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Research Article

Barriers To The Efficient Utilisation And Delivery Of Online Retail Services In Gauteng-Based Emerging Business Enterprises

Zeleke Worku

[1] Tshwane School for Business and Society, 159 Nana Sita Street, Pretoria 0001, South Africa

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ABSTRACT

The effective utilisation of online methods, processes and applications enables emerging businesses enterprises to optimise the delivery of retail business activities to their clients. Online and digital methods are vital for offering highly efficient retail services and for competing favourably with large business enterprises. Various studies have shown that small enterprises are using online and digital platforms for the effective promotion of retail services, advertisement, awareness campaigns, and efficient marketing to potential customers. Such services are vital for reaching out to a diverse group of customers in the market and offer efficient services at an affordable cost without lowering the quality of services. Online retail services have enabled SMMEs to compete with established businesses by using digital technology to close the gap between them and large businesses. The purpose of research was to identify predictors of the efficient utilisationof online and digital methods for conducting retail business activities among 432 emerging SMMEs operating retail business activities in the province of Gauteng, South Africa (Worku, 2024).The results found a significant relationship between satisfactory entrepreneurial skills and the effective utilisation of online and digital methods of conducting retail business. The efficient utilisation of online and digital methods was undermined by lack of capacity to invest in digital equipment and technology, inadequate infrastructure, and low level of skills in the use of online and digital methods of conducting retail business activities.

Keywords: Gauteng Province, Emerging businesses, Online retail services, Business intelligence.

INTRODUCTION

By gathering quantitative and qualitative data from 432 Gauteng-based small, micro and medium-sized enterprises, Worku (2024) has found that the ability to utilise online and digital technology, processes and methods for conducting retail business activities is a differential factor that separates emerging SMMEs from business enterprises that are viable. Hendricks and Mwapwele (2024) state that the pace of adoption of e-commerce activities depends upon the level of utilisation of online and digital technology for conducting retail business. The authors have found that access to technology, the availability of conducive working environments, and customer trust are influential factors of adoption. Bawack (2024) has identified common causes that explain why developed nations have a relatively much faster adoption rate of online and digital technology than developing nations. The explanation highlights factors such as lack of awareness and lack of infrastructure. Local communities in various African nations can promote rural and urban development as well as the cost and efficiency of retail activities by adopting e-commerce and digital processes. Gallant, Amadi-Echendu and Esterhuyzen (2025)state that the adoption of e-commerce processes in retail markets depends upon the ability to penetrate markets in which there is demand for retail services. The level of awareness about the benefits of e-commerce retail activities has increased in rural regions of South Africa since the early 2000s. There are obstacles such as lack of digital infrastructure, a high cost of telecommunications, power outages, and cumbersome regulatory obstacles hamper the progress made in adoption in Gauteng based townships (Ramsern, & Govender, 2023).

By gathering information from 522 retail enterprises, Costa and Rodrigues (2024) have found that the efficient delivery of e-commerce retail services is dependent upon the availability of digital infrastructure, technological awareness and capability, and commitment to maintain and upgrade digital and telecommunications infrastructure. The effective use of digital platforms and appropriate technological methods for reaching out to a broad and diverse group of customers is shown to be helpful for ensuring profitability. The survey has shown that adequately informed customers tend to be loyal and satisfied. The survey shows the benefits of using appropriate digital technology for marketing and disseminating information about goods, services and products that are offered to customers. Most of this information is disseminated by using online methods and highly efficient web-based information communication processes. Any disruption in these communication and information dissemination processes leads to breakdown and the loss of market opportunities and potential revenues. Karine (2021) has

conducted a survey to show how much member nations of BRICKS can grow their economies by promoting e-commerce. The author has shown the need to expand and maintain digital and telecommunications infrastructure in all member nations. Emerging SMMEs are significantly affected by lack of infrastructural development, costly telecommunications services, inadequate municipal services, lengthy procedures of license application and renewal, and power outages.

