Determinants of satisfactory entrepreneurial skills in retail businesses

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Abstract

Braamfontein is part of the central business district of Johannesburg, South Africa. It is home to vibrant local and international footwear and textile business enterprises. The objective of the study was to assess and evaluate factors that affect entrepreneurial skills in footwear and textile businesses in Braamfontein. As part of the survey, data was gathered from a stratified random sample of size 586 retail business operators in the footwear and textile sector. The level of entrepreneurial skills of retail operators was measured by using a composite index developed by Worku (2021A) and Worku (2021B). Results obtained from factor analysis showed that the level of entrepreneurial skills of retailers was significantly influenced by profitability, the ability to produce a business plan in which a niche market is identified, and the ability to produce adequate collateral and fixed assets to support business loan applications submitted to money-lending institutions such as commercial banks and microfinance institutions.

Key words: Retail businesses, Entrepreneurial skills, Factor analysis

Introduction and background to study

Braamfontein is the home of world class artists and theatres including the Nelson Mandela Theatre and the Joburg Theatre. Braamfontein is also a centre of attraction to footwear and textile retailers from all over the world. Braamfontein a key attraction to migrant entrepreneurs from the rest of Africa. It is well known for retail businesses in footwear and textile.As part of the study, data was collected fromretail operators working in the textile and footwear sector of Braamfontein by using a self-administered questionnaire. According to the Gauteng Provincial Government (2021), small enterprises create at least 50% of all jobs in Gauteng Province. According to Statistics South Africa (2021), small enterprises contribute about 34% of the Gross Domestic Product (GDP) of South Africa.

Studies conducted by Gregory and Rogerson (2019:178-193), Salim, El Barachi, Onyia and Mathew (2020:147-177) and Sekhwela and Samson (2020:21-29) indicate that the retail industry of Gauteng Province needs to be supported adequately financially and administratively. Although support is provided to the retail industry of Braamfontein by the Gauteng Provincial Government and the South African National Department of Trade, Industry and Competition (2021), the level of support provided to the industry is inadequate. There is a demand from emerging and poorly resourced entrepreneurs for tailor-made training opportunities on entrepreneurial and vocational skills as well as financial assistance. Nguyen, Tsai, Nguyen, Vu and Dao (2020:1005-1015) have shown that the financial performance and profitability of retail businesses depends upon the extent to which they exercise

fiscal discipline, and the practice of keeping proper financial records and documentation. Researchers such as Marivate (2014: 53-72) and Osifuye, Worku and Muchie (2020) have shown that emerging retail businesses often fail to document business transactions and maintain long-term relationships with their customers. Not enough is known about the level of entrepreneurial skills of retail business operators working in the footwear and textile sector of Braamfontein. Very few studies have measured the level of entrepreneurial skills in the footwear and textile sector of Braamfontein. In an attempt to fill the gap in the literature, the study has gathered empirical data from retail operators working in the footwear and textile sector of Braamfontein.

Literature review

Ranchhod and Daniels (2021:44-62) have shown that the unemployment rate in South Africa is about 35%. The authors have identified various policy-related difficulties that hinder economic growth at rates of 10% or more. The authors have pointed out that graduates produced by South African academic and vocational institutions do not have the set of skills that are required in industry, business and Government. Krugel (2021:22-25) has argued that the academic curriculum used in South African academic and vocational institutions needs to be radically overhauled by taking valuable lessons from countries such as Germany, South Korea and the Netherlands. Marivate (2014) and Fatoki (2018) have both shown that the set of skills that are required in the job market are not so easy to find in South Africa due to mismatch between the curriculum used for teaching learners and skills and expertise that are needed in industry. Herrington (2018) has found that more than 50% of start-up businesses fail before operating for 3 successive years of operation due to lack of entrepreneurial skills and difficulty in securing business loans.

