

Original Research Article

E-commerce and its impact on the economic development of entrepreneurs in a shopping center in Trujillo, Peru

Abstract

The objective of this research was to determine the impact of e-commerce on the economic development of entrepreneurs in the El Virrey shopping center. Trujillo, 2022; the type of research was applied, with a quantitative research approach and a non-experimental, cross-sectional and correlational research design. The sample consisted of 67 entrepreneurs of the El Virrey de Trujillo shopping center. The e-commerce questionnaire with reliability 0.956 and the economic development questionnaire with reliability 0.980 were used for data collection. SPSS Ver 26 software was used. As a result, e-commerce has a very high incidence on economic development with a correlation coefficient of 0.470. It was determined that the normative framework has a low incidence on economic development with a correlation of 0.322, the referential framework has a moderate incidence on economic development with a correlation of 0.401, the conceptual framework has a low incidence on economic development with a correlation of 0.356 and the theoretical framework has a low incidence on economic development with a correlation of 0.299, all at 1% significance. In the case of the philosophical framework, the incidence of 0.144 is not statistically significant.

Keywords: Digital marketing, Entrepreneurship, Strategies.

INTRODUCTION

In these times where modernity is the day to day of the human being, a new trend of commercial transactions is born, called e-commerce that uses technology to position itself in the market and is considered one of the great social and cultural innovations of modern society. With the appearance of the World Wide Web in 1992 and Secure Sockets Layer SSL 3.0, it is that electronic commerce grows rapidly reaching millions of customers (Fernández et al., 2015).

According to Zhou (2022a) 547,200 websites are created daily and although some are abandoned there are approximately between 12 and 24 million e-commerce sites, he also points out that Etailingsights.com places retailers around the world at 9.1 million and of them 2.5 million are in the United States; It also classifies them into three groups: traditional e-retailers with 3.6 million who use their own websites to sell products made by other companies. There are also branded e-retailers with around 5.2 million of these selling their own products on their own websites for example Apple and Nike. Finally, there are electronic retailers of virtual goods and there are an estimated 290,000 worldwide, these sell their intangible products on their own websites through associated links, for example, Netflix and Amazon Prime Video. It states that Smallbiztrends.com

reported that 90% of websites will fail in the first 90 days due to poor online marketing performance coupled with a lack of search engine visibility.

Max Freedman, who writes for Business.com magazine claims that China is the world's largest and fastest growing e-commerce market led by Alibaba Group: Taobao, Alibaba.com and Tmall, with an annual growth rate of 21% where 81.6% of Chinese residents with internet access made online purchases by 2021 making China responsible for 10% of online shopping globally. The United States follows China with \$842 billion, the United Kingdom with \$169 billion, Japan with \$144 billion and South Korea with \$120 billion. Finally, the Asia-Pacific region has almost 63% of the world's e-commerce sales (Zhou 2022b). This expansion has meant growth in many countries of the world, according to (Limas, 2020), Colombia grew in recent years, now its commerce is for buying and selling on the internet despite this practice being recent.

After the COVID 19 pandemic, e-commerce has taken hold in the economy and society, generating two trends. On the one hand, the normalization and stabilization of sales compared to the previous year and stable growth is expected in 2022 and on the other hand consumers are being more careful in their expenses. The effects of the war in Ukraine, inflation, disruption of supply chains and uncertainty destabilize growth while remaining indispensable and resilient digital trade. Christel Delberghe, CEO of EuroCommerce emphasizes and states that having a digital presence is becoming a trend for many companies, so supporting SMEs will require technical advice and awareness of the tools to ensure their presence (Ortiz, 2022).