Loffstadt, Ndlovu and Padia (2023) have conducted a survey to examine how fair tax related regulations that apply to e-commerce operations are and have found that tax related regulations in South Africa are fair and in line with international best practice. Awareness about the benefits of e-commerce activities needs to be promoted among emerging businesses of all sizes. There is also a need for reducing the cost of telecommunications services. Mdoda, Christian and Agbugba (2024) have found that the high cost of telecommunications services and poor digital infrastructure stifles profitability among farmers working in the Eastern Cape province of South Africa.

Saunders and Aragón-Zavala (2024) state the numerous benefits of effective wireless communication systems for promoting e-commerce activities in all businesses. Affordable and reliable wireless communication systems enable emerging businesses to be more visible and competitive at an affordable cost. The availability of affordable and reliable wireless services allows poorly resourced businesses to reach out to potential customers with tailor-made services, products and goods. Emerging businesses that operate in developing nations experience regulatory and infrastructural difficulties. The main benefits of affordable and reliable wireless services are increased efficiency, enhanced mobility, the ability to reduce the cost of business transactions, flexibility and scalability, the ability to enhance collaboration, the ease of managing networks, and enhancing the level of satisfaction of consumers.

LITERATURE REVIEW

Highly efficient digital and wireless services are essential for gathering business related information from local and international markets at an affordable cost. In developing communities, emerging businesses are exposed to a high cost of seeking market-related information about their business rivals and competitors. Emerging businesses often fail due to intense competition from established and large business enterprises. Chuks (2024) has identified barriers that undermine e-commerce retail business activities in Nigeria and South Africa. By gathering data from Takealot in South Africa and Jumia in Nigeria, the authorindicates that e-commerce activities can be utilised best in local communities in which there is adequate awareness and infrastructure for online and digital technology. The author points out the benefits of investing on the mastery of digital and technological skills, upgrading and maintaining digital and telecommunications infrastructure, and simplifying cumbersome bureaucratic regulations that are too costly to poorly resourced business enterprises.

Morepje, Sithole, Msweli and Agholor (2024) state the benefits of promoting e-commerce retail activities among smallholder farmers working in the agricultural sector. The main finding of their survey is that local and national governments have a duty to promote awareness education and build infrastructural capacity in rural and urban regions so that e-commerce retail business activities can flourish efficiently. The authors point out that the key benefit of doing so includes ensuring food security among rural and urban households. The other benefit is that of protecting the environment, natural habitat and wildlife from degradation, abuse, contamination and toxic pollution. Nougarahiya, Shetty and Mandloi (2021) have highlighted various examples in which the effective use of e-commerce has made a valuable contribution to economic growth in India over the past several years. The survey shows the advantages of investing in digital and telecommunications infrastructure.

Thiébaut (2024) has identified various regulatory and legislative obstacles that stifle growth and profitability in e-ecommerce activities among SADC member nations. The author states that e-commerce activities are less effective when there are infrastructural, educational, regulatory, immigration, legal and customs-related obstacles. It follows that e-commerce activities thrive when such obstacles are removed. Mkansi and Nsakanda (2023) have found that trust and internet security-related issues stifle growth in e-commerce activities that are carried out by retail enterprises. The authors have shown the need to provide education to emerging SMMEs that conduct e-commerce retail activities. Singh and Vijay (2024) state that e-commerce activities are expected to grow and evolve significantly in the coming years and decades and that it is essential to master technological skills that are essential for using e-commerce efficiently. Such technological advancements are not so easy to master in emerging business enterprises that operate in poorly developed nations.

The ability of large businesses to use online methods for selling, marketing and networking is significantly larger than that of small businesses. The main target of e-commerce is the personal consumer. The practice of buying and selling goods and services by using online platforms falls under e-commerce activities. In contrast, e-business activities include conducting all sorts of business activities by using online methods. SMMEs rely on personal marketing techniques that rely on close personal knowledge and relationships. Such intimate knowledge leads to loyalty and repeat customers. In contrast, large enterprises rely on mass-market approaches that are general in nature. Mass market approaches are designed to reach large groups of potential customers. SMMEs that develop the capacity to use digital and online platforms are capable of narrowing the gap between small and large business enterprises cost effectively.

