

The effect of e-commerce determinants on shopping malls performance: A case study in DUBAI

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Abstract: This research investigates the effects of e-commerce determinants on the performance of shopping malls in Dubai, focusing on the growth of e-commerce platforms, changes in consumer preferences, and e-commerce marketing strategies. Descriptive statistics revealed that respondents perceived significant growth in e-commerce platforms and changes in consumer preferences, with moderate agreement on the effectiveness of e-commerce marketing strategies. Regression analysis demonstrated that changes in consumer preferences had the most significant influence on the performance of shopping malls, followed by e-commerce marketing strategies and the growth of e-commerce platforms. Instead, it presents an opportunity for shopping malls to evolve into multi-dimensional spaces that integrate digital technologies and consumer-driven strategies to enhance the customer experience. For managers, the study emphasizes the importance of embracing digital integration, personalizing consumer engagement through data analytics, and creating innovative experiences within the physical space of the malls.

Keywords: e-commerce, shopping malls, quantitative methodology, Descriptive statistics, digital integration, cross-cultural.

1. INTRODUCTION

This research delves into the evolving landscape of retail in Dubai, a dynamic metropolis known for its opulent shopping malls and rapidly growing e-commerce sector. The study focuses on three critical areas: the impact of the growth of e-commerce platforms, changes in consumer preferences, and e-commerce marketing strategies on the performance of shopping malls in Dubai. By examining these variables, the study seeks to offer insights into the changing dynamics of consumer behavior and retail strategies, thus contributing valuable perspectives to both academic discourse and practical applications in the retail industry. The rapid growth of online shopping platforms, fueled by technological advancements and changing consumer habits, poses significant questions about the future of traditional retail spaces. Globally, e-commerce has shown its capacity to reshape market dynamics, altering consumer preferences and shopping behaviors.

This study situates itself within this context, aiming to unravel the complex relationship between the burgeoning e-commerce sector and the traditional allure of Dubai's shopping malls.

This research aims to contextualize these global findings within the unique landscape of Dubai, exploring how the interplay between evolving e-commerce dynamics and traditional retail spaces is reshaping the city's retail sector.

1.1 Problem Statement

The central problem this research addresses stems from the rapid ascent of e-commerce, which has profoundly disrupted the traditional retail landscape, particularly in urban epicenters like Dubai. Shopping malls, once the undisputed hubs of retail, leisure, and social interaction, are now facing an existential challenge posed by the convenience, variety, and personalized experience offered by online shopping platforms. E-commerce's burgeoning growth, especially in technologically advanced and economically vibrant cities like Dubai, prompts a critical evaluation of how traditional shopping malls can remain relevant and competitive. Furthermore, e-commerce platforms, leveraging sophisticated marketing strategies, have succeeded in attracting a significant portion of consumer spending, which traditionally flowed into physical retail spaces. Their findings highlight a trend where the rapid growth of online shopping platforms directly impacts the viability and profitability of physical retail spaces, including shopping malls.

The strategies employed by online retailers, as discussed in their study, are key to understanding the competitive challenges faced by shopping malls in Dubai. Drawing on these studies, the problem statement for the current research becomes multifaceted: it involves understanding how the growth and strategic marketing of e-commerce platforms, coupled with evolving consumer preferences and behavior, impact the traditional role, foot traffic, and economic viability of shopping malls in Dubai.

This research seeks to provide a comprehensive analysis of these dynamics, offering insights and strategies for malls to navigate and thrive in an increasingly digital retail environment. This situation presents a complex problem: How do traditional shopping malls in Dubai adapt to maintain their foot traffic and sales in the face of growing online competition?

Therefore, this research seeks to unravel the layers of this emerging challenge, aiming to understand the multifaceted impact of e-commerce on Dubai's iconic shopping malls and to explore strategies for adaptation and sustainability in this new retail era.

