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# Assessing the impact of Amazon's marketing strategies on consumer behavior in the food sector

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The growth of the technology industry has changed online marketing and shaped consumer behavior. Despite extensive research on internet usage and social media trends, the online purchasing behavior of Egyptian consumers, particularly in the food products area, has received limited attention. This study provides valuable insights for businesses to enhance their strategies, policymakers to advance digital transformation initiatives, and academics. The main purpose of this study was to understand Egyptian consumer behavior, particularly in online food purchases, using Amazon Egypt as a case study, based on the theory of planned behavior (TPB) as a framework. The research examined variables such as convenience motivation, price-saving orientation, app quality, service quality, perceived risk, subjective norms, perceived control, and consumer attitude toward online food purchase intention. Data were gathered through online surveys of 400 participants from Cairo and analyzed using structural equation modeling (SEM). The results indicated that convenience motivation, price-saving orientation, app quality, subjective norms, and perceived control positively influence consumer attitudes, which in turn strongly impact purchase intentions. These findings underline the importance of convenience, affordability, and technological factors in shaping consumer preferences in Egypt's online food market.

## KEYWORDS

app quality, consumer behavior, convenience motivation, online food purchase, perceived control, price-saving orientation

## 1 Introduction

E-commerce has revolutionized the global economy by transforming traditional business models and integrating offline and online markets. The global e-commerce market is expected to grow at a rate of 14.7% annually from 2024 to 2030, reaching \$8.1 trillion (Chodak, 2024; Yang et al., 2024). This growth is fueled by improvements in digital infrastructure, greater

internet access, and the increasing use of online shopping platforms. Major e-commerce companies like Amazon, Alibaba, and Jumia have made supply chains more efficient, reducing costs by 12–25% and increasing productivity by 18–30% (Chodak, 2024; Malik and Vidyarthi, 2024). E-commerce has also strengthened industrial and agricultural sectors, boosting trade by 40% in developing countries and enhancing financial inclusion and digital transformation (Li et al., 2024).

Egypt is emerging as a major e-commerce market in the Middle East and North Africa. As of January 2024, the country had 82.01 million internet users, accounting for 72.2% of the total population. Among them, 53% used mobile phones for online purchases. The e-commerce market is projected to expand from \$10.39 billion in 2025 to \$20.72 billion by 2030, with a Compound Annual Growth Rate (CAGR) of 14.8%. The online grocery market is expected to reach \$183.3 million by 2028, growing at a CAGR of 28.3%. Platforms such as Amazon, Jumia, Carrefour Egypt, Gourmet Egypt, Otlob, and elmenus dominate the food delivery industry. However, the food sector remains less developed compared to more established markets in North America, Europe, and Asia (Korniyenko et al., 2025; Macca et al., 2024).

Despite this growth, the online food sector in Egypt faces challenges that hinder its progress. Online food purchases make up only 4.6% of the country's e-commerce market, far below the global average, concerns about food quality and hygiene, a preference for cash-on-delivery payments, and inefficient delivery systems contribute to these difficulties (Chaffey et al., 2019; Changchit and Klaus, 2020; Hong et al., 2021).

While numerous studies examine internet use, time spent online, and social media trends, few studies specifically address Egyptian consumers' online purchasing behavior especially with relation to online food buying. With little emphasis paid to online services, either used online or offline, most current studies concentrate on conventional e-commerce which centers on the purchase of things (Aref and Okasha, 2019; Analytica, 2019). This research gap highlights the increasing importance of further investigation in this area.

This study focuses on understanding consumer behavior in Egypt's online food sector, using a case study of Amazon in Egypt. It examines factors such as convenience, service quality, price, app quality, perceived risks, and consumer attitudes toward purchase intention. The findings aim to identify challenges and recommend strategies to support growth in this sector. Understanding these factors is critical for unlocking the potential of Egypt's online food market, which remains an underutilized yet promising area for economic development.

## 2 Theoretical framework and hypotheses

### 2.1 Theory of planned behavior

The Theory of Planned Behavior (TPB) explains human behavior, suggesting that intention shaped by attitudes, norms, and perceived control predicts online purchasing activities, among other influencing factors (Pedrinelli et al., 2024). The Theory of Planned Behavior (TPB) has been widely applied to understand and predict various behaviors across different domains. In the context of online food shopping,

additional factors such as food-specific features (e.g., quality, freshness, delivery time, and packaging) may further impact consumer selections. While the TPB has been widely employed to analyze and predict many behaviors across multiple domains, its application to food purchasing behavior gives distinct insights (Martini et al., 2023; Rozenkowska, 2023). Food-related attributes present specific consumer concerns, such as the demand for freshness and convenience, which differentiate food transactions from other sorts of online buying. By integrating these food-specific characteristics into the TPB framework, a more comprehensive knowledge of online food purchasing behavior may be gained, distinguishing it apart from studies focusing on other types of consumer behavior (Dang-Van and Nguyen, 2025; Liao et al., 2025; Martini et al., 2023).