In order for SMMEs to benefit effectively from e-commerce activities, they need to develop and maintain the capacity to offer reliable and efficient online retail services to their customers. The main requirements of e-commerce are website and platform (domain name, hosting a website, maintaining platforms for e-commerce activities, designing a user-friendly services to customers using a wide variety of devices), ensuring a highly efficient user experience, ensuring security from hackers and intruders, ensuring an efficient payment processing, the ability to manage the efficient delivery of goods and services to customers, ensuring an efficient customer service, ensuring efficient marketing services, complying with consumer protection acts and legislation, the efficient management and resolution of consumer complaints, the regular assessment of customer satisfaction, and addressing valuable comments and suggestions from customers.

All 257 municipalities in South Africa stand to benefit significantly from the effective utilisation and promotion of e-government and e-commerce activities. E-government processes enable local municipalities to render services to businesses efficiently. A key aspect of efficient municipal services is upgrading and expanding digital infrastructure for the effective delivery of e-government services. E-commerce activities flourish when e-government services are promoted. This has been shown in the past several years in various surveys conducted in Gauteng-based emerging enterprises by Alexander, Runciman, Ngwane, Moloto, Mokgele and Van Staden (2018), Marivate (2014), Tshanga (2020), Rogerson and Sixaba (2021) and Worku (2019, 2022). Adeleke, Akinlabi and Dunmade (2021)have reported a similar finding in Nigeria. The main finding reported by the above authors is that local municipalities can help their local communities to reduce the high rate of failure in emerging enterprises by rendering efficient and affordable municipal and infrastructural services.

Worku and Muchie (2018) have assessed marketing strategies that are used by footwear and textile businesses that operate in Alexandra Township and found that emerging SMMEs lack the capacity to acquire and utilise appropriate digital and online technologies and equipment that are essential for benefiting from e-commerce activities. The key barriers are lack of capacity to acquire and use appropriate digital equipment, gadget and technology, poor access to the internet, poor infrastructure, and a high cost of telecommunications services. Surveys conducted by worku (2014, 2018, 2024) have identified obstacles such as poor access to the internet, inability to use computers effectively, poor knowledge of software such as Excel and MS Access for keeping records, inability to maintain personal records and profiles of customers, lack of trust in digital payments, risk emanating from digital fraud such as hacking, and the fear of exposure to computer virus.

The other common causes of failure in using e-commerce services effectively are selling the wrong products, inability to set selling price based on market research, the absence of a marketing plan, inability to keep website functional at all times, the use of inappropriate design for online customers, inability to be ranked optimally by Google, the absence of quality content at website, inability to deliver goods and services fast enough to customers, and a high cost of delivery of products to customers.

Rungani and Potgieter (2018) have conducted a survey in the Eastern Cape Province of South Africa to assess obstacles to the successful adoption of online platforms that are commonly used for conducting e-commerce activities in the retail industry. The authors have identified major obstacles such as poor digital infrastructure, the high cost of telecommunications services, lack of skills in capturing data electronically, inability to produce appropriate business plans, failure to conduct inventory, difficulty in using appropriate marketing tools and methods, and difficulty in networking with large and well-established business enterprises. The ability to use e-commerce platforms effectively improves market access and enables sellers to set reasonable prices for their goods, products and services.

A key mandate of the South African Local Government Association (SALGA, 2024) includes building capacity in all 257 South African municipalities. The focus areas of building capacity are infrastructural, administrative and managerial. The principle of building capacity is helpful for reducing the cost of doing retail business in emerging businesses. Residents and ratepayers include business enterprises that conduct retail business activities in all economic sectors. SALGA (2024) aspires to enhance the capacity of South African municipalities to generate enough income for maintaining and expanding municipal infrastructure. The achievement of this goal depends upon the ease of doing retail business in municipalities. A key aspect of accomplishing this task requires the provision of laying out, maintaining and upgrading municipal infrastructure and training municipal employees. The cost of municipal services can be reduced significantly by transforming paper-based services into digital services. To do so, all 257 South African municipalities need to invest on digital infrastructure.