According to the Americas Market Intelligence (AMI) (2022), Latin America has become the fastest growing market for e-commerce, forecasting 30% growth each year through 2025 despite the resumption of traditional retail sales. According to Master Card's Spending Pulse report, sales in Brazil expanded by 68% in 2021 representing 126 billion reais (\$23 billion). In Mexico, e-commerce raised 316,000 million pesos in 2021 (US \$ 15,000 million). Argentina through the Chamber of Electronic Commerce CACE reported the increase of online sales by 124% in 2020 and in 2022 they have a year-on-year expansion of 201%. Latin America is also a region of mobile payment devices since it accesses the internet by smartphones and general devices (Bnamericas, 2022). In Peru, 6% of GDP is made through e-commerce. According to the Chamber of Electronic Commerce (CAPECE), sales reached US \$ 9.3 billion in 2021, representing an increase of more than 55% over 2020. The categories where e-commerce is most used are department stores in 72%, online consumption of restaurants in 92%, supermarket purchases in 75%. In addition, the categories that have not yet recovered as accommodation with -4%, tourism with -20% and entertainment -28%. According to Américas Market Intelligent (AMI) the e-commerce market in Peru by 2022 will grow by 53% to reach almost US\$ 20 billion in sales (Americasmi, 2022 a).

In Peru, a variety of means of payment are used to buy online, such as credit cards with 34%, debit cards with 27%, cash vouchers with 18%, digital wallets 13%, bank transfers 3- and another 5%. According to Rafael Hospina, VP of Market Development of Kushki, the Peruvian market is promising for ecommerce because there are more than

33 million inhabitants and 47% of these are banked and it is expected that by 2025 it will reach US \$ 28 million, it is expected that electronic commerce would increase by 53% reaching a value of US \$ 20,000 million (Americasmi, 2022 (b)). But the development and progress of the economy is influenced by another important aspect that is usually born in the young or less favored sectors, this is entrepreneurship. The Global Entrepreneurship Monitor (GEM) is a benchmark for international entrepreneurship measurement and in 2019, considered Chile and Colombia in first and sixth place respectively, with a TEA of 36.7% and 22.3%, based on the emergence of new businesses, employment and socioeconomic well-being. However, the reality of Small and Medium Enterprises, due to the high standards of competitiveness and poor marketing of their products, they do not participate in international markets and as a consequence their life span is reduced (Palomo, 2005).

In our country there are 1,728,777 formal companies referred by Benites et al. (2020). In the La Libertad region, there are 7,409 formal manufacturing companies. Microenterprise accounts for 95.1%, small enterprise 4.3%, 0.2% for medium-sized enterprises and 0.5% for large enterprises. León Mendoza, (2018), using the data of the ENAHO, determined that in Peru, when establishing a business, sociodemographic variables influence the decision especially if you are head of household, for example the older you are, the greater the probability of entrepreneurship. Schumpeter (1966, cited in León, 2019) the technological process has as protagonists the entrepreneurial entrepreneurs who are in the search and application of new techniques, innovating, renewing efforts to achieve success in the electronic market.

In the city of Trujillo – Peru we have the El Virrey Shopping Center located on Av. España 2072 and houses more than 215 entrepreneurs and develops in the industry: Purchases that includes wholesale and retail trade, with ISIC code 47, 3-story building with underground garage. Both e-commerce and entrepreneurship are key to the economic takeoff of a region or country, so the research question was raised: How does e-commerce affect the economic development of entrepreneurs at the El Virrey shopping center in Trujillo 2022? The hypothesis raised was that E-commerce affects the economic development of entrepreneurs in the El Virrey shopping center in Trujillo 2022, the general objective was to determine the impact of e-commerce on the economic development of entrepreneurs at El Virrey Shopping Center. Trujillo, 2022.

This research was justified according to the considerations of Hernández et al. (2018) regarding its convenience because the development of this research will serve as a knowledge base for future research on e-commerce and the development of entrepreneurs in the city of Trujillo, new trends in e-commerce and the benefits that its use generates for entrepreneurs; It has social relevance because today entrepreneurs have a growth in their businesses because many are using e-commerce making the consumer public choose to use this commerce system achieving market positioning; It also has practical relevance since entrepreneurs are expected to have a notorious development in their businesses by using e-commerce against their competition and will serve as a background for future research on e-commerce and development of

entrepreneurs; Likewise, this research has methodological value because this research will be helpful in the design of new instruments for taking information regarding e-commerce and the development of entrepreneurs.

METHODOLOGY

Type of research

The research was applied, correlational-transversal design. After applying the Kolmogorov Smirnov Normality Test, the impact of e-commerce on economic development was determined using Spearman's correlation coefficient.

