“Development of sustainable SMEs: conceptualized criteria for measuring the sustainability of youth-owned small retail businesses in selected rural areas of South Africa”

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DEVELOPMENT OF SUSTAINABLE SMES: CONCEPTUALIZED CRITERIA FOR MEASURING THE SUSTAINABILITY OF YOUTH-OWNED SMALL RETAIL BUSINESSES IN SELECTED RURAL AREAS OF SOUTH AFRICA

Abstract

High failure rates among youth-owneds mall retail businesses has prompted the need for strengthening sustainability in the sector. The current paper sought to establish a framework for use in determining youth-owned small retail business sustainability. An exploratory mixed study approach was followed (qualitative and quantitative methods). Snowball and cluster sampling procedures were utilised to select respondents. Data were collected using semi-structured interview guides and close ended questionnaires. Qualitative data was analysed using the Atlas.ti version 7 software network techniques, while the IBM SPSS version 25 techniques were utilised to generate quantitative results. Principal component analysis outcomes reflected that the framework for measuring youth-owned small retail business sustainability comprises 6 major components. The components included security measures (18.01%), outsourcing abilities (13.70%), marketing strategies (10.07%), risk management (8.54%), financial management (8.43%) and innovation (7.89%). The six pillars of the criteria were utilised to further develop time specific indices that were expressed in the following formula: R1= f (SM1, OA1, MS1, RM1, FM1, I1, S1) + e. Based on this formula, the sustainability of youth-owned small retail businesses can be assessed based on the six pillars on the right side of the equation and other subjective attributes at a particular time. The current study provided a framework that can be used by managers and practitioners to determine key sustainability building blocks of youth-owned small retail business at a particular time and track how they change over time.

Keywords criteria, indices, measuring, sustainability, small retail business, start-up

JEL Classification L18, 010

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РОЗВИТОК СТІЙКИХ МСП: КОНЦЕПТУАЛЬНІ КРИТЕРІЇ ДЛЯ ВИМІРЮВАННЯ СТІЙКОСТІ МОЛОДИХ ПІДПРИЄМСТВ РОЗДРІБНОЇ ТОРГІВЛІ В ОКРЕМИХ СІЛЬСЬКИХ РАЙОНАХ ПІВДЕННОЇ АФРИКИ

Анотація

Високий ступінь невдачі серед молодих підприємств роздрібної торгівлі зумовив потребу у підвищенні стійкості галузі. Метою статті є розробка моделі для визначення стійкості молодих підприємств роздрібної торгівлі. Використано якісні та кількісні методи пошукового змішаного дослідження. Для вибору респондентів було використано метод сніжного кому та кластерну вибірку. Дані було зібрано за допомогою напівструктурованого опитування та анкетування з питаннями закритого типу. Якісні дані було проаналізовано за допомогою мережевих методів програми Atlas.ti версії 7. Для отримання кількісних результатів було

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використано програму IBM SPSS версії 25. Результати аналізу основних компонентів свідчать про те, що модель для вимірювання стійкості молодих підприємств роздрібної торгівлі складається з 6 основних компонентів: заходи безпеки (18.01%), можливості аутсорсингу (13.70%), маркетингові стратегії (10.07%), управління ризиками (8.54%), фінансове управління (8.43%), інновації (7.89%). Для подальшої розробки часових показників, виражених у формулі R1= *f* (SM1, OA1, MS1, RM1, FM1, I1, S1) + e, було використано шість основних компонентів цих критеріїв. На основі цієї формули можна зробити оцінку стійкості молодих підприємств роздрібної торгівлі на основі шести основних компонентів з правого боку рівняння та інших суб'єктивних ознак в конкретний час. У статті представлено модель для керівників і практиків для визначення ключових складових формування стійкості молодих підприємств роздрібної торгівлі в конкретний час і відслідковування їх змін з часом.

Ключові слова: критерії, показники, вимірювання, стійкість, малий роздрібний бізнес, молодь

Класифікація JEL: L18, 010

INTRODUCTION

Small retail business sustainability is increasingly gaining recognition from development agencies and researchers. The current turbulent environment in both world and local economies have, in general, enlightened the need for small business to be resilient. Despite this need, Sanchis & Poler (2014) laments the scarcity of literature on approaches to measuring sustainability of small businesses in general. Donaldson (2012) also highlighted the limitation of research in the townships and informal settlements to address township specific issues. In particular, there is no specific and universal criteria for measuring small retail business sustainability. As a result, Erol et al. (2010) recommends the need for building knowledge related to approaches for measuring small retail business sustainability in particular. This is due to the fact that, small retail businesses have a greater potential to contribute to national economic growth and youth-owned development. Conferring to this background, it becomes important to develop criteria for measuring youth-owned small retail business sustainability. The objectives of this article were to (a) Identify the sustainability attributes of youth-owned small retail businesses (b) develop a conceptualised criteria for measuring sustainability of youth-owned small retail businesses. This will be the first step towards enhancing the sustainability in the sector.