Hashmi, Khushik, Gilal and Yongliang (2021:1-11) have assessed the main causes of unemployment in South Africa, Brazil, Russia, India and China, and have found that there is a dire need for overhauling the curriculum used for teaching in South African universities and technical training colleges. According to the authors, South African graduates possess relatively lower levels of vocational, technical, innovative and entrepreneurial skills in comparison with graduates from Brazil, Russia, India and China. Masoabi and Alexander (2021:1-20) have shown that the level of vocational, artisan, technical and entrepreneurial skills possessed by young South African graduates are not aligned adequately enough with the variety of skills that are essential for ensuring successful ventures and career paths. Herrington (2018) and Rogerson (2020) have shown that a major cause of bankruptcy in emerging South African businesses in all economic sectors is the lack of bookkeeping, auditing and accounting skills. Maheshwari, Gautam and Jaggi (2021:1875-1900) have shown that networking skills, the ability to conduct effective market related research by using business intelligence methods, the use of social media platforms, the use of online retail, and presentation skills are all highly valuable for ensuring profitability in retail businesses. Maziriri and Chivandi (2020) and Worku (2018:295-308) have shown that the ability of retailers to order goods from wholesale suppliers and distributors on credit ishighly advantageous to emerging businesses in the retail industry.

Allais, Schoer, Marock, Kgalema, Ramulongo and Sibiya (2021:649-662) have shown that lack of skills in marketing and inability to use appropriate business intelligence methods result in failure in retail businesses. Fatoki (2018:2527) has shown that poorly resourced businesses often fail to produce adequate collateral and fixed assets in order to be granted business loans by commercial banks. This failure often leads to bankruptcy in

emerging businesses in all economic sectors and all geographical regions of South Africa.

Most emerging businesses are unable to raise adequate collateral and fixed assets as well as evidence of successful banking in the course of business loan applications submitted to commercial banks. Microfinance institutions impose stringent loan repayment conditions as well as higher service fees and interest rates on borrowers. As a result, start-up businesses fail prematurely, and often before operating successfully for 3 successive years (Worku, 2018). Marivate (2014) and Fatoki (2018) have shown that business enterprises that fail to produce adequate collateral and fixed assets to support their loan applications are mostly owned and operated by people who lack managerial and entrepreneurial skills and fail to keep good working relationships with commercial banks and microfinance institutions. As such, they often fail to produce evidence of successful banking history and track record of loan repayment according to terms agreed with money-lenders.

The study conducted by Kanungo, Sethi and Biswal (2021:81-106) shows that it is highly valuable to provide initial seed money, mentoring, coaching and close supervisory assistance to emerging businesses. The main benefit of doing so is to alleviate abject poverty and unemployment. Gamble (2021:258-277) has argued that the South African Government has a duty to alleviate the need for adequate vocational and entrepreneurial skills among emerging businesses in South African townships, villages and cities. The author has shown that most emerging businesses are run by business operators who fail to produce business plans that are acceptable to money-lending institutions. Chigbu and Nekhwevha (2021:1-9) have shown that adverse labour conditions and the absence of an enabling working condition often stifle growth and profitability in retail businesses.

Objective of study

The overall objective of study was to determine influential predictors of entrepreneurial success in retail businesses in the Braamfontein suburb of Johannesburg. The specific objectives of study were to assess and quantify the relationship between the level of entrepreneurial skills in retail business operations (Y) and the following 6 predictor variables:

X1: Profitability of business
X2: The ability to draw up sound business plans
X3: The ability to secure business loans by producing adequate collateral and fixed assets
X4: Use of business intelligence methods for marketing and networking
X5: Bookkeeping, auditing and accounting skills
X6: The ability to maintain a good working relationship with customers

Literature review

The study is guided by the innovation theory of entrepreneurship proposed by Joseph Schumpeter (1982:244). The same theory has been used by Ying, Sindakis, Aggarwal, Chen and Su (2021:390-400) to show that entrepreneurial success is dependent upon the ability of organisations to keep their customers satisfied by using up-to-date, innovative and creative methods of service delivery to their customers. Figure 3 shows a diagram for key findings reported by Worku (2021A: 1380-1390) and Worku (2021B: 1391-1396) in which the author has found that entrepreneurial success in retail businesses is significantly influenced by profitability, the ability to draw up a business plan that identifies a niche market, the ability to secure business loans by producing adequate collateral and fixed assets, the ability to assess markets and network by using business intelligence methods, bookkeeping, auditing and accounting skills, and the