Variables and operationalization

The variables involved in the research were:

Variable 1: E-commerce.

Conceptual definition. Constantinides and Fountain (2008), is the virtualization of traditional businesses where the consumer is the main actor where he uses his experiences to generate a successful purchase.

Operational definition. The digital marketing variable was measured using the Likert scale with values: 1= nothing; 2 = little; 3 = fair; 4 = a lot and 5 = too much. The survey questionnaire was used to take the information.

Variable 2: Economic development.

Conceptual definition. According to (Hurtado Muñoz, 2018) he tells us that in the creation of new companies, entrepreneurs perceive an opportunity and take risks when creating it to exploit it and generate wealth.

Operational definition. The variable economic development was measured using the Likert scale with values: 1= nothing; 2 = little; 3 = fair; 4 = a lot and 5 = too much. The survey questionnaire was used to take the information.

Poblation (Selection criteria), sampling, sampling, unit of analysis

The population was made up of entrepreneurs from the El Virrey shopping center in the city of Trujillo, 2022 (table 1).

Table 1. Ventures in the El Virrey shopping center.

Entrepreneurship	Quantity
------------------	----------

Sale of clothing	110
Clothing	15
Sale of sneakers	10
Sale of shoes	18
Sale of jewelry	12
Manicure service	15
Sale of computer tools	12
Food sale - juices	8
Sale of toys	15
<hr/> Total	<hr/> 215

Inclusion criteria

The entrepreneurs of the El Virrey shopping center in the city of Trujillo 2022 were included in the study population, regardless of whether they are formalized, sex, age or the category of entrepreneurship.

Exclusion criteria

Entrepreneurs who have their ventures outside the El Virrey shopping center in the city of Trujillo 2022 were excluded from the study population.

The selected sample was size $n = 67$ entrepreneurs. Sampling was conducted for convenience given the high cost and limitations of the project. The analysis unit, made up of each of the entrepreneurs who work in the El Virrey shopping center and who are part of the sample.

Data collection techniques and instruments

The survey technique was used. The data collection facility was the questionnaire.

Data analysis method

Inferential statistics were used, specifically the test of research hypotheses that relate the variables under study with a sample of 67 entrepreneurs from the El Virrey shopping center.

RESULTS

According to Table 2, there is significant evidence ($p < 0.05$) suggesting that the data do not follow a normal distribution, indicating that nonparametric methods should be used for hypothesis testing.

Table 2. Proof of normality of e-commerce and economic development of entrepreneurs at El Virrey de Trujillo shopping center 2022.

One-Sample Kolmogorov-Smirnov Test	ECOMMERCE	ECONOMIC DEVELOPMENT
N	67	67
Asymp. Sig. (2-tailed)	,000 ^c	,000 ^c

Table 3 shows that there is a direct and significant moderate correlation (Rho=0.470**) ($p \leq 0.05$), which suggests that e-commerce affects the economic development of entrepreneurs in the El Virrey shopping center in Trujillo 2022.

Table 3. Impact of e-commerce on the economic development of entrepreneurs in the El Virrey shopping center in Trujillo 2022.

Spearman's rho		E-commerce	Economic development
E-commerce	Correlation Coefficient	1.000	,470**
	Sig. (2-tailed)		.000
	N	67	67
	Correlation Coefficient	,470**	1.000
Economic development	Sig. (2-tailed)	.000	
	N	67	67

In Table 4, the results show the incidence of theoretical frameworks in economic development at a significance of 1%. The normative, conceptual and theoretical frameworks have low incidence, but direct at a highly significant level in the economic development of the entrepreneurs of the El Virrey Trujillo 2022 shopping center, whose correlational coefficients are 0.322, 0.356 and 0.299 respectively at a level of significance $\alpha = 0.01$. Regarding the referential framework, there is a direct moderate incidence with a correlation coefficient of 0.401 at a significance level of 1%. Regarding the philosophical framework, it shows low direct impact on the economic development of the entrepreneurs of the El Virrey Trujillo 2022 shopping center, with a correlational coefficient 0.114 a level of significance $\alpha = 0.01$; however, statistically it is not significant because $p = 0.05 > 0.01$ level of significance.