1. LITERATURE REVIEW

In general, small and medium enterprises (SMEs) are recognized as a vehicle for employment generation, economic growth and development in countries that have conducive investment climate (Fernandes & Chamsa, 2014). In Europe, they play an intermediary role between producers, manufactures and customers (Bobe & Dragomir, 2010). The same can be said for Asian countries such as China, India and Pakistan. In particular, rural SMEs produces about one-third of China's GDP since 1996 and employed 130 million rural workers. India possess the largest retail sector in the world (Dholakia et al., 2018) while in Pakistan approximately 85% of the population depends on entrepreneurship thus, indicating the sectors' significance to the county's economy (Jan et al., 2013). In Africa, Ilegbinosa & Jumbo (2015) report that, small retailers contribute over 50% towards the Gross Domestic Product (GDP) in most developing countries. They further contribute towards poverty alleviation through job creation (Adebayo & Kavoos, 2016; Alaye-Organ, 2012). In South Africa, small independent retailers contribute between 36% and 45% towards the South African GDP and constitute 60% of the labor force (Naidoo, 2016). As a result, Simons (2012) conclude that, small business development is the possible answer to the economic quagmire in Africa, South Africa included. Due to the benefits associated with small businesses, the South African government has prioritized the sector in order to reduce high unemployment (Oni & Fatoki, 2013).

Despite recent government and private sector interventions across the world to promote the involvement of youth-owned in small retail businesses as a tool for addressing high unemployment and poverty rates, success in the sector remains a pipe dream. For instance, Fernandes and Chamsa (2014) claim that, traditional small retail shops are on the decline Europe. In Africa, a large number of SMEs fail within the first year of operation (Adis et al., 2014). Likewise, Bowen et al. (2009) Laments that three out of five businesses fail within the first few months of operation. A similar trend is apparent in South Africa where an estimated 70% to 80% SMEs fail to grow or collapse (Fatoki, 2014; Adeniran & Jonhston, 2011). Owale and Garwe (2010) also state that, new SMEs have achieved limited growth in South Africa despite government support. In Limpopo province, for example, it has been estimated that 60% of retail businesses collapse before reaching maturity (LEDA, 2013).

In order to be successful and sustainable, small retail businesses in townships and rural areas must not only excel in their growth, but also become sustainable (Maclean et al., 2013; Agbenyegah et al, 2013; Hua et al., 2015). Achieving sustainability status and growth is an impossible goal, without outlining frameworks for use in determining appropriate sustainability drivers and targeted interventions. Various frameworks for measuring sustainability exist in different fields. These frameworks differ in terms of scale, focus, method of analysis and purpose. Consequently, it is difficult to compare the frameworks or attempt to apply a one size fit all approach. The technical differences between the various approaches generally relate to the choice of indicators/ characteristics and the way they are weighted. Levine (2014) criticized most of the existing models for choosing generic characteristics of sustainability based on judgment rather than empirical evidence or analysis of vulnerability. This is evidenced by limited longitudinal studies for determining those characteristics. Contrary to the generic use of objective indicators and characteristics of sustainability, Bene et al. (2016) argues that sustainability is determined by more than tangible factors such as assets, but also subjectively constructed elements.

Other frameworks (e.g. characteristic based approaches such as the Oxfam's Multi-Dimensional Approach) attempts to identify reliable determinants of household and community level sustainability that can be assessed prior to shocks occurring (Hughes & Fuller, 2013; Oxfam GB, 2013; Sturgess, 2017). However, the frameworks fail to account for the sustainability changes over time (Frankenberger & Nelson 2013; Bene et al., 2012). Furthermore, most character based approaches reduces sustainability into a single score by using a particular threshold. Against this practice, Levine (2014) argues that, sustainability assessment approaches must leave space for differences of opinion about the available alternative strategies. For this reason, characteristic measures of sustainability should be treated as predictors of likelihood rather than its constituents.

Most of the frameworks for measuring sustainability have also suggested approaches that require complex mathematical modelling and calculation of sustainability (Arianoutsou et al., 2011; Zobell, 2011). This make it difficult for practitioners to apply the models. Consequently, Sancis & Poler (2014) lament the scarcity of approaches that guide small businesses to measure and analyse their sustainability capacity. Yet, Dalziel & McManus (2004) emphasise the significance of measurement approaches for achieving sustainability within the small business sector. The use of single methodologies in frameworks (e.g. Gibson et al., 2010; Demmer et al., 2011; Jackson & Stoel, 2011) have also been criticised for lack of rigour. Given this gap in methodological utilisation, Erol et al. (2010) and Levine (2014) recommended the use of more intensive methodologies (mixed studies) in order to develop dynamic measurement approaches of sustainability.

