

Perceptions of Street Food Vendors on the Determinants of Competitiveness of their Enterprises in Vhembe District, Limpopo Province

Mahopo, T.C.¹, Nesamvumi, C.N.², Nesamvumi, A.E.³, and Van Niekerk, J.A.⁴

Corresponding Author: T.C. Mahopo. Correspondence Email: tjale.mahopo@univen.ac.za

ABSTRACT

The study investigated street food vendors' perception of socioeconomic attributes as determinants of their competitiveness in the Vhembe District of Limpopo Province, South Africa. Porter's Diamond Model was used as a framework for the analysis of this study. A cross-sectional survey was conducted among street food vendors selling ready-to-eat foods in Vhembe district towns. A convenient sampling method was used to recruit 511 street food vendors (age range 18-75 years). Descriptive analysis was used to summarise the demographic results. Participants' perceptions of 46 factors, including those that enhance or constrain competitive performance, were rated on a 5-point Likert scale. Over 90% of the participants were women, unmarried, aged 35-44, and had a high school education. The chance (3.60±1.23), production (3.62±0.76), and government role (3.50±1.23) factor conditions received the highest overall determinant ratings, while related industries (3.34±1.11), demand condition (3.26±1.38), and firm structure, strategy, and rivalry (3.22±1.38) received the lowest. Perceptions included the importance of government authorities' innovative policy formulations at the local level to accommodate and provide space and facilities for street vendors through town planning, as well as empowerment programs for women and youth street

¹ Lecturer and researcher: Department of Nutrition, Faculty of Health Sciences, University of Venda. Private Bag X 5050, Thohoyandou 0950, Limpopo province, South Africa. tjale.mahopo@univen.ac.za, ORCID ID 0000-0003-0186-1438.

² Associate Professor: Department of Nutrition, Faculty of Health Sciences, University of Venda. Private Bag X 5050, Thohoyandou 0950, Limpopo Province, South Africa. cebisa.nesamvuni@univen.ac.za, ORCID ID 0000-0002-3764-1683.

³ Professor and Managing Director: Khanimambo Innovative Solutions (KIS). P.O. Box 6796 Thohoyandou 0950. nesamvunic@gmail.com.

⁴ Vice Dean: Agriculture and Professor, University of Free State: Department of Sustainable Food Systems and Development, Faculty of Natural and Agricultural Sciences, University of Free State, Republic of South Africa. vNiekerkJA@ufs.ac.za, ORCID ID 0000-0001-9842-0641.

vendors, and safety nets. This study advocates for a new valuing of the informal sector to recognise and build on its mode of operation and critical contributions to society.

Keywords: Perceptions, Street Food Vendors, Competitiveness, Women Enterprises.

1. INTRODUCTION

Street food vending, a strategy used by individuals from low socioeconomic backgrounds, contributes to employment, household revenue, and food security (Kiran, 2019; Redzwan Habib, 2016). Hence, it is a significant part of the economy in many developing countries, including South Africa (Mathaulula, 2020). In South Africa, skilled individuals resort to street food enterprises due to the lack of job opportunities (Hill *et al.*, 2019; Roever & Skinner, 2016). Several households benefit (Legodi & Kanjere, 2015), mainly illiterate women, as a lack of education and skills is a significant obstacle to obtaining regular jobs (Anyidoho & Steel, 2016; WIEGO, 2020).

Street vendors in Dhaka, Bangladesh, perceive business operations, knowledge, and production as critical for business competitiveness despite their challenges (Muzaffar *et al.*, 2009). Street food vending suffers from competition due to market prices and insecure, irregular employment. Furthermore, the lack of support from various authorities and institutions (Jaishankar & Sujatha, 2016) and inadequate infrastructural support create an unfriendly environment for operation. Several studies on informal trading and street food enterprises have indicated that the role of the street food enterprise in the economy, although essential, is poorly defined (Anyidoho & Steel, 2016; Benítez *et al.*, 2018; WIEGO, 2014), poorly measured, and consequently not considered in food security policy (Crush & Riley, 2019).

In South Africa, skilled individuals resort to street food businesses due to the lack of job opportunities (Hill *et al.*, 2019; Mkhize *et al.*, 2013; Roever & Skinner, 2016). Although earlier results (Hill *et al.*, 2019) indicated that street food vending should be considered a role player in the local economy, local authorities do not give critical attention to informal trading despite the unfavourable conditions in which the vendors operate. Challenges to effectively controlling the street vending sector arise in rural South Africa (Mpumalanga and Northwest) and some urban towns in Gauteng, where informal traders require recognition certification in operation (von Holy & Makhoane, 2006). Successfully promoting and improving street food vending operations can be done by obtaining health and local authorities' approval (Bamhu, 2019).

There is a consensus that the industry's low entry costs and flexible hours make street food enterprises attractive to poor women (Bamhu, 2019). According to FAO (2003), street food enterprises often sustain the rural sector by providing raw materials for the informal food trade at a low cost. However, due to unstable conditions in the informal economy, the lack of proper coordination guided by conducive policies makes it challenging for street vendors and authorities to compete effectively (Hill *et al.*, 2019). Abrahale *et al.* (2019) emphasised the importance of understanding street food vending in various settings, given the significant role of street food in society, its widespread availability, nutritional value, purchasing patterns, consumption habits, and competitiveness.

While Porter's Diamond Model has been widely applied to assess the competitiveness of large firms and small and medium enterprises in South Africa (Jafta, 2014; Mbatha & Mastamet-Mason, 2015) and specifically in the Vhembe District (Maele *et al.*, 2015; Nesamvuni *et al.*, 2014, 2017), it has not yet been utilised to examine the competitiveness of street food vendors in this region. This study fills this gap by providing insights into the competitive dynamics of micro-businesses in the street food sector, an area that has received limited attention in existing literature (Meshram & O'Cass, 2010). This study investigates street food vendors' perceptions of socioeconomic attributes as determinants of their competitiveness in the Vhembe District, Limpopo Province, South Africa. Using Porter's Diamond Model as the analytical framework, the study seeks to answer the research question: How do socioeconomic attributes affect the competitiveness of street food vendors in the Vhembe District, according to Porter's Diamond Model?

