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Impact of Financial Literacy on the Debt Trap of Micro, Small, and Medium Enterprises in the Northern Province of Sri Lanka

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Abstract

The financial vulnerability of Micro, Small and Medium scale Enterprises (MSMEs) in Sri Lanka threatens both organizational survival and community livelihoods, particularly within the post-conflict socio-economic landscape of the Northern Province. Grounded in Resource-Based Theory (RBT) and the Knowledge Based View (KBV), this study investigates the influence of financial literacy on debt traps, which are operationalized as over-indebtedness of firms, where new credit is utilized primarily to service existing debt. While existing studies examine financial literacy in isolation, this study addresses a critical gap by examining the mediating role of financial decision making. Data was collected from MSMEs operating in manufacturing and industry, trading, and service sectors in the five districts of Northern Province, using a structured survey, with a sample 400 which was determined through statistical power analysis to ensure adequate sensitivity for complex modeling. A multidimensional Financial Literacy Index (FLI) was computed, revealing competency levels between 25% and 32% based on aggregated scores of financial knowledge, behavior, and attitude was below the average rate in Sri Lanka (57.9% in 2021). Analysis using Partial Least Squares Structural Equation Modeling (PLS-SEM) reveals that financial literacy serves as a vital internal resource that exerts a significant negative direct effect on MSME debt trap. Furthermore, financial decision-making acts as a significant partial mediator; the findings demonstrate that the total effect of financial literacy on debt traps is achieved through both cognitive knowledge and the optimization of behavioral choices. The findings of the study provide constructive awareness for policymakers and financial institutions in Sri Lanka to design targeted financial literacy programs that cater to the specific needs of MSME owners.

Keywords: Financial Literacy Index, Debt Trap, Financial Decision Making, MSMEs, PLS-SEM, Resource-Based Theory

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Introduction

MSMEs are vital to the Sri Lankan economy, accounting for 90% of all businesses, 45% of total employment, and 52% of the national GDP (Sri Lanka Export Development Board, 2021). Despite their significance, these entities frequently struggle with high debt (Mithula, 2015). In developing nations, MSMEs are invariably linked to economic and social issues such as unemployment, poverty, and economic inequality However, a significant obstacle to the sustainability of MSMEs is the lack of appropriate financial literacy. (Lusardi & Mitchell, 2012). Particularly in emerging economies, financial literacy has become a crucial factor in determining how well MSMEs perform. Several studies show that financial literacy improves access to financing and debt management, and it is positively correlated with MSME performance (Buchdadi et al., 2020; Rahadjeng et al., 2023). Meanwhile, financial decision making to accomplish financial stability is essential for all business entities (Mithula, 2015).

Recent reports from the Department of Census and Statistics, indicate that Sri Lanka has reported a noteworthy adult literacy rate. With a 92% adult literacy rate as of 2024, Sri Lanka leads among South Asian nations in terms of adult literacy. Considering this, it is surprising to discover that, corresponding to the latest financial literacy survey in Sri Lanka, which was carried out by the Central Bank of Sri Lanka in 2021, the country's financial literacy rate is lower at 57.9%. It is further stated that this rate varies by geography, where rural areas record a rate of 12.10%, which is significantly below the global average in terms of financial literacy. This demonstrates clearly that there is a requirement to improve financial literacy among Sri Lankans and that many MSMEs still find it difficult to take advantage of these developments even in the face of a sophisticated financial system and infrastructure.

In many developing countries, including Sri Lanka, lease purchase, pawing of jewelry, loans from formal and informal sectors and microfinance lending are negatively affecting small businesses, particularly in rural communities. There are loans provided by both regulated and unregulated financial intermediaries in return for daily or weekly interest, where the effective annual-interest-rate can range from 40% up to 220%, especially with microfinance borrowings of MSMEs (Kadirgamar, 2020). A debt trap is defined as a state of over-indebtedness where a firm’s debt obligations exceed its repayment capacity, necessitating further borrowing to service existing liabilities (Aviantara, 2021). Within MSME finance literature, this phenomenon is often attributed to the vulnerability gap, where smaller firms—lacking the capitalization of larger enterprises—are disproportionately affected by supply-side shocks (Asian Development Bank, 2020). As per CFA Institute Sri Lanka (2019), there exist loan fraudulent and reckless lending schemes that impose effective interest rates as high as 220% yearly, trapping already vulnerable firms in debt and sometimes even resulting in the suicide of business owners because of debt brought on by ignorance. It is also reported that, despite the recent moratoriums provided by banks under the instructions of the Central Bank of Sri Lanka, the majority of MSMEs are averse to taking on high interest debt and face the danger of having to roll over working capital without enough income (Asian Development Bank, 2020). Thus, the Debt trap situation of MSMEs has to be studied in detail along with their past financial decisions to predict future financial performance.

