The Impact of E-Commerce Drivers on the Innovativeness in Organizational Practices

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***Abstract*—Innovation in e-commerce practices has revolutionized the way goods and services are purchased or sold online. This relatively new tool for online transaction provides range of access to wealth of information and knowledge needed to facilitate electronic commerce globally using internet network. The case is not the same in the developing countries where e-commerce innovation is deprived of key the components to drives developing economy. To clearly understand innovation in e-commerce diffusion, 375 quantitative data generated from e-commerce organizations in Libya. Statistically analysis of the key drivers of e-commerce innovations focused on the need for a shift in organizational attitude and knowledge through decision making that are committed to meeting customer's needs. The inter statistical covariance indicated a strong homogeneity between the drivers of e-commerce with mean value range of 4.09 to 4.82 (58.4 % to 68.8% of responses) indicating that 219 to 258 respondents out of 375 are of the same view. There is strong positive correlation between the drivers of e-commerce innovations except for e-commerce management style that has moderate relation and were statistically significant at 0.00 level. This study clearly explained the main factors of interest that are versatile in providing timely delivery of goods, efficient services and in meeting with e-commerce developmental trend.**

***Keywords*—E-commerce innovation; e-commerce drivers; performance management; decision making; management style**

I. Introduction

The progress in e-commerce represents a potential opportunity to enhance the growth of developing nations and to improve the effectiveness of business processes at the organizational level. The Organizations across developing countries can conveniently utilize open-ended opportunities to improve commercial activities globally. Innovation in e-commerce is transforming the developing economy because it drives commercial sectors to benefit from efficient and low-cost transactions [1], [2], [3]. E-commerce online platforms aid in the purchase or sale of goods and services and have contributed to building business networks and partnerships in most developing and developed countries, organizations and businesses have appreciated development innovations and the emergence of transitional changes in e-commerce practices. E-commerce has become an essential pillar off economic growth and internationalization to maximize the advantages of technology-driven commercial activities.

The easy access to e-commerce resources has significantly contributed to the integration of various technologically mediated media service frameworks for the sale of products and services. E-commerce innovations are at the forefront of transforming conventional commerce into an electronic-based business format [4], [5], [6]. Furthermore, the emerging experience of accessing e-commerce resources for online transactions has added to the use of different electronic devices and gadgets for economic activities. The versatility of electronic devices such as hand phones, computers, gadgets, electronic media, and handheld devices has improved the way goods and services are handled over the years [7], [8].

However, there are issues limiting the wider use to e-commerce websites including the cost of electronic systems, internet infrastructure, online security for data and personal information [9], [10]. Other challenges include ease of access to online platforms, customer experience, cost of shipping purchased products, online customers support, sustainability, and frequent updates requiring larger storage for new features to support online sales of products and services [11]. To generate depth of insight into e-commerce advances, these factors were grouped as drivers of e-commerce innovations in the present study. The emerging new features and apps incorporated with e-commerce require specialized skill [12], [13] and are vital for improvinge online businesses [14]. A good understanding of how these drivers influence innovativeness within organizations is very important for enhancinge the competitive edge of the digital marketplace [7].

However, the objectives of the present study are to identify the impact of the e-commerce drivers and to analyze how they influence e-commerce innovation. A clear understanding of the factors that have consistently contributed to the improvement recorded in e-commerce development could improve the competitive edge of e-commerce. This is important, as e-commerce has become a well-known branch of commerce that uses electronic systems for the purchase and sale of goods and services via online channels. The quality of e-commerce services will continue to improve over time as research efforts are targeted at meeting customers' needs [13], [15] As online businesses continue to widen with the inclusion of new innovative changes [16], retailers may be compelled to adapt certain changes to facilitate online transactions. The drivers of e-commerce could help drive e-commerce performance with insight into the potential influences on e-commerce innovations. The drivers of e-commerce innovation at the organizational level could further improve the effectiveness of different services and the competitiveness of online businesses.

II. Literature Review

The present study is based on the influence of the key drivers of e-commerce on innovative features from the literature. These variables have been widely recognized and used separately considering their impact on e-commerce activities at the organizational level. In the context of e-commerce practices, managerial and operational capabilities for organizational innovation have been validated based on management

style, decision making, people's development (also known as workers development), process management and performance management [1], [17]. [18] found that e-commerce development has been affected by technological and organizational attitudes toward innovation, as well as financial concerns. The management framework for assessing disruptive innovations by [19] found that decision making is a key driver of technological innovation in organizations. This could be because the decision to use a certain technology is based on management's decisions and approval. Decision-making has been referred to as an approach to improve technological innovation [20] and among drivers for the adoption of eco-design practices [21].