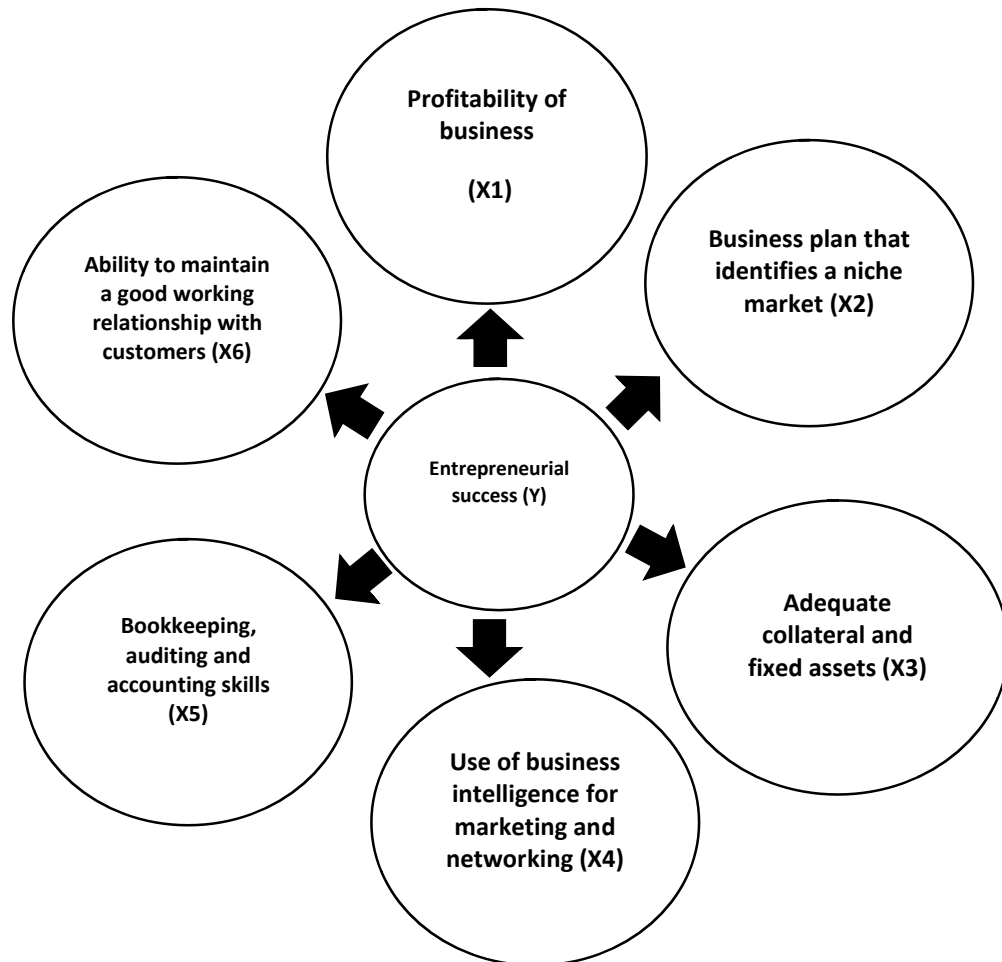ability to maintain a good working relationship with customers.

Figure 3: Determinants of entrepreneurial success in retail businesses
Source: Worku (2021A: 1380-1390) and Worku (2021B: 1391-1396)

Profitability of retail business operation (X1)

Studies conducted by Nguyen, Tsai, Nguyen, Vu and Dao (2020:1005-1015), Marivate (2014), Fatoki (2018), Herrington (2018) and Worku (2018:295-308), Worku (2021A: 1380-1390) and Worku (2021B: 1391-1396) have found that sustained profitability is a reliable indicator of entrepreneurial skills and competence in all economic sectors.

The ability to draw up sound business plans (X2)

McDonald and Eisenhardt (2020:483-523) have shown that the ability of retail business operators to draw up sound business plans in which niche market areas are identified is a key indicator of profitability. A business plan is a road map to be followed in an attempt to identify a gap for which there is a solid demand, a strategy to be followed in filling the gap, and an evidence of profitability in the process of rendering services to customers who require the services. Writing a good business plan requires the ability to conduct a critical market research.