This research is especially concerned with the Northern Province because of the prolonged ethnic conflict up until 2009, and there are limited number of surveys and research specifically focused on the Northern Province (Kadirgamar, 2020). MSMEs are predominantly engaged in agriculture, fisheries, small-scale manufacturing, and handicrafts, contributing significantly to livelihoods in the province (Central Bank of Sri Lanka, 2022). However, despite their importance, MSMEs in the Northern Province face numerous challenges that hinder their growth and sustainability, particularly issues related to financial accessibility, infrastructure deficits, and excessive debt burdens (Sivarajah & Markkandayan, 2021). There is a noticeable discrepancy between the national poverty headcount index and the Northern Province headcount index. The most recent data indicates that in 2024, the Northern Province headcount index is 23.8%, whereas the national poverty headcount index is 14.3%. Mullaitivu District of the Northern Province has the highest percentage of poverty (44.5%) in the country. A large portion of the Northern province population of our country lives below the poverty line and is vulnerable to several threats, according to the UNDP (2023), Multidimensional Vulnerability Index (MVI) of Sri Lanka. In developing nations, MSMEs are invariably linked to economic and social issues such as unemployment, poverty, and economic inequality (Fatoki, 2014). Thus, focusing on developing MSMEs in this province would support poverty alleviation and regional development.

According to Mithula (2015), business owners from Northern Province have not only lost millions in interest payments to financial intermediaries like banks, finance companies and informal lenders, but also have lost their properties, businesses and even lives. Microfinance loans have adversely affected business in this province (Kadirgamar, 2020). While the importance of regional MSMEs is documented, there is a noticeable gap in empirical research regarding the mediating role of financial decision making between literacy and the debt trap in this post-conflict region. Drawing on Resource-Based Theory and Behavioral Finance, this study addresses the lack of integrated theoretical explanations for why literacy does not always translate into debt avoidance among Northern Province entrepreneurs. To address this, the study aims to: (1) measure the level of financial literacy among these entrepreneurs; (2) assess the extent of the debt trap; and (3) analyze the relationship between financial literacy, financial decision making, and the debt trap

Literature Review

Debt Trap of the Firm

Businesses must obtain funding for running activities from internal or outside sources (Flynn, 2017). Undistributed profits and earnings are used in internal financing (Bester & Scheepens, 1996), whereas borrowing and stock issues are used in external financing. The findings of research on how debt level affects investment and financing have been inconsistent. Even though John and Muthusamy (2011) and Bae (2009) have stated a positive relationship, Aivazian and Santor (2008), Phan (2018), Flynn (2017), and Kannadhasan (2014) claimed that this relationship is significantly negative.

Debts are expected to improve future finance and investment, according to Myers (1977). On the other hand, Aivazian et al. (2005) discovered that underinvestment issues are a result of a debt trap, while Flynn (2017), He and Xiong (2012), and Kalemli-Ozcan et al. (2018) argue that a debt trap will cause problems for future funding. Taiwo et al. (2016) state that unstructured loans and credits from friends and lenders rank among the top sources of funding for small businesses. Additional sources that contribute to a small business's capital structure are banks, informal financial markets, and partners.

A Debt trap is explained as the distressing condition where businesses are unable to pay maturing debts or expenses, leading to liquidity problems, insufficient equity, and unavailability of current assets (Hui & Jing-Jing, 2008 as cited by Younas et al., 2021). According to Aviantara (2021), a debt trap is set off when a business fails to meet scheduled payments or when cash-flow forecasts reveal that it will be incapable of meeting maturing obligations. Financial distress faced by a business might trigger bankruptcy or forced liquidation. According to Platt, H., and Platt, M. (2006), even though debt trap and bankruptcy are used interchangeably, it is vital to identify the difference between both, in most instances, bankruptcy occurs after a period of a debt trap.

Financial Literacy

The term financial literacy was first introduced in 1787, in the USA, when the country recognized the need for financial literacy to overcome the widespread distress in America that had occurred due to unawareness of credit, cashflow and the nature of currency (Financial Corps, 2014). This term has become popular and extensively known in research since the 1990s (Goyal & Kumar, 2021).