In the financial year 2022/2023, only 34 of the 257 South African municipalities (13.23%) received clean audits from the South African Auditor-General (2024). The main obstacles are lack of good leadership, poor accountability, and the appointment of political appointees into technical and professional positions in municipalities. It is necessary to maintain and upgrade municipal and digital infrastructure in order to be able to render reliable services to people who rely on municipal services. Essential municipal services include water services, electricity services, waste and sanitation services, accounting services, road and street light maintenance, safety and security services, transportation services, health services, and looking after the operational needs of business enterprises. Power interruptions, poor municipal roads, dysfunctional traffic lights, and interruption of water services often result in protests in South African local municipalities and townships. E-commerce platforms require the availability of steady municipal and digital services that are affordable and predictable (Podger, 2023).

Pheiffer and Rakubu (2023) have identified barriers to profitability among South African SMMEs. A few examples of such barriers are criminal activities that target SMMEs, inadequate municipal services, difficulty in the registration of business enterprises, unfair tax assessment, and decaying municipal infrastructure. These barriers undermine the pace of adoption of e-commerce platforms as well as attaining sustained profitability (Msenge, & Nzewi, 2021). A survey conducted in Bangladesh by gathering data from SMMEs shows that local municipalities and local governments must invest financial and human resources sufficiently on a regular basis (Masum, Mia, Islam, Ahmed, Milon, & Hossain, 2024). The authors state that the promotion of e-commerce activities is highly valuable for the reduction of poverty in impoverished local communities.

Kobedi, Swanepoel and Venter (2022) have highlighted the benefits of promoting e-commerce activities for job creation in local communities in the Greater Tshwane geographical region. E-commerce activities enable emerging SMMEs to render affordable and efficient retail business services to a much wider customer base successfully. The ability to do so leads to increased revenue and sales as well as more employment opportunities for jobseekers. Employment opportunities arise in areas such as customer service management, logistical services, the development and maintenance of websites, and marketing and networking services. Joshua, James and Titos (2022) state that the adoption of e-commerce services is critical for ensuring sustained profitability in business enterprises that operate in Tshwane, Johannesburg and Ekurhuleni Metropolitan Municipalities. Key areas of growth in which e-commerce platforms can make a visible difference are the hotel, tourism and entertainment sectors.

Overall objective of study

The aim of research was to explore determinants of the successful utilisation of online and digital methods of conducting retail business activities in Gauteng-based small, micro and medium-sized business enterprisesin South Africa.

Specific objectives of study

- To assess the perceived level of capacity of emerging SMMEs to effectively utilise digital and online methods to conduct retail business activities;
- To assess the perceived level of suitability of digital infrastructure in emerging SMMEs to conduct retail business activities; and
- To assess the perceived level of skills of emerging SMMEs to utilise digital and online methods of conducting business.

METHODS AND MATERIALS OF STUDY

By gathering quantitative and qualitative data from 432 Gauteng-based small, micro and medium-sized enterprises, Worku (2024) has explored determinants of the effective utilisation of online and digital technology, processes and methods for conducting retail business activities in emerging business enterprises. This paper is based on a secondary analysis of data sets gathered in the study conducted by Worku (2024). Stratification (Levy and Lemeshow, 2013) was done by economic sector in the primary study. Methods used for performing the analysis of raw data sets include univariate and bivariate analysis (Denis, 2021), multivariate analysis (Montgomery and Runger, 2020), confirmatory factor analysis(Mardia, Kent and Taylor, 2024), and structural equations modelling (Kline, 2023). Estimates obtained from each statistical procedure were tested for reliability by using goodness-of-fit tests that are recommended for each statistical procedure.

