

An Evaluation of Critical Success Factors for Effective Digital Marketing Adoption in Zambia's Service-Based Businesses

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ABSTRACT

This study examined the critical success factors influencing digital marketing adoption among service based businesses in Lusaka, Zambia. The objectives were to identify digital marketing practices that drive adoption, assess the influence of environmental factors and determine the barriers and enablers shaping effective digital marketing use. A descriptive research design was applied and data were collected from 385 businesses using structured questionnaires. Analysis included descriptive statistics, correlation tests and multiple regression modelling. Findings showed that online advertising and social media marketing were the most widely adopted strategies, with high mean scores of 4.577 and 4.540. Email marketing recorded low usage (mean 2.584), while affiliate marketing showed moderate adoption (mean 3.410). Environmental conditions had strong influence on digital marketing, particularly market dynamics (mean 4.904) and environmental influence (mean 4.665). Regression analysis showed that environmental factors explained 79 percent of the variance in digital marketing adoption. The strongest predictors were the political, economic and social environment ($\beta = 0.5014$, $p < 0.001$), environmental influence ($\beta = 0.2576$, $p < 0.001$) and market dynamics ($\beta = 0.1117$, $p < 0.011$). Barriers identified included lack of management support, digital skills shortages, high costs and poor technological infrastructure. Major enablers included increased mobile and internet access, supportive organizational culture, use of data analytics and government support. The study concludes that digital marketing adoption is shaped by the interaction of internal capabilities, environmental pressures and enabling conditions. Strengthening digital infrastructure, improving digital literacy and enhancing regulatory support are recommended to advance digital marketing effectiveness in Zambia's service sector.

Keywords— Digital marketing adoption, service based businesses, environmental factors, technology readiness, infrastructure, regulatory context, online advertising, social media marketing, email marketing, affiliate marketing.

INTRODUCTION

Digital marketing is a broad term that encompasses various types of online marketing strategies and tactics (Arghya et al., 2020). Nowadays, many entrepreneurs are using digital marketing strategies to improve their business. Service-based businesses could also benefit from digital marketing strategies. For service-based businesses, digital marketing strategies can help them find customers and even build a loyal customer base over time. Service-based businesses can benefit greatly from digital marketing strategies. Digital marketing is a great way to reach and connect with potential customers, and service-based businesses are no exception to this rule. In fact, service-based businesses may need digital marketing more than other types of business, as they often act as an intermediary between customers and core services. According to Scharl et al. (2005), digital marketing is a technology application that offers a business the opportunity to interconnect with clients regularly. This has transformed the ways both prospective and actual customers communicate through the use of phones and other devices (Arghya et al., 2020). These devices help businesses, whether small or large, to advertise their products via the internet and assist advertisers in contacting potential customers anytime and anywhere (Samoilenko and Osei-Bryson, 2018). Digital marketing is achieved when digital marketing planning and strategy development improve the company's digital marketing culture (Arghya et al., 2020).

Digital marketing is progressively being used by a majority of firms globally to communicate and build stronger consumer relationships. The increased usage of personal computers, smartphones, social media, the internet, and e-commerce technology has resulted in significant variations in business marketing approaches and strategies (Donnelly, 2018). In this new world, it is more crucial than ever for marketers to use digital marketing to influence client preferences and buying intent (Kumar & Mirchandani, 2018). Companies use digital marketing platforms to communicate directly with their customers, and customers can converse with each other on these platforms (Mangold & Faulds, 2019).

Studies have confirmed that since the Internet entered the commercialization stage, there have been radical changes in its usage, including the consumer behaviour, perceptions, and attitudes towards digital-marketing and online purchasing (Ryan & Jones, 2012). For service-based businesses, digital marketing strategies can help them find customers and even build a loyal customer base over time. Service-based businesses can benefit greatly from digital marketing strategies. Digital marketing is a great way to reach and connect with potential customers, and service-based businesses are no exception to this rule. In fact, service-based businesses may need digital marketing more than other types of business, as they often act as an intermediary between customers and core services. Therefore, crucially, understanding factors influencing Effective Digital Marketing for Service-Based Businesses in Zambia remains critical in the operations of these business ventures.

LITERATURE REVIEW

Critical Success Factors for Effective Digital Marketing Adoption

Online Advertising plays a crucial role in digital marketing by delivering targeted promotional messages to consumers. Key success factors include creating personalized content that resonates with the audience, which enhances engagement and loyalty, as noted by Ryan and Jones (2019). Additionally, selecting appropriate advertising platforms is vital; for example, social media channels like Facebook and Instagram effectively reach younger demographics, while LinkedIn serves B2B markets (Khan, 2017). Measuring the effectiveness of these campaigns through metrics such as ROI and conversion rates is essential for making informed adjustments and improving overall marketing strategies (Merisavo & Raulas, 2016).

Social Media Marketing has transformed the way businesses engage with consumers, emphasizing the importance of building relationships and brand reputation within online communities (Matheena & Riswan, 2018). The shift from traditional one-way communication to interactive engagement empowers consumers, allowing them to influence brand perceptions and marketing outcomes (Quinton, 2013). Successful social media marketing involves setting clear goals, identifying the right channels, executing targeted strategies, and analyzing results to optimize future efforts (Dodson, 2016). Furthermore, research indicates that effective social media campaigns can significantly enhance brand awareness and customer engagement, particularly among millennials (Silvia, 2018).

Environmental Factors Affecting Digital Marketing Adoption

Understanding the micro-environment is crucial for effective digital marketing, as it encompasses the immediate factors influencing consumer behavior, such as competitors, suppliers, and market dynamics (Prause, 2019). Digitalization has become a key competitive advantage, yet companies face challenges in adapting to this shift, as highlighted by Leeflang et al. (2014). The rise of mobile technology and social media has reshaped consumer interactions, necessitating that businesses tailor their strategies to meet evolving preferences and behaviors (Abou-Elgheit, 2018). Marketers must assess both micro and macro-environmental forces to develop effective strategies that resonate with target audiences (Newswire, 2019).

The macro-environment includes external factors such as political, economic, social, and technological influences that impact digital marketing strategies (Kale, 2017). For instance, the COVID-19 pandemic forced many businesses to pivot to online marketing, highlighting the need for innovative communication methods (Zafar & Mustafa, 2020). Additionally, government regulations can either facilitate or hinder technology adoption,

affecting how organizations implement digital marketing strategies (Seethamraju, 2015). Understanding these macro-environmental factors is essential for businesses to navigate challenges and leverage opportunities in the digital landscape (Molla, Taylor, & Licker, 2016).

Barriers and Enablers Affecting the Effectiveness of Digital Marketing Adoption among Service-Based Businesses

Service-based businesses face several barriers to effective digital marketing adoption, including limited technological infrastructure and a lack of digital marketing expertise among employees (Obwatho, 2016; Kaur, 2017). The absence of advanced tools can prevent these businesses from effectively reaching potential customers, and high implementation costs further deter investment in digital strategies (Peter & Dalla Vecchia, 2020). Additionally, without proper training, employees may struggle to create engaging content or analyze performance, leading to poor customer engagement and reduced ROI (Ryan and Jones, 2019).