The ability to secure business loans by producing adequate collateral and fixed assets (X3)

Toxopeus, Achterberg and Polzin (2021:2773-2795) have shown that only viable businesses can meet the demand for collateral and fixed assets. The authors have shown that such a demand cannot be met adequately by poorly-resourced emerging retail businesses due to inability to set aside part of their daily revenue as a saving. Papadimitri, Pasiouras and Tasiou (2021:765-784) have shown that nascent retailers are often forced into bankruptcy due to their inability to break out of the bondage of paying back existing business loans. The authors have shown that the ability to produce adequate collateral and fixed assets is a key indicator of profitability and entrepreneurial competence.

Use of business intelligence for marketing and networking (X4)

Chen, Qi, Shen and Xu (2021:2498-2521) have shown that effective networking and a track record of trust and loyalty enable retailers to order merchandise on credit from wholesale suppliers. The authors have shown that retailers need to maintain their credibility and loyalty by working hard and by using highly innovative methods of social media, networking, e-commerce applications, online and digital marketing.

Bookkeeping, auditing and accounting skills (X5)

Li, Woods and Wu (2020:23-46) have shown that proper bookkeeping, auditing and accounting skills are essential for ensuring profitability in retail business operations on a day-to-day basis. Such an ability requires discipline in effective day-to-day record-keeping. According to the authors, the ability to keep accurate records enables retailers to place orders and sell goods effectively and according to plan. The authors have pointed out that local municipalities and national ministries of trade need to provide regular training opportunities so that emerging retailers develop adequate bookkeeping, auditing and accounting skills. Baporikar and Akino (2020) have argued that such training opportunities are essential for promoting successful women entrepreneurship and for alleviating poverty and unemployment. Wong, George and Tanima (2021:525-550) have shown that the ability to keep financial records in order enables retailers to be extra cautious on how they use their financial resources. The ability to ensure fiscal discipline in retail businesses is a measure of accountability, responsibility and good business leadership.

The ability to maintain a good working relationship with customers (X6)

Stjepic, Pejic Bach and Bosilj Vuksic (2021:58) have shown the numerous benefits of business intelligence methods for ensuring profitability in retail businesses in all economic sectors. Nithya and Kiruthika (2021:3139-3150) have shown that the effective use of business intelligence enables retailers to assess supply, demand, selling price and customer preference in local markets along with empirical data and highly valuable information about promotional methods, marketing strategies, networking and sourcing methods that are used by business rivals and competitors in local markets.

Methods and materials of study

Data was gathered from 586 eligible owners and operators of footwear and textile businesses by using a self-administered structured questionnaire of study. The questionnaire of study was an adaptation of a questionnaire developed by Worku (2018:295-308) for conducting a similar study. Content validity (Fellows and Liu, 2021) was ensured by way of conducting a pilot study in the field. The pilot study was necessary for pre-testing and validating the questionnaire of study before it was used for actual data collection in the field. The Cronbach Alpha test (Pandey and Pandey, 2021) was used for

ensuring internal consistency and reliability in tools used for measuring the variables of study. All Cronbach Alpha coefficients had large magnitudes (magnitudes of 0.75 or above) as is shown in Table 3, thereby confirming that the tools used for the measurement of variables were internally consistent and reliable enough. Table 3 shows the list of variables of study used for conducting the study. The list provides details of the dependent variable of study (Y) and 6 independent variables of study that are known to affect the level of entrepreneurial skills in retail business operations in South Africa and other Sub-Saharan African countries. Five of the 7 variables of study were measured by using a 5-point ordinal scale (Inadequate, Below average, Average, Above average, and Adequate). The remaining 2 of the 7 variables were dichotomous (variables with only 2 possible outcomes). A composite index developed by Worku (2021A: 1380-1390; 2021B: 1391-1396) was used for measuring the levels of entrepreneurial skills of the 586 retail business operators who participated in the study.