2. LITERATURE REVIEW

2.1 Evolution of E-commerce

The ethical dimension of this digital leap forward, as explored by Almuraqab, Alrae, and Almuraqab (2023), adds a layer of complexity to the narrative. The adoption of AI and other technologies in e-commerce brings to the fore questions of privacy, data security, and consumer rights, challenging stakeholders to navigate these issues with integrity and foresight. The UAE's proactive approach to addressing these ethical challenges underscores a broader commitment to responsible and sustainable e-commerce development.

Akour et al. (2022) further enrich this discussion by spotlighting consumer privacy concerns, a pivotal aspect of e-commerce adoption in the UAE. Their research underscores the delicate balance between leveraging digital technologies for business growth and safeguarding consumer trust. The conceptual model proposed by the authors provides a framework for understanding the interplay between privacy concerns and e-commerce adoption, highlighting the critical role of transparent and secure practices in fostering digital trust.

2.2 Growth of E-commerce Platforms

Kleisiari, Duquenne, and Vlontzos (2021) delve into the implications of e-commerce within the retail chain store market, suggesting that what began as an alternative shopping channel is rapidly becoming the main trend. The convenience, variety, and personalized shopping experiences offered by e-commerce platforms have significantly contributed to their burgeoning appeal. This shift is underpinned by advanced logistics, robust digital payment systems, and a user-centric approach to retail that traditional shopping malls struggle to match.

The discussion by Rosário and Raimundo (2021) further enriches our understanding, providing a decade-long retrospective on consumer marketing strategies in e-commerce. Their review highlights the innovative tactics employed by online retailers to attract and retain consumers, from targeted advertising and social media engagement to AI-driven personalized recommendations. These strategies have not only enhanced the user experience but also expanded the e-commerce user base, drawing in demographics that traditionally favored in-person shopping experiences.

2.3 Consumer Behavior and E-commerce

Mou and Benyoucef (2021) provide a comprehensive meta-analysis of consumer behavior within social commerce, a subset of e-commerce that leverages social media platforms to facilitate online transactions. Their findings reveal a marked shift in how consumers engage with brands and make purchasing decisions, emphasizing the role of social influence, online reviews, and user-generated content. This social aspect of online shopping has not only altered consumer behavior but has also elevated expectations regarding engagement, trust, and authenticity from brands.

Mishra, Singh, and Koles (2021) explore consumer decision-making in omnichannel retailing, offering insights into how the blurring lines between online and offline channels affect consumer choices. Their review underscores the complexity of the modern consumer's journey, which often spans multiple channels, each offering a different facet of the shopping experience. This omnichannel approach has led to a more empowered consumer who expects seamless integration, consistency, and flexibility across all touchpoints.

2.4 E-commerce Marketing Strategies

Dudhela and Chaurasiya (2020) delve into the realm of content marketing, underscoring its importance in building brand authority and trust. High-quality, relevant, and engaging content serves not only to inform and entertain but also to gently guide consumers along the purchasing journey. This strategy, rooted in value provision rather than overt selling, fosters deeper consumer relationships, encouraging not just initial purchases but also long-term loyalty. Content marketing's effectiveness in e-commerce is magnified by its ability to seamlessly integrate with other digital channels, amplifying reach and engagement.

Gyenge, Máté, Vida, Bilan, and Vasa (2021) introduce a strategic marketing management model tailored to the unique requirements of e-commerce within the supply chain. This model underscores the importance of integrated marketing strategies that align with the overall business objectives and supply chain dynamics. The strategic use of digital marketing in this context not only enhances customer acquisition and retention but also streamlines operations and improves supply chain efficiency, showcasing the broader business impact of effective marketing.

2.5 Performance Metrics for Shopping Malls

The omnichannel approach, highlighted by Yu, Sedlezky, Wong, Hernandez, Larsen, and Stephenson (2018), underscores the necessity for malls to integrate their physical and digital strategies. This approach not only addresses the changing consumer behavior but also leverages the strengths of both platforms to create a cohesive and enhanced customer journey.