2. MATERIAL AND METHODS

2.1. Description of the Study Area

The study was conducted from July to September 2019 in the rural towns of Makhado, Thohoyandou, and Musina, located in the Vhembe District, the northernmost district of Limpopo Province, South Africa. The Vhembe District spans an area of 21,402 square kilometres, primarily comprising rural land. Vhembe District has an estimated population of 1.2 million. About 48% of the district population resides in the Thulamela municipality, with 55% comprising women (Statistics South Africa, 2020). Due to the high level of unemployment and poverty, the inhabitants of the district have developed several survival strategies, including the street food enterprise at major trading points within the local municipalities, identified as

the towns of Makhado, Thohoyandou, Mutale, and Musina. The informal sector in South Africa contributes 8% to the country's GDP and supports 27% of all working people (Greve, 2017).

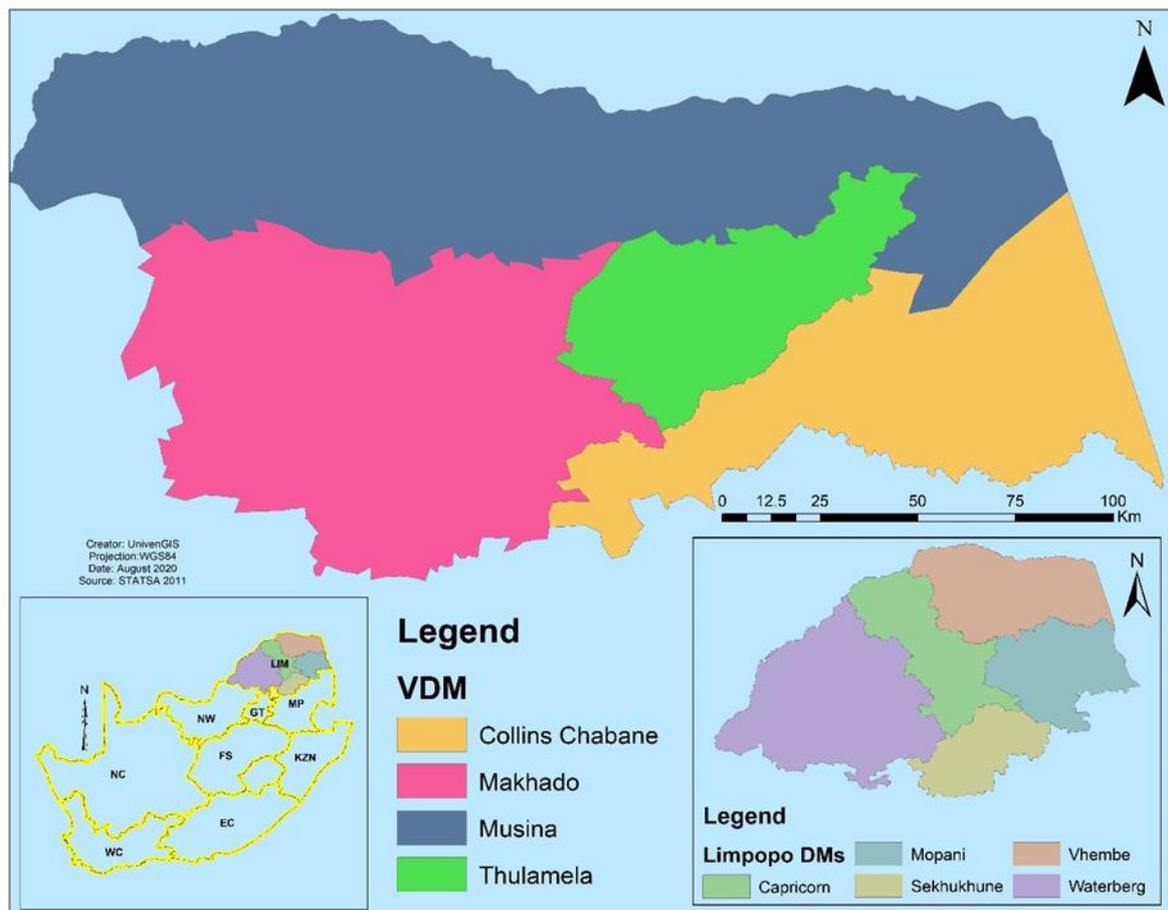


FIGURE 1: Map Showing the Location of the Study Area (Source: STATS SA, 2011)

2.2. Sampling

We used convenience sampling to select 511 street food vendor enterprises selling ready-to-eat food or cooked food in Makhado (36), Musina (168), and Thohoyandou (307) towns. Given the challenging nature of street vendors' work, a convenient sampling technique was used. As there were no records of street vendors in place at the municipalities of the Vhembe District, the researchers established and maintained a complete list of the primary units. The sample size was determined using Yamane's 1969 formula. The formula states that at the significance level of 90%, the minimum sample size for the unknown population is 100 (Nirathron, 2006). Street food vendors were recruited at taxi ranks, along the main roads, in industrial areas, malls, schools, and lastly, between residents' streets, especially in Musina town.

2.3. Data Collection Procedures

Under the study leader's supervision, nine trained fieldworkers conducted the interviews. A structured questionnaire comprising demographic socio-characteristics and the six attributes of Porter's Diamond Model of Competitiveness (Porter, 1990), Commonly used as prospective determinants of competitiveness were production, markets, related and supporting industries, government support, firm strategy, structure, rivals, and chance.

2.4. Data Preparation and Analysis

Two trained data capturers entered the data into an Excel spreadsheet, with quality checks by the primary investigator. The data were exported to the Statistical Package for Social Sciences (SPSS version 27) for analysis (Frey, 2017). Descriptive statistics were computed to summarise the data, with frequencies and percentages for categorical data. Means and standard deviations were computed for continuous data. We used a 5-point Likert-type scale to measure the vendors' perceptions of the competitiveness of their enterprises.