Attitude, defined as an individual's evaluation of a behavior, significantly shapes behavioral intentions across various domains (Pedrinelli et al., 2024), including online food purchasing. Positive attitudes toward a service increase the likelihood of purchase intentions (Chen et al., 2020; Kim and Kim, 2022). Building on this theoretical background, the following hypotheses are proposed to explore the impact of key factors on online food purchase intention.

*H1. Attitude significantly influences online food purchase intentions.*

Subjective norm is the perceived social pressure to perform a behavior, shaped by the expectations of others. It along with attitude, Social approval and recommendations from peers influence individual purchase intentions, continued usage and repeat purchase (Lin et al., 2018; Pedrinelli et al., 2024), with positive societal perceptions encouraging the adoption of new business models in online food services (Fu et al., 2020; Pillai et al., 2022; Shanbhag et al., 2023), it significantly shapes consumer behavior in online food shopping. Based on this and the explanation in the introduction above, the following hypothesis can be formulated:

*H2. Subjective norms significantly influence consumer attitudes toward online food purchase intentions.*

Perceived control refers to individuals' perception of the ease or difficulty in performing a behavior, influenced by factors like quality and shelf life, and positively affects online purchase intentions by shaping risk judgment and interest (Ozkara et al., 2017; Pedrinelli et al., 2024). Perceived control, reflecting an individual's confidence in their ability to engage in a behavior, is crucial for behavioral intentions. In online food shopping, consumers' perception of control over usage processes influences their decision to use the service and recommend it to others (Ariño et al., 2011; Chen et al., 2020; Hagger et al., 2022). Based on this and the explanation in the introduction above, the following hypothesis can be formulated:

*H3. Perceived control significantly influences consumer attitudes toward online food purchase intentions.*

Convenience motivation in online shopping refers to the ease of use, saving time, and avoiding offline shopping challenges, which positively influences purchase intention, especially in online food purchasing through home delivery (Campo and Breugelmans, 2015; Alrawad et al., 2023; Muangmee et al., 2021; Guo et al., 2021),

Convenience, defined by time value, ease, flexibility, and effort, is crucial in shaping consumer satisfaction and future intentions (Jalil et al., 2024; Srivastava and Thaichon, 2023). Based on this and the explanation in the introduction above, the following hypothesis can be formulated:

*H4. Convenience motivation influences consumer attitude toward intention to purchase food online.*

Service quality is crucial for customer satisfaction and organizational success, often assessed using the SERVQUAL model. High service quality boosts customer attitudes and purchase intentions, while poor quality has a negative impact. It is evaluated based on service, delivery process, and environment, with adaptations needed for specific contexts (Sohail and Hasan, 2021; Ariffin et al., 2021; Yang and Hu, 2022; Uzir et al., 2021). Service quality, including factors like reliability, responsiveness, and trust, significantly impacts consumer purchase intentions, fostering positive attitudes, loyalty, and repeat purchases. Maintaining high service standards is essential for enhancing consumer satisfaction and long-term loyalty (Bhati et al., 2022; Uzir et al., 2021; Maharsi et al., 2021; Bello et al., 2021; Jadil et al., 2022). Based on this and the explanation in the introduction above, the following hypothesis can be formulated:

*H5. Service quality influences consumer attitude toward intention to purchase food online.*

Price saving orientation focuses on minimizing costs, with price reductions enhancing perceived value and influencing consumer decisions, particularly in online food delivery services (Nagle, 2024; Liu et al., 2023). The availability of online information allows price comparisons, with high perceived value and lower prices driving purchase decisions. Price-saving orientation and product quality influence customer satisfaction, choice, and purchase intentions (Allah Pitchay et al., 2022; Change, 2023; Giningroem et al., 2023; Troise et al., 2021). Based on this and the explanation in the introduction above, the following hypothesis can be formulated:

*H6. Price saving orientation influences consumer attitude toward intention to purchase food online.*

App quality refers to user assessments of factors like customization, interactivity, security, and convenience (Yang et al., 2022). High-quality apps, offering features like ease of use, flexible payment options, and effective support, enhance trust, satisfaction, and purchase intention. A well-designed app ensures reliable, up-to-date information, good reputation and a positive user experience (Qalati et al., 2021). Website and app quality significantly affect customer satisfaction and purchase intention, with key factors like system quality, information quality, and service quality driving these outcomes. App design, including esthetics and content quality, plays a crucial role in user experience and engagement. Lack of useful information, even in a well-designed app, can hinder consumer usage. The quality of app information is linked to trust, satisfaction, and purchase intention (Dung et al., 2024; Foroughi et al., 2024; Gai et al., 2024; Lin et al., 2024). Based on this and the explanation in the introduction above, the following hypothesis can be formulated:

*H7. App quality influences consumer attitude toward intention to purchase food online.*

