Relationship between Financial Literacy and Business Performance: Empirical evidence from small and medium enterprises (SME) in Sri Lanka

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Abstract

The purpose of this study was to determine the level of financial literacy in Sri Lanka based on demographic factors and to identify the impact of financial literacy on the business performance of small and medium enterprises (SMEs). As a result, a quantitative study based on Prospect Theory and Exchange Theory was conducted. In Sri Lanka, there is a shortage of studies on these variables. This research is being carried out in order to close the empirical gap. The sample size was 100 SMEs in Sri Lanka, and the required data was collected using the usual purposive sampling method. After conducting factor analysis, reliability, and validity tests, this study used primary data from questionnaires. Since the previous empirical review suggested using this analysis to examine the relationship, the objectives were achieved through descriptive analysis, correlation, and regression analysis. The study's findings revealed that financial literacy and business performance have a positive relationship. As a result, independent variables such as technical financial knowledge, financial market knowledge, and financial management skills impact SMEs' business performance, with technical financial knowledge and financial management skills being the most influential of these variables. This study concluded that good financial knowledge among owners is required to make decisions to explain prospect theory. This study also found that owners and employees should have a higher level of education. According to the exchange theory, it should exchange information or knowledge among employees and recruit more skilled employees. The study gives SMEs and policymakers insight into how financial literacy can help them make better decisions and improve their

businesses performance. As a result, business owners and policymakers should set up training programs to improve financial literacy knowledge.

Keywords: *Financial Literacy, SME's, Business Performance*

1. Introduction

Small and medium-sized enterprises (SMEs) have risen to prominence as the primary engine for economic growth in Sri Lanka. For the simple reason, SMEs act as catalysts for entrepreneurship, employment, innovation, and other positive social outcomes. SMEs are crucial to domestic production and employment in developed and developing countries. Most SMEs in developing countries employ formal and informal workers to varying degrees (Page and Soderbom, 2015). As a result, SMEs are critical to the economy. Sri Lanka's government can increase tax revenue, reduce poverty, and reduce unemployment due to these factors.

When SMEs have a significant economic impact, they face various challenges. Their financial viability determines the success or failure of SMEs. One of the most common problems is maintaining a positive cash flow and working capital (Chepngetich, 2016). The result is that certain businesses fail because they do not understand the complexities of financial processes. The majority of SMEs do not know how to manage their finances. Sometimes they borrow money from high-interest companies, spend it all without planning, invest in negative NPV real estate investments, and so on. As a result, they must deal with significant financial difficulties within the organization and eventually close it. Given the high failure rate, it is critical to investigate the factors necessary for SMEs to survive and advance to the growth phase of the organizational life cycle (Kamunge et al., 2014).

Because of this, Financial Literacy has emerged as the most critical daily operation factor for both individuals and businesses. Financial literacy is the ability to make sound financial decisions based on knowledge of money and financial products (Basu, 2005). Financial literacy is critical for organizations to achieve their goals by improving transparency, efficiency, accuracy, and accountability (Koitaba, 2013). Effective financial literacy skill implementation leads to improved business performance due to better tracking business events from the record system (Siekei et al., 2013).

Numerous studies conducted over the last few decades have concluded that financial literacy strongly connects to financial performance. Furthermore, in today's dynamic and complex business environment, financial literacy is essential. Numerous studies have argued that SMEs have a limited role in economic development because of a lack of access to financial services, particularly from formal financial institutions. Due to poor financial literacy, SME owners and managers occur.

Studies on financial literacy tend to focus on personal finance more than business performance. Instead of focusing on a single aspect of financial knowledge, this study examined four different facets of technical, financial knowledge: risk attitude, financial management skills, and knowledge of financial markets. In every economy, SMEs play a critical role in creating jobs, contributing to GDP, and driving innovation. Over one million registered SMEs in Sri Lanka employ three people on average (Census, 2017). As a result, Sri Lankan SMEs account for 52 percent of GDP (CBSL) and employ more than 65 percent of the workforce.

However, due to a variety of factors, the failure rate of SMEs has skyrocketed. The major problem is that they do not know how to manage their finances to achieve their objectives and survive. It was reported that the rate of business failure among SMEs is 45% (Daily Mirror, 2016). It also revealed that the major causes for that failure are lack of education of business owners, prior business planning, financial knowledge & skills, and inappropriate finance. Thus, the primary objectives are to determine the level of financial literacy among SMEs based on demographic factors (gender, age, the amount of money they earn monthly, the educational level of the business owners, their legal structure, and the number of employees) and to investigate the impact of financial literacy on the business performance of SMEs in Sri Lanka.

2. Literature Review

2.1. Definitions of Financial Literacy

Financial literacy refers to the ability to make sound financial decisions by thoroughly understanding financial concepts and instruments (Agarwal et al., 2009). Noctor et al. (1992) further defined financial literacy as the ability to make sound financial decisions. Basic money management skills like budgeting, saving, investing, and insurance focus

on financial literacy (Widdowson and Haliwood, 2007). According to (Lusardi and Mitchell, 2011), financial literacy is the understanding of basic financial investment concepts such as inflation and risk diversification, as well as the ability to perform interest rate calculations.

The GAO (2012) defines financial literacy as the ability to make well-informed decisions and take appropriate action concerning one's current and future use and management of money. To have financial literacy, one must recognize and use financial statements to calculate important financial ratios for evaluating and managing a business (Pearl and Eileen, 2014). Personal and professional success now hinges on one's ability to manage one's finances.

This study defines financial literacy as the ability of business owners to make sound financial decisions in their day-to-day operations by combining technical, financial knowledge, financial market knowledge, financial management skills, and a risk-taking attitude.