Table 3: List of variables of study (n=586)

Variables of study	Type of variable	Number of possible values	Magnitudes of Cronbach Alpha coefficients
Level of entrepreneurial skills	Dependent	2	0.8306
Profitability	Independent	2	0.8212
Business plan	Independent	5	0.8117
Collateral	Independent	5	0.8053
Business intelligence	Independent	5	0.7989
Bookkeeping	Independent	5	0.7883
Working relationship	Independent	5	0.7756

Pearson's chi-square tests of associations (Pardoe, 2020) were performed in order to perform a preliminary screening of variables. Confirmatory factor analysis (Westfall and Arias, 2020) was performed in order to find out if factor analysis was appropriate for the data set. The correlation matrix obtained from factor analysis confirmed that the use of factor analysis was justified. Results obtained from factor analysis were subsequently used for performing structural equations modelling. In so doing, 3 highly influential predictors of entrepreneurial success in retail businesses were identified. Various goodness-of-fit tests (Montgomery, Peck&Vining, 2021)were used for assessing the degree of reliability of regression estimates obtained from structural equations modelling.

Results obtained from data analyses
Table 1shows a frequency table for the overall characteristics of the 586 retailers who were selected into the survey. About 65% of retailers had adequate skills in entrepreneurship. About 69% of retail businesses were profitable. About 70% of retailers were capable of drawing up a business plan that shows a niche area in the local market. About 67% of retailers were capable of producing adequate collateral and fixed assets to support business loan applications.

Table 1: General characteristics of retailers (n=586)

Variable of study	Frequency (Percentage)
Level of entrepreneurial skills	Adequate: 383 (65.36%)
	Inadequate: 203 (34.64%)
Profitability of retail business	Profitable: 406 (69.28%)
	Not profitable: 180 (30.72%)
Ability to draw up a business plan that identifies niche area in local market	Good: 59 (10.07%)
	Above average: 104(17.75%)
	Average: 244 (41.64%)
	Below average: 118 (20.14%)
	Poor: 61 (10.41%)
Ability to raise adequate collateral and fixed assets to support business loan applications	Good: 63 (10.75%)
	Above average: 107 (18.26%)
	Average: 221 (37.71%)
	Below average: 123 (20.99%)
	Poor: 72 (12.29%)

Table 2 shows a frequency table for Ability to use business intelligence for marketing and networking, the level of bookkeeping, auditing and accounting skills, and the degree to which retailers can maintain a good working relationship with their customers. About 59% of retailers could use business intelligence methods for marketing and networking purposes. About 61% of retailers had adequate bookkeeping, auditing and accounting skills. About 82% of retailers had the ability to maintain a good working relationship with their customers.

Table 2: Ability to use business intelligence methods (n=586)

Variable of study	Frequency (Percentage)
Ability to use business intelligence for marketing and networking	Good: 49 (8.36%)
	Above average: 88 (15.02%)
	Average: 207 (35.32%)
	Below average: 154 (26.28%)
	Poor: 88 (15.02%)
Level of bookkeeping, auditing and accounting skills	Good: 52 (8.87%)
	Above average: 92 (15.70%)
	Average: 209 (35.67%)
	Below average: 149 (25.43%)
	Poor: 84 (14.33%)
Ability to maintain a good working relationship with customers	Good: 263 (44.88%)
	Above average: 114 (19.45%)
	Average: 108 (18.43%)
	Below average: 57 (9.73%)
	Poor: 44 (7.51%)

Table 3 shows that about 14% of retailers had worked in retail businesses for five years or less when the survey was conducted. The percentage of retailers with an experience of 21 years or more was just under 5%. About 32% of retailers had worked as retailers for 11 to 15 years. The percentage of textile retailers was 44%. The percentage of footwear retailers was 43%. The percentage of retailers who worked on textiles and footwear was 13%. The percentage of owners of businesses was 57%. About 11% of retailers were administrators. The percentage of employed managers was 21%. The percentage of shareholders was 8%.

About 4% of retailers worked as both owner and manager.