Occupancy rates further illuminate the mall's ability to attract and retain tenants, serving as a barometer for its desirability among retailers. Imoize and Adegbite (2018) delve into the technical performance aspects of malls, such as network connectivity, which can enhance the operational environment for tenants, thereby supporting sustained or improved occupancy rates. The occupancy rate not only impacts the mall's revenue stream through leases but also influences foot traffic and sales per square foot, as a vibrant, fully leased mall tends to draw more visitors.

2.6 Impact of E-commerce Determinants on Shopping Malls

Mohamad, Hassan, and Abd Elrahman (2022) delve into the nuanced impacts of e-commerce on the planning and designing of commercial activity centers, suggesting a paradigm shift in the architectural and operational blueprint of malls. The burgeoning growth of e-commerce platforms has not only diversified the retail ecosystem but also heightened expectations for convenience, variety, and personalization among consumers. This transition necessitates a reimagined approach to mall design, one that incorporates digital touchpoints and fosters an integrated shopping experience that can compete with the allure of online shopping.

Mofokeng (2021) explores the relationship between online shopping attributes and customer satisfaction, highlighting the pivotal role of e-commerce experience in shaping consumer loyalty. The ease, accessibility, and tailored experiences offered by e-commerce platforms have recalibrated consumer expectations, setting a new benchmark for physical retail environments. Shopping malls, in response, are compelled to innovate beyond traditional retail offerings, incorporating experiential and value-added services to enhance customer satisfaction and foster loyalty.

3. RESEARCH METHODOLOGY

The choice of a quantitative approach is not arbitrary; rather, it is a deliberate decision aligned with the study's objectives to identify and quantify the effects of specific e-commerce variables on mall performance metrics. This methodological path allows for the collection of data that is not only expansive in scope but also rich in detail, facilitating a robust analysis that can withstand the scrutiny of statistical validation. The inherent strength of this approach lies in its ability to produce results that are not only reflective of the sample studied but also indicative of broader trends within the population of e-commerce consumers in Dubai.

