illiteracy is a significant barrier that keeps impoverished people from receiving financial services, and for those who can, it prohibits them from using those services effectively and appropriately. Academic studies show that MSMEs with financially educated owners are more likely to succeed than those with illiterate owners.

_Hypothesis 1: Financial literacy positively influences the financial performance of MSMEs during a crisis._

**Financial Performance of MSMEs**

Various studies have covered the elements that affect how MSMEs get financed. Constraints on both supply and demand have an impact on MSMEs' access to financing (Cressy & Olofsson, 1997; Agbloyor et al., 2014). MSMEs are the main force behind growth, and as such, the expansion and survival of these companies rely heavily on their capacity to invest in successful projects, which in turn depends on their ability to get capital. According to the European Commission, credit costs and the likelihood that a loan application will be approved have significantly varied among nations, with borrowers in stressed economies experiencing a more severe credit contraction.

Yazdipou (2011) asserts that even for companies with precious but uncertain growth potential, start-up enterprises usually rely primarily on personal resources and family, with external stock injections uncommon (Robb et al., 2009). Although they are not the primary source of money for starting a new firm, banks are the primary basis of finance for small enterprises once they have been established, providing operating capital and funding for investments in machinery or equipment (Berger & Udell, 1998).
MSME lending is more expensive from a bank management perspective than working with large firms in terms of capital inclusion and transaction costs because of the lack of transparency (Brogi & Langone, 2016). Because of this, MSMEs experience downturns more severely than larger companies, proving the cyclical nature of SME loans (European Banking Authority, 2015). An important element of the research on MSMEs’ access to credit is theoretically based on the idea of information opacity and its function in creating information symmetry between lenders and MSME business owners.

The Sri Lankans have been victims of numerous investment scams in recent years, including those involving Sakvithi, Pramuka Bank, Golden Key, and others. The failure of loan companies throughout Sri Lanka taught us several important things, one of which was the local investor community's lack of financial awareness. Heenkenda (2014) claims that access to financial services in Sri Lanka has recently increased due to the proliferation of service providers; nonetheless, financial literacy is essential for identifying and assessing sound investment options. According to CFA, Sri Lanka (2019), there are loan sharks and reckless lending programs that charge effective interest rates as high as 220% annually, and push already vulnerable people into a debt trap and even lead to suicide as they are financially excluded due to ignorance.

*Hypothesis 2: Financial decision making mediates the relationship between financial literacy and financial performance of MSMEs during crisis.*

**METHODOLOGY**

The focus of this research is a quantitative study with a sample of entrepreneurs in the MSME sector in the Northern Province of Sri Lanka. The respondents will represent the MSMEs of the various industries located in the Northern Province of Sri Lanka. According to the Department of Census and Statistics, regional distribution of MSMEs the sample was selected from the five districts of the Northern Province (Jaffna, Killinochchi, Mannar, Vavuniya, Mullaitivu). Based on the Labour Force Survey Statistics of 2019, the number of own-account workers in the Northern Province is 166,575.

The main instrument for data collection is the Questionnaire. The
questionnaire would be a self-administered one, as some questions and terminology need further explanation. Respondents in the study will be voluntary, and they will be assured of anonymity. The questionnaire will be pilot-tested to establish the clarity and appropriateness of the questions before conducting the survey.

According to Hair et al. (2006), the margin of error used by survey researchers usually falls between 4% and 8% at the 95% confidence level. Thus, for this study, applying a 95% confidence level and 4% the confidence interval or margin of error, a sample of 150 MSME entrepreneurs will be selected for the survey using convenience sampling.

As the initial step, the accuracy of the collected data was verified using frequency analysis, where the missing values were detected. Any instances where a variable in the analysis has missing values can be dealt with by either replacing the missing value or by merely removing them. According to Hair et al. (2006), any imputation approach can be used if the sample's missing values make up less than 10% of the whole sample. The standard method for addressing missing data is to replace the missing data points with the mean of that variable. Since just a small percentage of the study's cases, less than 3% were missing, and the missing cases have been substituted with the indicator's mean value. Using a boxplot graph, outliers were consequently found in this experiment. After identifying the outliers through the graph, the z-values of the variables were calculated. With a cutoff value of three, only six out of 156 responses were identified as outliers where they were deleted. Thus, after treating for missing values and removing outliers, 150 responses were counted for the final analysis. The conceptual framework of this study, only contains two variables, which makes this sample size sound reasonable for the investigation, in contrast to Hair et al. (2006)'s explanation, which suggests that the smallest sample size needs to be 100 for models having five or fewer constructs or variables. The data were analyzed using SPSS and the structural equation modeling (SEM) approach.

RESULTS

The data analyzed reflects the following demographic characteristics. The total respondents were 150 MSME entrepreneurs, with 54 representing Jaffna, amounting to 36.0% of the total sample; 48 entrepreneurs were from Vavuniya; 23 entrepreneurs were from Manner, 14 entrepreneurs from...
Mullaitivu, and 11 entrepreneurs from Kilinochchi.