The weaknesses identified in frameworks for measuring sustainability informed the need to develop a sector specific framework for small retail business sustainability. As a result, the current paper presents a conceptualised criteria for measuring the sustainability of youth-owned-run small retail businesses in selected rural areas of South Africa based. The criteria comprise key attributes of sustainability. The resultant criteria provide a checklist for determining the most appropriate sustainability attributes for youth-owned-run small retail businesses at a particular time. Going forward, the criteria idealistically assists in tracking changes in sustainability attributes over time and informs appropriate adjustments.

2. THEORETICAL FRAMEWORK

The process approach by Wreathal (2006) guided the development of the criteria for measuring small retail business sustainability in this paper. Central to the approach is the assumption that sustainability is a continuous process that spans from pre-event to post-event recovery (Haimes et al., 2008). In the context of small retail businesses, pre-event tasks include threat detection and risk projection techniques. On the other hand, prevention and adaptation techniques are post-event attributes necessary for recovery. Based on this approach, the ability of a business to predict threats, find appropriate responsive actions to either prevent or reduce damage and adapt in order to recover are critical pillars of sustainability. Wreathall (2006) further stipulate that performance measures of sustainability are attained through a comprehensive analysis of the pre-event and post-event business tasks.

Another framework by Westrum (2006) further emphasized the need to categorize disruptive events according to their potential to disrupt a system and their origin. Classification of threats enables businesses to take preventive

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actions and model response actions in case of that disruption. Therefore, a categorization of disruptive events and their consequences can be used to model and predict a sustainability measure based on past events. Ultimately, a database of threats and their potential impact based on different scenarios can be a basis of sustainability measurement. The value tree method which is imbedded in the multi-attribute utility theory was also utilized to disintegrate complex operational sustainability into specific attributes. The attributes are recognized as performance measures that can be used to measure sustainability (Stolker et al., 2007). The theory further highlights the need to prioritize the attributes through assigning weights. The value tree method was utilised to classify sustainability attributes into three major categories (detection, prevention and adaption attributes) and related subgroups. Prioritization and weighing supports decision making to address sustainability problems in business.

3. METHODS AND MATERIALS

The study was conducted in Thulamela Municipality of Vhembe District. The District is situated in the northern part of Limpopo Province which also borders South Africa and Zimbabwe. The District is made up of Thulamela, Makhado, Musina and LIM345 Municipalities. The municipality has a high youth-owned unemployment rate (58%), a fair share of small retail businesses and a larger rural population. Approximately 47% of the entire Vhembe district's population lives in Thulamela Local Municipality (Statistics South Africa, 2011). Its main town centre Thohoyandou is surrounded by rural communities. Business and trade sectors are the major employers in the Municipality. Approximately between 2,100 people are employed in the trade and business sector, respectively (Thulamela local municipality report, 2016).

An exploratory sequentially integrated mixed study approach (qualitative and quantitative methods) was followed in two phases. A qualitative approach (explorative case study) was employed in the first phase. Lack of information regarding sustainability drivers in the small retail businesses sector necessitated the use of an explorative case study. However, case study results are often not widely applicable in real life and thus difficult to generalise (Tellis, 1997; Babbie & Mouton, 2010). For this reason, a broader cross-sectional survey design was further utilised in the second phase. In the survey, the sample size was increased, data was triangulated, and statistical analysis tools were utilised in order to make inferences and establish the appropriate sustainability attributes. As illustrated by Andrew & Halcomb (2006), applying both qualitative and quantitative methods, assists in extracting the strengths and diminish the weaknesses in both approaches within a single study.

A multistage sampling technique involving cluster and snowball sampling techniques was utilized to select 20 youth-owned small retail business owners and 18 customers in the first qualitative study phase. As illustrated by Babbie & Mouton (2010) Cluster sampling is ideal when the elements of population are spread over a wide geographical area and the population is divided into sub-groups on the basis of their geographical location. Snowball sampling is useful when approaching populations that are not readily available or not known (Dragan & Isaic-Maniu, 2013). The lack of data base for informal youth-owned retailers necessitated the use of snowball sampling in this project. The same sampling procedures were utilised to select 255 youth-owned retailers in the second quantitative approach phase in a similar study area. Data was collected using semi-structured interview guides and citizen juries in the first phase. The qualitative results informed the development of a close ended questionnaire. The Likert scale ranked questionnaires were meant to determine the appropriateness of sustainability drivers identified in the first phase as well as facilitating objectivity and rigour. The questionnaire was pre-tested prior to data collection.

Qualitative data was analysed using the Atlas.ti version 7 software. Atlas.ti is a powerful workbench for qualitative data analysis, mainly for large sections of text, visual and audio data. The software is ideal for text analysis and interpretation using coding and annotation techniques (Smit, 2002). The network diagram tool was used creating networks and outcome linkages between codes as well as quotations.

Quantitative data was analysed using the IBM-SPSS version 25. The Principal Component Analysis (PCA) was utilised. Principal Component analysis is the common method for developing sustainability measurement frameworks due to its ability to reduce many variables to a manageable number (Melecký & Staníčková, 2015; Drost, 2011).