3. RESULTS

3.1. Socioeconomic Characteristics of Street Food Vendors

Error! Reference source not found. provides the socio-demographic characteristics of street food vendors. Most of the street vendors were from Thohoyandou (60%), followed by Musina (33%) and Makhado (7%). Most (85%) street vendors were South African, and 15% were foreign nationals from Zimbabwe. Almost half of the vendors were single (45.8%) or widowed (3.3%). Their highest education levels were for degrees or diplomas (5.9%). Most (79.3%) attended high school, with 28.8% matriculating. Most vendors were complete owners of their enterprises.

TABLE 1: Demographic Characteristics of the Street Food Vendors (n=511)

Characteristics	N	%
Location		
Musina	168	32.9
Makhado	36	7.0
Thohoyandou	307	60.1
Country of origin		

South Africa	436	85.3
Zimbabwe	75	14.7
Marital status		
Single/ Widowed	234/17	45.8/3.3
Married/Co-habiting	143/117	28.0/22.9
Educational status		
No schooling	19	3.7
Primary	57	11.2
Some high school/ Matriculation	258/147	50.5/28.8
Diploma/Degree	26/4	5.1/0.8
Business ownership		
Full owner	440	86.1
Co-owner	60	11.7
Employee	11	2.2

3.1.1. Age and Sex Profiles

The age and sex distributions are provided in **Error! Reference source not found.** Almost all the vendors (90%) were females. Their age distribution was as follows: 20% were youth (45-54 years), 69.4% were middle-aged adults (35-54 years), and 10.9% were older.

TABLE 2: Age and Sex Distribution of the Street Food Vendors (n=511)

Age categories (years)	Males		Females		Total	
	N	%	n	%	N	%
18-34	11	2.2	91	17.8	102	20.0
35-54	28	5.5	327	64.0	355	69.4
55+	11	2.2	43	8.4	54	10.6
Total	50	9.8	461	90.2	511	100.0

3.1.2. Economic profile

The median monthly household income of the vendors was declared to be R6,000, with minimum and maximum amounts of R1,000 and R8,000, respectively, and an interquartile

range of R3,420 to R10,000. The vendors’ median monthly income from their businesses was R4,000, with minimum and maximum amounts of R200 and R200,000, respectively, and an interquartile range of R2,100 to R7,000.

3.2. Porter’s Diamond Model of Competitiveness

This section presents the perceived competitiveness of various components within Porter’s Diamond Model of Competitiveness, as rated by 511 street food vendors. The components are categorised into six main factors: Production Conditions, Market Conditions, Related and Supporting Industries, Government Support, Firm Strategy, Structure, Rivalry, and Chance. The mean rating, standard deviation (SD), and rank for each component are listed within its respective factor condition.

3.2.1. Factor Conditions

The perceptions of the street food vendors of each factor condition of Porter’s Diamond Model of Competitiveness are provided in **Error! Reference source not found.** The factor conditions are ranked from highest to lowest in terms of competitiveness based on the mean ratings of their components. The findings indicate that the Production factor condition (3.62 ± 0.76) is perceived as the primary determinant of competitiveness. Chance conditions (3.60 ± 1.23) and Government support (3.50 ± 1.23) were perceived as the second and third, respectively. Overall, the street vendors were uncertain about demand conditions (3.26 ± 1.38), firm strategy, structure, and rivalry (3.22 ± 1.38), as well as related and supporting industries (3.34 ± 1.11), which they considered fundamental determinants of street food enterprise competitiveness.

TABLE 3: Perceived Competitiveness of Porter’s Factor Conditions, Ranked on Their Mean Ratings (n=511)

Factor conditions	Mean	SD	Ranked mean*
Production conditions	3.62	0.76	1
Market Demand conditions	3.26	1.34	5
Related and supporting industries	3.34	1.11	4
Government support	3.50	1.23	3

Firm strategy, structure, and rival	3.22	1.27	6
Chance	3.60	1.23	2

*1= Strongly disagree 2= Disagree 3= Not Sure 4= Agree 5= Strongly agree

3.2.2. Overview of the Perceived Competitiveness of Various Components Within Porter's Diamond Model of Competitiveness

3.2.2.1. Production Conditions

The street food vendors considered several specific production factor conditions as determinants of competitiveness, as follows: the most agreed-upon were the cost of production inputs (3.91 ± 1.21), insufficient sources of water (3.76 ± 1.35), and the cost of water (4.07 ± 1.08) as necessary. Transportation (3.78 ± 1.1) and electricity (3.59 ± 1.21) were amongst the infrastructural factors of production conditions perceived as determinants of competitiveness in this study. The most widely agreed-upon aspects of capital/finance were that capital is costly (3.99 ± 1.17) and unavailable (3.75 ± 1.41).

Additionally, street vendors considered the communication systems (3.31 ± 1.43) and the lack of technology (3.45 ± 1.29) to be key factors in the street food enterprise. Moreover, inadequate production knowledge (3.60 ± 1.31) required in the business was also rated as an essential determinant of the factor conditions that determine street food vendors' competitiveness.

3.2.2.2. Market Demand Information

Market information was not regarded as a significant component for street vending enterprises in the market condition. The street vendors agreed that one demand condition, being an essential determinant of the competitiveness of the street food enterprise, was the cost of accessing market information (3.59 ± 1.33). Street vendors were uncertain if the distance to the market (3.27 ± 1.34), market information in general, including lack of quality (3.18 ± 1.44), lack of availability (3.14 ± 1.44), and market agent information (3.36 ± 1.47), were apparent as determinants of competitiveness.

3.2.2.3. Related and Supporting Industries.

The only perceived specific factors related to and supporting industries were financial institutions (3.55 ± 1.38) and suppliers of inputs (3.51 ± 1.55). Other related and supporting

industry factors, such as research institutions (3.26 ± 1.37), packaging suppliers (3.11 ± 1.46), and electric suppliers (3.28 ± 1.30), were not considered necessary by the street vendors.