Conversely, enablers such as increased mobile technology penetration and management support can significantly enhance digital marketing effectiveness (Shukla & Nigam, 2018; Awa, Ukoha, & Emecheta, 2017). Organizations that prioritize digital marketing as a strategic component are more likely to succeed, particularly when they foster a culture of innovation and provide employees with the necessary resources and training (Oliveira, Thomas, and Espadanal, 2014). By leveraging data analytics and adopting mobile-friendly strategies, service-based businesses can better understand consumer preferences and engage effectively with their target audiences (Eren, 2016; Khan, 2017).

METHODOLOGY

This section outlines the research methodology, encompassing the research design, target population, research model, measurement of study variables, sampling, data collection instruments, data analysis, and ethical considerations. It provides a comprehensive framework for how the research will be conducted and ensures that the study objectives are met effectively.

Research Design

The study employed a descriptive research design, which serves as a strategic blueprint for data collection, measurement, and analysis, as noted by Sekaran and Bougie (2010). This design was selected for its ability to gather comprehensive data from a large number of participants, facilitating an in-depth exploration of digital marketing adoption among service-based businesses without manipulating variables, as supported by Mugenda and Mugenda (2016).

Target Population

The target population consists of all service-based businesses operating in Lusaka district, as defined by Cooper and Schindler (2009). This specific focus allows for a thorough examination of digital marketing practices within a local context, ensuring that the findings are relevant and applicable to practitioners and policymakers in the region.

Sample Size

The sample size for the study was determined using the Yamene formula, which provides a simplified method for estimating sample sizes from a known population (Bryman, 2016). Based on the PACRA Report (2022), the target population of approximately 11,265 service-based businesses in Lusaka resulted in a calculated sample size of 386 respondents, ensuring statistical significance and manageable data collection.

Sampling Technique

The study utilized simple random sampling to select service-based businesses, allowing each member of the

population an equal chance of being chosen (Cooper & Schindler, 2009). This technique minimizes bias and enhances the representativeness of the sample, thereby facilitating reliable generalizations about the broader population.

Data Collection Instrument

A questionnaire was chosen as the primary data collection instrument, incorporating both open and closed-ended questions to accommodate respondents' busy schedules. This method allows for efficient gathering of both qualitative and quantitative data, providing a comprehensive understanding of participants' insights.

Validity and Reliability of the Instruments

Validity refers to the accuracy of the measurement tools, while reliability concerns the consistency of those measures (Haslam et al., 2024; Bell et al., 2022). To ensure both validity and reliability, a pilot study was conducted with ten participants, enabling the researcher to refine the questionnaire based on feedback and improve the overall effectiveness of the data collection instruments.

Data Analysis

Data analysis involved editing raw data, applying a coding system to obtain frequencies and percentages, and utilizing SPSS for efficient and accurate interpretation. This systematic approach enhances the reliability and validity of the findings, allowing for meaningful insights to be derived from the collected data.

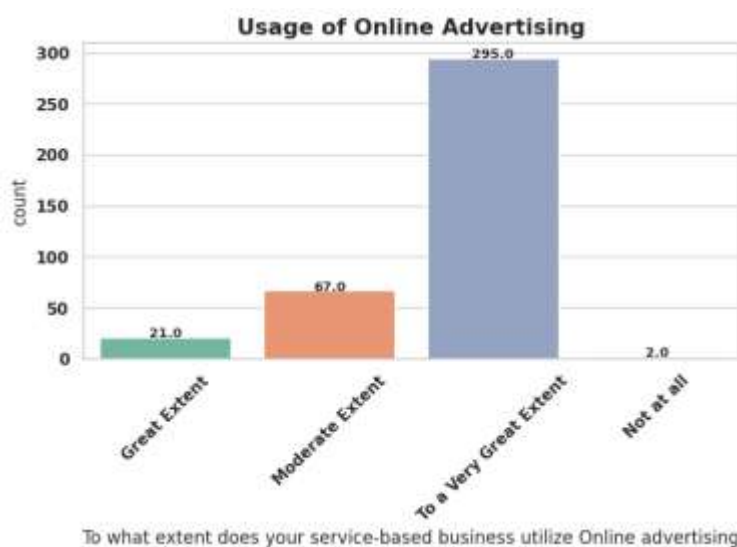
FINDINGS

Digital Marketing Practices Utilized by Service Based Businesses

This section presents the extent to which service based businesses in Lusaka utilize four major digital marketing practices. These include online advertising, social media marketing, email marketing, and affiliate marketing. The results provide insight into the level of engagement and the relative importance placed on each digital marketing tool.

Usage of Online Advertising

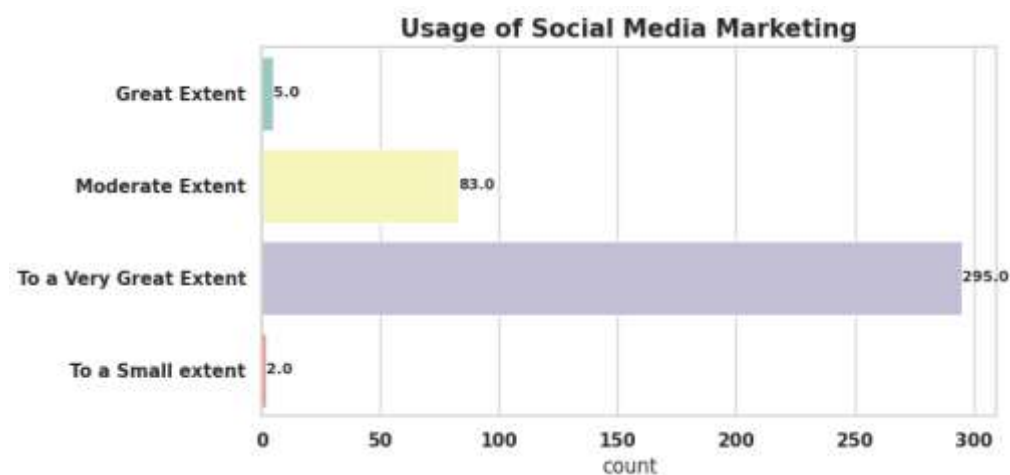
Usage of Online Advertising



The findings indicate that online advertising is widely adopted among service based businesses. A total of 295 respondents reported using online advertising to a very great extent, making this the most dominant response category. Additionally, 67 respondents indicated usage to a moderate extent, while 21 respondents stated that they used online advertising to a great extent. Only 2 respondents reported not using online advertising at all.