Corresponding to Bongomin et al. (2018), financial literacy is defined as the competency to obtain, comprehend, and evaluate appropriate information needed to make financial decisions and choices along with the knowledge of likely financial outcomes. This literacy is essential for small businesses in developing economies to be sustainable and to access financial services. The OECD (2024) defines financial literacy as the composition of awareness, knowledge, aptitude, attitude, and behaviour required to make thorough financial decisions which, ultimately, help to attain personal financial health. According to the revised UK Adult Financial Capability Framework of Australia (2008), financial literacy is classified into four main segments: financial understanding, financial proficiency, financial responsibility, and numeracy and Standard literacy.

With reference to Hung et al., (2009) financial literacy is “the financial knowledge, attitude, and awareness that improve organizational performance”. This is the capability to appraise new and complex financial options to make knowledgeable judgements in choice of instruments and degree of usage for long-run interests (Mandell & Klein, 2007).

Hypotheses Development

De Mel et al. (2012) emphasize that MSMEs' growth is significantly influenced by financial knowledge and behaviour, which have a crucial role in deciding the debt level of the entity. Studies show that entrepreneurs with greater degrees of financial literacy perform superior in their business’s debt (Charfeddine et al., 2024). As stated by Cole et al., financial literacy plays a crucial part in determining an investor’s ability to obtain debt.

According to McKenzie (2009), it is important to remember that even someone who is financially well-informed may make poor financial decisions that put them in danger of falling into a severe debt trap. Aron, Muellbauer, and Murphy (2006) emphasize the necessity of regularly conducting research to monitor business financial literacy levels and debt levels to reduce the financial risks related to loan non-performance and payback default. Lusardi and Tufano (2015), performed a study on the connection between over indebtedness and financial literacy. Only one-third of the participants were able to apply financial ideas to comprehend everyday financial decisions, which indicated lower levels of financial literacy. People who lack financial literacy to make informed decisions are more vulnerable to the wide range of financial services and products available on the market and are less able to differentiate between safe and risky investments (Lyons, 2004). As a result, they are more likely to experience financial difficulties like default and debt traps. Disney and Gathergood (2013), support this viewpoint by highlighting that people underestimate the cost of credit or financing if they lack financial literacy and become more exposed to debt accumulation; that is, entities with lower financial literacy typically take on higher levels of debt resulting in debt traps.

H1: Financial literacy influences the Debt trap of MSMEs

The financial complexities make financial literacy more crucial for business owners, particularly those taking charge of their long-term financial decisions (Spiranec et al., 2012). There are a number of studies that have shown the link between financial literacy and financial decision making (Adomako et al., 2016; Esiebugie et al., 2018; Guiso & Viviano, 2015). Less financially literate entities are more vulnerable to financial mistakes, unconventional practices and the inability to handle emergencies (Hung et al., 2009). Better financial literacy provides responsible financial behaviour and attitude (Borden et al., 2008; Robb & Woodyard, 2011), positive credit behaviour (Hastings et al., 2013), stock market participation (Van Rooij et al., 2011), better retirement planning (Lusardi and Mitchell, 2007, 2011) and increased wealth accumulation achieved through financial decision making (Van Rooij et al., 2012).

Several investigators have identified and agreed on the link between financial literacy and financial decisions (Esiebugie et al., 2018). According to Nyamboga et al. (2014), from the previous studies conducted, there is mixed evidence on the effects of financial literacy on the financial decisions of MSMEs. According to Lusardi and Mitchell (2014), financial literacy is essential to MSMEs' growth as it improves their decision making. High levels of financial literacy trigger higher business incomes and savings through better decisions (Disney & Gathergood, 2013). Some authors (Calcagno & Monticone, 2015) have considered that financial literacy is necessary to make the right financial decisions. It is generally connected with an MSME owner or manager's financial knowledge of appropriate financing decisions that would invariably affect the firm's performance as it moves through different stages and the most suitable financing products and services (Utomo et al., 2020).