Table 1: Definitions of financial literacy

Author	**Definition**
(Noctor et al., 1992)	Capability to make informed decisions and make effective decisions about the use and management of money.
(Mandell, 2006)	what people need to know in order to make critical financial decisions that are in their best interests.
(Widdowson and Haliwood, 2007)	basic money management skills such as budgeting, saving, investing, and insurance.
(Agarwal et at., 2010)	the ability to make sound financial decisions based on a thorough understanding of financial concepts and instruments.
(Lusardi and Mitchell 2011)	the recognizing of fundamental financial investment concepts such as inflation and risk diversification and the ability to perform interest rate calculations.

GAO (2012)	the capability to make informed decisions and take practical actions concerning the current and future use and management of money.
Pearl and Eileen (2014)	"The ability to understand and apply business financial statements to generate key financial ratios for evaluating and managing a business."

Source: Constructed based on literature

2.2 Definitions of Small and Medium-scale Enterprises (SMEs)

- There is no global agreement on the definition or nature of small and medium-sized enterprises (SMEs). According to (Obitayo, 1991), the most important criteria used to describe small-scale enterprises worldwide are the number of employees, sales volume, financial strength, relative size, initial capital outlay, and independent ownership. Small and medium-sized enterprises (SMEs) are businesses with annual revenues of less than Rs.600 million and borrowings of less than Rs.200 million by the Central Bank of Sri Lanka (CBSL). According to resource-based theories, a firm's resources and capabilities are the most critical determinants of its overall performance (Peteraf et al., 2003). Small and medium-sized enterprises (SMEs) are not subsidiaries of more giant corporations and have fewer than a certain number of employees (OECD, 2005).

- Small and medium-sized enterprises (SMEs) are defined in Sri Lanka's SME policy framework based on the number of employees and annual revenue. As a result, Small and Medium-sized Enterprises (SMEs) are defined as businesses with fewer than 300 employees and annual revenues of less than Rs.750 million (National Policy Framework for SME Development).

2.3 Empirical Evidence Related to Financial Literacy and Business Performance of SMEs

Scholars and policymakers in both developed and developing countries have recognized that financial literacy has been critical for the establishment and survival of small businesses over the last two decades (Wise, 2013). According to a study on

financial literacy in SMEs (Barte, 2012), it is directly related to business performance. The findings are consistent with Mwambia (2014), who discovered a favorable relationship between financial literacy and returns. (Njoroge, 2013) investigated the relationship between financial literacy and business success among SMEs in Nairobi County. According to the study, most Nairobi entrepreneurs had some financial literacy, and in some cases, those formal SMEs were highly financially literate.

According to Brown et al., (2006), financial literacy for small business owners must include reading and understanding fundamental financial statements and working with numbers, making informed judgments, and making effective decisions about the use and management of money. Financial literacy, as defined by two authors recently, is "the ability to understand and use business financial statements to generate key financial ratios to evaluate and manage a business." – Eileen and Pearl (2014). Through an educational program, (Brown et al., 2006) could demonstrate the rise of financial literacy among entrepreneurs, and (Pearl and Eileen, 2014) could demonstrate the association between financial literacy and the success of small businesses by removing the link between inadequate financial literacy and financial difficulties faced by entrepreneurs.

On the other hand, (Sage, 2012) conducted a survey on Canadian Small Business Financial Literacy, with a sample of 300 small businesses, to assess small business owners' perceptions, knowledge, and habits regarding financial and resource management. As a result, many researchers concluded that financial literacy has an impact on business performance.

2.4 Measures of Financial literacy

According to the literature on financial literacy, there are no standardized measures of financial literacy (Moore, 2003; Cole & Fernando, 2008). As a result, empirical researchers have used various measures to assess the effects of financial literacy on business performance.

Table 2: Measurements of financial literacy.

Author	**Indicators**
(Clercq and Venter, 2009)	Demographic factors Age Gender Cultural background Income
(Oseifuah, 2010)	Demographic data Financial attitude Financial knowledge Mathematical & computer literacy Financial behavior
(Zuhair and Wickremasinghe, 2014)	Personal factors Socio-economic factors Cultural factors
(Ajward et al., 2015)	Demographic factors Class rank Gender Race Age Experience Income

(Jonsson, 2016)	Technical financial knowledge Fund knowledge Market knowledge Risk attitude Saving
(Harari, 2016)	Saving behaviors Saving intention Attitudes toward saving

Source: Constructed based on literature

Clercq and venter (2009) have researched only personal demographic factors such as age, gender, cultural background, income. In contrast (Oseifuah, 2010) has considered demographic data, financial attitude, financial knowledge, mathematical & computer literacy, and financial behaviour. On the other hand, (Ajward et al.,2015) considered demographic factors such as class rank, gender, race, age, experience & income to measure financial literacy in a non-university higher education institution in Sri Lanka.

Jonsson (2016) has measured financial literacy using variables such as technical financial knowledge, fund knowledge, market knowledge, risk attitude & savings. (Harari, 2016) has adopted variables for his research such as saving behaviors, saving intention, and attitudes toward saving. (Jonsson, 2016) has measured financial literacy based on technical financial knowledge, fund knowledge, market knowledge, risk attitude, and saving. In contrast, Zuhair and Wickremasinghe (2014) have measured based on personal, socioeconomic, and cultural factors.

Accordingly, in this study, the conceptual framework for measuring the level of financial literacy has adopted four independent variables as Technical financial knowledge, Financial Market knowledge, Risk attitude, Financial management skills.

Furthermore, for measuring the business performance of the SMEs are adopted as dependent variables knowing the information about Pattern in sales, Pattern in profits, Business plan, Communication system, Customer loyalty and number of employees.

Technical financial knowledge: The ability to calculate and deal with new and more sophisticated financial instruments are increasingly important in day-to-day business operations. Specifically, the risk level of various securities, the implications of interest rates.

Financial Market knowledge; Everyone should be aware of the current state of the financial markets. A proclivity to monitor market activity and an interest in financial issues may lead to an awareness of situations in which one is more or less reluctant to trade, likely to result in corrective mechanisms (Wegener and Petty, 1995).