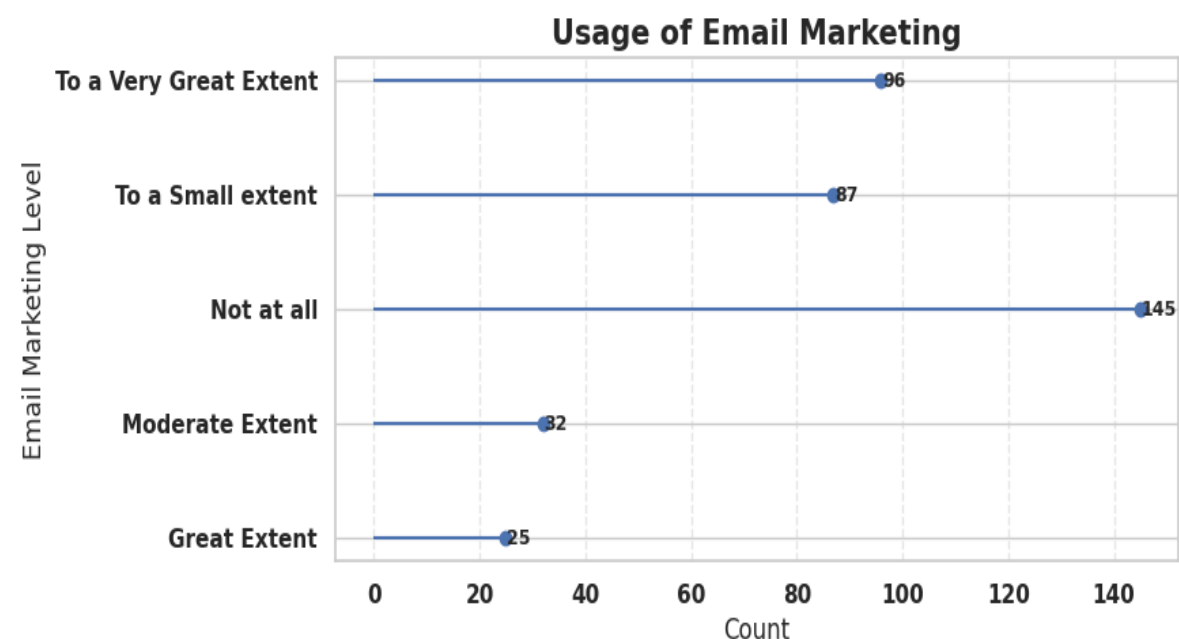
These results demonstrate that online advertising has become an essential marketing strategy for most businesses in the region. The high adoption rate suggests that businesses recognize the importance of digital visibility, targeted promotions, and customer reach provided by online platforms such as sponsored search engine adverts and social media adverts. The findings further imply that online advertising is considered both effective and necessary for competitiveness in the current digital environment.

Usage of Social Media Marketing



Social media marketing emerged as one of the most heavily utilized digital marketing practices. The data shows that 295 respondents used social media marketing to a very great extent. A further 83 respondents reported using it to a moderate extent, while 5 respondents indicated usage to a great extent. Only 2 respondents stated that they used social media marketing to a small extent, and no respondents reported not using it at all. These results highlight the critical role that social media platforms play in business operations. Businesses appear to rely heavily on platforms such as Facebook, Instagram, TikTok and WhatsApp for customer engagement, brand awareness, communication, and promotions. The strong adoption rate suggests that social media marketing is perceived as highly accessible, cost effective, and capable of reaching diverse audiences in real time. The findings also demonstrate that many businesses have integrated social media as a core component of their marketing strategy.

Usage of Email Marketing

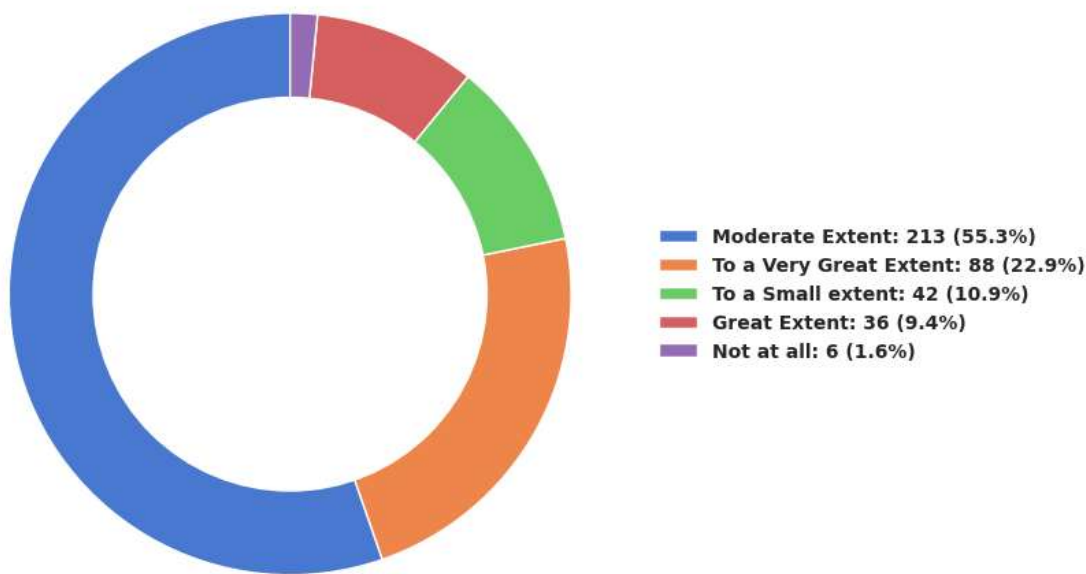


The results show a varied level of adoption of email marketing among service based businesses. A total of 145

respondents indicated that they do not use email marketing at all, which represents the largest proportion in this category. Meanwhile, 87 respondents reported using email marketing to a small extent, and 82 respondents used it to a moderate extent. A smaller group of 25 respondents indicated usage to a great extent, while 96 respondents used email marketing to a very great extent. These findings reveal that although email marketing is utilized by some businesses, it is not as widely adopted as social media or online advertising. The large number of respondents who do not use email marketing suggests potential barriers such as limited customer email databases, lack of email automation tools, or low perceived relevance for certain service sectors. However, the presence of a significant number of respondents using email marketing to a great or very great extent indicates that those who adopt it find value in its ability to support customer loyalty, personalized communication, and relationship building.

Usage of Affiliate Marketing

Usage of Affiliate Marketing



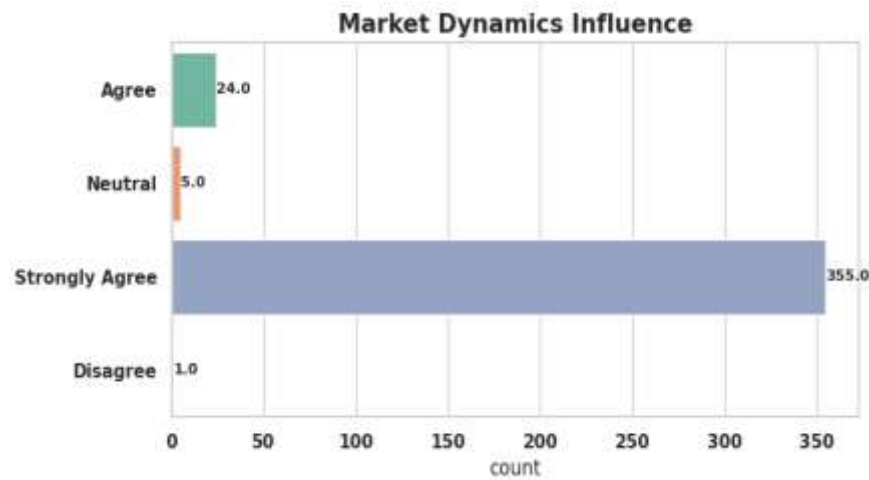
The analysis shows that affiliate marketing is moderately utilized among service based businesses. The largest group of respondents, totaling 213 individuals which represents 55.3 percent, reported using affiliate marketing to a moderate extent. Another 88 respondents, making up 22.9 percent, used it to a very great extent. A smaller group of 42 respondents which represents 10.9 percent used affiliate marketing to a small extent, while 36 respondents, representing 9.4 percent, used it to a great extent. Only 6 respondents, representing 1.6 percent, indicated that they do not use affiliate marketing at all. These findings suggest that while affiliate marketing is not the most dominant digital strategy, it is still an important tool for many businesses. The moderate level of adoption may reflect the growing engagement with influencers, content creators, and third party promoters who support business visibility and customer acquisition. The results imply that affiliate marketing is increasingly becoming recognized as a supplementary promotional strategy, particularly for businesses that seek to expand their customer reach through partnerships.