RESULTS OF DATA ANALYSES

The general profile of the 432 participants of survey is displayed in Table1 below. The table shows that less than 5% of participants (4.17%) used online and digital methods for conducting retail business activities on a regular basis. The percentage of participants who did not use online and digital methods for conducting retail business activities was 95.83%. The percentage of participants who had access to the internet was 33.11%. The percentage of participants who had no access to the internet was 66.89%. The percentage of participants who owned a laptop was 34.49%. The percentage of participants who did not own a laptop was 65.51%. These figures are relatively less than figures reported by Rand Merchant Bank (2025) and Mastercard (2024). The difference is attributed to the fact that the 432 participants that took part in the study come from emerging SMMEs and not from large business enterprises. The table shows that about 57% of participants in the study were owners of the businesses they operated. About 4% of participants were both owners and managers. About 7% of participants were shareholders. About 12% of participants had matric level education or less. About 60% of participants had degree level academic qualifications (bachelor's, honour's master's and doctoral degrees). At the time of the survey, about 57% of participants had worked as entrepreneurs for 11 years or longer. About 75% of businesses were operated by 5 or fewer people.

Table 1: Personal characteristics of participants of survey (n=432)

Personal characteristics of participants	**Percentage**
Utilisation of online and digital methods for conducting retail business activities	Yes: 4.2% No: 96%

Does the participant have access to the internet?	Yes: 33% No: 67%
Does the participant own a laptop?	Yes: 34% No: 66%
What is the status of the participant in the business enterprise?	Owner: 57% Employee: 21% Both owner and manager: 4% Administrator: 11% Shareholder: 7%
What is the highest level of education of the participant?	Matric level or less: 12% Certificate: 7% Diploma: 21% Bachelor's degree: 48% Honours degree: 4% Master's degree: 7% Doctoral degree: 1%
How many years has the participant worked in the business enterprise?	Five or less: 13% Six to ten: 31% Eleven to fifteen: 34% Sixteen to twenty: 18% Twenty-one or more: 5%
How many people are employed in the business enterprise?	Two or fewer: 5% Three to five: 70% Six to ten: 5% Eleven or more: 19%

Table 2 shows that about 12% of participants were aged between 20 and 30 years; about 21% of them were aged between 31 and 40 years; about 32% of them were aged between 41 and 50 years; about 28% of them were aged between 51 and 60 years; and about 6% of them were 61 years old or older at the time of the survey. About 67% of participants were male; about 33% of them were female. The percentage of married participants was fifty-seven; the percentage of single participants was twenty-two; the percentage of divorced participants was eleven; the percentage of widowed participants was four; and the percentage of participants who lived together with their sexual partners was seven. At the time of the survey, the percentage of participants who had worked for less than three years was six percent; the percentage of participants who had worked for three to five years was nine percent; the percentage of participants who had worked for six to ten years was thirty-six percent; the percentage of participants who had worked for eleven to fifteen years was twenty-nine percent; the percentage of participants who had worked for sixteen to twenty years was sixteen percent; the percentage of participants who had worked for twenty-one years or more was five percent.

Table 2: Distribution of age, gender, marital status and duration of experience (n=432)

Characteristics of participants of survey	Percentage
What is the age of the participant of survey?	Twenty to thirty years: 12% Thirty-one to forty years: 21% Forty-one to fifty years: 32% Fifty-one to sixty years: 29% Sixty-one years or above: 6%
What is the gender of the participant of survey?	Male: 67% Female: 33%
What is the marital status of the participant of survey?	Single: 22% Married: 57% Divorced: 11% Widowed: 4% Living together: 7%
How long has the participant of survey managed the business enterprise?	Less than three years: 6% Three to five years: 9% Six to ten years: 36% Eleven to fifteen years: 29% Sixteen to twenty years: 16% Twenty one years or more: 5%

Table 3provides information in respect of estimated turnover of business and starting capital for the 432 emerging SMMEs that were chosen for the survey.