Risk attitude; Early work in psychology commonly assumed risk attitude, a person's position on the risk-aversion-to-risk-seeking continuum, to be a personality trait (Plax and Rosenfeld, 1976).

Financial management skills; Financial literacy can be measured based on financial management skills. i.e., the skills to budget and track spending, regularly contribute to a savings account and compare purchases to monthly statements.

2.5 Measures of Business Performance

Empirical researchers have adopted different measures to measure the impact of business performance.

Table 3: Measurement of business performance.

Author	**Measurements**
(Fernandes, 2015)	Business plan Cash flow forecast Profitability
(Chamwada, 2015)	Location of the SMEs The firm's size

	ROA Amount of capital invested in logarithmic terms Management practices
(Enlola and Encebang, 2015)	Strategic resources Human resources Competitive capabilities
(Chepngetich, 2016)	Growth in sales Growth in profits Number of employees Market size Competitors

Source: Constructed based on literature

Fernandes (2015) has adopted measures to measure business performance such as business plan, cash flow forecast, and profitability, while (Enlola and Encebang, 2015) used strategic resources, human resources, and competitive capabilities. On the other hand, Chamwada (2015) has adopted measures such as location, size, ROA, log amount of capital invested, and management practices in the study. Moreover, Chepngetich (2016) has measured business performance by using growth in sales, profits, number of employees, market size, and competitors.

2.6. Gap Analysis

Factors affecting a prospective chartered accountant's financial literacy have been studied (Clercq and venter, 2009). According to his findings, the age group, 30-39, is the most financially literate, and a higher income positively affects financial literacy. To this study's credit, it has considered various factors, but only two stand out. Financial literacy did not affect his company's performance, according to them. It was found that children with a high level of ISM had more positive attitudes toward saving

and more positive behaviour related to saving (Harari, 2016). On the other hand, this study has only looked at ways to save money but failed to consider financial literacy measures such as knowledge of financial markets, risk attitude, and financial management skills, among others.

Financial literacy directly impacts SMEs' sustainability, with access to finance acting as a partial mediator between financial literacy and sustainability (Ye and Kulathuna, 2018). The effects of the risk attitude on business performance, such as sales and employment, were not considered.

Because of this, to fill in research gaps, this study looked at financial measurements to see how well-informed small business owners are about financial literacy. According to previous research, financial literacy and business performance are linked based on metrics such as return on sales, ROI/ROS combination, liquidity, sales level, the growth rate of the sales sector, cash flow, and return on equity.

Financially literate business owners can make better decisions about how money is used and managed. Small business owners should know how to read and understand fundamental financial statements to work with numbers, make informed decisions, and use their money wisely. There is a general lack of financial literacy among small business owners, which adversely impacts the entire economy and society.

3. Methodology

Researchers used positivism, deductive reasoning, and quantitative methods to determine the impact of financial literacy on small- and medium-sized enterprises (SMEs). As a result, the study's two variables, financial literacy and small business performance in Sri Lanka could be identified with greater accuracy thanks to the study's effective research design. Owners of Sri Lankan SMEs are the target population for this research. According to the Sri Lankan census, there are approximately one billion small and medium-sized enterprises (SMEs). The sampling plan explains how the study's sampling unit, sampling frame, sampling procedures, and sample size will be determined using sampling plans and methods. Suppose all population units listed in the sampling frame random sample can be selected (Cooper and Schindler, 2011). However, this study could not explicitly identify a specific sampling frame and

considered a purposive sampling technique. This study selected 175 Sri Lankan SMEs that were both available and willing to participate using the purposive sampling method. Since the study was aimed at small business owners in Sri Lanka, only 100 of the 175 questionnaires were filled out by those business owners. Data on business performance (dependent variable) and technical financial knowledge, market knowledge, risk attitude, and market skills are needed. This data can be found here (independent variables). Primary data was used in this investigation, which was gathered by employing questionnaires. Primary data is vital because it enables the researcher to collect the information they need for the project (Cooper and Schindler, 2011). Questionnaires will be utilized to collect information. Five questions on the Likert scale and five on the nominal scale ask about dependent and independent variables and demographic factors. In order to achieve the study's goals, information was collected via a questionnaire.

The questionnaire consisted of 36 questions that were developed for each dependent and independent variable of the model. There are one dependent variable and four independent variables: technical financial knowledge, financial market knowledge, risk attitude, and financial management skills. Designing the questionnaire was a significant part of the research, as it was a fundamental part of the data collection process. As mentioned earlier, the questions were developed to gather information on business performance, technical financial knowledge, financial market knowledge, risk attitude, and financial management skills. In addition to this, a questionnaire was developed according to the past literature. Table 4 explains the operationalization of variables based on empirical review.

Table 4 - Operationalization table

Variable	**Dimension**	**Indicator**	**No. of Questionaire Items**	**Reference**
Financial Literacy	Technical Finance	Simple and compound interest,	11 Items	Chepngetich (2016)

(Independent)	Knowledge (TFK)	risk & return, and inflation. Borrowing & budgeting financial literacy. The risk level of various securities, the interest rate for securities. The basic financial statements		Esiebugie, Richard, and Emmanuel (2018)
	Market Knowledge	Questions related to the finance market.	04 Items	Chepngetich (2016) Esiebugie, Richard, and Emmanuel (2018)
	Risk Attitude	Entrepreneurs or non-entrepreneurs Men & women Innovativeness	05 Items	Chepngetich (2016)

	Financial Management Skills	Managing daily expense Budget preparation & business plan Management experience Cash flow forecasting Knowledge of its software	06 Items	Chepngetich (2016) Esiebugie, Richard, and Emmanuel (2018)
Business performance (Dependent)	Growth in sales	Pattern of sales	11 Items	Chepngetich (2016) Cherotich, Ayuya and Sibiko (2018) Esiebugie, Richard
	Growth in profits	Pattern of profits		
	Growth in no of employees	Considering the number of employees at initial		
	Formal planning	Directing at long term goal attainment		

	Communication system	Top to bottom or bottom to up		and Emmanuel (2018)

Source: Constructed based on literature

Accordingly, this study is conducted with a conceptual framework by using the following independent and dependent variables.