Environmental Factors Influencing Digital Marketing Adoption

This section presents findings on the extent to which environmental conditions influence digital marketing adoption among service based businesses in Lusaka. The study focused on key external factors including market dynamics, technology readiness, regulatory environment, and infrastructure availability. The results reveal strong agreement among respondents that these environmental conditions play an important role in shaping the adoption and effectiveness of digital marketing practices.

Influence of Market Dynamics

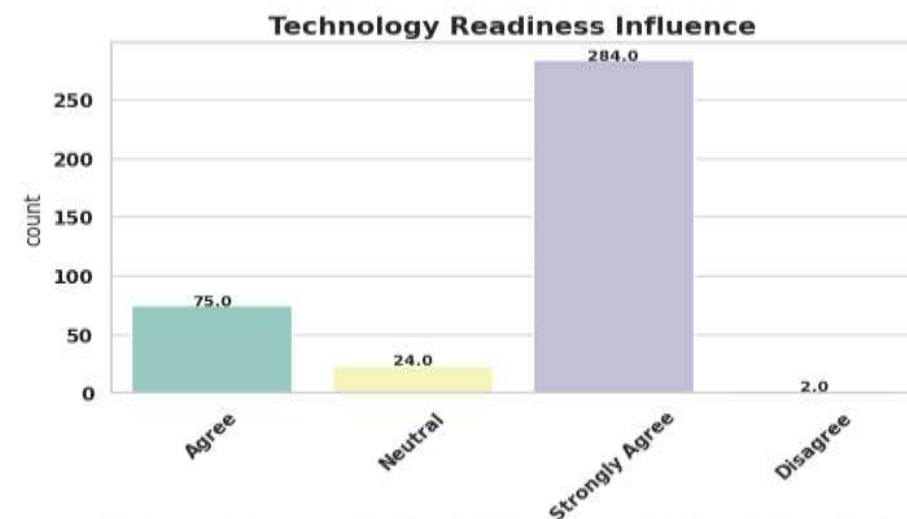
Environmental Factors Influencing Digital Marketing Adoption



The findings show overwhelming agreement that market dynamics exert a strong influence on digital marketing adoption. As shown in the results, 355 respondents strongly agreed that shifting consumer behaviors and market trends impact their digital marketing efforts. This response category formed the majority. Additionally, 24 respondents agreed, while 5 respondents were neutral. Only 1 respondent disagreed, indicating minimal opposition to this view.

These results suggest that service based businesses are highly responsive to changes in customer preferences, competitive patterns, and emerging digital trends. The dominance of strong agreement implies that businesses recognize the need to adjust their marketing strategies to remain competitive in a rapidly evolving market environment. The results also indicate that digital marketing is viewed as a strategic response mechanism that enables organizations to align their promotional activities with contemporary consumer expectations.

Influence of Technology Readiness



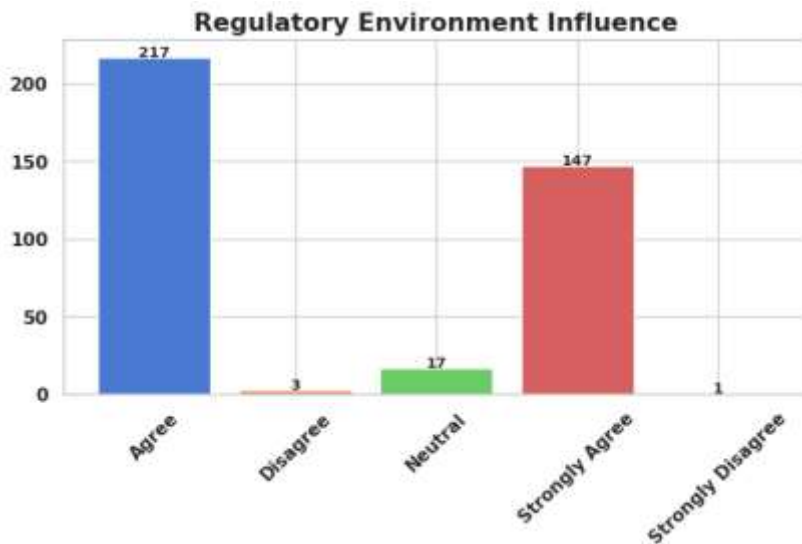
Environmental factors significantly influence our digital marketing adoption.

Technology readiness was also found to significantly influence digital marketing adoption. A total of 284 respondents strongly agreed that their level of technological readiness affects their ability to implement digital marketing practices. Furthermore, 75 respondents agreed with this statement. Another 24 respondents remained neutral, while only 2 respondents disagreed.

The results suggest that the availability of digital tools, staff capability, and the general technological orientation of service based businesses contribute greatly to the adoption process. Businesses that are technologically

prepared tend to adopt digital marketing more quickly, while those with limited infrastructure or technological expertise may experience delays. The high proportion of strong agreement indicates that many businesses understand the importance of being technologically competent in order to utilize digital marketing effectively.

Influence of the Regulatory Environment

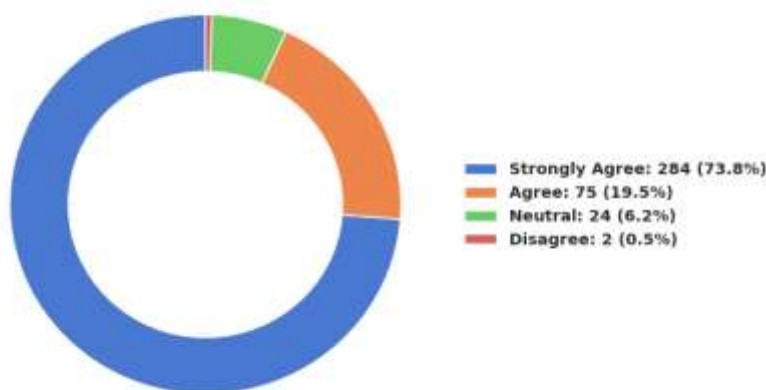


The study further examined the role of regulatory conditions in shaping digital marketing decisions. The findings show that 217 respondents agreed that the regulatory environment affects their adoption of digital marketing, while 147 respondents strongly agreed. A smaller group of 17 respondents were neutral, and 3 respondents disagreed, with 1 respondent strongly disagreeing.

These results indicate that the regulatory environment is viewed as an important external force that can either promote or hinder digital marketing adoption. Issues such as data protection guidelines, advertising standards, business registration procedures, and online transaction regulations may shape the way businesses utilize digital platforms. The high level of agreement suggests that respondents are aware of the regulatory landscape and consider it a factor that must be navigated when implementing digital strategies.

Influence of Infrastructure Availability

Infrastructure Influence (Proxy Variable)



Infrastructure availability was measured as a proxy variable and included factors such as internet connectivity, access to digital devices and communication networks. According to the results, 284 respondents strongly agreed, representing 73.8 percent, that infrastructure significantly influences their digital marketing adoption. Another 75 respondents, representing 19.5 percent, agreed with this statement. Only 24 respondents were neutral, and 2 respondents, representing 0.5 percent, disagreed.