An empirical study that explored the interplay of managerial and operational capabilities to infuse organizational innovation in SMEs [1] provided a formal reflection on the role of innovation in transforming organizational practices. In [22], it was shown that e-commerce will continue to improve management practices with the emergence of new technological features that make transactions easier and faster. A study by [18] provided a depth of insight into the prevailing issues of concern regarding e-commerce practices, which are related to organizational practices, technological development, financial resources and external factors.

Previous research findings are foundational to the choice of instrument, used in this study, research approach, variables of interest, and the analytical method used in the present study. A literature study by [18], [21] found that e-commerce adoption has been severely affected by technological innovation, financial assets, management practices, decision-making, and organizational factors. Financial and technological factors have demonstrated a consistent influence over the years on organizational factors. E-commerce practices at the organizational level were demonstrated in a study by [1]. Important variables used include process management, management style, decision making, performance management, people's development, and organizational innovations. The study in [23] found that emerging economies have realized the benefits of e-commerce and are investing heavily in technology to fully explore e-commerce potentials. This study's structure is reflective of previous findings that represented a synergetic focus on factors that constrained innovation in e-commerce practices.

III. Research Framework

This study examined contextual factors that have been identfied as drivers of e-commerce innovation. The drivers include organizational management styles (eCMS) that provide insight into the need for a swift response to online customers and feedback to information and requests relative to sales of products and services. Decision-making in e-commerce (DM) provided a clear understanding of the plans to improve e-commerce practices. e-commerce worker development (eCWD) focuse on training and employers' development to cope with innovative changes in technology and the application of e-commerce features. The e-Commerce management process (eCPM) explains activities and tasks to effectively improve e-commerce services. e-commerce performance management (eCPfM) sets clear business goals for e-commerce organizations. The e-Commerce Organization Attitude to Innovation (eCOAI) explained the commitment of thee-commerce management team to adopt new technology to efficiently deliver e-commerce services. Knowledge of e-commerce technology (KeCT) focuses on the ability of innovative features to drive e-commerce activities. Financial concern refers to the capability to effectively manage financial resources to achieve healthy e-commerce services. External factors (extF) entail pressure from external entities, such as customers and suppliers. e-Commerce Innovation (eCI) explains new ways of conducting e-commerce business using improved features. These important e-commerce factors were collectively used in this studt, and their effect on e-commerce innovation was hypothetically validated using statistical measurements. This study sets up a new conceptual and holistic view that contextually explains the variable themes that matter in the theoretical model of e-commerce innovation. The hypothesis of this study asserts that "e-commerce drivers have a positive relationship with e-commerce innovation". This study explores the key drivers of e-commerce practices and their overriding influences on e-commerce innovation. E-commerce innovations are embodied with potential opportunities to earn promising benefits from e-commerce features that support sales of goods and services via online websites [24]. The clear identification of e-commerce drivers and potential barriers in this study is a pathway to improve the effectiveness and versatility of online services. Reflecting on the work of [18], e-commerce has been constrained by knowledge of e-commerce technology, organizational management style, financial concerns, as well as external factors relative to supply and customer push. The research framework constituting the key drivers of e-commerce innovations are as shown in Fig. 1.