Table 3: Length of experience in retail business operation (n=586)

Variable of study	Frequency (Percentage)
Length of experience in retail business operation	5 years or less: 80 (13.65%) 6 to 10 years: 184 (31.40%) 11 to 15 years: 190 (32.42%) 16 to 20 years: 105 (17.92%) 21 years or more: 27 (4.61%)
Category of retail business operation	Textile: 258 (44.03%) Footwear: 253 (43.17%) Both textile and footwear: 75 (12.80%)
Position held by respondents in retail businesses	Owner: 334 (57.00%) Administrator: 62 (10.58%) Owner and manager: 24 (4.10%) Employed manager: 122 (20.82%) Shareholder: 44 (7.51%)

Factor analysis is a data reduction technique used to reduce a large number of variables to a smaller set of underlying factors that summarise the essential information contained in the variables (Murray-Smith & Johansen, 2020). Factor analysis entails calculation of the correlation matrix of variables used for performing data analysis, the extraction of initial estimates, and the rotation of factors that are extracted for achieving a reliable solution.

Factor analysis was used for reducing the number of factors that had to be analysed. The method produced 5 influential predictor variables that influenced profitability in retail businesses. Factor analysis is useful in cases where the correlation among the variables of study is significant. The correlation matrix in this study showed that several pairs of variables had correlations exceeding 0.3, thereby showing that factor analysis was appropriate. In this study, a cutoff point of 0.3 was used as is recommended by (Murray-Smith & Johansen, 2020).

Magnitudes of the Cronbach Alpha statistic were obtained for each variable used in factor analysis. Each magnitude was above 0.75, indicating that there was enough reliability and internal consistency in the items and scales used for the measurement of factors that

affect profitability in retail businesses. The quality of information provided in the correlation matrix was assessed by using a test of sphericity defined by Bartlet (Murray-Smith and Johansen, 2020) and gave a magnitude of 0.622. This figure was above 0.50. This showed that the information provided in the correlation matrix was valuable enough for performing factor analysis by using the principal component method of extracting influential factors.

Results obtained from univariate and bivariate analysiswere used for performing factor analysis (Mueller & Hancock, 2018). Factor analysis is appropriate in cases where there is a need for data reduction and high correlation among pairs of variables. Factor analysis identifies influential predictor variables based on Eigen values (Mueller & Hancock, 2018).

Table 4 shows a correlation matrix for 6 variables that are associated with the level of entrepreneurial skills. Most of the correlation coefficients in the table are larger than 0.30. According to Chatfield and Collins (2018), this indicates that factor analysis is suitable as a method of data reduction. Table 4 also shows that the magnitudes of all Cronbach Alpha coefficients is larger than 0.75 (the cut-off point). This indicates that the measurements used for

quantifying the variables used for performing factor analysis are adequate enough(Murray-Smith &Johansen, 2020).

Table 4: Correlation matrix for 6 predictors of entrepreneurial skills (n=586)

Variable of study associated with Level of entrepreneurial skills	Observed chi-square statistic	P-value	Cronbach's Alpha coefficient
Profitability	79.6236	0.0000	0.8212
Business plan	72.5551	0.0000	0.8117
Collateral	68.3546	0.0000	0.8053
Business intelligence	66.0498	0.0000	0.7989
Bookkeeping	61.6141	0.0000	0.7883
Working relationship	54.1924	0.0000	0.7756

Chatfield and Collins (2018) recommend the estimation of Cronbach Alpha coefficients for variables that are used in factor analysis. Table 5shows Cronbach Alpha coefficients estimated for the 6 variables used in factor analysis. The table shows that all Cronbach Alpha coefficients are larger than the cut-off point of 0.75. This fact confirms that all 6 predictor variables are valuable for performing factor analysis. Table 5 shows a correlation matrix for the 6 predictors of entrepreneurial skills. It can be seen that the correlation coefficients are all larger than the cut-off point of 0.30, thereby indicating that the use of factor analysis as a method of data reduction is in order (Chatfield&Collins, 2018).