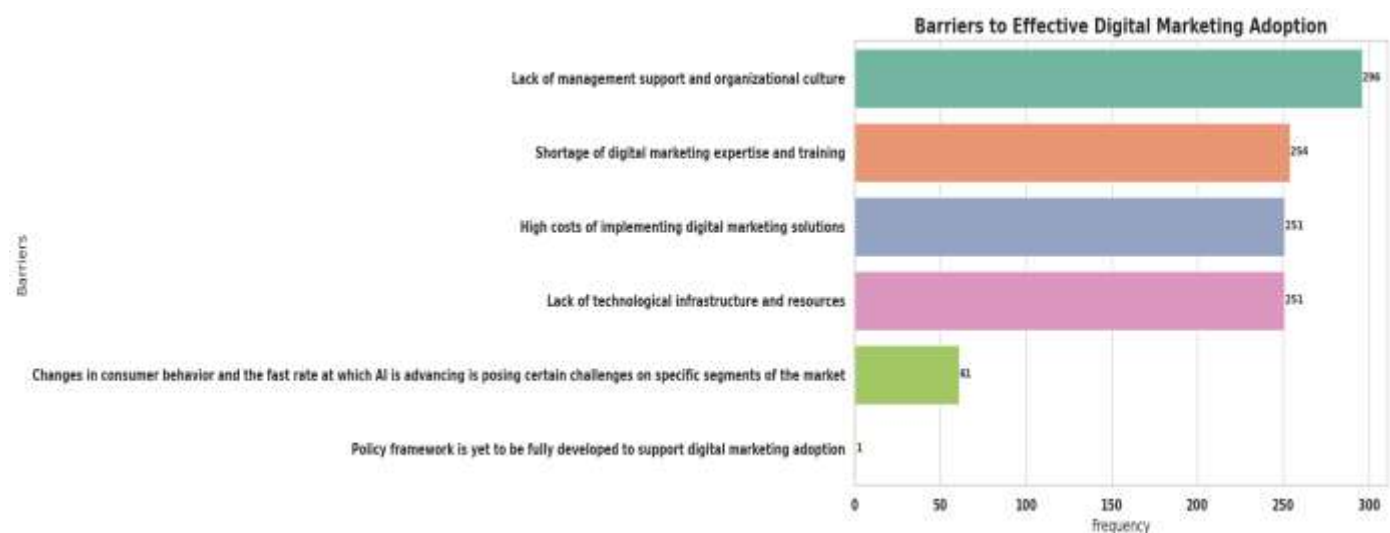
These findings highlight the critical role of infrastructure in enabling digital marketing. Reliable and affordable internet connectivity, access to smartphones and computers, and digital communication platforms are essential for effective participation in online marketing. The dominance of strong agreement suggests that businesses recognize infrastructure as a foundational requirement for implementing digital marketing tools. Limited infrastructure would therefore pose a significant challenge for businesses seeking to expand their digital presence.

Barriers and Enablers Affecting Digital Marketing Adoption

This section presents the key barriers limiting effective digital marketing adoption as well as the enablers that support and promote the implementation of digital marketing strategies among service based businesses in Lusaka. Understanding both constraints and facilitating factors provides a comprehensive picture of the digital readiness and operational environment within the service sector.

Barriers to Effective Digital Marketing Adoption

Barriers to Digital Marketing Adoption



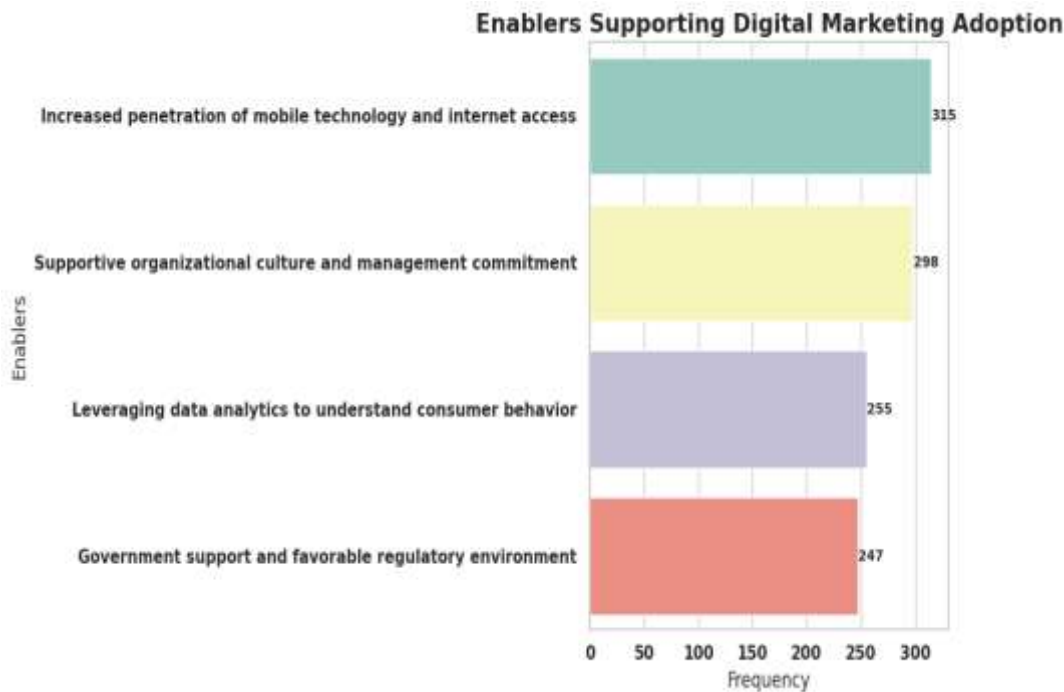
The study identified several major barriers that hinder the adoption of digital marketing. The most commonly reported barrier was lack of management support and organizational culture, cited by 296 respondents. This finding shows that internal attitudes towards technology and limited leadership commitment significantly impede the integration of digital strategies. Many businesses appear to lack clear digital visions, change management structures and supportive cultures that encourage digital experimentation. The second major barrier was shortage of digital marketing expertise and training, reported by 254 respondents. This indicates that although digital tools are increasingly available, many enterprises lack staff with the necessary skills to execute effective online campaigns, analyze digital data or manage digital platforms. Limited expertise restricts the quality and consistency of digital marketing activities.

Another important barrier was the high cost of implementing digital marketing solutions, also cited by 251 respondents. This reflects concerns regarding the financial burden of digital tools such as automated systems, analytics platforms, paid adverts and professional content creation. For many small enterprises with limited resources, these costs represent a considerable challenge. A similar number of respondents, 251 in total, identified lack of technological infrastructure and resources as a critical barrier. Unreliable internet connectivity, insufficient digital equipment and limited access to digital communication tools were highlighted as obstacles that restrict effective digital engagement.

Additionally, 61 respondents reported that rapid changes in consumer behavior and the fast pace of artificial intelligence innovations create challenges for certain market segments. This reflects the difficulty some businesses face in keeping up with the rapid evolution of digital technologies. Finally, 1 respondent identified a lack of fully developed policy frameworks to support digital marketing adoption, signalling limited concern about regulation among the broader population.