Referring to the sector classification, based on the United Nations International Standard Industrial Classification of All Economic Activities (ISIC), the MSMEs were categorized. Accordingly, 77 MSMEs are involved in wholesale and retail businesses accounting for 51.3% under the category of trade, 37 businesses are involved in the industry, and construction sector, and 24 MSMEs are providing various services, including transport accommodation and education.

Financial Literacy Score

Referring to the OECD/INFE financial literacy survey of adults, the total scores for financial knowledge, financial attitudes, and financial behavior make up the financial literacy score.

Score for financial knowledge

The score is calculated based on the number of correct answers to the financial knowledge questions, including both general financial knowledge questions (dividends and the definition of equity) as well as questions specifically on business finance (inflation, risk and return, interest on loans). The total number of points awarded ranged from 0 to 5.

Score for financial behavior

The total number of financially smart behaviors is expected to be used to generate the behavior score. The sum ranged from 0 and 9. Since it can be challenging to distinguish between financially savvy and unsavvy behavior from other non-optional traits, they are not used to determine the score. Instead, they will be analyzed to learn more about the business owner's financial behavior.

Score for financial attitudes

The quantity of financially wise attitudes was used to determine the attitudes score. The sum will range from 0 to 3.

Summary of competencies and overall score
The overall financial literacy (FL) score was calculated by averaging the knowledge (FK), attitude (FA), and behavior (FB) values. The three factors are expected to add up to a total of 0 to 17 points, and the final financial literacy score would be given as a percentage of the greatest score possible (for instance, a final score of 17 points would be rescaled to 100%).

Figure 1: Financial Literacy Score (Source: Survey Data)

With reference to Figure 1, based on the survey data, it reveals that the financial literacy score of most of the Northern Province business owners is in the range of 25 – 32%, which is significantly below Sri Lanka’s financial literacy rate of 57.9% according to Financial Literacy Survey Sri Lanka conducted by the Central bank of Sri Lanka in 2021. This clearly indicates that there is further scope to improve the financial literacy of the Northern Province business owners, and despite the development of the financial system with financial infrastructure after the postwar context, many investors still struggle to use these advancements effectively and are being adversely affected by the debt trap. It is surprising to see that even though more than 95.3% of the businessmen have a qualification above G.C.E Ordinary level completion, only 27.3% of the businessmen have done finance or economics as a subject in their academic programs at school or a higher level.

At the end of 2020, prior to the economic crisis, businesses were managing their finances with adequate liquidity, where 56.3% of business owners have mentioned the liquidity level of their businesses was adequate or high in 2020. 45.3% of businesses had a low level of short-term debt, and 42.7% of businesses maintained low gearing with lower long-term debt financing. It revealed that 98% of the businesses agreed that the owners’ investment was significant or adequate before the crisis. Businesses have also
reported a high level of payables and receivables during the year 2022 due to the increase in turnover after relaxing the COVID-19 pandemic restrictions.

During the year 2022, with the economic crisis, the overall business operations are being significantly affected. The business owners have rated the overall impact as a large decrease in operations, which is worse than the COVID-19 pandemic crisis. 75% of the businesses among the 150 businesses that are investigated were affected adversely. Ten business owners have indicated an improvement in their business performance despite the economic crisis. 94% of the business owners have reposted that the turnover is unchanged or slightly reduced with the crisis. However, the profits of 94.7% of the businesses have decreased. Most of the businesses have tried to maintain employee numbers in the past. However, 55.3% of the businesses have reduced their employees as a mean to reduce the cost. The debt levels have significantly increased for most of the firms, while 48.7% of the businesses have reduced their debt through repayments and restructuring of loans. The debt level not only indicates the long-term loans and debt but also any unsettled bills such as supplier payments, electricity, water, etc. 58.7% of businesses have reported a decrease in liquidity due to the increase of their operational expenses.

Analyzing the debt repayments and going for new debt during the crisis, 26% of the businesses have gone into new loans or credits, and 11.3% of business owners have applied the loan moratorium facilities to delay and restructure their debt commitment as the business cash flows are affected due to current economic crisis. However, 46.7% of the business owners mentioned that they are repaying the existing loan as the moratoriums can create additional costs and burdens in the years to come. Business owners in the Northern Province also stated that they lacked knowledge and understanding about loan restructuring and debt moratoriums that were introduced by the Central Bank of Sri Lanka during COVID -19 pandemic and the economic crisis. The banks have instructed them to go for moratoriums where the businesses are not required to make loan repayments in the short run. However, the businessmen emphasized that currently, they are paying high amounts due to the accumulation of interest during the moratorium period.