H2: Financial literacy influences the MSMEs decision making

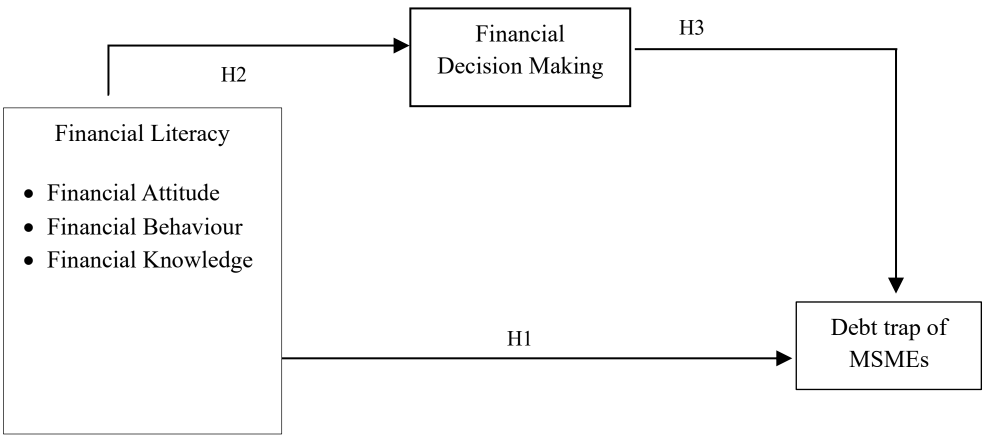
Previous studies have demonstrated a strong correlation between financial literacy, the proficiency to make prudent financial decisions, domestic prosperity, and the continued existence of businesses (Njoroge, 2014; Turyahebwa et al., 2013; Lusardi & Mitchell, 2015). Because financial literacy enables and teaches investors to evaluate financial goods and take informative conclusions, they are necessary to the continued existence and management of MSMEs. Conceptually, this mediation is grounded in Behavioural Finance theory, which recognizes that psychological processes influence the financial behavior of investors. While financial literacy provides the knowledge and tools to set up budgets and make wise investment choices, it is the actual process of financial decision making that serves as the mechanism for achieving financial stability (Ezejiofor et al., 2014)

Based on Siekei et al. (2013), financial literacy equips business owners with the tools they need to manage risk by helping them save money, diversify their holdings, buy insurance, avoid going into too much debt, and be less susceptible to shady business scams. A financially intelligent person is a better planner and wise resource allocator than a financially ignorant counterpart when faced with limited resources and various conflicting wants. In the Northern Province, where entrepreneurs have lost properties and businesses to high-interest informal lenders (Kadirgamar, 2020), the quality of financial decision making determines whether an owner can navigate microfinance challenges or fall into a debt trap. Therefore, financial decision making is the vital mediator that converts financial literacy into the practical avoidance of debt traps.

H3: Financial decision making mediates the relationship between financial literacy and debt trap of MSMEs.

Analyzing the previous literature, the following conceptual framework is developed.

Figure 01: Conceptual framework



Methods

The research paradigm of this study is positivism, this philosophy is uniquely suited to the research objectives, as it allows for the empirical testing of hypotheses (H1–H3) and the identification of causal relationships between measurable constructs. A quantitative survey-based approach was selected over other designs (such as experimental or longitudinal) due to its efficiency in capturing a broad snapshot of the MSME landscape in a post-conflict region and its alignment with the deductive nature of the study. The study focuses on MSMEs across various industries in the Northern Province. The Northern Province was selected due to its unique vulnerability gap. Despite the cessation of conflict in 2009, the region's poverty headcount remains significantly higher than the national average (UNDP, 2023). This provides a critical empirical site to study debt traps, as regional MSMEs face a higher density of informal, high-interest lenders compared to more financially integrated provinces (Kadirgamar, 2020).

Numerous definitions of MSMEs are applied by different international organizations, nations, and statistical agencies based on numerous factors, including capital investment, number of employees, turnover, asset value, and balance sheet. According to Esubalew and Raghurama (2017), there are drawbacks to adopting the number of employees as a criterion for defining MSMEs because labour force is declining as technology improves. Thus, using turnover as a parameter is effective because the development of the business is determined by revenue generation. To define MSMEs, the study will use turnover as a parameter as illustrated in Table 01 below. .

Table 01: Identifying Micro, Small and Medium Enterprises (MSMEs)

Size/ Sector	Criteria	Medium	Small	Micro
Manufacturing	Annual Turnover	Rs. Mn. 251 - 750	Rs. Mn. 16 - 250	Rs. Mn. 15 or less
	Number of Employees	51 - 300	11 - 50	10 or less than 10
Service Sector	Annual Turnover	Rs. Mn 251 - 750	Rs. Mn. 16 - 250	Rs. Mn. 15 or less
	Number of Employees	51 - 300	11 - 50	10 or less than 10

Note: *National Policy Framework for Small Medium Enterprise (SME) Development, 2017*

The target population was determined by identifying the number of MSMEs registered with DS divisions of the Northern Province as of 2023. For this study, 379 or more samples are required at confidence level of 95% that the real value is within ±5% of the measured/surveyed value. This study employed a non-probability convenience sampling technique. This approach was necessitated by the lack of a comprehensive, centralized, and updated sampling frame (business registry) for MSMEs in the Northern Province following post-conflict restructuring. To mitigate the inherent biases of convenience sampling and ensure the sample remained representative (Table 02) of the research focus, specific inclusion criteria were applied: respondents had to be the primary owners and chief financial decision-makers of an active MSME within the manufacturing, trading, or service sectors.