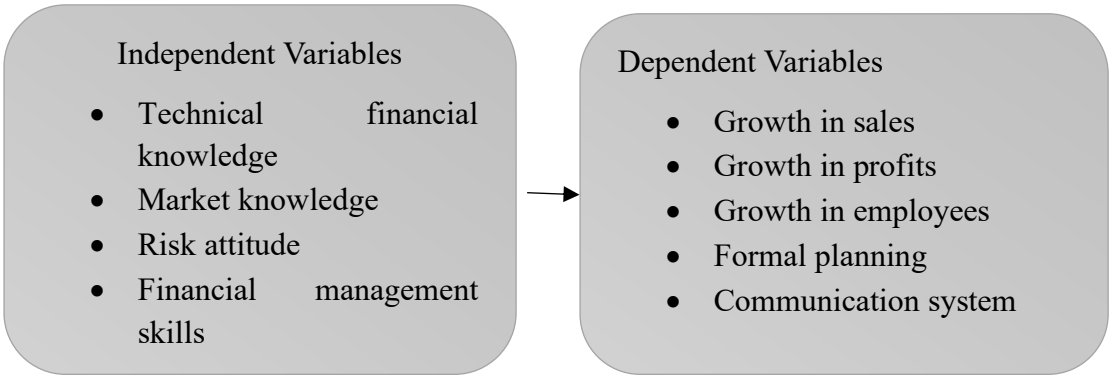

Figure 1: Conceptual framework

Several studies have found links between financial literacy and business performance. According to the findings of (Pearl and Eileen, 2014), there is a significant association between financial literacy and small business success by removing the link between inadequate financial literacy and financial difficulties entrepreneurs face. As a result, the hypothesis for this study was developed because there is a positive relationship between these variables.

H1: *There is a positive relationship between financial literacy and business performance in SMEs.*

Following the OECD, financial literacy includes knowledge of concepts such as simple and compound interest, return on investment (ROI), and inflation. Financial knowledge is a crucial determinant of whether someone is financially literate. When it comes to "best practice" financial behaviours, having financial knowledge is linked to having an adequate emergency fund, monitoring credit reports, avoiding checking account

overdrafts, not taking on revolving debt, and setting aside money for retirement, according to research (Robb, 2011).

H2: *There is a positive relationship between Technical Financial Knowledge and the Business Performance of SMEs.*

According to the past research, they have concluded that market knowledge of finance is significant for improving business performance. Accordingly, this study's hypothesis was developed, stating a positive association between financial market knowledge and business performance.

H3: *There is a positive relationship between Financial Market Knowledge and Business Performance of SMEs.*

The financial attitude of a company's employees is one factor that significantly impacts its overall performance. Richard and Emmanuel (2018) discovered that the financial attitude of small and medium-sized enterprises (SMEs) significantly impacts their performance. Since there is a positive relationship between these two variables, the hypothesis for this study was developed.

H4: *There is a positive relationship between Risk Attitude and Business Performance of SMEs*.

The lack of financial expertise among small business owners, according to research, can be a significant impediment to the success of a venture. There is a significant relationship between financial management skills and business performance, according to the findings of (Halabi and Dyt, 2010). Since there is a positive relationship between these two variables, the hypothesis for this study was developed.

H5: *There is a positive relationship between Financial Management Skills and the Business Performance of SMEs.*

The main aim of this study is to measure the effect of financial literacy on SMEs' business performance and examine the level of financial literacy. The data collected were analyzed with the aid of the Statistical Package for Social Sciences (SPSS 20) because of its clarity, precision, ease of comprehension, and interpretation. This study used descriptive analysis for that purpose, and accordingly, it used mean, median, mode

& standard deviation. In addition, this study used one-way ANOVA to test whether there is a difference in business performance according to demographic factors such as age, gender, education level, income level.

In addition to this, the correlation is used to measure the relationship between the independent variables - technical financial knowledge, financial market knowledge, risk attitude & financial management skills, and the dependent variable – business performance.

In this study, multiple linear regression analysis was used to assess the impact of financial literacy on business performance. Before that, this study validated some assumptions.

Accordingly, the regression model is as follows.

$$BP = \alpha + \beta_1 TFK + \beta_2 FMK + \beta_3 RA + \beta_4 FMS + \varepsilon$$

BP = Business Performance

TFK = Technical Financial Knowledge

FMK = Financial Market Knowledge

RA = Risk Attitude

FMS = Financial Management Skills

4. Discussion

Initially, the normality test was conducted, and outliers of the sample were reduced. Due to the low reliability RA variable is removed from the analysis. The reliability values for variables such as TFK, FMK, FMS, and BP were 0.793, 0.771, 0.852, and 0.865, respectively. Since the Extraction values from factor analysis for all questions are higher than 0.05, the validity was met.

In this study, the researcher considered two statistics related to factor analysis: Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. Bartlett's test of sphericity is a statistical test used to investigate the hypothesis that the variables in a population are uncorrelated. KMO sampling adequacy index is used to

determine whether factor analysis is appropriate. A value greater than 0.6 indicates the need for factor analysis.

Table 5: KMO and Bartlett's test – Factor analysis

Sampling Adequacy.		.857
Bartlett's Test of Sphericity	Approx. Chi-Square	2527.045
	df	630
	Sig.	.000

In this study, KMO is 0.857, which is higher than 0.6 indicates that the factor analysis is appropriate or the sample size is adequate for factor analysis. Furthermore, Bartlett's test is significant at a 5% level, indicating significant inter-item correlations.