For this reason it became the most ideal analysis technique for reducing many sustainability attributes into a few variables that informed the criteria for measuring sustainability. The Principal Component Analysis technique was further utilised to develop indices. There is no universal method for constructing indices. The choice of technique is based on the type of data, particular application and knowledge expert (Matteo & Pareto, 2013). Most of the sustainability indices were developed using the PCA (Gwatkin et al., 2000; Mckenzie, 2003; FAO, 2012; RIMA, 2012). This is due to the simplicity and ability of the PCA technique to produce weighted scores.

4. RESULTS

4.1. Resilience attributes

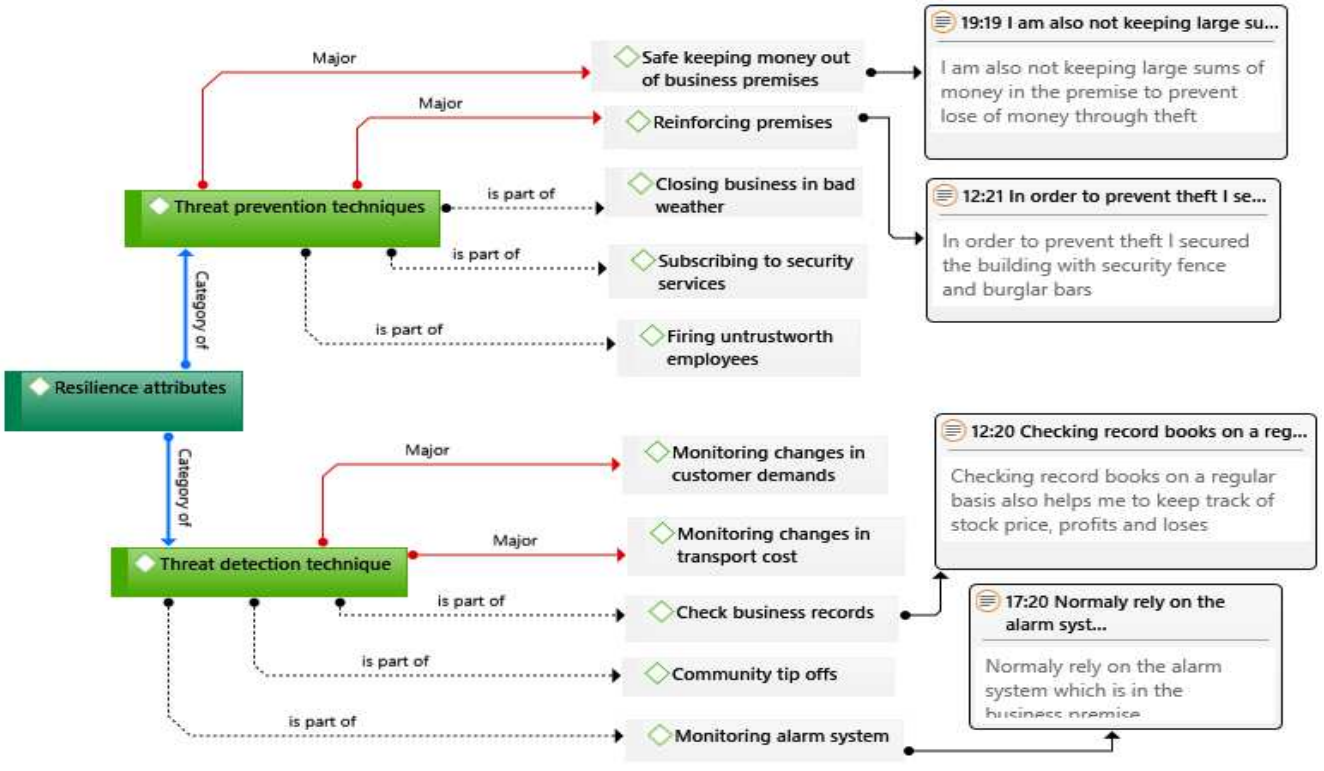
This section present sustainability attributes that were obtained through the qualitative approach. The attributes were categorised into three major sustainability capacities that encompassed detection, prevention and adaptation business mechanisms. The distinct attributes of sustainability are discussed in the following sub-sections.

4.2. Threat detection techniques

Results revealed five major threat detection techniques critical to youth-owned small retailers. Figure 1 shows that the majority of participants relied on monitoring changes in customer demand. This was done through informal customer surveys and observations. Consequently, changes in any of the trends would prompt simultaneous action in order to avoid loses. Results also indicated a preference for monitoring changes in transport price hikes. This simultaneously informed product pricing. The technique was cost effective and relevant to the local business dynamics. Below are some of the verbatim words by selected participants who articulated the above facts:

"*You see when I want to see what customers like, I just talk to them especially youth when they are buying. That way they will tell me the truth as a brother".*

"*You see when I want to see what customers like, I just talk to them especially youth when they are buying. That way they will tell me the truth as a brother". (Ethiopian youth retailer)*



Source: Compiled by the authors.