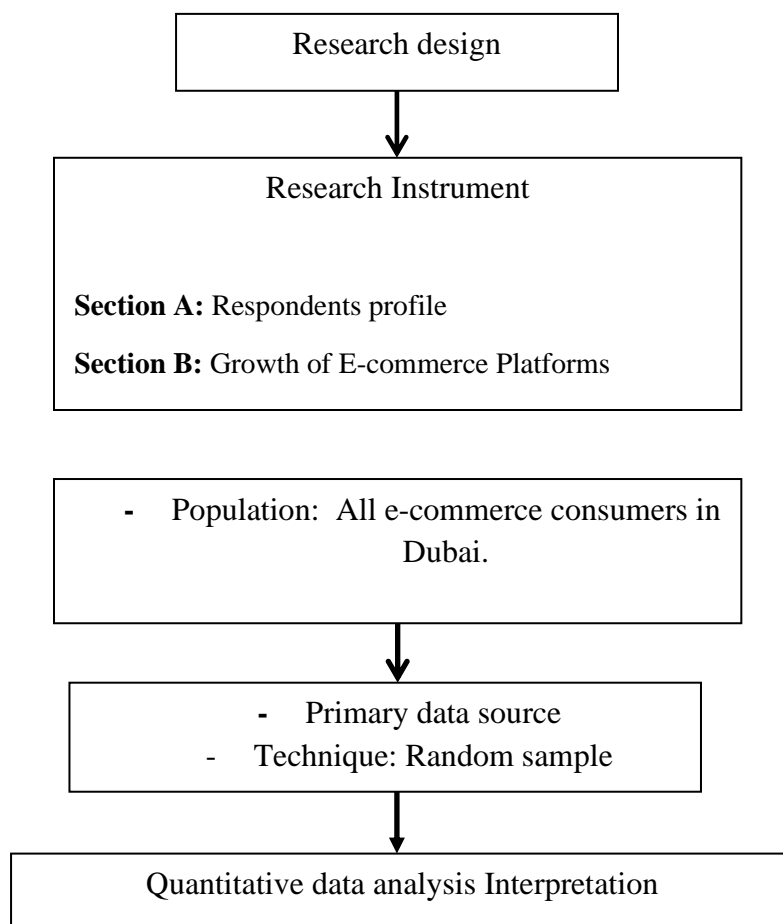


Figure 3.1: Research Design

4. FINDINGS AND ANALYSIS

4.1 Demographic Analysis

The demographic profiles presented in Table 4.1 offer a rich overview of the individuals who partook in this study, drawn from the consumers base of e-commerce consumers in Dubai. The distribution across gender lines is nearly balanced, with females representing a slight majority at 50.6%, and males constituting 49.4%. Such an almost even split provides a harmonious gender perspective to the insights garnered.

The age range of respondents skews towards the younger demographic, with a notable 39.3% falling within the 18-25 years bracket, signaling a workforce that is vibrant and potentially more adaptable to the digital shifts characterizing the retail landscape. The 26-35 and 36-45 age groups are well-represented as well, comprising 27.2% and 32.1% of the respondents, respectively, reflecting seasoned professionals who bring a wealth of experience to the retail domain. The >46 years category, however, is noticeably smaller, at a mere 1.4%, suggesting a relatively younger workforce overall within the e-commerce consumers in Dubai.

Table 4.1: Demographic Profiles

	Frequency	%		Frequency	%
Gender			Highest Education		
Male	190	49.4	High School	74	19.4
Female	196	50.6	Diploma	83	21.5
Age			Bachelor	178	46.2
18-25 yrs. old	151	39.3	Master	51	12.9
26-35 yrs. old	104	27.2			
36- 45 yrs. old	123	32.1			
> 46 yrs. old	8	1.4			
Experience					
From 1 to 3 years				82	21.3
From 4 to 6 years				147	38.1
More than 6 years				157	40.6

4.2 Reliability Test

The reliability test outlined in Table 4.2 serves as a robust measure of the internal consistency of the questionnaire used in this study, ensuring the reliability of the instrument for gauging the variables of interest. The Cronbach's Alpha values for each variable give us insight into the degree to which the set of items in the questionnaire are correlated to one another, hence providing an estimate of the reliability of the scale.

In the realm of social science research, as delineated by Bujang, Omar, and Baharum (2018), a Cronbach's Alpha value of 0.7 or above is generally considered acceptable, indicating that the items have a reasonable level of consistency. The Growth of E-commerce Platforms, with a Cronbach's Alpha of 0.797, reflects a reliable scale. The consistency suggests that the respondents have perceived the items related to this variable in a similar vein, indicating that the questionnaire items are successfully capturing the underlying construct of e-commerce growth.

Table 4.2: Reliability test

Variables	No of Items	Cronbach's Alpha
Growth of E-commerce Platforms	5	0.797
Changes in Consumer Preferences	5	0.823
E-commerce Marketing Strategies	5	0.809
Performance of Shopping Malls	10	0.760

4.3 Normality Test

The normality test, as exhibited in Table 4.3, is a fundamental aspect of data validation, providing insights into the distribution characteristics of the dataset. This test allows us to understand whether the data conforms to a normal distribution, which is a key assumption in many statistical analyses, particularly parametric tests. Analyzing the Skewness and Kurtosis statistics for the variables in question offers a glimpse into the shape and distribution of the responses for each variable. For the growth of e-commerce platforms, with a skewness of 0.625 and kurtosis of 0.431, the data suggests a moderately positive skew, indicating a distribution with a tail extending towards higher values, yet not too far from a normal distribution, given the skewness value is less than 1. The kurtosis value close to zero suggests a distribution that is neither too flat nor too peaked, aligning fairly well with the normal distribution.