Table 02: Total population and sample amount of MSMEs

District	DS division	Target MSMEs	Sample MSMEs	Total	% of total sample
Jaffna	Delft	40	1		
	Island South	134	2		
	Island North	231	4		
	Karainagar	110	2		
	Jaffna	2278	40		
	Nallur	1217	22		
	Sandilipay/Valikamam Southwest	1406	25		
	Chankanai/Valikamam West	1047	19		
	Uduvil/Valikamam South	1835	32		
	Tellippalai/Valikamam North	973	17		
	Kopayvalikamam East	1093	19	148	37%
	Chavakachcheri/Thenmaradchi	861	15		
	Karaveddy/Vadamaradchchi Southwest	716	13		
	Pointpedro/Vadamaradchchi North	913	16		
	Maruthankeny/Vadamaradchchi East	229	4		
Mannar	Mannar	872	35		
	Madhu	141	5		
	Manthai West	217	14		
	Nanaddan	263	10	64	16%
	Musali	172	5		
Vavuniya	Vavuniya	2558	65		
	Vavuniy South	338	16		
	Vengalacheddikulam	506	19	116	29%
	Vavuniya North	288	14		
Mullaitivu	Maritimepattu	1106	20		
	Thunukai	284	5		
	Manthai East	171	3		
	Oddusuddan	459	8	48	12%

District	DS division	Target MSMEs	Sample MSMEs	Total	% of total sample
Kilinochchi	Karachchi	209	3	24	6%
	Pachchilaipallai	347	5		
	Kandawalai	469	9		
	Poonakary	443	8		
Total		24316	400	400	100%

Note: Compiled by the author, based on data collected from DS divisions, 2023

The financial literacy of MSMEs was determined by the 'adult OECD/INFE financial literacy survey', which is the sum of the scores for financial attitude, financial behaviour, and financial knowledge. The total financial literacy (FLT) score was calculated by identifying the average of knowledge, attitude, and behaviour values. Following the OECD/INFE (2020) framework, literacy is measured as a composite of knowledge, behavior, and attitude. These are equally weighted in the final index, reflecting the theoretical consensus that knowledge is ineffective without the corresponding attitude and behavioral application. The study has used the survey questionnaire of OECD 2020 to measure the financial decision making of MSME owners. Indicators of financial awareness were used to find out how much knowledge MSMEs have about conventional and alternative financing choices, as well as whether they are aware of the primary business insurance options offered in the nation. The indicators of financial inclusion provided an overview of how much MSMEs use traditional and digital formal platforms in decision making. The scale for over-indebtedness and attitude towards debt, based on previous studies by Almenberg, Lusardi, Save-Soderbergh, and Vestman (2021), was used to measure the debt traps of MSMEs.

Initially, the questionnaire was given to subject-matter experts to get their input on face validitythat is, how well the questionnaire seems to measure what it purports to measure among Sri Lankan respondents. The OECD instrument was translated into Tamil using a back-translation method to ensure linguistic equivalence. Construct validity was rigorously tested during the pilot phase using exploratory factor analysis (EFA). Reliability was confirmed with Cronbach's alpha; all constructs exceeded the acceptable threshold of 0.70. Finally, this study adhered to strict ethical protocols: informed consent was obtained from all owners, data was anonymized to protect business identities, and participants were informed of their right to withdraw at any time.

Data Analysis

The analysis of the data reveals the following demographic characteristics. Four hundred MSME entrepreneurs made up the total number of responders; of these, 148 made up 37.0% of the sample were from Jaffna district. The remaining 116 entrepreneurs came from Vavuniya, 64 from Mannar, 48 from Mullaitivu, and 24 from Kilinochchi. While the sample is predominantly male (82%), all respondents identified as the primary decision-makers, ensuring the unit of analysis remains the individual entrepreneur's cognitive process. Although 95.3% of owners hold education levels above G.C.E. Ordinary Level, only 27.3% have formal training in finance or economics, providing a potential demographic explanation for the observed low literacy levels. The descriptive statistics shown in Table 03 offer a comprehensive overview of financial behaviour, financial attitude, financial knowledge, financial decision making, and debt traps.