3.2.2.4. Government support

The most highly ranked and perceived component in the Porter Competitive Model for Street Food Enterprises was the government's beneficial support (3.97 ± 1.36), indicating a lack of interaction with beneficiaries (3.68 ± 1.35). Street vendors, however, were uncertain about the labour policy (3.22 ± 1.53) and the transformation policy (3.25 ± 1.52) as being crucial for their enterprise.

3.2.2.5. Chance

Street vendors regarded economic stability (3.58 ± 1.45), political stability (3.55 ± 1.46), and price stability (3.69 ± 1.41) as the most influential factors in the success of their street food enterprises.

Street food vendors also indicated that crime (3.88 ± 1.27) and oil and fuel (3.53 ± 1.48) are important for an enterprise's competitiveness. However, street food vendors could not agree much on AIDS (3.36 ± 1.48) due to the competitiveness of the street food enterprise.

3.2.2.6. Firm Strategy, Structure, and Rival

On average, the firm's strategy, structure, and rivalry were found to be the determinants of competitiveness in the street food enterprise, with a mean of 3.22 ± 1.38 . As shown in Table 4, street vendors disagreed on the significance of adaptability (3.12 ± 1.43), culture (3.20 ± 1.41), flexibility (3.12 ± 1.34), and pricing strategy (3.34 ± 1.33) as determinants of competitiveness in the Vhembe district.

TABLE 4: Perceived Competitiveness of the Components of Porter’s Factor Conditions, With Rankings of Mean Ratings (n=511)

Factors condition	Components	Mean	SD	The rank of the mean within Factor Condition	The rank of mean relative to all components
Production conditions	1. Cost of production	3.58	1.13	4	8
	2. Water	3.91	1.06	1	2
	3. Infrastructure	3.46	1.13	5	14
	4. Capital/ Finance	3.87	1.09	2	4
	5. Knowledge of production	3.60	1.31	3	7
	6. Technology	3.45	1.29	6	15
	7. Natural Factors	3.49	0.77	7	17
Markets conditions	8. Distance to the market	3.27	1.34	2	22
	9. Market information	3.34	1.24	1	20
	10. Quality of products	3.19	1.44	4	30
	11. Product market availability	3.25	1.44	3	25
Related and supporting industries	12. Financial institutions	3.51	1.55	2	13
	13. Research institutions	3.26	1.37	4	23
	14. Input suppliers	3.55	1.38	1	10
	15. Suppliers of packing materials	3.11	1.46	5	32
	16. Electricity suppliers	3.28	1.30	3	21

Government support	17. Interaction with beneficiaries	3.68	1.35	2	6
	18. Beneficiary support	3.97	1.36	1	1
	19. Indirect support	3.34	1.55	3	18
	20. Labor policy	3.22	1.53	5	27
	21. Transformation policy	3.25	1.52	4	24
Firm strategy, structure, and rival	22. Adaptability	3.21	1.43	3	28
	23. Culture	3.20	1.41	4	29
	24. Structure	3.23	1.41	2	26
	25. Flexibility	3.12	1.34	5	31
	26. Pricing strategy	3.34	1.33	1	19
Chance	27. Economic stability	3.58	1.45	3	8
	28. Oil and fuel	3.53	1.48	5	12
	29. Aids	3.36	1.48	6	16
	30. Political stability	3.55	1.46	4	11
	31. Price stability	3.69	1.41	2	5
	32. Crime	3.88	1.27	1	3

Note: 1= Strongly disagree 2= Disagree 3= Not Sure 4= Agree 5= Strongly agree

3.2.3. *Determinants of Competitiveness for Street Food Vendors*

Table 5 reports on the 12 key factors that determine competitiveness for street food enterprises, as perceived by the street food enterprises in the Vhembe district. Considering the six attributes of the Porter's Diamond Model of Competitiveness, only three were perceived by the street vendors as crucial determinants of competitiveness, namely, factor condition (3.60 ± 1.33), chance (3.89 ± 1.07), and the role of government (3.49 ± 1.46) related and supporting industries (3.22 ± 1.27). Street vendors were uncertain about the firm's strategy, structure, and rival and market demand conditions, which were key attributes that determined the success of the street food enterprise. The street vendors were asked to rate the 12 most perceived attributes as influential determinants, based on their importance level as determinants of competitiveness, as indicated in the previous responses (Table 5).

The specific components perceived as the determinants of street food enterprise were: (I) Poor support, (II) cost of water, (III) high crime rate, (IV) cost of capital, (V) price stability, (VI) poor interaction, (VII) lack of knowledge of production, (VIII) increased cost of production, (IX) economic stability, (X) importance of reliable inputs suppliers, (XI) political stability and lastly, (XII) oil and fuel.

TABLE 5: Top 12 Determinants of Competitiveness for Street Food Vendors (n=511)

Factor condition	Component	Mean	SD	The rank of the mean within Factor Condition	The rank of the mean relative to all components
Government support	Poor support	3.97	1.36	1	1
Production conditions	Water	3.91	1.06	1	2
Chance	Crime	3.88	1.27	1	3
Production conditions	Capital/ Finance	3.87	1.09	2	4
Chance	Price stability	3.69	1.41	2	5
Government support	Interaction	3.68	1.35	2	6

Production conditions	Knowledge of production	3.60	1.31	3	7
Production conditions	Cost of production	3.58	1.13	4	8
Chance	Economic stability	3.58	1.45	3	8
Related and supporting industries	Inputs suppliers	3.55	1.38	1	10
Chance	Political stability	3.55	1.46	4	11
Chance	Oil and fuel	3.53	1.48	5	12

Note: 1= Strongly disagree 2= Disagree 3= Not Sure 4= Agree 5= Strongly agree

4. DISCUSSION

The diamond model explains the ability of enterprises to compete in the arena mainly on an interrelated set of advantages that specific industries in different nations possess (Porter, 1990). This paper analyses the factors influencing the competitiveness of street food enterprises in the Vhembe district.