Cronbach's alpha for TFK is 0.793, FMK is 0.771, FMS is 0.852, and BP is 0.865, which is more than 0.7. Accordingly, it can be indicated that there is good internal consistency between data, which measures the variables including TFK, FMK, FMS, and BP.

4.1. Descriptive Analysis

The descriptive analysis was conducted to examine the level of financial literacy among SMEs based on demographic factors, one of this study's main objectives. In addition, using one-way analysis of variance, it is measured whether financial literacy levels impact different demographic factors. Demographic factors include Gender, Age level, Monthly income level, Education level, Legal formation and number of employees at the SMEs.

- *To examine the level of financial literacy according to the Gender*

Table 6: Descriptives Analysis – Gender

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		

Female	51	36.9412	5.92423	.82956	35.2750	38.6074	25.00	47.00
Male	29	38.1034	6.36028	1.18107	35.6841	40.5228	25.00	47.00
Total	80	37.3625	6.07181	.67885	36.0113	38.7137	25.00	47.00

Table 6 shows a descriptive table with beneficial statistics such as the mean, standard deviation, and 95 percent confidence intervals for the dependent variables – business performance for each separate male and female group. The mean value for a female is 36.9412, and the mean value for a male is 38.1034.

Table 7: Test of Homogeneity of Variance – Gender

Levene Statistic	df1	df2	Sig.
.423	1	78	.517

According to the table of test of homogeneity of variances, the Levene statistic indicates that the significant value is 0.517, which is greater than 0.05. It means that the requirement of homogeneity of variance has been met.

Table 8: ANOVA Table – Gender

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	24.974	1	24.974	.675	.414
Within Groups	2887.513	78	37.019		
Total	2912.487	79			

ANOVA test has been conducted to find the significance level between gender of SMEs' owners. Accordingly, Table 8 outlines that the significance value is 0.414, which is higher than 0.05, which means there is no statistically significant difference between the means of the different levels of gender. According to this data set, it can

be stated that the gender level of SMEs owners does not significantly impact financial literacy.

- *To examine the level of financial literacy according to the Age levels*

Table 9: Descriptives Table – Age

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
18 - 25	2	33.5000	2.12132	1.50000	14.4407	52.5593	32.00	35.00
26 - 35	25	37.2800	5.44304	1.08861	35.0332	39.5268	27.00	46.00
36 - 45	32	37.3750	6.24112	1.10329	35.1248	39.6252	25.00	47.00
46 - 55	19	37.8421	6.55967	1.50489	34.6804	41.0038	25.00	47.00
Above 55	2	37.5000	13.43503	9.50000	-83.2089	158.2089	28.00	47.00
Total	80	37.3625	6.07181	.67885	36.0113	38.7137	25.00	47.00

Table 9 illustrates that the descriptive table provides some beneficial statistics such as the mean, standard deviation, and 95% confidence intervals for the dependent variables – business performance for each different age level such as 18 – 25, 26 – 35, 36 – 45, 46 – 55 & above 55. The mean value for different age levels is similar except for age levels of 18 – 25. The studies of (Brown et al. 2006) and (Banco de Portugal,2010) found evidence of lower levels of financial literacy among young entrepreneurs.

Table 10: Test of Homogeneity of Variance – Age

Levene Statistic	df1	df2	Sig.
1.828	4	75	.132

According to the table of test of homogeneity of variances, the Levene statistic indicates that the significant value is 0.132, which is greater than 0.05. It means that the requirement of homogeneity of variance has been met.

Table 11: ANOVA Table – Age

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	34.421	4	8.605	.224	.924
Within Groups	2878.066	75	38.374		
Total	2912.488	79			

ANOVA test has been conducted to find the significance level among age levels of SMEs' owners. Accordingly, Table 11 outlines the significance value as 0.924, which is higher than 0.05, which means there is no statistically significant difference between the means of the different age levels. According to this data set, it can be stated that the age levels of SME owners do not significantly impact the level of financial literacy in Sri Lanka.

To examine the level of financial literacy according to the Monthly income levels

Table 12: Descriptives Analysis – Income level

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below Rs.25000	34	34.5588	6.00097	1.02916	32.4650	36.6527	25.00	46.00
Rs.25000-Rs.50000	35	38.4000	5.19162	.87754	36.6166	40.1834	27.00	47.00

Rs.51000-Rs.100000	11	42.7273	4.31488	1.30099	39.8285	45.6260	33.00	47.00
Total	80	37.3625	6.07181	.67885	36.0113	38.7137	25.00	47.00

Table 12 illustrates the descriptive table, which provides some beneficial statistics such as the mean, standard deviation, and 95% confidence intervals for the dependent variables – business performance for each different monthly income level such as below Rs.25000, Rs.25000 – 50000, Rs.51000 – 100000 and above Rs.100000.

Table 13 Test of Homogeneity of Variance – Income level

Levene Statistic	df1	df2	Sig.
1.786	2	77	.175

According to the table of test of homogeneity of variances, the Levene statistic indicates that the significant value is 0.175, which is greater than 0.05. It means that the requirement of homogeneity of variance has been met.

Table 14 ANOVA Table – Income level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	621.523	2	310.762	10.445	.000
Within Groups	2290.964	77	29.753		
Total	2912.487	79			

ANOVA test has been conducted to find the significance level among monthly income levels of SMEs. Accordingly, Table 14 outlines that the significance value is 0.000, which is less than 0.05, which means there is a statistically significant difference between the means of the different monthly income levels. According to this data set, it can be said that the monthly income levels of SMEs significantly impact the financial literacy in Sri Lanka.