Table 03: Descriptive statistics

Variable	Mean	Std. Deviation	Skewness	Kurtosis
Financial Behaviour	3.37	1.18	-0.498	-1.264
Financial Attitude	3.38	1.24	-0.443	-1.257
Financial Knowledge	3.40	1.21	-0.504	-1.257
Financial Decision Making	3.42	1.27	-0.552	-1.200
Debt Trap	2.98	1.09	0.326	-1.201

Descriptive statistics indicate that mean scores for financial dimensions range from 2.98 to 3.42 on a 5-point Likert scale. These are interpreted as moderately positive as they hover around the scale's midpoint, suggesting that while owners have basic awareness, they lack high-level competency. The standard deviations, ranging from 1.09 to 1.27, reflect a fair amount of variability in responses. All variables show a roughly normal distribution (skewness and kurtosis are within ±2).

All the scales demonstrate strong internal reliability, as constructs achieved Cronbach's alpha and Composite Reliability (CR) values above 0.77, exceeding the standard 0.70 threshold (Table 04). KMO values are above 0.75, which indicates that the data is suitable for factor analysis, and the constructs used in the questionnaire are valid representations of their respective concepts emphasizing sampling adequacy.

Table 04: Reliability and Validity testing

Scale	Type of scale	No. of items	Cronbach's alpha (CA)	KMO Value
Financial Behaviour	5 - point Likert	14	0.886	0.871
Financial Attitude	5 - point Likert	7	0.881	0.829
Financial Knowledge	5 - point Likert	14	0.789	0.761
Financial Decision Making	5 - point Likert	9	0.886	0.753
Debt Trap	5 - point Likert	7	0.875	0.846

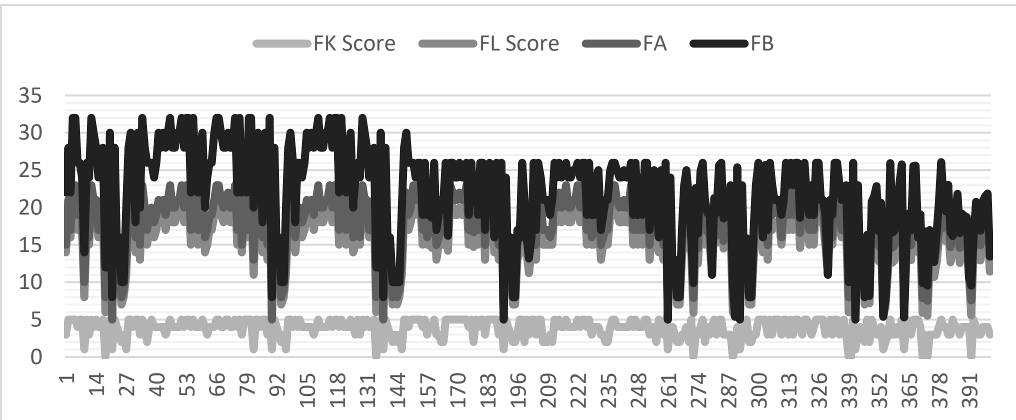
Multicollinearity was tested using SPSS with the indicator – Variance Inflation Factor (VIF). If the VIF value is less than or equal to 10 that would indicate that there is no severe multicollinearity in the model. As per the VIF of the variable's financial literacy (VIF – 1.367) and financial decision making (VIF – 1.367) are having the indicator value less than 10 which indicates that there is no severe multicollinearity. As the study respondents come from the manufacturing, trading, and service sectors, Levene's test was run to make sure there were no appreciable variations in the study variables' measurements within and between the categories (Gastwirth, Gel & Miao, 2009). Since there were no discernible differences between the groups according to the results (Table 05), the responses were analyzed as a whole.

Table 05: Levene's Test of Homogeneity of Variance

		df	Mean Square	F	Sig.
Financial Literacy	Between Groups	2	343.003	.916	.401
	Within Groups	397	374.575		
Financial Decision Making	Between Groups	2	.477	.909	.404
	Within Groups	397	.525		
Debt Trap	Between Groups	2	1.047	1.641	.195
	Within Groups	397	.638		

The survey data indicates that the majority of entrepreneurs in the Northern Province have a financial literacy score between 25 and 32% (Figure 02). This is considerably lower compared to the financial literacy rate of Sri Lanka ,57.39%, which was published by the Central Bank of Sri Lanka in 2021 through the Financial Literacy Survey of Sri Lanka.

Figure 02: Financial Literacy Score



The study model was assessed using SmartPLS 4.0 to test the hypothesized relationships among the constructs: Financial Literacy (FL), Financial Decision Making (FDM), and Debt Trap (DT). The analysis revealed acceptable reliability and validity indicators, confirming the robustness of the model (Table 06).