4.1. Socioeconomic Characteristics of Street Food Vendors

A typical street food vendor in Vhembe District is a middle-aged South African woman, single, married, or cohabiting, earning just over R7000.00 (about 476 US Dollars). Low educational qualifications compromise socioeconomic status. This characterisation aligns with findings from related studies, such as Dipeolu *et al.* (2007), which highlights that individuals in their 30s are more likely to understand the complexities of their trade better. According to Jari *et al.* (2013) better education is associated with improved adaptive capacity to adverse socioeconomic conditions.

Regarding income, Herkenhoff *et al.* (2021) showed that household income is one of the determinants of the amount of credit that small business owners can borrow. Therefore, higher incomes among these vendors can enable them to better afford essential production inputs and qualify for credit to procure assets that would otherwise be unaffordable. Contrary to earlier studies in other sectors, such as agriculture, where males predominated, recent studies, like that

of Tawodzera and Crush (2019), have revealed that most street food vendors are females. This finding contrasts with older studies, such as those by Bonnet and Joann (2019) and Louis and Mathew (2020), which showed that most agricultural project owners were male. It is encouraging to see that women are increasingly participating in the upstream value chain of food production.

4.2. Attributes of Porter's Diamond Model of Competitiveness

The street food enterprise's competitiveness model has shown that chance, production factor conditions, the role of government, and related and supporting industries received the highest ratings as determinants. Moreover, demand conditions and firm strategy are minor constraints in this street food enterprise. Porter's Diamond Model states that factor conditions are essential for any industry (Porter, 1990). Production factor conditions provide industries with a competitive advantage, as evidenced by studies on small-scale farms (Barr, 2019; Nesamvuni *et al.*, 2017). According to Li and Luo (2018) PDM categorises production factors into primary ones, based on natural resources, and advanced production factors, which are influenced by historical culture, human capital, and technology. In the current study, street vendors considered climate conditions and disasters, such as heavy rainfall or rainy seasons, to be crucial factors affecting their street food enterprises. Vhembe District is characterised by warmer and drier conditions, with increased droughts, changes in rainfall timing, and observed trends in temperature and precipitation (Louis & Mathew, 2020). Harsh weather conditions have been reported to significantly influence the competitiveness of street food vendors (Marutha & Chelule, 2020; Tamako & Thamaga-Chitja, 2017).

The operations of the enterprise are impacted severely. Although climatic variability and change affect every societal sector (Tamako & Thamaga-Chitja, 2017), it needs urgent attention, including the street food sector in the Limpopo Province (Mahopo *et al.*, 2022; Mathaulula, 2020). Poor infrastructure is among the factors contributing to the country's enterprise competitiveness, which exacerbates the impact of weather conditions. Street vendors sell their food in open spaces; however, most struggle to operate their businesses during harsh weather conditions. Several studies in South Africa (Hill *et al.*, 2019; Mathaulula *et al.*, 2016; Tshikhudo & Manenzhe, 2021) and other African countries (Edeme & Nkaku, 2018; Resnick *et al.*, 2019; Tavonga, 2014) confirm that the poor infrastructure of street food vendors hinders the enterprise's progress. Moreover, Viljoen and Van Der Walt (2018) highlighted that climate

conditions drive South Africa towards a warmer and drier future, with predictions of more prolonged and extreme droughts and intense floods. Enterprises face various challenges, including decreased demand, supply chain disruptions, raw material shortages, and transportation disruptions (Bartik *et al.*, 2020).

It was not surprising that the street vendors in the study perceived capital/finance as essential determinants of the competitiveness of their enterprises, with costly capital and a lack of availability being perceived as contributing to failure. As reported earlier, women in South Africa often face structural challenges in starting and running small businesses, including limited access to capital/finance, which compromises their enterprise sustainability. Furthermore, very few new firms in South Africa have access to bank loans (Herkenhoff *et al.*, 2021). It is well established that informal traders, including those in South Africa, are not eligible for microloans or government finance to establish or maintain their businesses (Njuki, 2019; Lekhanya, 2016; Tawodzera, 2019). A study by Garwe and Fatoki (2012) indicated that a firm's unavailability of financial assistance is considered the second most crucial factor in the firm's success. Just above 50% of the vendors had some high school education. A key finding from this study is that participants can read and write effectively if proper training is provided to them.

Street food vendors agreed on the production cost of inputs as another critical determinant of the competitiveness of the street food enterprise. This is likely because street vendors rely daily on their sales to purchase the necessary inputs for the next day, regardless of profit. However, street vendors could have their own gardens and produce vegetables for input, such as vegetables, rather than buying all the inputs to spend less and gain more. Porter also indicated that factor conditions should be upgraded by developing skills and creating new knowledge (Porter, 1990).

However, the current study reports that half the street vendors with some form of high school education seemed not to maximise profit for their enterprise. Street vendors could be encouraged to maximise profit by producing their own inputs rather than constantly buying all the inputs used for the business. In this study, almost all street vendors are self-employed rather than employees working for someone else or as business co-owners. Similar findings were observed in studies conducted in South Africa (Hill *et al.*, 2016; Resnick *et al.*, 2019),

highlighting that informal trading offers opportunities to all who cannot find employment in the formal industry, irrespective of their level of education.

Most (85%) of our study participants had some high school, matriculation, or tertiary education, indicating that they could read and write if needed. Additionally, South Africa reported high numbers of individuals who achieved secondary education and subsequently occupied informal employment (StatsSA, 2020). With rising unemployment, the current study highlights that individuals at all educational levels can impact informal economic growth. However, low education levels, accompanied by no special skills, are reported among individuals between 18 and 24 years old (Muzaffar *et al.*, 2009).