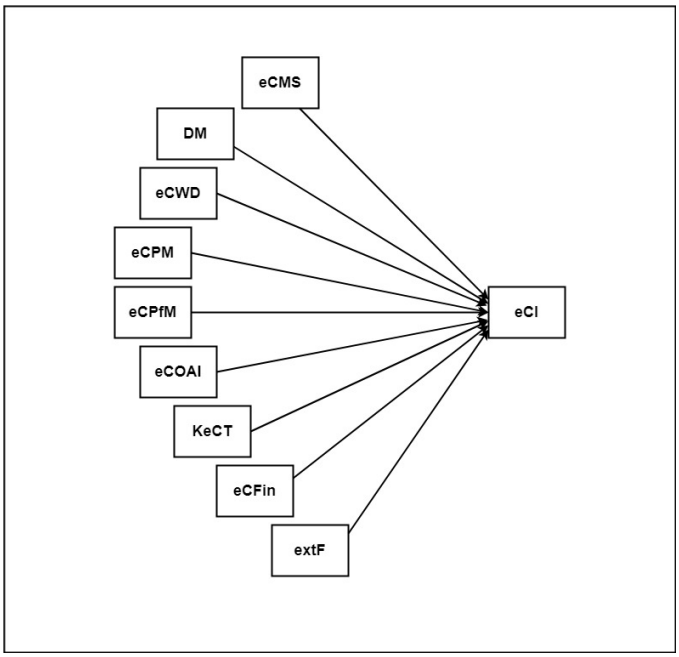

Fig. 1. The research framework of e-commerce drivers' effect on e-commerce innovations.

IV. Research Approach

The population of this study comprised 375 managers who have saved a minimum of five years on the most active 150 e-commerce websites across Libya. Participants ranging

from 20 to 65 years of age were selected to respond to structured research items that focused on the drivers of e-commerce innovations. Data collected from online and e-commerce employees willingly contributed to their practical experience in e-commerce transactions and management involvement to improve e-commerce practices. Employers' age, position and years of experience were major considerations for data collection and 384 data collected were carefully screened of which 375 were considered appropriate for this study. Incomplete questionnaires were excluded to improve the accuracy and reliability of the research findings. Participation in the survey was voluntary, and participant experience and organizational roles contributed to the overall quality of the research findings.

A. Measures

e-commerce organizational practices revolve around e-commerce innovations [19], [24], [25]. To improve e-commerce activities and competitiveness at all levels, this study statistically explored the participants' knowledge of e-commerce innovations and the types of devices used as well as the type of training and the issues that have constrained e-commerce progress. Pearson's correlation statistics were used to measure the strength of the relationship between the relative research variables based on r and p value. Inter-statistical analysis was used to provide a clear explanation on the variance and the mean value in the research items. ANOVA with Tukey's test for statistics was used to estimate the degrees of freedom based on the power of observation and the linear relationship of the hypothesized relationship. Multivariate analysis was used to explain the research hypotheses and address the null hypothesis of the study. A statistical test between the subject effect was used to support the hypothetical result.

V. Contextual Description of Research Variables

The analysis reported in this section was based on numerous factors that support the e-commerce business including the need for timely communication and feedback with customers/clients also referred to as the e-commerce management style (eCMS). e-commerce organizational practices have been challenged by the difficulty of handling sensitive personal information, data and important software and innovative apps that have added value to the competitiveness of online businesses [26]. This is because the management style of e-commerce firms has failed to incorporate trends in technology into management practices. This could be because, decision making (DM) to improve e-commerce practices has not taken into consideration the need for adequate and timely training on e-commerce updates and innovations also referred to as e-commerce worker development (eCWD). In this study, all processes and tasks associated with e-commerce transactions is referred to as e-commerce process management (eCPM) and a clear business set goal for the e-commerce process is referred to as e-commerce performance management (eCPfM). Other important factors such as e-commerce organizations attitude towards innovation (eCOAI) have focused on making e-commerce more attractive to a range of online consumers into an effort to reduce shopping and delivery time. Organizations knowledge of the impact of e-commerce innovation has opened doors to new outlets to make online sales easier and convenient [27], [28], [29]. It becomes imperative that e-commerce competitiveness e-commerce rotates around a transformative shift in innovation [30]. Knowledge of e-commerce technology (KeCT) has become a vital tool for e-commerce development. This is because insufficient knowledge about new developments in e-commerce practices poses greater challenges in positioning developing economies on a fast development path [31]. This is very visible from the emergence of relatively new technological innovations changes that have enabled organizations to tap new knowledge capabilities to foster the production and sales of products by extending service networks and providing timely services to larger numbers of online shoppers [32]. It is noteworthy to consider the financial capability of e-commerce organizations to acquire the necessary infrastructure to handle different services. Financial involvement (eCFin) to sustain e-commerce development is an important factor that determines e-commerce versatility to render efficient and timely services at a relatively lower cost. External pressure is another important factor (extF) in this study that focuses on customer and supplier commitment and respond to the business environment and is discussed in this study relative to new ways of doing online business, also referred to as e-commerce innovation (eCI).