Figure 1. Network diagram showing threat detection and prevention sustainability attributes of youth-owned small retail businesses

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It was also indicated that youth-owned small retail businesses detected financial related threats through checking business records. This assisted in identifying anomalies such as loss, internal theft by employees and shoplifting. Records were also critical for tracking the past as well as enabling future business projections. However, only a minority were keeping records. This was reportedly due to either lack of knowledge or interest. Alternatively, other youth-owned small retailers relied on community tip offs in order to detect issues such as the prevalence of criminal activities and customer dissatisfaction and loss of customers to other retailers. There were no clear distinctions among businesses in both town areas and peripheral areas. However, retailers utilized different techniques based on the availability of financial resources as well as necessity.

High risks of theft in the area necessitated the need for taking security measures in order to detect related threats. This included securing premises with burglar bars and installing functional alarm systems. The technique was noted mainly by Ethiopian and Somalian retailers who were in business for more than two years.

4.3.Threat prevention techniques

The common preventive measures were related to combating crime. As shown in Figure 1, reinforcing premises with burglar bars was the major theft threat prevention technique. Depositing cash in banks in order to minimise loss to criminals was also a major threat prevention technique used by small retailers in the predominantly rural communities. Three groups of customers also suggested the need for safeguarding business premises in order to prevent crime.

Subscription to security services such as Data Response Security (DRS) was viewed by some as an effective way of guarding premises against criminal activities. The technique was reportedly useful in areas that were near the urban area where the response time of these security companies was maximum. In cases where employees were perpetrators of criminal activities, some youth-owned retailers resorted to dismissal as punishment and remedy to avoid further loses. Though dismissal of employees would temporarily eliminate the problem, keeping reliable records was a more reliable preventive measure to theft by employees. A minority of the owners preferred hiring security guards to look after the premise especially at night. However, in some instances security guards were collaborating with criminals and facilitate theft on the premises they guard. This deterred most businesses from hiring security guards.