Perceived risk refers to the uncertainty consumers face regarding potential negative outcomes of a purchase, with higher risks in online shopping compared to physical stores. It significantly influences consumer attitudes, behavior, trust, and the adoption of new products, particularly in the context of online food purchasing, which is considered more risky (Muharam et al., 2021; Essiz et al., 2023; Wang et al., 2022; Szymkowiak et al., 2021). Perceived risk, including financial, product, security, time, and psychological risks, significantly affects consumer attitudes and purchase intentions in online food shopping (Pillai et al., 2022; Rathi et al., 2024). Security risk is a primary barrier, while trust in sellers can mediate this relationship (Munikrishnan et al., 2023). Perceived benefits and risk-reducing strategies, such as brand reputation and certifications, can mitigate these concerns, enhancing purchase intentions (Nam et al., 2019). Based on this and the explanation in the introduction above, the following hypothesis can be formulated:

*H8. Perceived risk significantly influences consumer attitudes toward online food purchase intentions.*

Intention to purchase indicates a consumer's likelihood to buy, influenced by factors like attitude, behavior, and trust. It is shaped by product quality, service, security, and loyalty, and can be impulsive and unpredictable in E-commerce (Chung et al., 2021; Liu et al., 2021; Mayayise, 2024; Hussain et al., 2022).

## 2.2 Research framework

This study investigated consumer behavior regarding online food purchase intentions on Amazon Egypt, focusing on the influence of eight factors: convenience motivation, service quality, price orientation, app quality, perceived risk, subjective norms, perceived control, and attitude. The hypothesis tests the significance of each factor in shaping consumer purchase intentions. Urbanization has led to reduced shopping time, prompting companies and retailers to adopt online shopping services to meet consumer needs.

Based on the theoretical foundations discussed, including both the positive and negative aspects of the relevant theories, a research model is developed to describe the conditions influencing consumer behavior in online food purchase intentions. The conceptual framework for this study is outlined as shown in Figure 1.

## 3 Research methodology

### 3.1 Survey design

The survey measurements were derived from existing literature and were carefully adapted to suit the objectives of this research. The study examined and explained the relationships between the independent and dependent variables through hypothesis testing. Based on the literature review, a conceptual model was proposed. The questionnaire used in this study consisted of two main sections. The first section focused on quantitative data to investigate the effects of factors such as convenience motivation, service quality, price, app quality, perceived risk, subjective norms, and perceived control on consumer attitude and purchase intention. The measurement scale

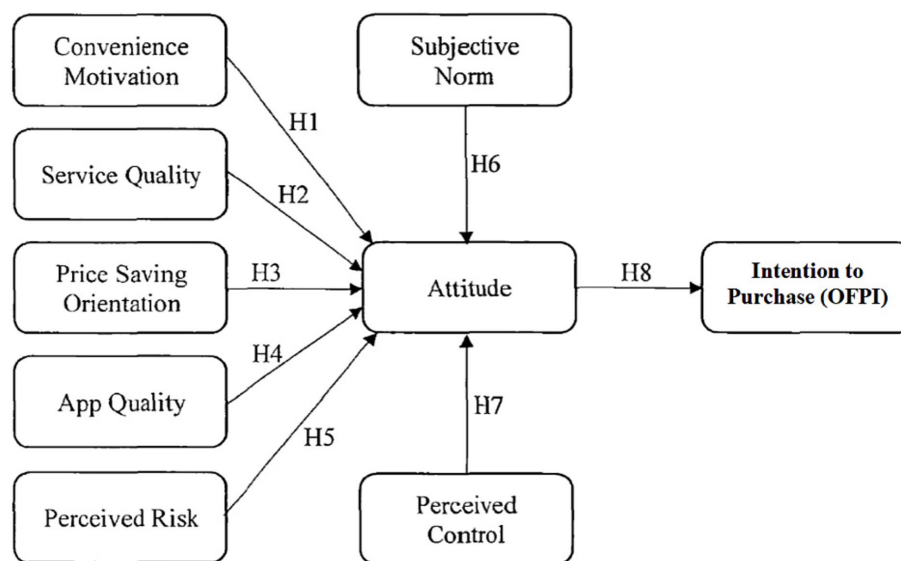


FIGURE 1  
Conceptual frame work of the study.

employed was the Likert scale, which is widely used to assess respondents' level of agreement or disagreement with a series of statements. The Likert scale ranged from 1 (strongly disagree) to 5 (strongly agree). The second section of the questionnaire gathered demographic information, as shown in Table 1.

### 3.2 Data collection

This study employed a quantitative design and was conducted in August 2024 in Egypt using online questionnaires via Google Forms. The sample size was 400, with data gathered from a purposive sampling technique, where participants were selected based on specific criteria (Malhotra et al., 2020). The questionnaire was distributed via popular social media platforms in Egypt, specifically Facebook and WhatsApp, which are widely used in Egypt. It targeted residents of Cairo and its surrounding districts. To ensure the accuracy of the sample's geographic focus, the questionnaire included a demographic section requiring respondents to specify their location (e.g., city or district). Furthermore, the survey was promoted within local online groups and communities that are specifically associated with Cairo and neighboring areas. This approach helped to ensure that the responses were primarily from individuals residing in the intended geographic region.