Table 06: Outcome of measurement model

	α	p_A	CR	AVE
Financial Behaviour	0.875	0.870	0.886	0.749
Financial Attitude	0.882	0.881	0.887	0.801
Financial Knowledge	0.789	0.788	0.779	0.772
Financial Decision Making	0.884	0.800	0.789	0.789
Debt trap	0.885	0.883	0.884	0.768
Optimal values	> 0.7	> 0.7	> 0.7	> 0.5

Note: *α = Cronbach Alpha; p_A = Rho A; CR = Composite Reliability; AVE = Average Variance Extraction*

Also, findings of the Fornell– Larcker criteria indicated that the square root of the AVE for each variable surpassed its maximum correlation with any other variable (Table 07). The reflective measurement model's significant results demonstrate the measures' high reliability and validity.

Table 07: Fornell and Larcker Criterion

	DT	FA	FB	FDM	FK
DT	0.932				
FA	-0.582	0.949			
FB	-0.550	0.931	0.921		
FDM	-0.465	0.835	0.863	0.943	
FK	-0.526	0.931	0.913	0.877	0.934

Note: *DT – Debt trap; FA- Financial Attitude, FB – Financial Behaviour, FDM – Financial Decision Making; FK – Financial Knowledge*

Discriminant validity is also confirmed across all constructs using HTMT. Table 08 illustrates below the results of the HTMT Criterion.

Table 08: Heterotrait – Monotrait ratio (HTMT) Criterion

	DT	FA	FB	FDM	FK
DT					
FA	0.594				
FB	0.561	0.746			
FDM	0.474	0.649	0.675		
FK	0.535	0.745	0.785	0.688	

Note: *DT – Debt trap; FA- Financial Attitude, FB – Financial Behaviour, FDM – Financial Decision Making; FK – Financial Knowledge*

The findings of the measurement model indicated that all outer loadings surpassed 0.7, excluding items that were deleted because of their low loading (Table 09).

Table 09: Outer loadings of the Model

	DT	FA	FB	FDM	FK
Debt trap (DT)					
DT1	0.846				
DT2	0.745				
DT3	0.895				
DT4	0.929				
DT5	0.838				
DT6	0.753				
DT7	0.716				
Financial Attitude (FA)					
FA1		0.834			
FA2		0.749			
FA3		0.849			
FA5		0.86			
FA6		0.750			
FA7		0.846			
Financial Behaviour (FB)					
FB1			0.915		
FB10			0.826		
FB11			0.843		
FB12			0.837		
FB13			0.738		
FB2			0.884		
FB4			0.73		
FB6			0.831		
FB7			0.732		
FB9			0.882		
Financial Decision Making (FDM)					
FDM1				0.740	

FDM2	0.845	
FDM3	0.747	
FDM4	0.851	
FDM5	0.856	
FDM6	0.749	
FDM7	0.929	
FDM8	0.843	
FDM9	0.826	
Financial Knowledge (FK)		
FK1		0.812
FK11		0.840
FK12		0.748
FK13		0.836
FK2		0.729
FK3		0.826
FK5		0.723
FK6		0.730
FK7		0.839
FK9		0.729

Note: Threshold: Loadings > 0.7

Direct Effects

The path coefficient from financial literacy to debt traps was found to be significant and negative ($\beta = -0.549$, $p < 0.01$). This suggests that MSMEs with higher levels of financial literacy are less likely to fall into a debt trap. Similarly, the direct effect of financial literacy on financial decision making is also strong and positive ($\beta = 0.872$, $p < 0.001$), indicating that financially literate MSME owners are more capable of making sound financial decisions. This finding aligns with previous literature that confirms financial literacy as a critical determinant of rational and informed decision making (Lusardi & Mitchell, 2012).

Table 10: Structural model results

Hypothesis	Relationship	β	R^2	t-statistics	p-value	Effect
H1 (A)	Financial literacy → Debt trap	-0.549	0.760	7.151	0.008	Negative
H2 (A)	Financial literacy → Financial decision making	0.872	0.32	5.793	0.000	Positive
H3 (A)	Financial literacy → Financial decision making → Debt trap	−0.362	0.316	6.104	0.000	Negative

Note: *p<0.05, **p<0.01, ***p<0.001, n.s= not significant;(two tailed test), (R) = Rejected; (A) = Accepted

The direct effect of financial decision making on the debt trap was also negative and significant (β = -0.415, $p < 0.001$), confirming that MSME owners who make more informed and rational financial decisions are less likely to experience high debt-related difficulties.