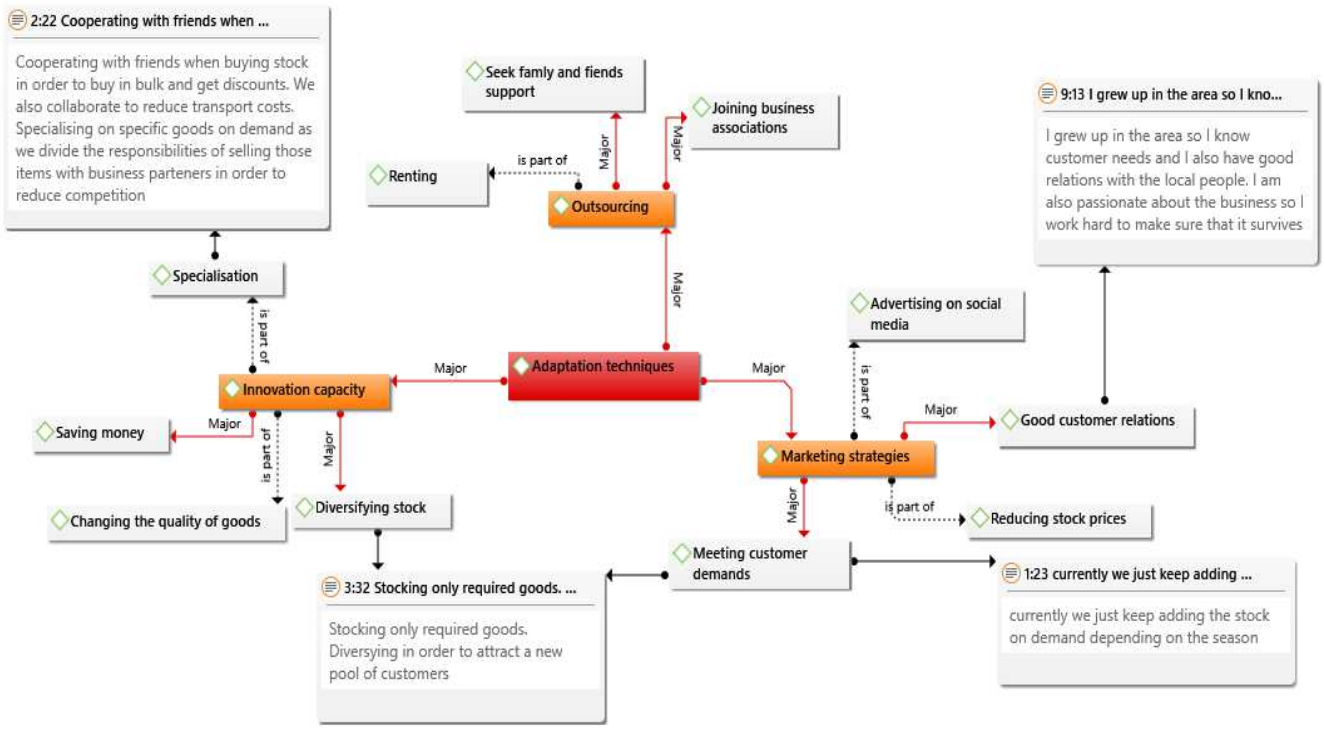
4.4. Adaptation techniques

Figure 2 is a network diagram extracted form Atlas.ti analysis showing adaptation techniques utilised by small retail owners. All respondents anonymously revealed that building and maintaining good customer relations was a vital ingredient for enhancing small retail business sustainability. Results from citizen juries also demonstrated the same views. Customer relations were mainly built through the provision of credit, free gifts and attending community events. The majority of youth-owne retail owners (18) also recognised the significance of meeting customer demands in order to remain competitive. In most cases, small retailers provided seasonal products in order to suit customer needs. Competition was also addressed through aggressive price reduction. The affordability of products attracted more customers and thus, enabling quick returns. Price reduction techniques were normally practised by Somalians and Ethiopians.

Youth-owned small retailers also emphasised the need for innovative techniques in order to enhance their sustainability. Product specialization was one of the common innovations utilised by foreign nationals. This was meant to reduce competition among businesses in the same area.

Provision of stock diversity was another innovative initiative noted by eight retailers. Four groups of customers also echoed the same sentiments. Diversification of stock was informed by customer requests. In addition, changing the quality of products was also recommendable for attracting customers in a highly competitive environment.

Results also revealed five main outsourcing techniques. These included, joining informal associations, renting business premise, borrowing money from colleagues and buying in bulk. The majority (17) of interviewed



Source: Compiled by the authors.

Figure 2. Network diagram of adaptation sustainability drivers of youth-owned small retailers

owners and three groups indicated that joining business associations was a multi-dimensional adaptation technique. Associations were utilized to buy in bulk, share ideas as well as a platform for borrowing money in the event of financial problems. The informal arrangements also led to the formation of lasting business networks.

It was apparent that Somalian and Ethiopian retailers were relying much on collaborations in order to be sustainable than other interviewed youth-owned small retailers.

4.5. Cross-sectional survey results

As illustrated in the methodology, the current study was conducted in two sequentially integrated phases. This section provides results of the follow up survey. The survey questionnaire was informed by the qualitative findings presented above. The final criteria for measuring sustainability was developed using the Principal Component Analysis (PCA) technique as elaborated in the following section.

4.6. Criteria for measuring sustainability

The main aim of the study was to develop criteria for measuring youth-owned small retail businesses sustainability. In order to determine the appropriateness of applying PCA, the Kaiser Meyer-Olkin (KMO) of sampling adequacy test was conducted. The KMO was 619; Bartlett's test of sphericity approximately (393.47) significance (0.00). In this regard, PCA was considered appropriate for the variables tested.

Principal Component Analysis yielded a six-factor solution with a simple structure when items with loadings >0.40 were extracted. As indicated in Table 1, the structure accounted for 66.67% of the total variance. The first factor was labelled security measures due to high loadings by three items (functional alarm systems, introducing anti-theft measures and procuring stock in bulk). The factor explained the highest variance of 18.01%. The second factor explained a variance of 13.70%. It was named outsourcing abilities due to high loadings by two items (Renting business premise and joining business associations).

The third factor was named marketing strategies because of high loadings by items such as carrying out customer satisfaction surveys and careful business planning. Marketing strategies explained a variance of 10.07%.

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The fourth factor was categorised as risk management and it explained a variance of 8.54%. The items that loaded on the factor included reducing stock price and closing business when it is raining.

Table 1. Major sustainability attributes based on principal component analysis with Varimax rotation (N = 255)

Source: The table was developed through principal component analysis (Statisitcal Package for Social Scientist).

Items	Factor 1 Security measures	Factor 2 Outsourcing abilities	Factor 3 Marketing strategies	Factor 4 Risk management	Factor 5 Financial management	Factor 6 Innovation	Communities
Functional Alarm system	0.773						0.632
Introducing anti-theft measures	0.764						0.602
Procuring stock in bulk	0.659						0.548
Renting business premise		0.838					0.763
Joining business associations		0.713					0.653
Careful business planning			0.810				0.750
Carrying out customer satisfaction surveys			0.677				0.619
Reducing stock prices				0.781			0.767
Closing business during rain and heavy winds				0.719			0.709
Keeping money away from the business premise					0.837		0.709
Maintaining health relationships with customers					0.558		0.519
Diversifying stock						0.849	0.769
Improvising ways of tracking changes in stock price						0.640	0.626
Eigen values	2.342	1.782	1.309	1.111	1.097	1.026	(Total)
% variance	18.01	13.70	10.07	8.54	8.43	7.89	66.67

The fifth factor was named financial management due to loadings by two items (keeping money away from business premise and maintaining health relationships with customers). The factor explained a variance of 8.43%. The last factor explained the least variance of 7.89% and was considered innovation due to loadings by two items (diversifying stock, improvising ways of tracking changes in stock price). Sustainability is, therefore, a function of six attributes (security measures, outsourcing abilities, marketing strategies, financial management skills, operational management and innovation).