VI. Statistical Analysis

A. Descriptive Statistics of e-Commerce Knowledge Across the Study Population

Proportion of Libyan using e-commerce platform to purchase products are denoted by "Yes and No device used for e-commerce transaction, type of training to adopt e-commerce innovations and problems with purchasing product and vices via e-commerce platform are as shown in Table I.

The mean distribution of the research variables ranged from 4.0880 to 4.8160 (58.4% to 68.8%), indicating that 219 to 258 out of 375 of the study population had the same view about the research outcome, as shown in Table II.

B. Correlation Matrix of the Research Variable

The correlation matrix shows the relationship levels of the variables ranging from moderate (only for eCMS) to strong positive relationships with other drivers of e-commerce innovation (Table III). Inter-item covariance explains the homogeneity of the tested variables. The mean value of the variable item was closely related (4.088 – 4.816) with a mean value of M = 4.431 (Table IV, Fig. 2, 3).

C. ANOVA Statistics with Tukey's Test for Nonadditivity

Tukey's estimated power to which observations must be made to achieve additivity = 2.056. The model analysis revealed the interaction effect between e-commerce drivers and e-commerce innovation at the organizational level (Table V).

D. Multivariate Analysis of the Research Hypotheses

- indent Variable: eCI.
- .581 eCMS(eCOAI)+.564 eCMS (KeCT)+.839 eCMS(eCFin)+.330 eCMS(extF) - 1.315 eCMS (Error).

TABLE I. E-COMMERCE KNOWLEDGE, DEVICES USED AND PRACTICES

				95% **Confidence Interval**		
	F	**%**	**Bias**	**Std. Error**	**L**	**U**
Yes	330	88	-0.1	1.7	84.5	90.9
No	45	12	0.1	1.7	9.1	15.5
Total	**375**	**100**				
Smartphones	306	81.6	-0.1	1.9	77.6	85.1
Laptop	27	7.2	0	1.3	4.8	9.6
Desktop PC	12	3.2	0	0.9	1.3	5.1
Tablets	30	8	0.1	1.4	5.6	10.9
Total	**375**	**100**				
Formal training	165	44	0.1	2.5	39.2	49.3
On-the-job training	108	28.8	-0.1	2.3	24	33.3
Both formal and on-the-job training	102	27.2	0	2.4	22.7	31.7
Total	**375**	**100**				
Location	78	20.8	0	2.1	16.8	24.8
Delivery time	72	19.2	0	2	15.2	23.2
Product quality	59	15.7	0	1.8	12.3	19.2
No problem	108	28.8	0	2.3	24	33.3
Delay	58	15.5	0.1	1.8	12	19.2
Total	**375**	**100**				

Note: F, L, U refer to frequency, lower, and upper, respectively.

TABLE II. DESCRIPTIVE STATISTICS E-COMMERCE INNOVATION DRIVERS

Variables		**Mean**	**Std. Deviation**	**N**
eCMS		4.472	1.68784	375
DM		4.264	1.55201	375
eCWD	4.088	1.86589		375
eCPM	4.224	1.73605		375
eCPfM	4.392	1.62647		375
eCOAI	4.656	1.64709		375
KeCT	4.528	1.57983		375
eCFin	4.464	1.67337		375
extF	4.408	1.66642		375
eCI	4.816	1.53768		375

TABLE III. CORRELATION MATRIX OF RESEARCH VARIABLES

Variable item	***eCMS***	***DM***	***eCWD***	***eCPM***	***eCPfM***	***eCOAI***	***KeCT***	***eCFin***	***extF***	***eCI***
eCMS	1.000	0.430	0.450	0.446	0.435	0.488	0.445	0.462	0.479	0.488
DM	0.430	1.000	0.967	0.978	0.960	0.939	0.951	0.944	0.954	0.941
eCWD	0.450	0.967	1.000	0.972	0.964	0.952	0.947	0.963	0.951	0.962
eCPM	0.446	0.978	0.972	1.000	0.977	0.958	0.966	0.966	0.967	0.962
eCPfM	0.435	0.960	0.964	0.977	1.000	0.961	0.962	0.967	0.965	0.953
eCOAI	0.488	0.939	0.952	0.958	0.961	1.000	0.967	0.966	0.966	0.976
KeCT	0.445	0.951	0.947	0.966	0.962	0.967	1.000	0.969	0.966	0.951
eCFin	0.462	0.944	0.963	0.966	0.967	0.966	0.969	1.000	0.956	0.959
extF	0.479	0.954	0.951	0.967	0.965	0.966	0.966	0.956	1.000	0.956
eCI	0.488	0.941	0.962	0.962	0.953	0.976	0.951	0.959	0.956	1.000