Table 15: Multiple Comparisons – Income level

(I) Monthly Income Level	(J) Monthly Income Level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Below Rs.25000	Rs.25000-Rs.50000	-3.84118*	1.31345	.012	-6.9802	-.7022
	Rs.51000-Rs.100000	-8.16845*	1.89206	.000	-12.6902	-3.6467
Rs.25000-Rs.50000	Below Rs.25000	3.84118*	1.31345	.012	.7022	6.9802
	Rs.51000-Rs.100000	-4.32727	1.88544	.062	-8.8332	.1787
Rs.51000-Rs.100000	Below Rs.25000	8.16845*	1.89206	.000	3.6467	12.6902
	Rs.25000-Rs.50000	4.32727	1.88544	.062	-.1787	8.8332

*. The mean difference is significant at the 0.05 level.

A Tukey post hoc test showed that financial literacy has a different effect on monthly income levels. The significant level between income below Rs.25000 and Rs.25000-50000 is 0.012, less than 0.05. Furthermore, the significant level between income below Rs.25000 and Rs.51000-100000 is 0.000. However, the significant level between income Rs.25000-50000 and Rs.51000-100000 is 0.062. Accordingly, when monthly income levels are Rs.25000-50000 and 51000-100000, the financial literacy level is higher than the income level below Rs.25000.

To examine the level of financial literacy according to the Education Levels

Table 16: Descriptives Analysis– Education level

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below O/L	24	35.1250	6.08857	1.24282	32.5540	37.6960	25.00	47.00
Passed O/L	36	37.0556	6.01875	1.00313	35.0191	39.0920	25.00	46.00
Passed A/L	17	40.5882	4.93785	1.19760	38.0494	43.1270	31.00	47.00
Higher education after A/L	3	40.6667	5.85947	3.38296	26.1109	55.2224	34.00	45.00
Total	80	37.3625	6.07181	.67885	36.0113	38.7137	25.00	47.00

Table 16 shows that the descriptive table provides beneficial statistics for the dependent variables – business performance for each different education level, such as below O/L, passed O/L, passed A/L, and higher education after A/L as the mean, standard deviation, and 95 percent confidence intervals. The mean values for passed A/L and higher education are close to 40.6, higher than those for other education levels.

Table 17: Test of Homogeneity of Variances – Education level

Levene Statistic	df1	df2	Sig.
.626	3	76	.601

Furthermore, the table of test of homogeneity of variances the Levene statistic indicates that the significant value is 0.601, greater than 0.05. It means that the requirement of homogeneity of variance has been met.

Table 18: ANOVA Table – Education level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	333.189	3	111.063	3.273	.026
Within Groups	2579.298	76	33.938		
Total	2912.487	79			

ANOVA test has been conducted to find the significance level among education levels of SMEs. Accordingly, Table 4.25 outlines that the significance value is 0.026, which is less than 0.05, which means there is a statistically significant difference between the means of the different levels of the education level. According to this data set, it can be said that the education level of SME owners significantly impacts the level of financial literacy in Sri Lanka.

According to (Sanjib 2016), education level leads to a higher understanding of financial matters, resulting in higher financial literacy. Furthermore, (Brown et al., 2006) and (Atkinson and Messy, 2012) discovered evidence that low levels of education were related to lower levels of financial literacy. As a result, the findings of this study are consistent with those of this study.

Table 19: Multiple comparisons – Education level

(I) Education Level	(J) Education Level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Below O/L	Passed O/L	-1.93056	1.53519	.593	-5.9632	2.1021
	Passed A/L	-5.46324*	1.84674	.021	-10.3142	-.6122
	Higher education after A/L	-5.54167	3.56746	.411	-14.9127	3.8293

	Below O/L	1.93056	1.53519	.593	-2.1021	5.9632
	Passed A/L	-3.53268	1.71438	.175	-8.0360	.9706
Passed O/L	Higher education after A/L	-3.61111	3.50078	.732	-12.8069	5.5847
	Below O/L	5.46324*	1.84674	.021	.6122	10.3142
	Passed O/L	3.53268	1.71438	.175	-.9706	8.0360
Passed A/L	Higher education after A/L	-.07843	3.64816	1.000	-9.6614	9.5045
	Below O/L	5.54167	3.56746	.411	-3.8293	14.9127
Higher education after A/L	Passed O/L	3.61111	3.50078	.732	-5.5847	12.8069
	Passed A/L	.07843	3.64816	1.000	-9.5045	9.6614

A Tukey post hoc test showed that financial literacy has a different effect on education levels. There is a significant difference between below O/L and passed A/L which the significant value is 0.021 between them. Therefore, when the owner of SME has the education level of passed A/L or higher education after A/L, the financial literacy level is high.

- *To examine the level of financial literacy according to the Legal formation of SMEs*

Table 20: Descriptives Analysis – Legal formation

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		

Sole proprietorship	74	36.9730	6.04543	.70277	35.5724	38.3736	25.00	47.00
Partnership	6	42.1667	4.35507	1.77795	37.5963	46.7370	36.00	47.00
Total	80	37.3625	6.07181	.67885	36.0113	38.7137	25.00	47.00

Table 20 illustrates that the descriptive table provides some beneficial statistics such as the mean, standard deviation, and 95% confidence intervals for the dependent variables – business performance for each legal formation of SMEs. Here the mean value for a sole proprietorship is 36.9730 and for a partnership is 42.1667.

Table 21: Test of Homogeneity of Variances – Legal formation

Levene Statistic	df1	df2	Sig.
1.583	1	78	.212

According to the table of test of homogeneity of variances, the Levene statistic indicates that the significant value is 0.212, which is greater than 0.05. It means that the requirement of homogeneity of variance has been met.

Table 22: ANOVA Table – Legal formation

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	149.708	1	149.708	4.227	.043
Within Groups	2762.779	78	35.420		
Total	2912.488	79			

ANOVA test has been conducted to find the significance level among the legal formation of SMEs. Accordingly, Table 22 indicates the significance value is 0.043, which is less than 0.05, which means there is a statistically significant difference between the means of the different levels of the legal formation of SMEs. According to this data set, it can be stated that the legal formation of SMEs has a significant impact on the level of financial literacy in Sri Lanka.