### 3.3 Data analysis

Data analyses were performed using Statistical Package for Social Science (SPSS) version 25 and Analysis of Moment Structure (AMOS) Version 25. SPSS was used for descriptive analyses to analyze the characteristics of participants, and visualize the responses received. Then, AMOS was applied to test structural equation modeling (SEM) analysis through a two-stage procedure (Kline, 2023). In the first step, a confirmatory factor analysis (CFA) was conducted to evaluate the reliability and validity of the measurement model. In the second step,

TABLE 1 Demographic characteristics of the respondents ( $n = 400$ ).

Variable	Distribution	Number of respondents	Percentage (%)
Gender	Female	162	40.5
	Male	238	59.5
Age	From 18 to 24	211	52.8
	From 25 to 34	107	26.8
	From 35 to 44	57	14.3
	From 45 to 54	18	4.5
	From 55 to 64	1	0.3
	Over 65 years	6	1.5
Religion	Islamic religion	366	91.5
	Christianity	31	7.8
	Other	3	0.8
Education	Middle school	49	12.3
	Bachelor	253	63.3
	Master	61	15.3
	PHD	37	9.3
Marital status	Single	277	69.2
	Married	106	26.5
	Other	17	4.3
Monthly income	Less than 5,000 EGP	194	48.5
	5,000–10,000 EGP	113	28.3
	10,000–15,000 EGP	56	14
	15,000–20,000 EGP	16	4
	20,000 EGP and above	21	5.3

the full structural model was measured to evaluate the path analysis and the hypothesized relationships, with the help of standardized



regression coefficients ( $\beta$ ),  $t$ -values, and  $p$ -values, Smart PLS4 used for graphical path analysis.

## 4 Results

### 4.1 Profile of the respondents

Profile of the Respondents presents general information regarding the sample's demographic features. The data in Table 1 indicated that the majority of respondents are young (52.8%), male (59.5%), single (69.2%), and educated, primarily earning less than 5,000 EGP per month, with most identifying as Muslim (91.5%) and holding a bachelor's degree (63.3%), as shown in Table 1.

### 4.2 Instrument reliability and composite reliability of construct

The reliability of key constructs in this study was assessed using Cronbach's alpha and Composite Reliability ( $\rho_c$ ), with both measures indicating satisfactory internal consistency across all variables. Cronbach's alpha values range from 0.754 to 0.857, suggesting that the scales used for the measurement of the constructs exhibit good internal consistency. Generally, values above 0.7 are considered acceptable for Cronbach's alpha, with values exceeding 0.8 indicating strong reliability (Xu et al., 2024). These results gave a confirmation of the good reliability and validity of the research instruments as shown in Table 2.

### 4.3 Cross-loading of the PLS-SEM model

The cross-loading analysis in the PLS-SEM model assesses the relationships between indicators and their corresponding constructs, as well as their associations with other constructs. In PLS-SEM, an indicator's loading on its intended construct should ideally exceed 0.7, as this value indicates that the construct explains more than 50% of the variance in the indicator, demonstrating strong explanatory power and confirming the construct's validity. On the other hand, cross-loadings on other constructs should generally remain below 0.5 to ensure discriminant validity and prevent ambiguity in the measurement model. This distinction is critical for maintaining clarity and robustness in the model's

interpretation. These criteria are well-supported by established guidelines in the literature (Afthanorhan et al., 2020), as illustrated in Table 3.

As shown in Table 3, the cross-loadings for each latent variable are higher than those for other latent factors, indicating that the latent variables exhibit discriminant validity.

### 4.4 Fornell-Larcker criterion—discriminant validity

Fornell-Larcker criterion—discriminant validity displays the criterion for discriminant validity, which is used to confirm that the constructs in the analysis are sufficiently distinct. According to this criterion, the square root of the average variance extracted (AVE) for each construct should be larger than the correlations between that construct and the others (Panzeri et al., 2024). In Table 4, the diagonal values correspond to the square roots of the AVE, while the off-diagonal values represent the correlations between the constructs. All diagonal values exceed the off-diagonal correlations, indicating that the constructs are distinct from each other. As a result, the measurement model satisfies the discriminant validity requirement, confirming that the constructs reflect separate underlying concepts. As illustrated in Table 4.

### 4.5 Graphical path model (PLS-SEM)

Testing the inner model or structural model aims to evaluate the relationship between latent constructs, significance values and R-square of the determined research model. Based on the research model that has been determined and has been tested by PLS-SEM analysis, the results of testing the inner model are as follows in Figure 2.