TABLE IV. INTER ITEM STATISTICAL COVARIANCE

	Mean	**Max**	**Range**	**Max / Min**	**Var.**	**N of Items**
Item Means	4.816	0.728	1.178	0.045	10	
Inter-Item Covariances	3.149	2.022	2.795	0.331	10	

TABLE V. ANOVA WITH TUKEY'S TEST FOR NONADDITIVITY

			Sum of Squares	**df**	**Mean Square**	**F**	**Sig**
Between People			8964.85	374	23.97		
Within People	Between People		150.55	9	16.728	42.071	0.000
	Residu	Nonadditivity	20.441a	1	20.441	52.191	0.000
		Balance	1317.91	3365	0.392		
		Total	1338.35	3366	0.398		
	Total		1488.9	3375	0.441		
Total			10453.75	3749	2.788		

Grand Mean = 4.4312

TABLE VI. MULTIVARIATE ANALYSIS AND RELIABILITY STATISTICS

T-Squared	F	df1	df2	Sig	Cronbach's Alpha	Cronbach's Alpha (Standardized Items)
841.244	91.472	9	366	0.000	0.983	0.984

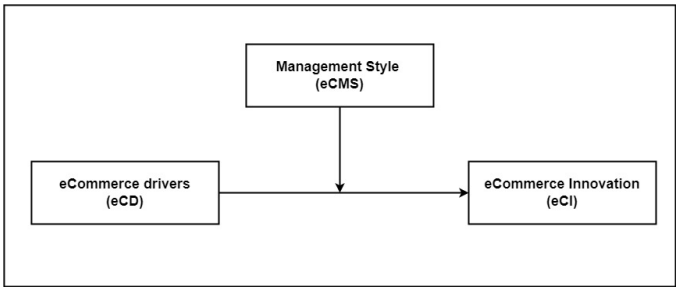

Fig. 2. Linear model of the moderation effect of eCMS on e-Commerce drivers with eCI.

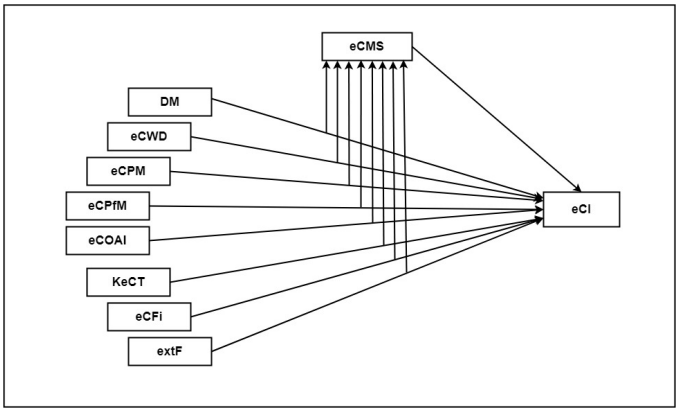

Fig. 3. Hypothetical path of the moderating effect of eCMS on the eCD influence on eCI.

- Cannot compute the appropriate error term using Satterthwaite's method.

With the intention of exploring different innovative ways to improve e-commerce practices at the organizational level, the partial sum of squares at an intercept with e-commerce innovation was .581 eCMS(eCOAI), .564 eCMS (KeCT), .839 eCMS(eCFin), .330 eCMS(extF), .771 eCMS(eCWD), .878 eCMS(eCOAI), .300 eCMS (DM), with - 1.315 eCMS (Error), indicating that e-commerce process management (eCPM) could not compute the appropriate error term. However, the hypothetical statement that eCMS(eCPM) has a positive relationship with eCI at the organizational level and was significant at 0.00 level (Table VII).

- Dependent Variable: eCI

A test of equality of error was conducted to confirm whether the variance of the dependent variable was equal across groups for the null hypothesis (Table VIII).