Enablers Supporting Digital Marketing Adoption

Enablers Supporting Digital Marketing Adoption



In addition to the barriers, the study explored factors that support and enhance the adoption of digital marketing among service based businesses. The results show several strong enablers, as illustrated in the enabler chart. The most influential enabler was increased penetration of mobile technology and internet access, reported by 315 respondents. This finding highlights the critical role played by widespread availability of smartphones, affordable data services and expanded internet coverage. Improved access allows businesses to reach customers through online platforms and engage audiences more effectively.

The second strongest enabler was supportive organizational culture and management commitment, cited by 298 respondents. This finding reinforces the importance of leadership in driving digital transformation. When managers encourage innovation, allocate resources and promote digital learning, employees are more motivated to adopt digital tools and integrate them into daily operations.

Another important enabler was leveraging data analytics to understand consumer behavior, reported by 255 respondents. This reflects growing recognition of the value of data driven insights. Businesses that utilize analytics tools can better understand customer needs, personalize content, improve campaign performance and strengthen customer engagement. Finally, 247 respondents identified government support and favorable regulatory environment as an important enabler. Supportive policies, digital infrastructure investments and regulatory clarity can create a conducive environment for digital innovation. When government and regulatory bodies promote digital adoption, businesses are more confident in engaging with digital platforms. Collectively, the findings indicate that digital marketing adoption is strengthened by a combination of technological access, organizational readiness, data driven strategies and supportive policy frameworks. These enablers play a vital role in promoting the integration of digital marketing into the operations of service based enterprises.

Descriptive Statistics of Key Study Variables

Descriptive Statistics for Digital Marketing Strategies

Variable	Mean	Standard Deviation
Online Advertising	4.577	0.810
Social Media Marketing	4.540	0.844

Email Marketing	2.584	1.621
Affiliate Marketing	3.410	1.007

The descriptive statistics in Table 4.1 provide insight into the relative level of usage and variability of each digital marketing strategy among service based businesses. The results show that online advertising has the highest mean score of 4.577, with a standard deviation of 0.810. This indicates that online advertising is used to a very great extent by most respondents and that usage is relatively consistent across the sample. The low variability suggests that businesses widely agree on the importance of online advertising as a core component of their digital outreach efforts.

Similarly, social media marketing has a high mean of 4.540 and a standard deviation of 0.844, showing that it is also heavily used across service based businesses. This reinforces earlier findings that social media is central to digital engagement, brand visibility and customer communication. The narrow spread of responses suggests that most businesses use social media frequently regardless of size or sector.

In contrast, email marketing has a much lower mean score of 2.584, reflecting lower average usage among respondents. The high standard deviation of 1.621 indicates wide differences in usage patterns. Some businesses rely heavily on email communication, while many others use it minimally or not at all. This suggests that email marketing adoption is highly uneven and may depend on business type, customer base, or availability of mailing lists and automation tools.

Affiliate marketing has a moderate mean of 3.410, with a standard deviation of 1.007, indicating that usage is neither very high nor very low. The variability suggests that some businesses have embraced affiliate partnerships while others have limited or no engagement in this strategy. This aligns with the understanding that affiliate marketing, while growing, is still emerging in many service sectors.

Overall, the descriptive statistics show that online advertising and social media marketing dominate the digital strategies used by service based businesses, while email marketing and affiliate marketing show more variability and mixed adoption.

Descriptive Statistics for Environmental Factors

Variable	Mean	Standard Deviation
Market Dynamics	4.904	0.359
Environmental Influence	4.665	0.616
PES Environment	4.314	0.619

The descriptive statistics for the environmental factors show that respondents perceive strong external influences on digital marketing adoption. Market dynamics has the highest mean score of 4.904, with a very small standard deviation of 0.359. This indicates almost universal agreement that shifting customer preferences, competitive forces and evolving market trends significantly influence digital marketing decisions. The extremely low variability suggests that businesses consistently recognize market dynamics as a critical external driver.

Environmental influence, which captures broader contextual factors such as competitor actions, supplier interactions and consumer behavior, has a high mean of 4.665 and a standard deviation of 0.616. This shows strong agreement that the immediate business environment shapes adoption of digital tools. The moderate variability indicates that while most businesses agree on its importance, the perceived intensity of environmental influence differs slightly across enterprises.

The PES environment which includes political, economic and social factors, has a mean of 4.314, showing strong perceived influence. The standard deviation of 0.619 reveals moderate variability in how businesses assess the

impact of national policies, economic stability and societal trends on digital marketing. This suggests that although most respondents see these macro factors as important, the degree of impact may differ depending on business size, sector or sensitivity to national conditions.

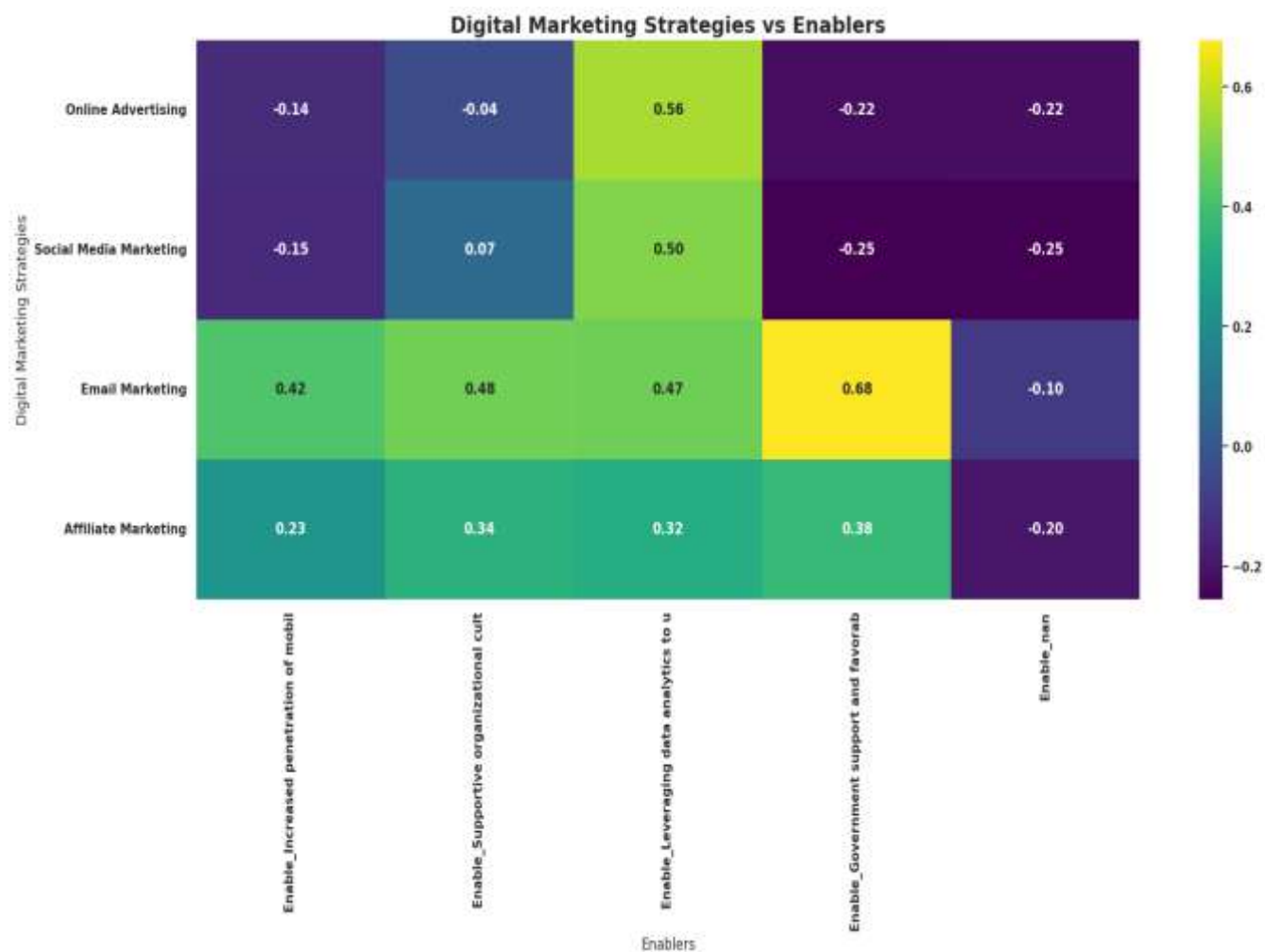
Overall, these findings show that environmental factors are perceived as highly influential, with market dynamics emerging as the strongest external force prompting digital marketing adoption. This aligns with earlier patterns showing businesses respond strongly to customer behavior, competition and changes in their operating environment.