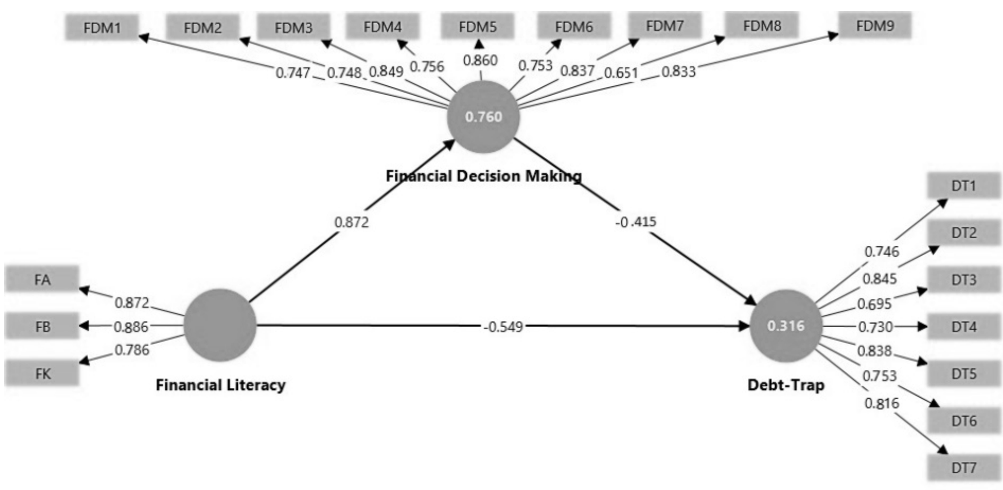


Figure 03: Final Model loadings, R2 and β Mediator Analysis

Mediation Analysis

The mediation analysis supported the presence of a significant indirect effect of financial literacy on debt traps through financial decision making ($\beta = -0.362$, $p < 0.001$). This implies that part of the effect of financial literacy on debt traps is transmitted through enhanced decision making. This finding highlights that financial literacy not only has a direct effect on debt traps, but it also empowers MSMEs to make better financial choices. Therefore, financial decision-making acts as a mediating variable that influences financial literacy onto the reduction of the debt trap. As both the direct and the indirect effects are significant, this is partial mediation.

The model (figure 03) accounted for a substantial proportion of variance in the debt trap construct ($R^2 = 0.76$), indicating that 76% of the variation in the debt trap is explained by financial literacy which is substantial in behavioural research. The R^2 value for financial decision making was 0.32, suggesting that approximately one-third of its variance is explained by financial literacy. Even though previous studies had mixed evidence on the association between financial literacy and financial outcomes, this study highlights a strong significant connection between financial literacy and the debt trap. Further numbers of studies have also determined that the financial literacy level of owners has a substantial impact on business decisions (Fatoki, 2014).

Table 11: Mediator Analysis

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Financial Decision Making → Debt Trap	-0.415	-0.016	0.042	7.151	0.008
Financial Literacy → Debt Trap	-0.549	-0.549	0.095	5.793	0.000
Financial Literacy → Financial Decision Making	0.872	0.872	0.017	5.811	0.000

Conclusion

The key objective of this study is to identify how the degree of financial literacy of MSME entrepreneurs in the Northern Province of Sri Lanka influences the debt traps of their businesses. As per the survey results, the level of financial literacy, is lower than the average rate in Sri Lanka (57.9% in 2021) among the Northern provinces entrepreneurs ranging between 25% - 32%. The results of this study provide strong evidence supporting the theoretical framework. The significant negative relationship between financial literacy and debt traps indicates that MSMEs with financial knowledge, financial attitudes, and financial behavior are better equipped to avoid excessive debt. The partial mediation effect of financial decision-making sheds light on the underlying process by which financial literacy influences debt traps. This study contributes to the financial behavior literature by confirming that cognitive factors (e.g., knowledge and understanding) and behavioral competencies (e.g., decision making ability) are interconnected in shaping financial resilience.

While the findings of this study offer valuable insights into the relationship between financial literacy, decision making, and the debt trap, the following limitations need to be acknowledged. The study used a cross-sectional survey design, capturing responses at a single point in time. Data was collected through self-administered questionnaires, which may be subject to social desirability bias and recall bias. Respondents might have overestimated their financial knowledge or underestimated the financial struggles of the entity. The sample was drawn from a specific population, which may limit the generalizability of the findings to broader or international contexts. Future studies could explore longitudinal designs to test causal relationships over time, particularly how improvements in financial literacy influence debt patterns. It would also be beneficial to examine how socio-demographic variables moderate the relationship between financial literacy and debt outcomes.

In summary, this research confirms that financial literacy is a fundamental determinant of debt trap avoidance for MSMEs in the Northern Province. By empirically validating the mediating role of financial decision making, the study bridges the gap between theoretical knowledge and practical behavioral outcomes, offering a framework to enhance the financial resilience of small business owners and contribute to the broader economic recovery of Sri Lanka.

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