VII. DISCUSSION

The study population consisted of Libyans aged 20 years and above 65 years old who are eligible e-commerce users and have a minimum of five years working as management staff in e-commerce organizations across Libya. results showed that 330 (88%) out of 375 of the study population purchased products and services via e-commerce websites. 306 (81.6%) users of e-commerce infrastructure accessed the website using smartphones, while others used tablets (30 users constituting 8%), laptops (27 users comprised of 7.2%), and desktop PC covering (12 users constituting 3.2%). Training of e-commerce is mainly by formal training and "on the job training" on-job training using facilities and infrastructures for e-commerce services. Majority of the e-commerce users (28.8%) were satisfied with the services, while others emphasized on the need to use identifiable location addresses (20.8), others focused on improving the delivery time (19.2%), product quality (15.7%), and to address delay in product and service delivery (Table I). Item statistics show that the mean value ranges from 4.09 to 4.82 (58.4 % to 68.8% of responses), indicating that 219 to 258 respondents out of 375 in the study population are of the same view about the research outcome. This finding shows that this study is reliable and can be used to generalize innovations in e-commerce practices across the developing countries, especially in the Middle East. The statistical results (Table II) show that eCI had the highest mean value (M = 4.82, SD = 1.54), followed by eCOAI (M = 4.66, SD = 1.65), KeCT (M = 4.53, SD = 1.58), eCMS (M = 4.47, SD = 1.69), eCFin (M= 4.46, SD = 1.67), extF (M = 4.41, SD = 1.67), eCPfM (M = 4.39, SD = 1.63), DM (M = 4.26, SD = 1.55), eCPM (M = 4.22, SD = 1.74), and eCWD (M = 4.09, SD = 1.86).

The correlation statistical result showed that eCMS has a moderate positive correlation ranging from r .430–.488, p = .000 level, with all e-commerce innovation drivers. Except for eCMS, the other drivers of e-commerce innovation have a very strong positive correlation. DM had a strong positive correlation, ranging from r = .944.978, p = .000. eCWD is strongly positively correlated at r = .951 – 972, p = .000, eCPM at r = .958 – 978, p = .000, eCPfM at r = .953 – 977, p = .000, eCOAI at r = .952 – 976, p = .000, keCT at r = .951 – 967, p = .000, eCFin at r = .944 – 969, p = .000, extF at r = .951 – 967, p = .000 and eCI at r = .941 – 976, p = .000. The strength of the relationship between variables varies. eCMS showed a stronger relationship with eCI and eCOAI, whereas DM showed a stronger relationship with eCPM, eCWD with eCPM, eCPM with DM, eCPfM with eCPM, eCOAI with eCI, KeCT with eCFin, eCFin with KeCT, extF with eCPM, and eCI with eCOAI (Table III).

An ANOVA one-degree Tukey's test for no additivity of freedom was used to test the hypothesized linear interaction across the research variables. The ANOVA model assumed no randomized treatment or additive block across the measured items. The interaction between the items and no additivity was statistically significant. The multivariate multiple responses of the variables were generalized using Hoteling's T-Squared Test. Significant differences between the multivariate means of the data sets shown in Table VI summarize e-commerce the significant relationship between e-commerce divers and

TABLE VII. TESTS OF THE EFFECTS OF E-COMMERCE DRIVERS

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	Hypothesis	485.653	1.000	485.653	374.319	
	Error	7.055	5.438	1.297a		
eCMS	Hypothesis	0.000	5.000	0.000	0.000	1.000
	Error	4.500	330.000	.014b		
DM	Hypothesis	0.250	2.000	0.125	9.167	0.000
	Error	4.500	330.000	.014b		
eCWD	Hypothesis	4.625	6.000	0.771	56.528	0.000
	Error	4.500	330.000	.014b		
eCPM	Hypothesis	0.000	0.000	.	.	.
	Error	.	.	.c		
eCPfM	Hypothesis	0.000	4.000	0.000	0.000	1.000
	Error	4.500	330.000	.014b		
eCOAI	Hypothesis	7.500	4.000	1.875	137.500	0.000
	Error	4.500	330.000	.014b		
KeCT	Hypothesis	1.600	4.000	0.400	29.333	0.000
	Error	4.500	330.000	.014b		
eCFin	Hypothesis	0.000	6.000	0.000	0.000	1.000
	Error	4.500	330.000	.014b		
ExtF	Hypothesis	0.000	3.000	0.000	0.000	1.000
	Error	4.500	330.000	.014b		

TABLE VIII. LEVENE'S TEST OF EQUALITY OF ERROR VARIANCE

F	df1	df2	Sig.
16.597	44	330	0.000

e-commerce innovations. The multivariate probability of F-distribution explained the hypothetical statement that the e-commerce drivers positively influenced e-commerce innovation were generalized by the statistics underlying t-distribution.