Correlation Analysis of Digital Marketing Strategies with Enablers and Environmental Conditions

This section presents the correlation analysis carried out to examine the relationship between digital marketing strategies and two key factors that influence their adoption. These include enablers such as internet accessibility, organizational support and data analytics capacity as well as environmental conditions such as market dynamics and the broader political, economic and social environment. The correlation coefficients from the heatmaps provide insight into the strength and direction of these relationships.

Correlation Between Digital Marketing Strategies and Enablers

Correlation Matrix: Digital Marketing Strategies and Enablers



The results show that different digital marketing strategies exhibit varying levels of association with the four major enablers. Email marketing demonstrated the strongest positive correlations across most enablers. The strongest correlation was between email marketing and government support or favorable regulatory environment, with a coefficient of 0.68. This suggests that supportive policies and a clear regulatory framework strongly encourage businesses to utilize email based communication. Email marketing is also positively associated with supportive organizational culture and management commitment with a correlation of 0.48, and with leveraging

data analytics to understand consumer behavior which recorded a coefficient of 0.47. These findings indicate that businesses with better internal support systems and data driven decision making structures tend to make greater use of email marketing. Additionally, the correlation of 0.42 between email marketing and increased penetration of mobile technology and internet access shows that widespread internet connectivity is also a key facilitator of email based digital strategies.

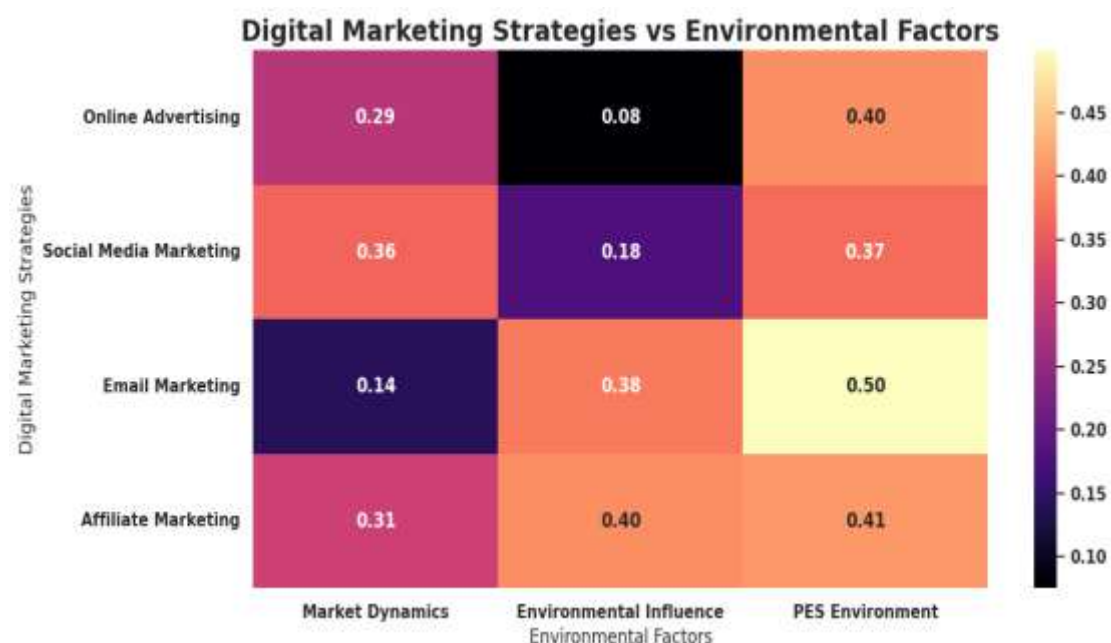
Affiliate marketing showed moderate positive correlations with most enablers. The strongest correlation was between affiliate marketing and government support, with a coefficient of 0.38, indicating that policy and regulatory clarity plays a meaningful role in supporting partnership based marketing models. Affiliate marketing also showed positive relationships with organizational culture (0.34), data analytics (0.32), and mobile and internet penetration (0.23). These results demonstrate that affiliate marketing requires both technological readiness and supportive internal structures to operate effectively. Social media marketing displayed moderate correlations with data analytics (0.50) and organizational culture (0.07). The positive relationship with data analytics suggests that businesses that utilize social media frequently tend to rely on data insights to track engagement and reach. The correlation with organizational culture, although small, still indicates that leadership attitudes and institutional support have some influence on social media adoption.

Online advertising exhibited mixed associations with the enablers. It had a moderate correlation of 0.56 with leveraging data analytics, indicating that businesses that frequently invest in online advertising are likely to use analytics tools to measure advertisement performance. However, online advertising showed weak or negative relationships with other enablers, including a negative correlation with government support (-0.22) and organizational culture (-0.04). This suggests that the adoption of online advertising is driven more by commercial opportunity than by internal support or policy environment.

Overall, the results indicate that email marketing and affiliate marketing are more strongly influenced by enabling factors than online advertising and social media marketing. Businesses appear to adopt these strategies when supported by strong internal culture, regulatory clarity and data driven marketing capacity.

Correlation Between Digital Marketing Strategies and Environmental Factors

Correlation Matrix: Digital Marketing Strategies and Environmental Conditions



The analysis also explored how environmental factors such as market dynamics, general environmental influence and the political, economic and social environment impact digital marketing strategies. The strongest positive correlation observed was between email marketing and the political, economic and social environment, with a coefficient of 0.50. This indicates that email marketing is highly sensitive to macro level environmental

conditions. Businesses may therefore rely more on email campaigns in environments where economic conditions and regulatory expectations are stable and predictable. Affiliate marketing also demonstrated notable correlations with environmental factors. It showed a coefficient of 0.41 with the political, economic and social environment, suggesting that stable macro conditions promote partnership based marketing strategies. It also had a correlation of 0.40 with the general environmental influence variable, highlighting that both micro and macro environmental conditions encourage the adoption of affiliate networks. Social media marketing showed a moderate correlation of 0.36 with market dynamics, indicating that businesses adjust their use of social media in response to shifting consumer preferences and competitive pressure. The correlation of 0.37 with political, economic and social conditions further shows that broader societal conditions influence the frequency and intensity of social media engagement.