- *To examine the level of financial literacy according to the number of employees at SMEs*

Table 23: Descriptive Analysis – No of employees

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below 2	19	33.0526	5.23316	1.20057	30.5303	35.5749	25.00	43.00
2 - 4	42	37.8571	5.20118	.80256	36.2363	39.4779	27.00	47.00
5 - 7	15	40.1333	6.46824	1.67009	36.5513	43.7153	28.00	47.00
8 - 10	2	37.5000	7.77817	5.50000	-32.3841	107.3841	32.00	43.00
Above 10	2	47.0000	.00000	.00000	47.0000	47.0000	47.00	47.00
Total	80	37.3625	6.07181	.67885	36.0113	38.7137	25.00	47.00

Table 23 illustrates that the descriptive table, which provides some beneficial statistics such as the mean, standard deviation, and 95% confidence intervals for the dependent variables – business performance for each number of employee level such as below 2, 2 – 4, 5 – 7, 8 – 10 & above 10. Accordingly, the mean value for no employees above 10 is higher than another no of employees, 47.0.

Table 24: Test of Homogeneity of Variance – No of employees

Levene Statistic	df1	df2	Sig.
1.693	4	75	.160

According to the table of test of homogeneity of variances, the Levene statistic indicates that the significant value is 0.160, which is greater than 0.05. It means that the requirement of homogeneity of variance has been met.

Table 25: ANOVA Table – No of employees

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	664.164	4	166.041	5.539	.001
Within Groups	2248.324	75	29.978		
Total	2912.487	79			

ANOVA test has been conducted to find the significance level among the number of employees of SMEs. Accordingly, Table 25 outlines the significance value is 0.001, which is less than 0.05, which means that there is a statistically significant difference between the means of the different levels of the number of employees. According to this data set, it can be stated that the number of employees of SMEs has an impact on the level of financial literacy in Sri Lanka. Accordingly, when the number of employees is 5-7, and above 10 at the SMEs, the level of financial literacy is high. When the number of employees is below 2, 2-4, 5-7, and 8-10at the SMEs, the level of financial literacy is low.

4.2. Multiple Regression Analysis

In this study, another main objective is to investigate the relationship between financial literacy and the business performance of SMEs. For that purpose, multiple regression analysis is conducted. Before doing the regression analysis, four assumptions in this study such as normality, linearity, homoscedasticity, and absence of multicollinearity were tested.

Normality assumption

The term "normality" denotes that the residuals of the regression should have a normal distribution. The residuals are nothing more than the error terms.

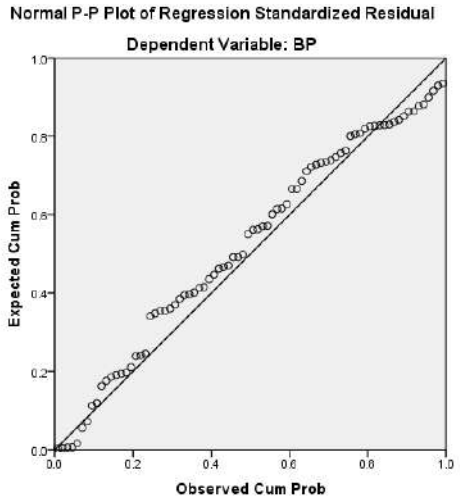

Figure 2: Normal P.P Plot

The little circles will follow the normality line according to the normal P-P plot of regression standardized residual. Accordingly, it can be said that the data is normally distributed in this study.

Homoscedasticity assumption

Another assumption of the regression analysis is to check the homoscedasticity using scatterplot diagrams.

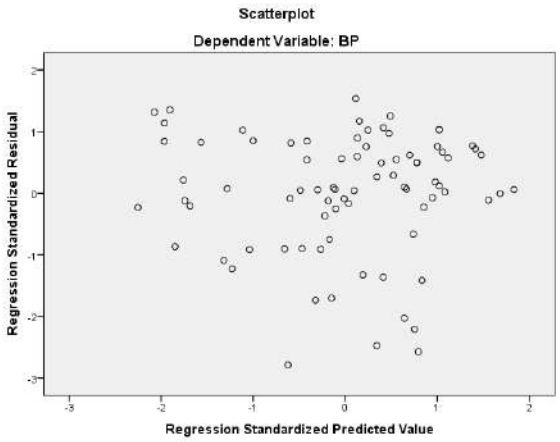

Figure 3 Scatterplot – Homoscedasticity assumption

Figure 3 shows no discernible pattern, and points are equally distributed above and below zero on the X-axis and to the left and right of zero on the Y-axis. Also, in the

residual plot, all points are within 3.3 and are distributed at random. As a result, the linearity and constant variance assumptions are satisfied.

Multicollinearity assumption

Another assumption of the regression analysis is variance inflation factor (VIF) values to test for multicollinearity. The term "collinear" refers to moving in tandem. The term multicollinearity refers to a situation in which independent variables are highly associated, violating the assumption of the predictors' independence. In the assessment of multicollinearity, the predictor (independent) variables are regressed upon other predictors.

Table 26: Coefficients – Multicollinearity assumption

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.882	3.152		1.549	.126		
	TFK	.296	.099	.253	2.993	.004	.517	1.933
	FMK	.095	.141	.048	.674	.503	.740	1.351
	FMS	.873	.100	.657	8.745	.000	.657	1.522

Accordingly, Table 26: illustrates that the VIF value for all independent variables is below 5. Each value is below 5, indicating that the Multicollinearity is not severe and the assumption is met. Furthermore, the absence of multicollinearity often makes the regression coefficients high reliable.