The attributes were related to three main threats in the area that included poor infrastructure, financial inadequacy and competition. The resultant conceptual criteria for measuring sustainability is presented on Figure 3.

4.7. Indices for measuring youth-owned small retail business sustainability

The indices were developed from the six components of the criteria and related variables. The indices provided the weighted scores of each sub-component in relation to separate sustainability building blocks in the criteria (Table 2). This provides a foundation for prioritisation of the subcomponents based on their value when determining the sustainability of small retail businesses. Based on the six objective dimensions of sustainability and the potential subjective elements, small retail business sustainability indices were illustrated in the following formula:

$$R_1 = f\ (SM_1, OA_1, MS_1, RM_1, FM_1, I_1, S_1) + e, \qquad (1)$$

where *R* is sustainability, *f* is the function; *SM* – security measures; *OA* – outsourcing abilities; *MS* – marketing strategies; *FM* – financial management skills; *OM* – risk management; *I* – innovation; *S* – subjective dimensions; $_1$ – particular time.

The assumption is that, small retail sustainability is not observable and its dimensions are also latent variables. As such, small retail business sustainability can be determined by assessing a single dimension at a particular time.

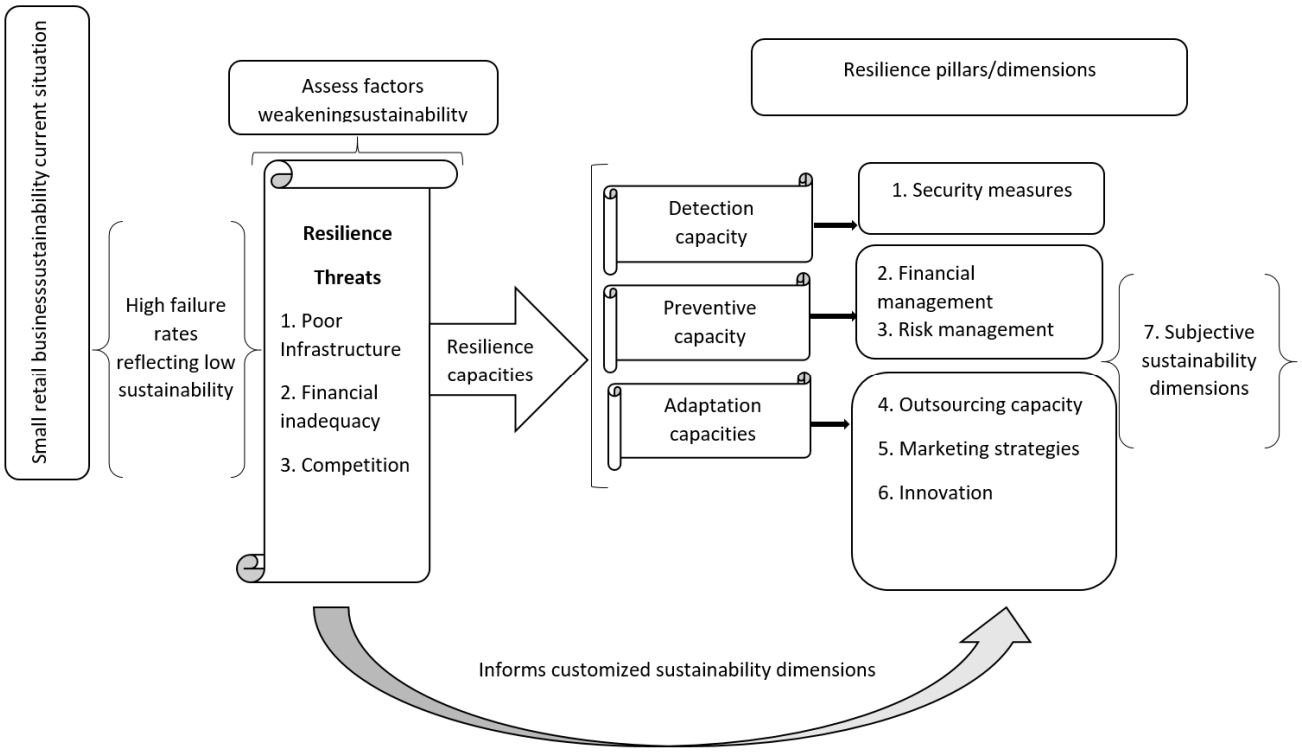
5. DISCUSSION

The criteria for measuring youth-owned small retail business sustainability consisted of six components that include security measures, outsourcing abilities, marketing strategies, risk management, financial management, and innovation.

Table 2. Indices for measuring small retail business sustainability

Source: The table was developed through principal component analysis (Statisitcal Package for Social Scientist).