Online advertising showed positive correlations of 0.29 with market dynamics and 0.40 with the political, economic and social environment. These findings suggest that online advertising is responsive to both competitive forces and macroeconomic conditions, although the strength of these relationships is moderate rather than strong. Overall, the results demonstrate that email marketing and affiliate marketing are consistently more influenced by environmental factors than social media marketing and online advertising. This suggests that businesses rely more heavily on email and affiliate based strategies when they perceive stability and predictability in the external environment.

Regression Analysis of Environmental Factors on Digital Marketing Adoption

Regression Results for Digital Marketing Adoption Model

Dep. Variable:	Digital_Marketing_Adoption	R-squared:	0.849
Model:	OLS	Adj. R-squared:	0.847
Method:	Least Squares	F-statistic:	532.9
Date:	Thu, 26 Mar 2026	Prob (F-statistic):	2.39e-154
Time:	17:34:15	Log-Likelihood:	99.804
No. Observations:	385	AIC:	-189.6
Df Residuals:	380	BIC:	-169.8
Df Model:	4		
Covariance Type:	nonrobust		

	coef	std err	t	P> t	[0.025	0.975]
const	0.2681	0.138	1.945	0.053	-0.003	0.539
Market_Dynamics	0.0719	0.037	1.923	0.055	-0.002	0.145
Technology_Readiness	0.1455	0.024	6.058	0.000	0.098	0.193
Infrastructure	0.4038	0.019	21.259	0.000	0.366	0.441
Regulatory_Context	0.3032	0.025	12.179	0.000	0.254	0.352

Omnibus:	15.813	Durbin-Watson:	1.692
Prob(Omnibus):	0.000	Jarque-Bera (JB):	38.020
Skew:	-0.026	Prob(JB):	5.55e-09
Kurtosis:	4.539	Cond. No.	137.

The regression model examined the combined effects of four key environmental predictors such as market dynamics, technology readiness, infrastructure and regulatory context on digital marketing adoption among service based businesses. The model demonstrates excellent explanatory power, with an R squared value of 0.849, meaning that 84.9 percent of the variation in digital marketing adoption is explained by the four predictors. The adjusted R squared value of 0.847 further confirms that the model remains robust even after adjusting for the number of variables. The F statistic of 532.9 with a highly significant p value of 2.39e minus 154 indicates that the overall model is statistically significant.

The coefficient for market dynamics is 0.0719, with a p value of 0.055. Although the effect is positive, this p value is slightly above the conventional significance threshold of 0.05. This suggests that while shifting consumer behavior and competitive market forces tend to increase digital marketing adoption, the influence is not

statistically strong at the 95 percent confidence level. However, it is very close to significance and may still be practically meaningful, indicating that market conditions influence adoption but not as strongly as other predictors.

Technology readiness shows a coefficient of 0.1455 with a significant p value of 0.000. This means that digital capability, access to digital tools and technological preparedness have a strong and statistically significant positive effect on digital marketing adoption. Businesses that possess better digital infrastructure, skills and familiarity with digital tools are much more likely to adopt digital marketing strategies. Infrastructure shows one of the strongest effects in the model, with a coefficient of 0.4038 and a p value of 0.000. This indicates that reliable internet connectivity, availability of digital devices and accessibility of digital platforms significantly enhance the likelihood of adopting digital marketing. The large coefficient suggests that improvements in digital infrastructure translate directly into greater use of digital marketing among service based businesses.

The regulatory context has a coefficient of 0.3032 and is also highly significant with a p value of 0.000. This finding demonstrates that supportive regulations, policy clarity and a favorable legal environment positively influence digital marketing adoption. Businesses appear more willing to invest in digital strategies when they feel protected and supported by government policies. The model constant is 0.2681, indicating the baseline level of digital marketing adoption when all environmental factors are held constant. This shows that even in the absence of environmental support, businesses exhibit a modest level of interest in adopting digital tools. Diagnostic results further confirm the reliability of the regression model. The Durbin Watson statistic of 1.692 is close to the acceptable range around 2, indicating no serious autocorrelation issues. The Jarque Bera and Omnibus test results indicate some deviation from perfect normality, but this is common in real world data and does not invalidate the regression model.

The regression analysis reveals that technology readiness, infrastructure and regulatory context are the strongest and most significant predictors of digital marketing adoption. Although market dynamics have a positive influence, their effect is weaker and marginally insignificant at the 95 percent level. These findings emphasize that digital marketing adoption is driven more by internal preparedness and external structural support than by market pressure alone. Strengthening digital infrastructure, improving technological capability and ensuring a stable regulatory environment are therefore critical to enhancing digital marketing adoption among service based businesses.

DISCUSSION

The study found that online advertising and social media marketing are the most widely used digital marketing strategies, with high mean scores indicating consistent adoption among service-based businesses. In contrast, email marketing showed lower adoption levels and variability, reflecting challenges such as poorly developed customer databases, while affiliate marketing was moderately utilized, suggesting a need for better partnerships and technical readiness.

Environmental conditions significantly impact digital marketing adoption, with market dynamics receiving a very high mean score, indicating strong agreement on the influence of consumer behavior and competition. Additionally, the political, economic, and social (PES) environment was found to have a strong positive effect on adoption, explaining 79% of the variance, thus highlighting that external pressures are more influential than internal factors in encouraging businesses to adopt digital strategies.

Key barriers to effective digital marketing adoption include a lack of management support and insufficient digital expertise, as reported by many respondents, which reflects gaps in leadership commitment and technical skills. Conversely, enablers such as increased mobile technology penetration and supportive organizational culture were identified as crucial for adoption, along with data analytics capability and government support, emphasizing the need for a conducive environment to enhance digital marketing integration.

LIMITATIONS

The study was limited by its narrow focus on service-based businesses in Lusaka, which may restrict the

generalizability of findings to other regions or contexts, highlighting the need for further research in diverse geographical settings. Reliance on self-reported data introduced bias, and the research design may have captured only a snapshot of digital marketing adoption, suggesting that longitudinal studies could offer more comprehensive insights into evolving practices.

FUTURE RESEARCH RECOMMENDATION

Future studies should expand the geographical scope beyond Lusaka to understand adoption patterns in rural and peri urban areas. Qualitative studies may also help reveal deeper insights into behavioural and organisational factors influencing digital marketing adoption. Further research could also explore digital marketing ROI in the Zambian context or compare adoption levels across different economic sectors.

CONCLUSION

The study aimed to evaluate the critical success factors for effective digital marketing adoption among service-based businesses in Lusaka, Zambia, guided by three specific objectives: identifying key digital marketing practices, exploring environmental influences, and recognizing barriers and enablers. Utilizing a descriptive research design, the study collected quantitative data from 385 respondents and employed descriptive statistics, correlation analyses, and regression modeling to analyze the findings, which revealed that online advertising and social media marketing were the most widely adopted strategies, while email marketing had the lowest adoption rate.

The results indicated that environmental factors significantly influence digital marketing adoption, with market dynamics being a strong determinant, explaining 79% of the variance in adoption. Key barriers included a lack of management support, digital expertise, high costs, and inadequate technological infrastructure, while enablers such as increased mobile and internet penetration, supportive organizational culture, and government support facilitated adoption. The study concludes that for sustainable digital marketing adoption in Zambia's service sector, it is crucial to enhance digital infrastructure, develop internal capabilities, and strengthen policy support to align both internal and external forces effectively.

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