South Africa's unstable economy forces people to seek alternative means of informal self-employment, such as street food vending (Tawodzera, 2019). Young, single individuals are most likely to populate the informal street food enterprise due to low education and poor skills (Tawodzera & Crush, 2019). In Cameroon, business operations, knowledge, and poor production contribute to competitiveness strategies that focus on improving food enterprises, aligning with Porter's four attributes (Porter, 1990) and the Diamond Model of Competitiveness.

There has been a decline in the quantity and quality of water in South Africa (Viljoen & Van Der Walt, 2018). About two-thirds of South Africa is urbanised, resulting in a significant demand for resources. Water scarcity has been a problem in the Vhembe District (Maponya & Mpandeli, 2012; Viljoen & Van Der Walt, 2018). It is a critical strategic area for enhancing competitive performance in the street food enterprise, as it is used in all activities, such as cooking and cleaning (Marutha & Chelule, 2020; Redzwan Habib, 2016). In this study, street food vendors reported that costly and unavailable water sources were crucial factors affecting their competitiveness. Street vendors lack access to adequate water sources, and high water prices negatively impact business profitability and competitiveness. Street vendors purchase water from local shops, and some bring it from their own locations, as they often have limited access to water sources in their business area along dusty roads (Marras & AgBendeck, 2016; Tawodzera & Crush, 2019). Moreover, the location of the street food vendors is a problem for the competitiveness of street vending enterprises in capital cities such as Johannesburg. During the "clean sweep" operation, all informal traders, including those selling 70% of street food, were cited for improper use of space and dysfunctional town operations (Arias, 2019).

While our findings indicated that a permanent built-in structure was not considered a problem for the success of enterprises, longer-term investment in supportive infrastructure is essential to ensure food security and promote more equitable local economic and social development among the street vendors. Poor infrastructure, coupled with a lack of governmental support, has made it challenging for street food enterprises to offer affordable services for sale that cater to the urban poor and urban youth (Hill *et al.*, 2019; Jaishankar & Sujatha, 2016). The government's role is to ensure that people live in a conducive environment and maintain a stable economic status. The current study highlights that strategies and policy development should focus more on supporting informal enterprises, as perceived in the study. A lack of proper coordination, as guided by policies, due to unstable conditions in the informal enterprise, is a cause of concern in many countries, including South Africa (Hill *et al.*, 2019).

Similarly, studies (Knox *et al.*, 2019; Osei-Mensah *et al.*, 2016; Resnick *et al.*, 2019) indicated that a lack of policies and guidelines makes it difficult for authorities to support informal enterprises entirely due to inadequate regulation and simplified administrative procedures (FAO, 2003). In the current study, street vendors indicated no interaction with authorities that could make them an essential part of the local plans. A lack of communication between government authorities and street food vendors has been observed in studies in other parts of the province (Legodi & Kanjere, 2015), with a notable absence of support for small and medium enterprises, especially street food traders (Garg & Phaahla, 2018). There is, however, consensus that good governance and effective prioritisation of street food enterprises in South Africa should be considered, as they play a vital role in the economy (Arias, 2019).

The South African government's failure to provide reliable support services might be due to a lack of technical skills, institutional capacity, and funding to operate, maintain, and manage available resources (Viljoen & Van Der Walt, 2018). Street vendors in Cape Town, South Africa, have noted that overseers visit their locations, asking for a food certificate, but do not always explain the authorisation process (Hill *et al.*, 2019). In other countries, such as Cameroon, authorities have made street food vendors an essential part of the local plan amid the rapidly growing street food sector. According to Porter's Diamond Model (Porter, 1990), the chance factor condition determines a firm's competitive advantage or industry. Street vendors perceive crime as a significant chance factor that harms the competitiveness of the street food enterprises in the Vhembe District Municipalities. Informal businesses suffer high rates of theft and crime, and the security of the traders is a concern for the competitiveness of

the street vending enterprise (Njuki, 2019; Edeme & Nkalu, 2018; Osei-Mensah *et al.*, 2016; Habib, 2016). Our study showed that 90% of the street food vendors were women. The high rate of gender-based violence in South Africa presents an additional challenge to their safety (Benítez *et al.*, 2018).

5. CONCLUSIONS

Investment in the street food enterprise in the Vhembe District should be based on its competitiveness. The current study confirms that street food vendors perceive Porter's Diamond Model factors, including conditions of production, chance, and government support, as overall determinants of street food enterprise competitiveness. The poor support component of the government support factor condition was perceived as the most critical component for competitiveness, with the cost of water being a sub-component of the production factor condition, and the cost and availability of capital being all critically important. Improving these critical attributes has the potential to develop the competitiveness of the street food vending enterprise in the Vhembe District. Improved water, financial, and governmental support strategies for street food vendors could increase the competitiveness of their enterprises.

The study notes that an active engagement of the government authorities and the different stakeholders in the informal street food vendors should help improve the operation of the street food enterprise through proper policy implementation guidelines, monitoring, and evaluation to accommodate and provide space and facilities for street vendors in town planning, empowerment programs for street vendors, and safety nets.

6. ACKNOWLEDGEMENTS

The authors thank the Street Vendors Committees of Vhembe District, specifically those in Musina, Thohoyandou, and Makhado. The study was made possible by the positive responses, permission, and facilitation of the District and Local Municipalities Management.

REFERENCES

- ABRAHALE, K., SOUSA, S., ALBUQUERQUE, G., PADRÃO, P. & LUNET, N., 2019. Street food research worldwide: A scoping review. *J Hum Nutr Diet.*, 32(2): 152–174.
- ANYIDOHO, N.A. & STEEL, W.F., 2016. Informal-formal linkages in market and street trading in Accra. *Afr Rev Econ Financ.*, 8(2): 171–200.