The Partial Least Squares Structural Equation Modeling (PLS-SEM) path model demonstrates that 59.8% of the variance in Attitude ( $R^2 = 0.598$ ) is explained by the predictors PR, SN, APP, PC, CM, PSO, and SQ. Additionally, 77.6% of the variance in Purchase Intention ( $R^2 = 0.776$ ) is accounted for by Attitude. The model incorporates latent variables (represented by blue circles) and their corresponding observed variables (depicted as yellow rectangles). All factor loadings exceed the threshold of 0.7, indicating strong measurement reliability (Afthanorhan et al., 2020). Path coefficients, represented by arrows, illustrate the directional relationships and effect sizes between independent and dependent variables, as depicted in Figure 2.

TABLE 2 Reliability and composite reliability of constructs.

NO	Variable	Cronbach alpha	Composite reliability ( $\rho_c$ )	Results
1	Convenience motivation	0.857	0.858	Reliable
2	Service quality	0.839	0.839	Reliable
3	Price Saving orientation	0.834	0.836	Reliable
4	APP quality	0.823	0.825	Reliable
5	Perceived risk	0.754	0.756	Reliable
6	Subjective norm	0.845	0.847	Reliable
7	Perceived control	0.788	0.793	Reliable
8	Attitude	0.845	0.723	Reliable
9	Intention to purchase	0.797	0.788	Reliable

TABLE 3 Cross-loadings of the P LS-SEM model.

Indicator	Construct								
	CM	SQ	PSO	APP	PR	SN	PC	ATT	IP
CM1	<b>0.884</b>	0.289	0.324	0.388	0.309	0.345	0.312	0.401	0.392
CM2	<b>1.000</b>	0.217	0.297	0.374	0.227	0.275	0.299	0.383	0.387
CM3	<b>0.926</b>	0.276	0.323	0.418	0.305	0.351	0.308	0.398	0.391
CM4	<b>0.927</b>	0.262	0.312	0.387	0.310	0.353	0.318	0.403	0.396
SQ1	0.316	<b>0.924</b>	0.307	0.319	0.195	0.340	0.261	0.325	0.336
SQ2	0.315	<b>0.825</b>	0.305	0.316	0.192	0.277	0.292	0.327	0.313
SQ3	0.371	<b>1.000</b>	0.311	0.328	0.220	0.290	0.298	0.338	0.324
SQ4	0.356	<b>0.969</b>	0.307	0.329	0.212	0.278	0.295	0.335	0.318
SQ5	0.335	<b>0.976</b>	0.302	0.318	0.206	0.272	0.289	0.325	0.317
PSO1	0.267	0.251	<b>0.869</b>	0.286	0.209	0.278	0.235	0.280	0.281
PSO2	0.266	0.258	<b>1.000</b>	0.293	0.213	0.289	0.234	0.275	0.272
PSO3	0.281	0.267	<b>0.878</b>	0.303	0.225	0.298	0.238	0.282	0.277
APP1	0.340	0.332	0.308	<b>0.973</b>	0.240	0.319	0.256	0.314	0.303
APP2	0.309	0.323	0.311	<b>1.000</b>	0.218	0.297	0.264	0.310	0.302
APP3	0.358	0.332	0.320	<b>0.947</b>	0.259	0.325	0.277	0.337	0.323
APP4	0.318	0.314	0.305	<b>0.804</b>	0.241	0.302	0.263	0.317	0.309
PR1	0.288	0.256	0.228	0.247	<b>1.000</b>	0.294	0.238	0.287	0.278
PR2	0.287	0.258	0.220	0.255	<b>0.932</b>	0.294	0.245	0.281	0.276
PR3	0.276	0.239	0.211	0.242	<b>0.842</b>	0.278	0.236	0.286	0.270
SN1	0.284	0.265	0.259	0.291	0.268	<b>0.839</b>	0.254	0.290	0.285
SN2	0.272	0.256	0.241	0.268	0.239	<b>1.000</b>	0.259	0.277	0.274
SN3	0.277	0.265	0.253	0.282	0.247	<b>0.898</b>	0.261	0.286	0.278
PC1	0.310	0.290	0.270	0.318	0.245	0.267	<b>0.931</b>	0.286	0.295
PC2	0.306	0.288	0.271	0.317	0.242	0.265	<b>1.000</b>	0.287	0.293
PC3	0.328	0.296	0.286	0.328	0.251	0.276	<b>0.882</b>	0.292	0.299
ATT1	0.284	0.257	0.236	0.276	0.221	0.264	0.235	<b>0.925</b>	0.276
ATT2	0.290	0.263	0.243	0.287	0.223	0.269	0.242	<b>1.000</b>	0.283
ATT3	0.286	0.261	0.239	0.271	0.219	0.267	0.230	<b>0.964</b>	0.280
IP1	0.276	0.241	0.228	0.259	0.220	0.235	0.219	0.274	<b>1.000</b>
IP2	0.279	0.247	0.234	0.267	0.223	0.241	0.223	0.276	<b>0.972</b>
IP3	0.268	0.234	0.222	0.258	0.216	0.229	0.215	0.271	<b>0.982</b>

CM, Convenience Motivation; SQ, Service Quality; PSO, Price Saving Orientation; APP, APP Quality; PR, Perceived Risk; SN, Subjective Norm; AT, attitude; IP, Intention to purchase.