Table 4. Impact of theoretical frameworks on the economic development of entrepreneurs at El Virrey Shopping Center 2022.

Spearman's rho	Regulatory Framework	Frame of Reference	Conceptual Framework	Theoretical Framework	Philosophical Framework	Business Entrepreneurship

Regulatory Framework	Correlation Coefficient	1.000	,121**	,204**	,231**	,103**	,322**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	67	67	67	67	67	67
Frame of Reference	Correlation Coefficient	,121**	1.000	,325**	,453**	,301**	,401**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	67	67	67	67	67	67
Conceptual Framework	Correlation Coefficient	,204**	,325**	1.000	,123**	,345**	,356**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	67	67	67	67	67	67
Theoretical Framework	Correlation Coefficient	,231**	,453**	,123**	1.000	,123**	,299**
	Sig. (2-tailed)	.000	.000	.000		.001	.000
	N	67	67	67	67	67	67
Philosophical Framework	Correlation Coefficient	,103**	,301**	,345**	,123**	1.000	,144**
	Sig. (2-tailed)	.000	.000	.000	.001		.05
	N	67	67	67	67	67	67
Business Entrepreneurship	Correlation Coefficient	,322**	,401**	,356**	,299**	,144**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.05	
	N	67	67	67	67	67	67

DISCUSSION

According to the general objective to determine the impact of e-commerce on the economic development of entrepreneurs at El Virrey Shopping Center. Trujillo, 2022, the results obtained in Table 3 show a level of moderate positive correlation ($r = 0.470$)

between e-commerce and the economic development of entrepreneurs which is understood that the use of e-commerce is directly related to business development, data when compared with those found by Rahayua and Daya (2015) in their study in Indonesia motivated because the adoption of electronic commerce was far from companies concludes that including SMEs should adopt e-commerce as a strategic ally for their development, with these results it is affirmed that e-commerce affects the development of entrepreneurs. Fishbein and Aizen (1975) supports the Theory of Reasoned Action where it states that there are factors that determine the adoption of e-commerce by SMEs, this criterion must be observed for better development of enterprises.

Regarding determining to what extent e-commerce in its regulatory framework dimension affects the economic development of entrepreneurs at El Virrey Trujillo 2022 Shopping Center, table 4 shows the moderate correlation ($r = 0.322$) between e-commerce and the development of entrepreneurs evidencing that there is a direct relationship, these results are consistent with what was found by Pita Palomino et al. (2020) that when investigating e-commerce in times of pandemic of COVID 19, it has an accelerated growth and the tendency is to be an influence on themselves and consumers, concludes that companies must comply with their dealings generating trust, security so that they are always satisfied, in this way the incidence of the regulatory framework of e-commerce in economic development is evidenced as there are rules and laws that regulate the behavior of this type of commerce.

Regarding the influence of the e-commerce referential framework on the economic development of entrepreneurs at El Virrey Trujillo 2022 Shopping Center, Table 4 shows a moderate correlation between the variables ($r = 0.401$) showing that there is a direct relationship and comparing the results with those found by Borja (2020) who investigated e-commerce as a form of business for companies of natural persons called neighborhood wineries, whose objective was to determine if microenterprises would adopt e-commerce to improve their businesses, concluding that it improves the profitability of microenterprises because they have a level of knowledge of electronic commerce and when applying it they easily reach the consumer, recommending the creation of an e-commerce platform to better supply the products, type of payment and makes them profitable and competitive. With these results we see that the referential framework of e-commerce affects economic development and most importantly serve as experience to follow in search of sustainability and improvement in the company.

The incidence of the conceptual framework of e-commerce in the economic development of the entrepreneurs of the Virrey Trujillo 2022 Shopping Center is evidenced in the results shown in table 4 where there is a moderate correlation ($r = 0.356$) indicating that the existing relationship is direct and positive, when comparing these results with those obtained by Yung Wei et al. (2018) when conducting a study in

Malaysia whose objective was to analyze adoption, acceptance and perception of people over 16 years of age regarding online purchases, verifying that education is related to the facts and that 86.4% of respondents use e-commerce because it is cheaper and more comfortable, coinciding with Turban et al. (2008) that considers e-commerce is the process of buying, selling, Transfer or exchange of services by electronic means. This situation shows that the conceptual framework of e-commerce affects the economic development of the merchants of the El Virrey Trujillo 2022 Shopping Center.