Resilience dimension	Factor loadings	Factor scores	Proportion of variance (%)
Security measures	Functional Alarm system	0.773	18.01%
	Introducing other anti-theft measures	0.764	
	Procuring stock in bulk	0.659	
Outsourcing abilities	Renting business premise	0.838	13.70%
	Joining business associations	0.713	
Marketing strategies	Careful business planning	0.810	10.07%
	Carrying out customer satisfaction surveys	0.677	
Risk management	Reducing stock prices	0.781	8.54%
	Closing business during rain and heavy winds	0.719	
Financial management	Keeping money away from the business premise	0.837	8.43%
	Maintaining health relationships with customers	0.558	
Innovation	Diversifying stock	0.849	7.89%
	Improvising ways of tracking changes in stock price	0.640	



Source: Developed by the researchers.

Figure 3. Conceptualized criteria for measuring youth-owned small retail business sustainability (S6)

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As noted by DFID (1999), the identification of appropriate indicators to measure sustainability raises key debates among practitioners and scholars in the area of sustainability building. Reviewed frameworks in food, organisational and business sustainability differ in terms of scale, focus, method of analysis and purpose. More so, most sustainability approaches, tools and methods proposed in literature reflect the diversity of disciplines and sectors that have appropriated the term (Béné, 2013). Consequently, sustainability analytical requirements cannot be met by universal approaches (Levine, 2014). Lisa et al. (2015) also add that, the selection of indicators of sustainability depends on what is being measured. For this reason, the capacity based criteria for measuring youth-owned small retail business sustainability reflected sector and local specific dimensions. It is best suited for use in assessing youth-owned small retail businesses.

However, the criteria can be used as a point of reference in small business sustainability studies as some threats and sustainability drivers in the field are similar in South Africa and beyond. As illustrated in Figure 3 above, the criteria was based on three major assumptions. Firstly, contextualised capacities support the understanding of how key local drivers of sustainability change and affect overall small retail business sustainability levels. Secondly, a clear understanding of local threats informs the development of customised sustainability pillars. The third assumption was that, youth-owned small retail business sustainability at a particular time depend on the options available to that business within the six major pillars (security measures, outsourcing abilities, marketing strategies, risk management, financial management and innovation). These options represent a pre-condition for small retail business response mechanisms in relation to specific threats. However, as noted by Bene et al. (2012), Melecky & Stanickova (2015), sustainability is not static and thus, the six pillars of sustainability established in this paper can change with time as conditions change. This necessitate the need for regular assessment of business sustainability in order to detect changes in performance measures and make appropriate adjustments thereof.

The indices for measuring youth-owned small retail businesses were based on the premise that, small retail business sustainability is not observable per se, and is considered a latent variable depending on the various attributes. Therefore, to estimate R, it is necessary to estimate the six components separately. This is due to the fact that, the components are themselves latent variables because they cannot be directly observed in a given survey, but it is possible to estimate them through multivariate techniques such as PCA. Vyas & Kumaranayake (2006) similarly suggested that sustainability cannot be objectively measured as a single score. Bene et al. (2012) similarly criticised most character based approaches for reducing sustainability into a single score. Instead, Levine (2014) suggest the need for sustainability measurement approaches to consider variations in opinions about the available alternative dimensions. Bearing these suggestions in mind, the current indices assumed that sustainability of youth-owned small retail businesses should be measured based on the separate sustainability dimensions as illustrated in the formula.

The indices for determining youth-owned small retail businesses encompassed subjective sustainability dimensions (S_1). Subjective sustainability is related to dimensions that allow individuals to evaluate their own business capacities to handle future events (Maxwell et al., 2015). These dimensions relate to personal perceptions about risk, motivations and personal aspirations with regard to sustainability responses. Levine (2014) emphasizes the need for sustainability assessment approaches to consider subjective sustainability. In this respect, the developed indices were comprehensive in nature.

6. CONCLUSION

The attributes in the criteria for measuring sustainability were closely linked to the prevailing threats. Therefore, the criteria builds capacity in dealing with threats. The context based sustainability building blocks also enhances the capacity of small retailers to manage risk over time, minimise vulnerability and the failure of interventions when future threats occur. The criteria are built upon a clear understanding of sectorial and local based sustainability dynamics. As such, it reflect on the reality on the ground regarding youth-owned small retail business sustainability drivers. The developed indices allow decision makers to prioritise support based on business sustainability needs. Based on these findings, adoption of sustainability measurement approaches from other fields into the youth-owned retail small business discipline may be misleading. Significant differences in opinions regarding

sustainability dimensions were identified for variables such as joining business associations and safekeeping of financial resources. The distinctions highlighted the need for considering the location of a business in relation to the nearest town when assessing sustainability using the current criteria.

7. RECOMMENDATIONS

The provision of support to youth-owned small retailers should be informed by area and sector specific needs such as those provided by this study. Through this avenue, customised rather than generic support for enabling sustainability can be provided. Future researches should focus on testing the indices provided in this paper using longitudinal studies. This helps to develop a comprehensive index that can be used to gauge small retail business sustainability levels.

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10. DISCLOSURE STATEMENT

There are no financial interest or benefit that has arisen from the direct applications of this research.

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