The changes in consumer preferences present a skewness of 0.582 and kurtosis of 1.090. Similar to the growth of e-commerce platforms, this variable also exhibits a positive skewness, albeit slightly less pronounced. The kurtosis value above 1 indicates a somewhat more peaked distribution compared to the normal distribution, which suggests that the data are more clustered around the mean, with fewer values in the tails than expected in a normal distribution.

Table 4.3: Results of Skewness and Kurtosis for Normality Test

	N	Skewness	Kurtosis
	Statistic	Statistic	Statistic
Growth of E-commerce Platforms	386	0.625	0.431
Changes in Consumer Preferences	386	0.582	1.090
E-commerce Marketing Strategies	386	-2.562	0.629
Performance of Shopping Malls	386	-0.704	-0.072

4.4 Descriptive Statistics Analysis

In Table 4.4, the descriptive statistics offer a comprehensive snapshot of the study variables, encompassing the growth of e-commerce platforms, changes in consumer preferences, e-commerce marketing strategies, and the performance of shopping malls. Each of these variables is critically examined through the lens of a Likert scale ranging from 1 to 5, where 1 signifies strong disagreement and 5 denotes strong agreement with the statements provided in the survey.

The growth of e-commerce platforms shows a high mean score of 3.954 with a relatively low standard deviation of 0.462, suggesting a strong agreement among the respondents about the prominence and upward trajectory of e-commerce in Dubai. The narrow standard deviation indicates that the responses are clustered closely around the mean, reflecting a general consensus among the respondents.

Table 4.4: Descriptive Statistics for Study Variables

	N	Min	Max	Mean	Std. Deviation
Growth of E-commerce Platforms	386	1.00	5.00	3.954	0.462
Changes in Consumer Preferences	386	1.00	5.00	3.678	0.750
E-commerce Marketing Strategies	386	1.00	5.00	3.293	0.859
Performance of Shopping Malls	386	1.00	5.00	3.889	0.385

4.5 Factor Analysis

The factor analysis conducted in Table 4.5 illuminates the underlying structure of the constructs measured in this study: Growth of E-commerce Platforms, Changes in Consumer Preferences, E-commerce Marketing Strategies, and Performance of Shopping Malls. Each item's loading on its respective factor provides insight into the strength of the association between the item and the factor it is intended to measure.

For the Growth of E-commerce Platforms, the factor loadings range from moderate (0.613 for GEP2) to very strong (0.872 for GEP5), indicating that these items are good indicators of the e-commerce growth construct. The highest loading is on GEP5, suggesting that this item is most reflective of the underlying factor of e-commerce growth among the items presented.

Table 4.5: Factor Analysis for Study Variables

Factors	Items	Loading
Growth of E-commerce Platforms	GEP1	0.681
	GEP2	0.613
	GEP3	0.822
	GEP4	0.725
	GEP5	0.872
Changes in Consumer Preferences	CCP1	0.768
	CCP2	0.812
	CCP3	0.786
	CCP4	0.504
	CCP5	0.841
E-commerce Marketing Strategies	EMS1	0.779
	EMS2	0.583

Performance of Shopping Malls	EMS3	0.831
	EMS4	0.714
	EMS5	0.857
	PSM1	0.807
	PSM2	0.849
	PSM3	0.705
	PSM4	0.873
	PSM5	0.794
	PSM6	0.689
	PSM7	0.804
	PSM8	0.869
PSM9	0.823	
PSM10	0.815	

4.6 Correlation Test

Table 4.6 encapsulates the correlations between the growth of e-commerce platforms (GEP), changes in consumer preferences (CCP), e-commerce marketing strategies (EMS), and the performance of shopping malls (PSM). The table outlines the relationships through Pearson correlation coefficients, along with their significance levels. The Pearson Correlation between GEP and CCP is .672, a strong positive correlation, indicating that as the growth of e-commerce platforms increases, the changes in consumer preferences are likely to increase in tandem. The significance level of .000 suggests that this correlation is statistically significant, giving confidence that the relationship observed is not due to random chance.