Analyzing the incidence of the theoretical framework of e-commerce in the economic development of the merchants of the El Virrey Trujillo 2022 Shopping Center, the result is in table 4 that shows a low relationship between the variables ($r = 0.299$) however it is positive, these results are consistent with what was found by Mulas (2019) when conducting research on e-commerce in China and Spain, concluding that in Spain the purchasing sectors are fashion, tourism, leisure preferred for price and comfort; in the case of China it is highlighted by means of payment, the logistics and speed of delivery of purchase also affirms that we chat is the best payment platform. In this way it is affirmed that the theoretical framework affects economic development taking into account the theory of the Technology Adoption Model (TAM) that predicts the behavior of the buyer regarding the intention and use of e-commerce taking individual attitudes according to the required utility.

On the impact of the philosophical framework of e-commerce on the development of entrepreneurs at El Virrey Trujillo 2022 Shopping Center, table 4 shows that although there is a positive correlation coefficient ($r = 0.144$) it turns out that it has no statistical significance, this is explained because entrepreneurs do not observe or ignore the importance of considering philosophical thought as a factor of implication for the development of their ventures. In this sense Descartes said: "I would give everything I know for half of what I do not know"; It invites us to continue in search of the unknown because you never stop learning.

CONCLUSIONS

The e-commerce has a moderate impact on the economic development of the entrepreneurs of the El Virrey Trujillo 2022 Trade Center, that is, the greater the use of e-commerce, the greater the economic development of entrepreneurs. It also indicates that the e-commerce raised from its theoretical frameworks have relevance in the economic development of enterprises. The regulatory framework of e-commerce affects the economic development of entrepreneurs at El Virrey Shopping Center, which is because entrepreneurs know the regulatory framework, but few give it importance for their development generating informality. The incidence of the referential framework of e-

commerce in the economic development of entrepreneurs is low, which shows that the research carried out gives confidence and the model to be followed by entrepreneurs with a view to growing their businesses generating better profits. The conceptual framework of e-commerce, has a low incidence on the economic development of entrepreneurs, this indicates that they do not know what e-commerce really is and how useful it is in its development, in many cases they apply it intuitively rather than by knowledge. There is a low incidence of the theoretical framework in the economic development of the entrepreneurs of the El Virrey Shopping Center. In this case it also happens that they apply e-commerce, but they do not know the theories that exist in this regard, however, with the perseverance and drive of themselves they generate achievements in their economic development. Regarding the philosophical framework of e-commerce, it does not affect the economic development of the entrepreneurs of the El Virrey Shopping Center.

REFERENCES

- Americas mi (2022). Data and statistics e-commerce in Peru 2022. Americas Market Intelligence. <https://americasmi.com/insights/lo-que-mas-compran-los-peruanos-en-internet/>
- Alfaro Arancibia, R. (2001). Modeling of an Electronic Commerce Website to Improve Interaction Under the CRM Philosophy. Catholic University of Valparaíso Faculty of Engineering School of Industrial Engineering.
- Benites, L., Ruff, C., Ruiz, M., Matheu, A., Inca, M., & Juica, P. (2020). Analysis of competitiveness factors for the sustainable productivity of SMEs in Trujillo (Peru). Analysis of competitiveness factors for the sustainable productivity of SMEs in Trujillo (Peru). *Journal of Quantitative Methods for the Economy and Business*, 29(29), 208–236.
- Borja, J.C. (2020). Original Article Electronic commerce application for Peruvian commercial micro-enterprises Electronic commerce application for Peruvian commercial micro-enterprises. *UCSA Scientific Magazine*, 7, 8.
- Córdova-Pacheco, A., Moína-Sánchez, P., & Morales-Carrasco, L. (2020). Economic growth in an entrepreneurial region in Ecuador. *Rhetos*, 10(19), 65–80. <https://doi.org/10.17163/ret.n19.2020.04>
- Díaz Fernández, I. (2017). Entrepreneurship in Cuba: analysis of its development. *CESLA Magazine*, 20, 325–340.