TABLE 4 Fornell-Larcker criterion—discriminant validity.

Construct	Mean	SD	CM	SQ	PSO	APP	PR	SN	PC	ATT	IP
CM	3.003	1.049	<b>0.9339</b>								
SQ	3.281	0.971	0.289	<b>0.924</b>							
PSO	3.112	1.075	0.324	0.307	<b>0.869</b>						
APP	3.090	1.026	0.388	0.319	0.286	<b>0.937</b>					
PR	2.980	1.118	0.309	0.195	0.209	0.240	<b>0.967</b>				
SN	3.231	1.009	0.345	0.340	0.278	0.319	0.294	<b>0.839</b>			
PC	3.169	1.030	0.312	0.261	0.235	0.256	0.238	0.254	<b>0.931</b>		
ATT	3.108	1.071	0.401	0.325	0.280	0.314	0.287	0.290	0.286	<b>0.9707</b>	
IP	3.101	1.056	0.392	0.336	0.281	0.303	0.278	0.285	0.295	0.276	<b>0.939</b>

CM, Convenience Motivation; SQ, Service Quality; PSO, Price Saving Orientation; APP, APP Quality; PR, Perceived Risk; SN, Subjective Norm; AT, attitude; IP, Intention to purchase, the bold diagonal values represent the square root of AVE.

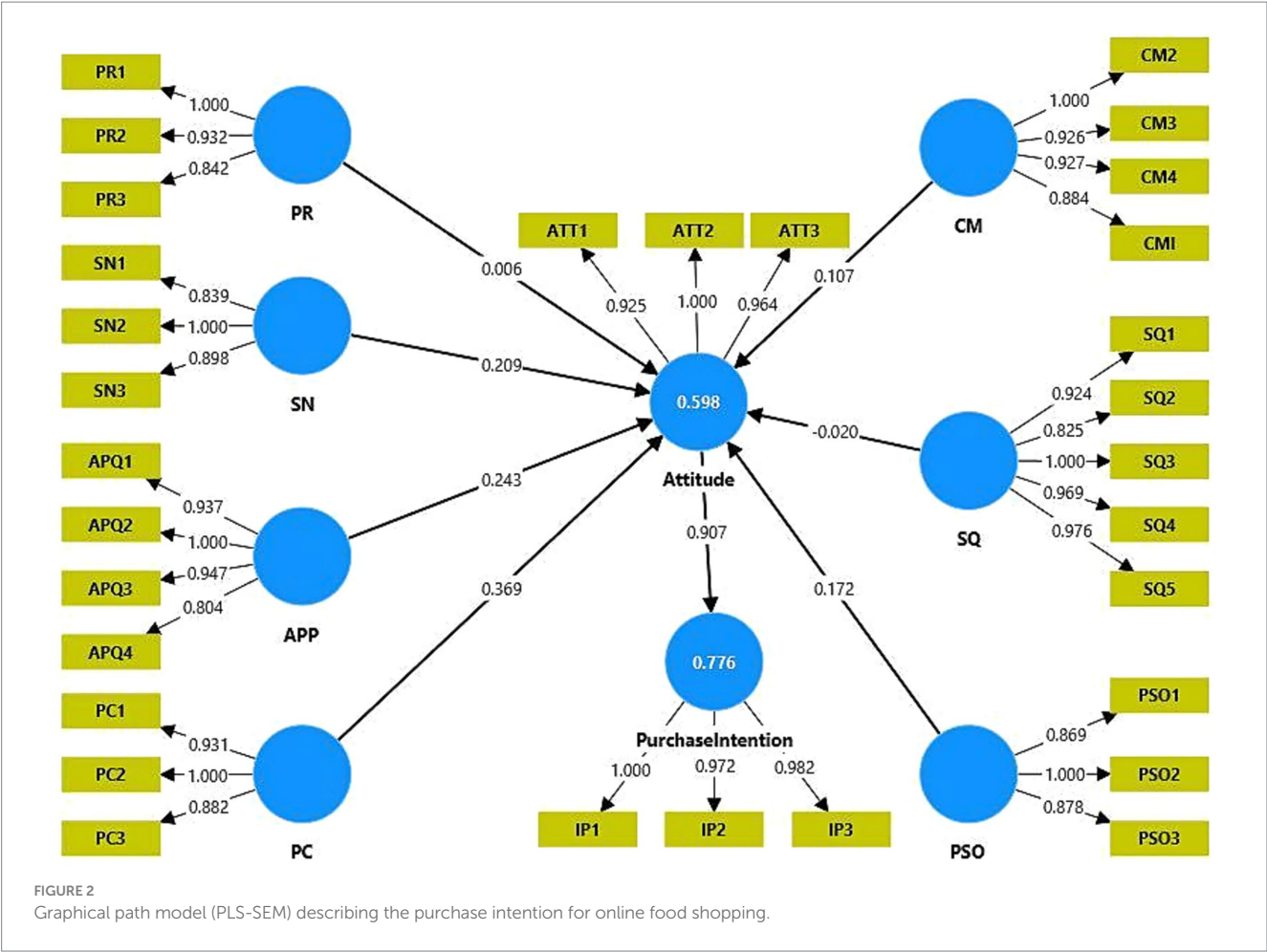


TABLE 5 Path coefficients.