Table 3: Estimated turnover and starting capital of business enterprises (n=432)

Characteristic of business	Percentage
Turnover of business	Half a million Rand or less: 17% Half a million to 1 million Rand: 13%) One to five million Rand: 25% Five to ten million: 17% Ten million Rand or more: 28%
Starting capital of business	Half a million Rand or less: 22% Half a million to 1 million Rand: 15%) One to five million Rand: 28% Five to ten million: 12% Ten million Rand or more: 24%

The strength of association between utilisation of online and digital methods of conducting retail business activities and various variables was quantified by using bivariate statistical tests of associations (Mardia, Kent, & Taylor, 2024). Table 4 shows 8 factors that are significantly associated with the effective utilisation of online and digital methods of conducting retail business activities on a regular basis.

Table 4: Table of significant associations with utilisation of online methods (n=432)

Factors significantly associated with the effective utilisation of online and digital methods of conducting retail business activities on a regular basis	Observed chi-square value	P-value
Lack of capacity to invest in digital equipment and technology	31.1425	0.0000
Inadequate infrastructure	28.1358	0.0000
Low level of skills in the use of digital and online methods of conducting business	27.5964	0.0000
Inability to use social media	24.2957	0.0000
Poor ability in marketing services	22.5469	0.0000
Poor ability in networking	19.8808	0.0000
Low level of formal education	18.6196	0.0000
Difficulty in acquiring training assistance	16.5724	0.0000

Table 5 shows results obtained from ordered logit analysis (Montgomery, & Runger, 2020). The table shows 3 factors that are significantly associated with the effective utilisation of online and digital methods of conducting retail business activities on a regular basis.

Table 5: Results from ordered logit analysis (n=432)

Factors significantly associated with the effective utilisation of online and digital methods of conducting retail business activities on a regular basis	Odds Ratio	P-value	95% C. I.
Lack of capacity to invest in digital equipment and technology**(equipment)**	4.43	0.000	(2.99, 5.86)
Inadequate infrastructure**(infrastructure)**	3.78	0.000	(2.35, 5.23)
Low level of skills in the use of digital and online methods of conducting business**(skills)**	3.68	0.000	(2.26, 5.14)

Results obtained from ordered logit regression analysis show that the effective utilisation of online and digital methods of conducting retail business activities on a regular basis was significantly influenced by 3 factors. These 3 factors were the following:

1. Lack of capacity to invest in digital equipment and technology
2. Inadequate infrastructure
3. Low level of skills in the use of digital and online methods of conducting business

INTERPRETATION OF ODDS RATIOS

The odds ratio of the variable "equipment" is 4.43. This odds ratio indicates that an SMME that has the necessary equipment for online and digital communications is 4.43 times more likely to use online and digital methods of conducting retail business in comparison with an SMME that lacks the necessary equipment for online and digital communications.
The odds ratio of the variable "infrastructure" is 3.78. This odds ratio indicates that an SMME that operates in an area that has the necessary infrastructure for online and digital communications is 3.78 times more likely to use online and digital methods of conducting retail business in comparison with an SMME that operates in an area that lacks the necessary infrastructure for online and digital communications.
The odds ratio of the variable "skills" is 3.68. This odds ratio indicates that an SMME that has adequate technical skills for using online and digital communications is 3.68 times more likely to use online and digital methods of conducting retail business in comparison with an SMME that does not have adequate technical skills for using online and digital communications.
The reliability of estimates obtained from ordered logit regression analysis was tested before making statistical inference and drawing conclusions. The fitted ordered logit model could classify 81.27% of observations accurately, the probability value from the likelihood ratio test was smaller than 5% (P=0.0000), andthe probability value from the Hosmer-Lemeshow test was larger than 5% (p=0.1083). All standard errors of estimation were quite small. According to Ross (2020), these findings corroborate the theoretical reliability of the fitted model.
The main aim of data analysis was to identify underlying predictors of the utilisation of online and digital methods of conducting retail business activities. Kline (2023) recommends the use of structural equations modelling (Kline, 2023) for identifying latent variables (variables that are hidden or not readily identifiable). The method works well when large sample sizes of study are used, which was the case with this particular survey (n=432). Before using structural equations modelling, confirmatory factor analysis was used to perform data reduction. Mardia, Kent and Taylor (2024)recommend the use of Cronbach Alpha coefficients for examining the extent to which tools used for the measurement of variables are internally consistent and reliable. When these coefficients are larger than 0.80, it means that tools used for measurement are reliable and internally consistent. In this particular survey, all magnitudes of these Cronbach Alpha coefficients were larger than 0.80.
The procedure identified 3 highly significant predictors of utilisation of online and digital methods of conducting retail business activities. Table 6 gives regression parameters estimated from Structural Equations Modelling (SEM). All standard errors of estimation were quite small. The coefficient of determination (CD) was quite large (84.17%), thereby confirming that a significant percentage of variation was accounted for by the 3 predictor variables identified in Table 6 below.