- ARIAS, J., 2019. *Informal vendors in Johannesburg, South Africa*. Penn Institute for Urban Research. Available from https://penniur.upenn.edu/uploads/media/05_Arias.pdf
- BAMHU, P.H., 2019. *Street vendors and legal advocacy: Reflections from Ghana, India, Peru, South Africa and Thailand*. Women in Informal Employment: Globalizing and Organizing (WIEGO). Available from <https://www.wiego.org>
- BARR, A., 2019. An analysis of the factors impacting the competitive performance of the South African wine industry value chain. Master's thesis, Stellenbosch University.
- CRUSH, J. & RILEY, L., 2019. *Inclusive growth and the informal food sector in Cape Town, South Africa*. Available from <https://hungrycities.net/wp-content/uploads/2019/08/HCP16.pdf>
- DE GROOT, J., MOHLAKOANA, N., KNOX, A. & BRESSERS, H., 2017. Fuelling women's empowerment? An exploration of the linkages between gender, entrepreneurship and access to energy in the informal food sector. *Energy Res. Soc. Sci.*, 28: 86–97.
- DIPEOLU, A.O., AKINBODE, S.O., DIPEOLU, A.O., AKINBODE, S.O. & OKUNEYE, P. A., 2007. *Income-generating potentials of street food vending businesses in ogun state, Nigeria*. Available from <https://www.semanticscholar.org/paper/INCOME-GENERATING-POTENTIALS-OF-STREET-FOOD-VENDING-Dipeolu-Akinbode/2016d874bbb6f01a93dd4104540f7d78a491e9e5>
- EDEME, R.K. & NKALU, N.C., 2018. Operations of street food vendors and their impact on sustainable life in rural Nigeria. *Am. Econ. & So. Re.*, 4(1): 1–7.
- FAO., 2003. *The informal food sector: Municipal support policies for operators*. Available from <http://www.fao.org/3/a-y4312e.pdf>
- FREY, F., 2017. *SPSS (Software)*. Available from <https://doi.org/10.1002/9781118901731.iecrm0237>
- GARG, A.K. & PHAAHLA, P.N., 2018. Factors affecting the business performance of small businesses in Sekhukhune. *J. Econ. Behav. Stud.*, 10(4(J): 54–67.

- GARWE, D.K. & FATOKI, O., 2012. The impact of gender on SME characteristics and access to debt finance in South Africa. *Dev. South. Afr.*, 29(3): 448–461.
- GOLLA, A.M., MALHOTRA, A., NANDA, P. & MEHRA, R., 2011. *Understanding and measuring women's economic empowerment: definition, framework and indicators*. Available from <https://www.icrw.org/wp-content/uploads/2016/10/Understanding-measuring-womens-economic-empowerment.pdf%5Cnhttp://ww.icrw.org>
- GORARD, S., 2015. Research Design, as Independent of Methods. In A. Tashakkori & C. Teddlie (ed.), *SAGE Handbook of Mixed Methods in Social & Behavioral Research*. Sage Publication, pp. 237–252.
- GREVE, B.N., 2017. *Vital part of SA economy still being ignored*. News24. Available from <https://www.news24.com/business/vital-part-of-sa-economy-still-being-ignored-20170426>
- HERKENHOFF, K., PHILLIPS, G.M. & COHEN-COLE, E., 2021. The impact of consumer credit access on self-employment and entrepreneurship. *J. Financ. Econ.*, 141(1): 345–371.
- HILL, J., MCHIZA, Z., PUOANE, T. & STEYN, N.P., 2019. Food sold by street-food vendors in Cape Town and surrounding areas: A focus on food and nutrition knowledge as well as practices related to food preparation of street-food vendors. *J. Hunger Environ. Nutr.*, 14(3): 401–415.
- JAFTA, A., 2014. Analysing the competitiveness performance of the South African apple industry. Master's thesis, Stellenbosch University.
- JAISHANKAR, V. & SUJATHA, L., 2016. A Study on Problems Faced by the Street Vendors in Tiruchirappalli City. *SSRG Int. J. Economics Manag. Stud.*, 3(9): 42–45.
- JARI, B., SNOWBALL, J.D. & FRASER, G.C.G., 2013. Is Fairtrade in commercial farms justifiable? Its impact on commercial and small-scale producers in South Africa. *Agrekon.*, 52(4): 66–88.

- NJUKI, J., 2019. *Supporting women entrepreneurs to thrive*. Spore. Available from <https://spore.cta.int/en/dossiers/article/supporting-women-entrepreneurs-to-thrive-sid090d0fa1c-486c-407e-a0de-91a845435778>
- KIRAN, P., 2019. Problems and Prospects of Street Vendors: A study with reference problems and prospects of street vendors. *Int. J. Manag. Tech. Engin.*, VI(XI): 2500.
- KNOX, A.J., BRESSERS, H., MOHLAKOANA, N. & DE GROOT, J., 2019. Aspirations to grow: When micro- and informal enterprises in the street food sector speak for themselves. *J. Glob. Entrep. Res.*, 9(1). <https://doi.org/10.1186/s40497-019-0161-7>
- LEGODI, K. & KANJERE, M., 2015. The challenges faced by informal traders in greater Letaba Municipality in Limpopo Province, South Africa. *Afr. Public Serv. Deliv. Perform. Rev.*, 3(4): 57.
- LEKHANYA, L.M., 2016. Determinants of survival and growth of small and medium enterprises in rural KwaZulu–Natal. Doctoral thesis, University of the Western Cape.
- LI, S. & LUO, H., 2018. Competitiveness of the rice industry in hunan province - A Diamond Model. *IOP Conf. Ser.: Earth Environ. Sci.*, 189(4). <https://doi.org/10.1088/1755-1315/189/4/042005>
- MAELE, L.M., NESAMVUNI, A.E., TSHIKOLOMO, K.A., AFFUL, D.B. & NORRIS, D., 2015. Characterisation of youth agricultural projects in Limpopo Province of South Africa. *J. Agric. Sci.*, 7(7): 42–52.
- MAHOPO, T.C., NESAMVUNI, C.N., NESAMVUNI, A.E., DE BRYUN, M., VAN NIEKERK, J. & AMBIKAPATHI, R., 2022. Operational characteristics of women street food vendors in rural South Africa. *Front. Public Health.*, 10: 849059.
- MAPONYA, P. & MPANDELI, S., 2012. Climate change and agricultural production in South Africa: Impacts and adaptation options. *J. Agric. Sci.*, 4(10). <https://doi.org/10.5539/jas.v4n10p48>