Variables	Path coefficients	T values	p values	Result
Convenience motivation → attitude	0.107	2.184	0.031	Accepted
Service quality → attitude	−0.020	0.308	0.756	Rejected
Price saving orientation →attitude	0.172	3.524	0.001	Accepted
APP quality →attitude	0.243	4.212	0.000	Accepted
Perceived risk →attitude	0.006	0.136	0.896	Rejected
Subjective norm →attitude	0.209	4.827	0.000	Accepted
Perceived control →attitude	0.369	6.139	0.000	Accepted
Attitude →intention to purchase	0.907	14.673	0.000	Accepted

4.6 Hypothesis testing

The value of each parameter seen from its significance value shows information related to the relationship between the variables used in this study. Testing the hypothesis in this study is to use or refer to the output path coefficients values as shown in Table 5.

Hypothesis testing can be done in two ways, testing using t-statistics and p-value. For t-statistic test, if the value of  $t \geq (1.98)$  (André and Reinholtz, 2024), then the research hypothesis is accepted. Based on Table 5, 2 of the 8 constructs have a t-statistics value smaller than t-table, namely Service Quality to Attitude

constructs of 0.308, and Perceived Risk to Attitude constructs of 0.136.

Testing the statistical relationship of variables can also be seen from the value of the coefficients path for each variable relationship showing a positive and significant relationship because the p is less than 0.0525 (André and Reinholtz, 2024). With this test it can also be seen that there are 2 constructs that are rejected among others; Service Quality to Attitude with p 0.756, and Perceived Risk to Attitude with p 0.896.

Based on the hypothesis test above, it can be concluded that the hypotheses H2, and H5 are rejected while the hypotheses H1, H3, H4, H6, and H7 are accepted.

## 5 Discussion

The increasing demand for online food shopping has been influenced by various factors, particularly in emerging markets such as Egypt. Consumers are driven by convenience, price considerations, and digital platform quality when deciding to purchase food online. The present study investigates Egyptian consumers' online food purchase intentions from Amazon Egypt by integrating key variables from the Theory of Planned Behavior (TPB). The proposed framework examines the relationships between these factors and evaluates their impact on online food shopping behavior. Structural Equation Modeling (SEM) analytical results verified the applicability of the model and confirmed a set of causal links among the different factors influencing Egyptian consumers' intentions to purchase food online from Amazon Egypt.

Regarding the effects of variables stemming from the Theory of Planned Behavior (TPB), Convenience Motivation has a positive and significant effect on consumers' Attitude toward purchasing food online from Amazon Egypt. This suggests that greater Convenience Motivation enhances consumers' Attitude, increasing their likelihood of buying food products. This finding is supported by previous research, which also demonstrated that Convenience Motivation positively and significantly influences Attitude (Alrawad et al., 2023; Muangmee et al., 2021; Guo et al., 2021).

Similarly, Price Saving Orientation was found to have a significant impact on Attitude, indicating that cost-conscious consumers are more likely to view online food shopping positively. Given that a large segment of Egyptian consumers is highly price-sensitive due to relatively low income levels and economic challenges, affordability remains a crucial determinant of purchasing behavior. Amazon Egypt's competitive pricing, discounts, and promotional offers reinforce consumers' motivation to shop online. This finding is consistent with previous studies that reported a positive and significant relationship between Price Saving Orientation and Attitude (Dung et al., 2024; Foroughi et al., 2024; Gai et al., 2024; Lin et al., 2024).

Furthermore, the hypothesis test results indicate that App Quality has a positive and significant effect on Attitude. Specifically, improvements in App Quality such as user-friendliness, high-quality food product information, and regular updates contribute to a more positive Attitude, increasing food purchase intention from Amazon Egypt. This finding aligns with previous research demonstrating the significant impact of App Quality on Attitude (Dung et al., 2024; Foroughi et al., 2024; Gai et al., 2024; Lin et al., 2024).

Similarly, the results reveal that Subjective Norm has a positive and significant effect on Attitude. This suggests that favorable opinions from family, friends, and colleagues positively influence consumers' Attitude, encouraging them to purchase food from Amazon Egypt. This is consistent with previous studies highlighting the significant role of Subjective Norm in shaping Attitude (Fu et al., 2020; Pillai et al., 2022; Shanbhag et al., 2023).