Table 6: Regression estimates from Structural Equations Modelling (n=432)

Determinants of utilisation of online and digital methods	Coefficient	Z-statistic	P-value	OIM Std. Err
Lack of capacity to invest in digital equipment and technology**(equipment)**	1.25	7.21	0.0000	0.0158
Inadequate infrastructure**(infrastructure)**	1.23	6.07	0.0000	0.0107
Low level of skills in the use of digital and online methods of conducting business**(skills)**	1.13	5.98	0.0000	0.0215
Constant term	1.18	2.21	0.010	1.1326

The estimates displayed in Table 6 above confirm that there are 3 influential predictor variables that explain the phenomenon of interest in the survey. The 3 influential predictor variables identified and quantified in the table explain the extent to which the 432 emerging business enterprises in the survey are capable of using appropriate technology (online and digital) for conducting retail business on a day-to-day basis. In a decreasing order of importance, the three influential variables are the following:

1. Lack of capacity to invest in digital equipment and technology (equipment)
2. Inadequate infrastructure (infrastructure)

3. Low level of skills in the use of digital and online methods of conducting business (skills)

As has been recommended by Kline (2023), the reliability of estimates obtained from structural equations modelling was tested by performing 2 tasks. The first such task was to examine the ability of the fitted model to account for variability in the dependent variable of study. The second such task was to examine the magnitudes of errors of estimation. The figures displayed in Table 7 confirm that the fitted model explains variability in the dependent variable of study quite well.

Table 7: Diagnostic statistics for SEM estimates (n=432)

Type of diagnostic statistic estimated from SEM regression analysis	Abbreviation	Estimated magnitude
Adjusted Goodness of Fit Index statistic	AGFI	93.68% (Large)
Tucker Lewis Index	TLI	97% (Large)
Comparative Fit Index	CFI	97% (Large)
Standardised Root Mean Square Error of Approximation	SRMSEA	0.0026< 1% (Insignificant)
Coefficient of Determination	CD	83.14% > 75% (High)
Akaike Information Criterion	AIC	33.1304 (Insignificant)
Bayesian Information Criterion	BIC	32.4802 (Insignificant)

DISCUSSION OF RESULTS AND IMPLICATIONS ARISING FROM SURVEY

Three broad categories of data analyses (univariate analysis, bivariate analysis and multivariate analysis) have identified 3 obstacles to that undermine the ability of Gauteng-based emerging retail business enterprises to utilise online and digital methods of conducting retail business activities. These obstacles are lack of capacity to invest in digital equipment and technology, inadequate infrastructure, and low level of skills in the use of digital and online methods of conducting retail business activities.

Platforms that are based on e-commerce activities are capable of overcoming geographical barriers and spheres. In spite of the fact that large enterprises outperform SMMEs, the effective use of e-commerce has enabled SMMEs to do well in some economic sectors. Retail entrepreneurs can only benefit from e-commerce benefits if technological, educational, infrastructural and digital requirements are met. This shows that ensuring success in the adoption and promotion of e-commerce activities in the retail industry requires commitment to empower and adequately equip emerging retail entrepreneurs working in South African SMMEs.