Table 5: Correlation matrix for 6 predictors of entrepreneurial skills (n=586)

	Profitability	Business plan	Collateral	Business intelligence	Bookkeeping	Working relationship
Profitability	1.000	0.382	0.364	0.347	0.319	0.338
Business plan	0.382	1.000	0.344	0.341	0.312	0.351
Collateral	0.364	0.344	1.000	0.355	0.305	0.326
Business intelligence	0.347	0.341	0.355	1.000	0.322	0.348
Bookkeeping	0.319	0.312	0.305	0.322	1.000	0.377
Working relationship	0.338	0.351	0.326	0.348	0.377	1.000

Two commonly used diagnostic tests for factor analysis were used to ascertain the suitability of factor analysis. These diagnostic tests were the Kaiser–Meyer–Olkin (KMO) test and Bartlett's test. The KMO test is commonly used for finding out if the sample size of study and sampling technique used for selecting eligible participants into the study are both appropriate. In cases where the sample size of study and sampling technique are both appropriate, the variables used for analysis account for a significant percentage of variability in the dependent variable of study (the level of entrepreneurial skills of retail

business operators). KMO and Bartlett's test (Mueller & Hancock, 2018). Table 6 shows that the observed value of the KMO statistic (0.843) is larger than 0.80, thereby showing that sampling adequacy is fairly well ensured.

Table 6: Goodness-of-fit measures for KMO and Bartlett's test (n=586)

Name of goodness-of-fit statistic	Observed value of statistic
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.843
Observed value of Bartlett's test of Sphericity statistic	79.464
Degrees of freedom of Bartlett's test of Sphericity statistic	6
P-value for Bartlett's test of Sphericity	0.0000

Table 7 shows statistics for communalities that are extracted by using principal axis factoring (Mueller & Hancock, 2018). The observed values of 3 of the 6 communalities are larger than 0.5 (the cut-off point). This indicates that 3 of the 6 factors used for factor analysis could be extracted by using principal axis factoring. These 3 factors are profitability, business plan, and collateral.

Table 7: Communalities extracted by using principal axis factoring (n=586)

Predictor variable associated with communality	Magnitudes of extracted communalities
Profitability	0.704
Business plan	0.688
Collateral	0.619
Business intelligence	0.448
Bookkeeping	0.367
Working relationship	0.353

Table 8 shows components that are extracted by using the principal axis factoring method. Six factors were extracted by using the principal axis factoring method. The criterion for extraction is having Eigen values that are greater than 1. A predictor variable is said to be influential if values of Factors 1 and 2 are both significantly different from 0, and are positive. Based on this criteria, 3 of the 6 variables (Profitability, Business plan and Collateral) are extracted based on the principal axis factoring method

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Table 8: Components extracted by using principal axis factoring (n=586)

Predictor variable	Component 1	Component 2
Profitability	0.738	0.759
Business plan	0.686	0.688
Collateral	0.581	0.589
Business intelligence	0.284	0.292
Bookkeeping	0.048	0.049
Working relationship	0.044	0.046

Table 9 shows Eigen values estimated for 3 influential predictors of profitability identified by performing factor analysis. These 3 influential predictor variables of profitability have Eigen values that are significantly larger than the number 1. These 3 predictor variables are Profitability, Business plan, and Collateral. The 3 extracted factors jointly account for 81.908% of the total variation in the dependent variable of study (level of entrepreneurial skills).

Table 9: Eigen values from factor analysis (n=586)

Predictor variable	Magnitude of Eigen value	Magnitudes of percentage variances explained by predictor variables	Cumulative percentages of variances explained by predictor variables
Profitability	1.644	30.884	30.884
Business plan	1.596	26.473	57.357
Collateral	1.488	24.551	81.908
Business intelligence	0.941	8.187	90.095
Bookkeeping	0.882	5.498	95.593
Working relationship	0.769	4.407	100.000