After testing all the assumptions, multiple regression analysis was done. The R-Square value is 0.718, which means the fitted regression model can explain 71.8% of the variation in business performance. Furthermore, it can be stated that 71.8% of the variation in business performance can be explained by the independent variables –

TFK, FMK, and f FMS. Adjusted R^2 has represented the modification of R^2 that adjusted for the number of explanatory in a model.

Table 27: ANOVA Table – Multiple regression

	Sum of Squares	Df	Mean Square	F	Significance
Regression	2091.834	3	697.278	64.574	.000[b]
Residual	820.654	76	10.798		
Total	2912.488	79			

Table 27 shows that the regression model accurately predicts the dependent variable. The overall regression model is statistically significant in this case because the F test is significant. As a result, it is possible to conclude that there is a positive relationship between financial literacy and the performance of SMEs in Sri Lanka.

According to the findings of (Pearl and Eileen, 2014), there is a positive relationship between financial literacy and small business success by removing the link between inadequate financial literacy and financial difficulties entrepreneurs face. Furthermore, several studies have found positive correlations between financial literacy and performance (Hilgert et al., 2003, Huston, 2010, Kidwell & Turrisi, 2004 & Lusardi, Mitchell, & Curto, 2010). As a result, the findings of this study are comparable to previous research. Using multiple linear regression analysis methods, Table 28 depicts the influence of the most critical financial literacy dimensions and business performance.

Table 28: Coefficients – Multiple regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

(Constant)	4.882	3.152		1.549	.126
TFK	.296	.099	.253	2.993	.004
FMK	.095	.141	.048	.674	.503
FMS	.873	.100	.657	8.745	.000

Accordingly, Table 28 illustrates the necessary information to predict b BP from TFK, FMK, and FMS as well as to determine whether those independent variables contribute statistically significantly to the model. Accordingly, The p-value for TFK is 0.004, which is less than 0.05. Thus, TFK is a significant predictor of business performance. The p-value for FMK is 0.503, which is higher than 0.05. Thus, FMK is not a significant predictor of business performance. So this variable is removed from the model. The p-value for FMS is 0.000, which is less than 0.05. Thus, FMS is a significant predictor of business performance. Accordingly, the regression equation of three independent variables and business performance is:

$$BP = 4.882 + 0.296\,TFK + \beta_4\,0.873$$

4.3 Correlation Analysis

In this study, the sub-objectives examine the relationship between independent variables - TFK, FMK, FMS, and the dependent variable BP.

Accordingly, using the Pearson's product-moment correlation with a 2-tailed test of significance, the correlation analysis was made to investigate the relationship between TFK, FMK, FMS, and BP.

Table 29: Correlations

	TFK	, FMK	FMS	BP
TFK	1			
FMK	.504**	1		

FMS	.581**	.229*	1	
BP	.659**	.326**	.815**	1

- *To examine the relationship between technical financial knowledge and business performance.*

The Pearson correlation between the two variables is 0.659, which is positive, according to Table 29. It demonstrates that TFK has a moderately positive relationship with BP. Furthermore, the correlation is statistically significant at 0.000 levels (2-tailed), less than 0.05. As a result, there is statistical evidence to support the claim that TFK and BP are related. Scholars and policymakers in both developing and developed countries have recognized the importance of TFK in the establishment and survival of SMEs, particularly in the agricultural sector, over the last decade (Wise, 2013).

- *To examine the relationship between financial market knowledge and business performance*

The Pearson correlation between the two variables is 0.326, which is positive, according to Table 29. It demonstrates that there is a moderately positive relationship between FMK and BP. However, the relationship is statistically significant because the correlation is significant at 0.003 (2-tailed) levels, less than 0.05. As a result, there is statistical evidence to support the claim that FMK and BP are related. According to a previous study (Richard and Emmanuel,2018), there is a positive relationship between, FMK and BP. As a result, this study is similar to that one.

- *To examine the relationship between financial management skills and business performance*

The Pearson correlation between the two variables is 0.815, which is positive, according to Table 29. It demonstrates that FMS, and BP have a strong positive relationship. Furthermore, the correlation is statistically significant at 0.000 levels (2-tailed), less than 0.05. As a result, there is statistical evidence to support the claim that FMS, and BP are related. Furthermore, the relationships are statistically significant, with Sig. (2

tailed) 0.05 between independent variables. The past study of (Richard and Emmanuel, 2018) has been discovered that there is a strong positive association between FMS and BP. The results are consistent with them.

5. Conclusion

This study can conclude that financial literacy is positively related to the business performance of SMEs in Sri Lanka. Also, the conclusions drawn from this study revealed a positive relationship between three independent variables – technical financial knowledge, financial market knowledge, and financial management skills on the business performance of SMEs. However, according to the findings, technical financial knowledge and financial management skills are the most influential factors affecting business performance among these variables. Financial market knowledge is not essential to the improvement of the business performance of SMEs. Therefore, high levels of technical financial knowledge and financial management skills among employees imply higher financial returns for SMEs. An increase in technical financial knowledge and financial management skills will be increased financial returns by 72%.

The study can also conclude that SMEs' monthly income level, owners' education level, the legal formation of SMEs, and the number of employees are the primary factors influencing financial literacy. The research provides insight to the business owners of SMEs on how they can make better decisions to improve business performance through financial literacy. The impact that financial literacy can make on business performance dimensions is evaluated and analyzed. They are technical financial knowledge and financial management skills. Moreover, this study adds new knowledge to prospect theory by the financial knowledge among owners to make decisions.

Therefore, business owners and policymakers should arrange training programs to improve employees' knowledge of financial literacy. The training can improve the knowledge on budgeting and planning, maintaining cash book, record keeping, cash flow forecasting, and good IT knowledge on finance. In addition to that, it should give current education on finance techniques such as current interest rates, financial statements, safety borrowing methods, inflation. Furthermore, it adds new knowledge

to the current research community on the impact of financial literacy on business performance.

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