Moreover, the hypothesis test results show that Perceived Control has a positive and significant effect on Attitude. This implies that consumers who feel they have greater control over their online food purchases develop a more favorable Attitude, leading to higher purchase intention from Amazon Egypt. Previous research supports this finding, indicating a significant relationship between Perceived Control and Attitude (Ariño et al., 2011; Chen et al., 2020; Hagger et al., 2022).

The results further confirm that Attitude has a positive and significant effect on Purchase Intention. This suggests that a more favorable Attitude toward online food shopping increases Purchase Intention, making consumers more likely to buy food from Amazon Egypt. This conclusion is consistent with prior studies, which also found a significant relationship between Attitude and Purchase Intention (Chen et al., 2020; Kim and Kim, 2022).

However, the hypothesis test results indicate that Service Quality does not have a positive and significant effect on Attitude. This suggests that improvements in Service Quality may not necessarily encourage more food purchases from Amazon Egypt. A possible explanation is that enhanced Service Quality is often associated with higher prices, which may deter consumers, particularly in Egypt, where demographic data indicate that many consumers have low incomes. This finding is supported by previous research, which also reported that Service Quality does not significantly influence Attitude (Keberhasilan and Azzahra, 2024; Maaz et al., 2019; Nugroho et al., 2024; Pradeep et al., 2024; Rashid and Rasheed, 2024; Riovaldy, 2020; Slack et al., 2020; Wang and Shahzad, 2024).

Based on the hypothesis test revealed that Attitude had no appreciable influence from perceived risk as well. The low impact of Perceived Risk (0.006) implies that Egyptian consumers give convenience, cost, and app quality top priority over possible risks while making online food purchases. The availability of safe payment choices, such as cash on delivery, which lessens financial loss fears, could help to explain this. Furthermore, as internet buying grows more popular in Egypt, individuals might feel more at ease making food purchases on digital channels. This result is in line with earlier research showing that, in some situations, risk perception contributes only little compared to other motivating elements (Hong et al., 2021; Kamboj et al., 2024; Kumar et al., 2024a,b; Lu, 2024; Munikrishnan et al., 2023).

## 6 Conclusions and implications

This study examined the factors influencing Egyptian consumers' intentions to purchase food online from Amazon Egypt, highlighting the significant roles of convenience motivation, price-saving orientation, app quality, subjective norms, and perceived control. The findings suggest that Egyptian consumers prioritize ease of use, affordability, and digital platform quality over perceived risks and service-related concerns. Given Egypt's economic challenges, price sensitivity plays a crucial role in shaping online shopping behavior, while the increasing adoption of digital technologies is gradually reducing concerns about online transactions.

To support the expansion of online food shopping in Egypt, the government should invest in improving digital infrastructure, particularly in rural and underserved areas where internet access remains unreliable. Strengthening e-commerce regulations related to online transactions, food safety, and consumer rights is essential for building trust in digital food retail. Given the high reliance on cash payments in Egypt, policies promoting financial inclusion such as expanding mobile banking, digital wallets, and secure payment options can further facilitate online transactions and reduce



consumers' hesitation toward online shopping. Government-supported programs to teach digital skills can reduce reliance on cash on delivery.

In order to attract the mostly young and price-sensitive consumers, online food retailers, especially international companies like Amazon, should use pricing strategies such as discounts, bundled deals, and loyalty programs that match Egyptian culture. Improving the user experience with easy navigation, personalized recommendations, and simple shopping processes can increase customer engagement. Retailers should also focus on making websites and apps easy to use in Arabic and optimize them for mobile devices. Offering flexible payment options and promotions will appeal to price-sensitive consumers. Delivery problems, especially in busy cities, can be solved by improving supply chains and partnering with local delivery services. Offering real-time tracking and clear delivery times will make customers feel more satisfied.

Although this study provides valuable insights into the factors influencing Egyptian consumers' online food purchasing intentions, some limitations should be considered. The findings indicate that Egypt's online food purchasing market is still in its early stages. As the sector continues to grow, longitudinal studies tracking shifts in consumer behavior and preferences will be essential for understanding emerging trends. Future research should also incorporate real-world consumer experiences to gain deeper insights into the evolving dynamics of the e-commerce landscape. Examining how trust, digital payment adoption, and supply chain improvements influence consumer behavior over time can provide a more comprehensive understanding of the factors driving online food shopping growth in Egypt.

## Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

## Ethics statement

The studies involving humans were approved by Nanjing Agriculture University. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

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## Author contributions

SH: Methodology, Software, Writing – original draft, Writing – review & editing, Formal analysis. AL: Resources, Funding acquisition, Writing – review & editing. RN: Writing – review & editing, Investigation. MA: Writing – review & editing. EA: Writing – review & editing. OA: Writing – review & editing. AhA: Writing – review & editing. MM: Writing – review & editing. AbA: Writing – review & editing. ME: Writing – review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Generative AI statement

The authors declare that no Gen AI was used in the creation of this manuscript.

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