- MARRAS, S. & AGBENDECH, M., 2016. *Food in urban areas*. Rome: Food and Agriculture Organisation of the United Nations. Available from <https://www.fao.org/3/i5804e/i5804e.pdf>
- MARUTHA, K.J. & CHELULE, P.K., 2020. Safe food handling knowledge and practices of street food vendors in Polokwane central business district. *Foods.*, 9(11): 1560. <https://doi.org/10.3390/foods9111560>
- MATHAULULA, M.A., 2020. Pillars of a safety management system for small-scale vended foods in a rural-based municipality of South Africa. Doctoral thesis, University of Venda, Thohoyandou, South Africa.
- MATHAULULA, M.A., FRANCIS, J. & MWALE, M., 2016. Perceived solutions to constraints to small-scale food vending in a growing town in Limpopo Province of South Africa. *J. Soc. Sci.*, 48(1–2): 137–146.
- MBATHA, S. & MASTAMET-MASON, A., 2015. Competitive Advantage Challenges Affecting the Apparel Manufacturing Industry of South Africa (AMISA): Application of Porter's Factor Conditions. *Int. J. Indus. Manuf. Engin.*, 9(8): 2836–2842.
- MCHIZA, Z., HILL, J. & STEYN, N., 2014. Foods currently sold by street food vendors in the Western Cape, South Africa, do not foster good health. In M.G. Sanford (ed.), *Fast foods: Consumption patterns, role of globalization and health effects*. Nova Science Publishers, pp. 91–118.
- MESHARAM, K. & O'CASS, A., 2010. *Examining the role of value offering in creating competitive advantages for street food vendors against restaurant owners in Mumbai, India*. Available from <https://www.researchgate.net/publication/277892053>
- MKHIZE, S., DUBE, G. & SKINNER, C. 2013. *Informal Economy Monitoring Study: Street Vendors in Durban, South Africa*. Manchester, UK: WIEGO.
- MUZAFFAR, A.T., HUQ, I. & MALLIK, B.A., 2009. Entrepreneurs of the streets: An analytical work on the street food vendors of Dhaka City. *Int. J. Bus. Manag.*, 4(2). <https://doi.org/10.5539/ijbm.v4n2p80>

- NESAMVUNI, A.E., TSHIKOLOMO, K.A., MPANDELI, N.S. & MAKHUVHA, L., 2017. Perceptions of smallholder farmers on determinants of competitiveness of the citrus industry in Vhembe District, Limpopo Province, South Africa. *J Hum Ecol.*, 59(2–3): 62–71.
- NESAMVUNI, A.E., TSHIKOLOMO, K.A., NEPHAWA, K.A., TOPHAM, R.W. & MPANDELI, N.S., 2014. Competitiveness: A case of Tshivhase-Mukumbani Estate in Limpopo, South Africa. *Int. J. Agric. Ext.*, 2(3): 193–203.
- NIRATHRON, N., 2006. *Fighting poverty from the street. A survey of street food vendors in Bangkok*. Bangkok: International Labour Organisation.
- OSEI MENSAH, J., OHENE-YANKYERA, K. & AIDOO, R., 2016. Constraints to growth of micro and small-scale enterprises in Ghana: A case of street food enterprises. *J. Dev. Agric. Econ.*, 8(10): 241-250.
- PORTER, M.E., 1990. New global strategies for competitive advantage. *Planning Review.*, 18(3): 4–14.
- REDZWAN HABIB, K., 2016. Understanding challenges faced by street food vendors to maintain street food hygiene in Dhaka City. *J. Food Sci. Nutr.*, 4(4): 78.
- RESNICK, D., SIVASUBRAMANIAN, B., IDIONG, I.C., OJO, M.A. & TANKO, L., 2019. The enabling environment for informal food traders in Nigeria's secondary cities. *Urban Forum.*, 30(4): 385–405.
- ROEVER, S. & SKINNER, C., 2016. Street vendors and cities. *Environ Urban.*, 28(2): 359–374.
- STATISTICS SOUTH AFRICA., 2020. *Statistical Release P0302: Mid-year population estimates 2020*. Stats SA. Available from <http://www.statssa.gov.za/publications/P0302/P03022017.pdf>
- TAMAKO, N. & THAMAGA-CHITJA, J.M., 2017. Does social capital play a role in climate change adaptation among smallholder farmers for improving food security and livelihoods? *J. Consum. Sci.*, 2: 16–26.

- TAVONGA, N., 2014. Operations of street food vendors and their impact on sustainable urban life in high-density suburbs of Harare, Zimbabwe. *Asian J. Econ. Model.*, 2(1): 18–31.
- TAWODZERA, G., 2019. The nature and operations of informal food vendors in Cape Town. *Urban Forum.*, 30(4): 443–459.
- TAWODZERA, G. & CRUSH, J., 2019. *Enabling informal food vending in urban South Africa.* Available from <https://hungrycities.net/wp-content/uploads/2019/08/HCPbrief4.pdf>
- TSHIKHUDO, L.P. & MANENZHE, T.D., 2021. Evaluation of the profitability of vegetable and fruit street vendors in Mbombela Local Municipality in Mpumalanga Province, South Africa. *Euro. J. Agric. Food Sci.*, 3(2): 49–52.
- VILJOEN, G. & VANDER WALT, K., 2018. South Africa's water crisis - An interdisciplinary approach. *Tydskrif Vir Geesteswetenskappe.*, 58(3): 483–500.
- VON HOLY, A. & MAKHOANE, F.M., 2006. Improving street food vending in South Africa: Achievements and lessons learned. *Int. J. Food Microbiol.*, 111(2): 89–92.