We reject H0 because α t2 (841.244) is greater than the critical value for F (91.472).

Analysis of variance based on a test of the between-subject effect was conducted to test the ability of the model to clearly explain possible variation. The displayed variable labels indicate that the values of all terms were significantly related at the intercept; eCMS, DM, eCWD, eCPfM, eCOAI, KeCT, eCFin, and extF computed similar error terms. However, larger values of the sum of squares, mean squares, and F values indicate a greater amount of variation accounted for by the model error term.

The p-values for the hypothetical relationship between eCMS, eCPfM, eCFin, and extF and eCI, while DM, eCWD, eCOAI, and KeCT were statistically significant at 0.00 level. The practical significance of each term was based on the ratio of the variation in the sum of squares accounted for by the term to the sum of the variation accounted for by the term, and the variation left to error. The tendencies of bias in standard errors, as well as t-statistics or F–statistics in drawing inferences, especially during model misspecification, were addressed by conducting heteroscedasticity tests to check for structural breaks. The heteroscedasticity test revealed that no single observation was dominant (Table VI). This has provided a clear understanding of the main factors requiring close attention in meeting the developmental innovations in e-commerce and how newly added features in online web shops have improved existing practices. It is clear that e-commerce innovations are versatile in providing timely delivery of goods and efficient services [33], [34].

This intriguing shift in e-commerce innovation has transformed digital commerce and provided multiple choices for online customers to buy products that were previously available only in physical retail shops. This relatively new business opportunity is embodied in specific skills that require successive developments and updates. The adoption of e-commerce innovation is part of the digital transformation from remote sales, and the delivery of customer service is an open-ended business network [35]. With the recent surge in online shopping, e-commerce stands out as a potential tool for enhancing entrepreneurial capability and competitiveness in organizations.

VIII. CONCLUSION AND RECOMMENDATION

Recent innovations have widened e-commerce knowledge and its role in a developing economy. Various drivers have been identified as key factors in enhancing e-commerce performance at the organizational level. Identifying the key drivers of e-commerce innovation makes the future of e-commerce brighter, as they contribute to addressing the backdrop in e-commerce performance at the organizational level. E-commerce innovation has been acknowledged as the main factor driving online transactions. The development of e-commerce workers is an issue of concern that needs to be addressed to meet the growing trend in innovation. The management styles of e-commerce firms incorporate development trends in e-commerce innovations into the training of workers and services to improve workers' knowledge and e-commerce performance. This is because knowledge of e-commerce at the organizational level is affected by attitudes towards innovation. Decision-making at the management level should incorporate funding of e-commerce infrastructures, since formal training and on-the-job training are prevalent ways of equipping employees in e-commerce organizations.

The drivers of e-commerce innovation model design showed that, at the intercept (eCMS + DM + eCPD + eCPM + eCPfM + eCOAI + KeCT + eCFin + extF), the drivers of e-commerce innovations have a strong positive relationship. Multivariate analysis has quantified the moderating effect of e-commerce management style (eCMS) on the relationship between e-commerce drivers (eCD) and e-commerce innovation (eCI). eCD had a strong positive relationship with eCI. Management styles at various e-commerce organizations aim

to invest more effort and resources to improve the performance of e-commerce innovation drivers.

E-commerce companies selling and delivering goods and services across multiple online platforms have indicated that the potential of e-commerce is promising. e-commerce has made shopping easier and positioned e-Shop strategically to carter customers using fast and easy-to-handle electronic systems. Therefore, for further improvement, customer interest should be considered first. To facilitate online transactions, it is important to provide access to different product links and a clear description of product quality and price to potential customers.

E-commerce organizations should also partner with firms that can provide a reliable target for different customers, especially those that rate preferences and choice of online customers, to improve sales of products and services via e-commerce sites. This can be achieved by fine-tuning or providing a descriptive explanation of available products and services to potential customers using different media platforms that are actively used by many people. Efforts in this direction will further e-commerce processes and attract potential customers.

Declaration of Competing Interest

The authors declare no conflicts of interest regarding the data and information reported in this study.

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