Further, the study illustrates why most of the businessmen in the Northern Province did not go into systematic borrowing, such as bank loans,
during a crisis. Based on the results, 28% of the respondents have identified that the application process is complicated and that they are not capable of meeting the requirements. 29% of the businessmen said that they think the loan will not get approved. 33% of the businessmen have not considered borrowing from a systematic or regulated institution.

Table 1: Correlation between Financial Literacy and Financial Performance

<table>
<thead>
<tr>
<th>Financial Literacy</th>
<th>Financial Performance</th>
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<tbody>
<tr>
<td>Financial Literacy</td>
<td>.803**</td>
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</table>

**Correlation is significant at the 0.01 level (2-tailed).
Source: Survey Data, 2022

Based on the survey results, the correlation between financial literacy and the financial performance of MSMEs during the crisis is statistically significant at 0.01 levels, with a Pearson correlation coefficient of 0.803. This shows a strong, positive relationship between the level of financial literacy and the financial performance of the business in the crisis context. Because MSMEs (i) are too small to shrink, (ii) are less diversified in their economic operations, (iii) have smaller capitalization, and (iv) lack a variety of financing choices, MSMEs are more exposed to economic downturns and supply-side shocks than large companies.

Table 2: Regression Results

<table>
<thead>
<tr>
<th>Regression Weights</th>
<th>β</th>
<th>t</th>
<th>p-value</th>
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<tbody>
<tr>
<td>FL→FP</td>
<td>3.720</td>
<td>37.112</td>
<td>.000</td>
</tr>
<tr>
<td>FL→FDM</td>
<td>0.311</td>
<td>5.701</td>
<td>.000</td>
</tr>
<tr>
<td>FL→FDM→FP</td>
<td>5.241</td>
<td></td>
<td>.000</td>
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</tbody>
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Direct Effect
R = 0.803
R² = 0.644
F (150) = 67.840
Indirect Effect
Test statistic = 5.24045
Std. error = 0.0844

*FL – Financial Literacy, FP – Financial performance, FDM – Financial decision making

Source: Survey Data, 2022

As the R² of the model is greater than 0.5 (R² = 0.644), the model is good enough to establish the relationship where the total variability of the dependent variable could be explained by the independent variable. If the value is greater than one for F-ratio means, it is an efficient model, whereas in the above table, the value is 67.8, which is good. Therefore, the analysis suggests that the financial literacy of MSME entrepreneurs has a strong, positive relationship with financial performance during the crisis.
Based on the study, it reveals that the poor financial literacy rate of the MSME entrepreneurs in the Northern Province has an adverse impact on the financial decision-making of these enterprises and that also has a negative impact on the financial performance of the businesses. Thus, it is identified that financial literacy is a better predictor of adverse financial behavior of MSMEs.

**Table 3: Summary of Regression Coefficients for the Median Analysis**

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<tr>
<th>Source: Survey Data (2023)</th>
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The indirect effect is statistically significant through bootstrapping. The Sobel test was performed to verify the effect. Sobel Test (1982) is a method used to estimate the statistical significance of indirect effect in the median analysis. Based on the test results (5.24045), as the P value is less than 0.05, we can conclude that the indirect effect between financial literacy and financial performance via decision-making is statistically significant. The point estimate is 0.4426 of the indirect effect between financial literacy and financial performance at the p-value of 0.000006 as per the Sobel test.

**CONCLUSION**

This study focused on two main objectives. Initially, to measure the financial literacy score of the MSME entrepreneurs and secondly, to evaluate the impact of that on the performance during the present economic crisis. Based on the findings, the financial literacy rate of these MSME entrepreneurs, as per the OECD/INFE financial literacy survey, is below 35%, which has an adverse impact on financial decision-making. This study examined the impact of financial knowledge, financial attitude, and financial behavior on financial decision-making using the Prospect theory. The first stage of the theory is known as editing or framing, where the lack of financial knowledge and awareness adversely affects the identification of financial choices of MSMEs. The second stage is known as the evaluation phase, where
financial literacy, including financial attitude and behavior, highly influences the final choice regarding the issues, as options are assessed using the value function. Thus, developing financial literacy is vital in making sound financial decisions, particularly during economic crises. Based on the study, it reveals that the financial literacy rate of these MSME entrepreneurs is below 35% in the Northern Province, which has an adverse impact on financial decision-making. This has led to an increase in debt level and affected the business performance adversely. Thus, it is identified that financial literacy is a better predictor of adverse financial behavior of MSMEs. This also agrees with some other studies conducted in Sri Lanka in the recent past. According to Nishantha (2020), the most recent challenge for MSMEs is the disruptions in the cash flow cycle and liquidity issues created by COVID-19. Micro finance loans have also significantly challenged the businesses and families in this community (Kadirgamar, 2020). Factors such as liquidity of the business, debt level, turnover and profit have been negatively affected during the crisis, resulting from lack of financial knowledge, poor financial attitude, and poor financial behavior of the MSMEs.

REFERENCES