Figure 1 shows a scree plot obtained from factor analysis. The plot shows that the first 3 most influential predictor variables (Profitability, Business plan, and Collateral) account for most of the variability in the dependent variable of study (profitability in retail businesses).
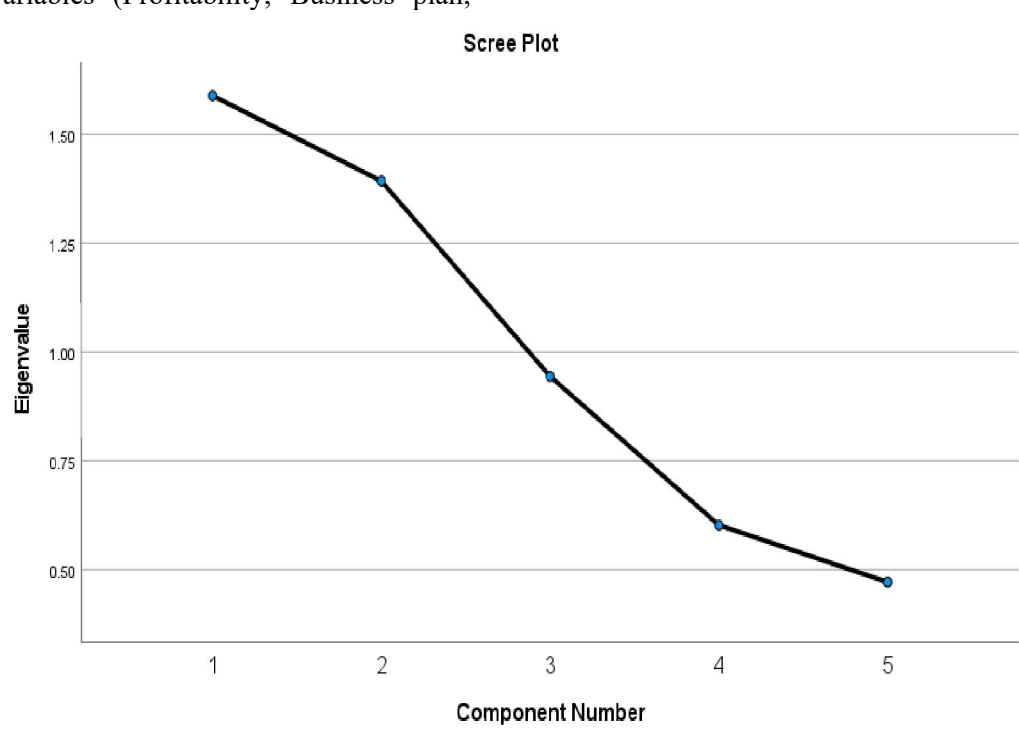
Figure 1: Scree plot obtained from factor analysis

Table 10 shows results obtained from ordered logit regression analysis. The table shows that level of entrepreneurial skills is significantly influenced by profitability, business plan, and collateral. These findings are in agreement with those obtained from factor analysis.

Table 10: Odds Ratios from ordered logistic regression analysis (n=586)

Predictor variable	P-value	Odds Ratio	95% Confidence Interval of Odds Ratio
Profitability	0.0000	3.61	(2.85,　7.02)
Business plan	0.0000	3.55	(2.78,　6.32)
Collateral	0.0000	2.94	(2.19,　5.84)

The percentage of overall correct classification was 89.04%. The P-value from the Hosmer-Lemeshow goodness-of-fit test was $0.1026 > 0.05$. These findings show that odds ratios estimated from ordered logit regression analysis are reliable.

Interpretation of significant odds ratios

The odds ratio of the variable "Profitability" is equal to 3.61. This indicates that retail businesses that are profitable are 3.61 times likely to be operated by people who possess adequate entrepreneurial skills in comparison with retail businesses that are not profitable.

The odds ratio of the variable "Business plan" is equal to 3.55. This indicates that retail businesses that are operated by people who are capable of producing business plans in which niche markets are identified in local markets are 3.55 times more likely to be operated by people who possess adequate entrepreneurial skills in comparison with retail businesses that are not capable of producing business plans in which niche markets are identified.

The odds ratio of the variable "Collateral" is equal to 2.94. This indicates that retail businesses that are operated by people who are capable of producing adequate collateral to support their application for business loans are 2.94 times more likely to be operated by people who possess adequate entrepreneurial skills in comparison with retail businesses that are not capable of producing adequate collateral to support their application for business loans.

These findings are consistent with findings obtained from ordered logit regression analysis.

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