Nthite and Worku (2019) have conducted a survey by gathering data from emerging SMMEs that operate in various Gauteng-based townships and have found that the successful adoption of e-commerce activities is undermined by inadequate infrastructure, poor access to technical training opportunities, difficulty in utilising digital technology, equipment and gadgets for conducting retail business, inability to use social media and digital methods for marketing and networking purposes, and failure to attend training programmes that are offered to emerging entrepreneurs by agents of the DTIC and SEDA in various locations, townships and cities.

Marivate (2014), Khale (2015), Ntshani (2020) have assessed socioeconomic factors that hinder the pace of adoption of e-commerce methods and applications in emerging South African retail businesses and has identified various technological, social, economic, cultural, educational and political obstacles. Both authors have identified inadequate municipal services, poor digital infrastructure, costly telecommunications services, and insufficient awareness about the advantages of online and digital technologies as major barriers to the adoption of e-commerce activities. The authors have suggested that incentives could be given to retail businesses by way of providing free Wi-Fi services in all parts of the City of Tshwane at all times, maintaining and expanding the range of services that are offered to emerging businesses, the provision of tax related incentives and awareness education to large businesses that are prepared to mentor and coach emerging SMMEs. Lekhera, Schutte and Dlamini (2023) have suggested regular mentorship and skills-based training to poorly resourced enterprises. Maphangwa and Van der Waldt (2023)have suggested that local governments could promote the successful adoption of online and digital methods by emerging businesses by installing, upgrading and maintaining municipal and digital infrastructure.

A report published by Madibeng Municipality (2022) shows that the municipality relies on tourism for growing the local economy and that tourism activities can be promoted effectively by using online methods such as social media, email exchanges, internet-based marketing, digital advertisements, telephone exchanges, and Google services. The basic processes of understanding and using e-commerce platforms for retail business require the availability of digital infrastructure, reliable and affordable telecommunications services, affordable digital equipment and gadgets, and training programmes for learners, and leadership from well-established business enterprises and Government agencies such as the DTIC and SEDA. Emerging SMMEs lack the digital equipment and technical expertise to compete adequately with large enterprises. However, they do possess the potential for making a valuable economic contribution to job creation and poverty alleviation in local communities. Inability to assess market conditions by using social media, difficulty in acquiring technical training and mentorship services on how to use digital equipment and software, and difficulty in partnering with large and adequately resourced business enterprises and captains of industry are a few examples of developmental obstacles that characterise emerging

businesses. A combination of technological and infrastructural obstacles stifle profitability in emerging SMMEs that lack specialised skills, skilled manpower and capital. The pace of adoption of e-commerce in emerging SMMEs can be enhanced by meeting the developmental needs of emerging SMMEs. Economic incentives should be provided to large enterprises that extend coaching and mentorship assistance to emerging SMMEs.

The ability to conduct online retail business activities enables people to work from home and save the money they would have to pay for renting business premises. The ability to work from home by using online methods comes with more convenience and flexibility in the course of conducting business activities. A survey conducted by Worku (2022) shows that common causes of failure to use e-commerce retail services in developing nations are inadequate municipal service delivery, low level of formal education, inability to use electronic and digital equipment and gadgets, and poor digital infrastructure.
Promoting sustained growth and viability in emerging SMMEs leads to the creation of livelihoods and jobs for the youth. This, in turn, is highly valuable for alleviating poverty in local communities. The study has shown that there is a need for empowering emerging SMMEs by way of providing them with the means to purchase digital equipment along with the necessary technical training, mentorship and supervisory support from the DTIC and SEDA. The ability to use e-commerce services enables business enterprises to shorten the time required to complete the process of buying, storing, listing, and distributing products to their customers. It also enables business enterprises to advertise and market their goods and services optimally. Online methods allow buyers and sellers alike to be flexible enough to accommodate each other. E-commerce services enable buyers and sellers to compare prices easily and to meet each other's demands much faster. The use of e-commerce platforms enables poorly resourced SMMEs to cope with intense competition from large enterprises who dominate local markets.

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