Fernández-Portillo, A., Sánchez-Escobedo, M. C., Jiménez-Naranjo, H. V., & Hernández-Mogollón, R. (2015). The importance of innovation in electronic commerce. *Universia Business Review*, 2015(47), 106–125.

Guzmán Duque, A. P., & Abreo Villamizar, C. A. (2017). From electronic commerce to social commerce: Innovation within the reach of organizations. Study for the footwear sector Bucaramanga, Colombia. *Accounting and Business*, 12(24), 107–118.
<https://doi.org/10.18800/accounting.201702.006>

Hernández, R., Fernández, C., & Baptista, P. (2010). *Methodology of investigation* (6th edition). ISBN: 978-607-15-0291-9

Hernandez, R., & Mendoza, C. (2018). Research methodology. The quantitative, qualitative and mixed routes The Quantitative Qualitative and Mixed routes. In McGRAW-HILL Interamericana Editores S.A. de C.V.
<http://repositorio.uasb.edu.bo:8080/bitstream/54000/1292/1/Hernández- Research Methodology.pdf>

Hernández Sampieri, R., Fernández Collado, C., & Baptista Lucio, M. del P. (2010). *Research methodology* (McGraw-Hill/INTERAMERICANA EDITORES S.A. DE C.V. (ed.); 5TA Edición).

Hurtado Muñoz, V. (2018). The initial dilemma of the entrepreneur: To undertake individually or to undertake in society.

León-Mendoza, J.C. (2019). Business entrepreneurship and economic growth in Peru. *Management Studies*, 35, 429–439. <https://doi.org/10.18046/j.estger.2019.153.3331>

Leon, J. (2018). Own business entrepreneurship in Peru: the role of personal sociodemographic factors at department level. *Management Studies*, 34, 19–33.
<https://doi.org/10.18046/j.estger.2018.146.2810>

Leon Mendoza, J. (2018). Own business entrepreneurship in Peru: the role of personal sociodemographic factors at department level. *Management Studies*, 34, 19–33.
<https://doi.org/10.18046/j.estger.2018.146.2810>

Limas, S.J. (2020). Electronic commerce (e-commerce) is a strategic partner for companies in Colombia. *Iberian Journal of Information Systems and Technologies*, E34, 235–251.

Mulas, M. (2019). *Electronic commerce: Differences between China and Spain* [Universidad de Valladolid]. <http://uvadoc.uva.es/handle/10324/38193>

Pita Palomino, A.F., Mendoza Vargas, C., & Oblitas Cruz, J.F. (2020). E-commerce and its importance in times of COVID-19 in the northern zone of Peru. *Venezuelan Management Magazine*, 25(3). <https://doi.org/10.37960/rvg.v25i3.33367>

Rahayua, R., & Daya, J. (2015). Determinant Factors of E-commerce Adoption by SMEs in Developing Countries: Evidence from Indonesia Elsevier Enhanced Reader (pp. 142–150). <https://doi.org/10.1016/j.sbspro.2015.06.423>

Salazar Concha, C., Mondaca Marino, C., & Cea Rodríguez, J. (2018). Electronic commerce in Chile: what factors affect the purchase decision? *Academia & Negocios Magazine*, 4(1), 1–14.

Sánchez-Alzate, J. A., & Sánchez-Torres, J. A. (2017). Analysis of social factors and their relationship with perceived risk in purchases through electronic commerce channels. *DYNA (Colombia)*, 84(200), 335–341. <https://doi.org/10.15446/dyna.v84n200.54161>

Yung Wei, C., Bt Mohd Fauzi, I.S., R, T., Elhag Elhussein, E.S., & Asirvatham, D. (2018). E-commerce Adoption and Analysis of the Popular E-commerce Business Sites in Malaysia. *Business and Economics Journal*, 09(02), 1–11. <https://doi.org/10.4172/2151-6219.1000347>

UNDER PEER REVIEW