For the relationship between GEP and EMS, an even stronger correlation is observed at .831, implying a very strong positive association. The growth of e-commerce platforms seems to be highly correlated with the employment of e-commerce marketing strategies. This significant correlation, with a p-value of .000, underscores a probable scenario where the maturation of e-commerce platforms necessitates more sophisticated marketing strategies.

The correlation between GEP and PSM shows a coefficient of .762, another robust positive correlation. This signifies that the performance of shopping malls is likely to be closely associated with the growth of e-commerce platforms. Here again, the p-value of .000 indicates statistical significance, suggesting that the performance of shopping malls is potentially being impacted substantially by how e-commerce platforms develop and expand.

Table 4.6: Correlations Test

		GEP	CCP	EMS	PSM
GEP	Pearson Correlation	1			
	Sig. (2-tailed)				
CCP	Pearson Correlation	.672**	1		
	Sig. (2-tailed)	.000			
EMS	Pearson Correlation	.831**	.783**	1	
	Sig. (2-tailed)	.000	.000		
PSM	Pearson Correlation	.762**	.595**	.487**	1
	Sig. (2-tailed)	.000	.000	.000	

Where: GEP; growth of e-commerce platforms, CCP; changes in consumer preferences, EMS; e-commerce marketing strategies, PSM; performance of shopping malls.

4.7 Regression Test

Tables 4.7 and 4.8 collectively present the results of a regression analysis which seeks to understand the impact of various independent variables, namely the growth of e-commerce platforms (GEP), changes in consumer preferences (CCP), and e-commerce marketing strategies (EMS), on the dependent variable, the performance of shopping malls (PSM).

Table 4.7, the Model Summary, shows an R square of .568, indicating that approximately 56.8% of the variance in the performance of shopping malls can be explained by the three independent variables included in the model. The Adjusted R Square value of .762 accounts for the number of predictors in the model and suggests that the model fits the data well, providing a high degree of explanatory power. The standard error of the estimate at .62986 represents the average distance that the observed values fall from the regression line. The significant F change (.000) indicates that the overall regression model is a good fit for predicting the performance of shopping malls.

Table 4.8 presents the results of a multiple regression analysis that evaluates the influence of three independent variables Growth of E-commerce Platforms (GEP), Changes in Consumer Preferences (CCP), and E-commerce Marketing Strategies (EMS) on the average performance of shopping malls (AVG_PSM). The coefficients within the table provide insight into how each factor weighs upon the performance outcome. Starting with the unstandardized coefficients, we find that the constant, representing the AVG_PSM when all independent variables are zero, is 4.972, with a statistically significant t-value of 8.552 ($p < .001$). This suggests a high baseline level of mall performance, affirming the inherent strength of shopping malls within Dubai's retail landscape.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.532 ^a	.568	.762	.62986	.186	9.029	5	433	.000

a. Predictors: (Constant), GEP, CCP, and EMS

Table 4.8: Multiple regression analysis (Coefficients)

Coefficients ^a											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error				Beta	Zero-order	Partial	Part	Tolerance
	(Constant)	4.972	.235		8.552	.000					
	GEP	.387	.046	.298	4.543	.000	.552	.583	.570	.755	1.325
	CCP	.628	.036	.413	3.575	.003	.437	.499	.615	.611	0.943
	EMS	.362	.083	.332	9.599	.000	.509	.319	.304	.578	1.06

a. Dependent Variable: AVG _ performance of shopping malls

5. CONCLUSION & RECOMMENDATIONS

This study ventured into the vibrant retail landscape of Dubai, embarking on a scholarly journey to unravel the complex dynamics between the burgeoning e-commerce sector and the traditional stronghold of the city's shopping malls. The research set out with a clear vision: to understand how the rapid growth of e-commerce platforms, shifting consumer preferences, and strategic e-commerce marketing maneuvers are influencing the performance of these retail titans.

- methodical application of a quantitative
- The growth of e-commerce platforms
- E-commerce marketing strategies
- managerial implications

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