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Mediating Role of Entrepreneurial Marketing in the Relationship between IoT Adoption and Sales Performance in E-Commerce

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A R T I C L E I N F O

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A B S T R A C T

The study examines how entrepreneurial marketing mediates the relationship between the Internet of Things (IoT) and sales performance in the e-commerce industry in the emerging markets. The research is aimed to investigate the effect of adoption of IoT on sales performance and entrepreneurial marketing behaviours on the effect of enhancing the relationship between IoT and sales by increasing innovation, proactiveness, opportunity focus, risk-taking, leverage resources, customer intensity and value creation. The quantitative methodology was used where a structured survey was used among 254 top and middle-level employees of leading e-commerce firms. The measure of sales performance was sales growth, revenue and market share whereas the operationalization of IoT was in the form of its applications on social media, digital connectivity and network integration. The results indicate that the introduction of the IoT has a tremendous positive impact on sales performance, and it becomes more significant with the implementation of the entrepreneurial marketing strategy. The research adds to the accumulating list of references on digital innovation and marketing as it offers empirical support within the context of e-commerce environment to present practical advice to e-commerce managers who want to utilize IoT technologies and entrepreneurial marketing behavior to provides insights applicable to dynamic and technology-driven markets.

1. INTRODUCTION

In the rapidly evolving global business environment, organizations are compelled to adopt innovative technologies to sustain competitiveness and achieve long-term success. Among these, the Internet of Things (IoT)—first conceptualized in 1999—has emerged as a transformative technological paradigm that facilitates seamless connectivity among devices, systems, and users through real-time data exchange. For emerging economies, particularly in the context of e-commerce, the integration of IoT is becoming increasingly relevant due to its potential to reshape customer engagement, streamline operations, and enhance performance metrics such as sales growth, market share, and revenue.

Simultaneously, entrepreneurial marketing (EM) has gained recognition as a strategic approach that blends innovation, risk-taking, and proactive opportunity-seeking behavior to create customer value and achieve competitive advantage. In the digital economy, where consumer preferences are fluid and competition is dynamic, EM plays a pivotal role in fostering customer loyalty and driving sales performance. Yet, despite the acknowledged potential of both IoT and EM, limited empirical studies have explored how entrepreneurial marketing mediates the relationship between IoT adoption and sales outcomes in the e-commerce sector—especially in

emerging markets.

The proliferation of social media platforms, the ubiquity of digital devices, and the increasing reliance on online transactions have further catalyzed the convergence of IoT and e-commerce. This intersection provides firms with new opportunities to capture real-time data, optimize decision-making, and build customer-centric strategies. Thus, investigating the interplay between IoT adoption, entrepreneurial marketing practices, and sales performance becomes essential to understanding how technology-oriented strategies can generate sustainable growth and competitive positioning in the digital marketplace.

In this context, the present study seeks to examine the mediating role of entrepreneurial marketing in the relationship between IoT adoption and sales performance within the e-commerce sector in the United Arab Emirates (UAE). By integrating constructs from marketing, innovation, and digital transformation literature, the research aims to contribute both theoretically and practically to the body of knowledge in technology-driven entrepreneurship.

1.1. Research Hypotheses

H1: The adoption of the Internet of Things (IoT) has a significant positive effect on sales performance in e-commerce firms.

H2: The adoption of IoT significantly influences entrepreneurial marketing practices in e-commerce.

H3: Entrepreneurial marketing has a significant positive impact on sales performance in the e-commerce sector.

H4: Entrepreneurial marketing mediates the relationship between IoT adoption and sales performance in e-commerce firms.

1.2. Research questions

To what extent does the adoption of IoT influence sales performance in e-commerce firms?

What is the relationship between IoT adoption and entrepreneurial marketing in e-commerce?

How does entrepreneurial marketing affect sales performance in the e-commerce context?

Does entrepreneurial marketing mediate the relationship between IoT adoption and sales performance in e-commerce?

1.3. Research Model

In this research, the dependent variable (Y) is Sales performance and it depends on the IoT internet of things which is the independent variable (X). Also, the meditator variable (Z) is Entrepreneurial marketing as displayed in Figure 1 below.

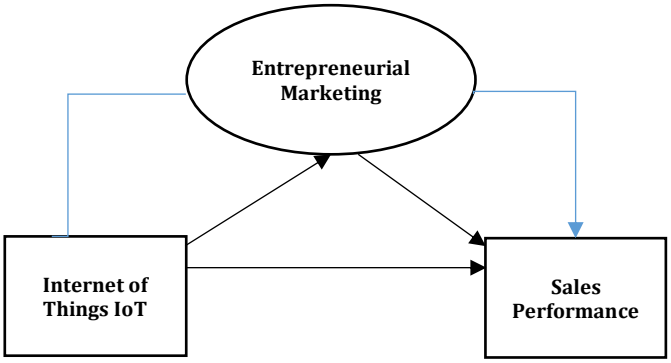

Figure 1: Conceptual Research Model

Dimensions: Entrepreneurial marketing (Innovativeness, Proactiveness, calculated risk-taking, Opportunity focus, Resource leveraging, Consumer intensity, and Value creation), Sales performance (sales growth, revenue, market share), IoT internet of things (worth derived "value", data quantity "volume", data speed "velocity", relationships among data "visualization", data meaning constantly changing "variability", type of data "variety", quality "veracity", and speed "velocity").

2. THEORETICAL FRAMEWORK

Internet of Things: IoT works by Network. Everything is connected through a communication network in order to easily swap data and information. IoT is sharing data across different platforms through the interconnection and sensing of devices. As well as, IoT allows people and organizations to connect and interact with each other via the internet to share and access data widely. Social media is one of the most useful IoT places where a group of individuals communicates and cooperate with each other effectively. On the other hand, the internet changed our lives as it is worldwide and everywhere, it creates for people a place to share and connect data and information. Also, an interconnected network includes elements and a computer network that connects to each other like mobile devices. IoT dimensions are worth derived(value) which is creating value from IoT data to turn it into a meaningful benefit, data

quantity(volume) is the size of the data set that a company collects in order to be analyzed, data speed(velocity) is the speed of collecting and distributing data, relationships among data(visualization) is using visuals, charts to make effective meaningful information, data meaning constantly changing(variability) is that information homogenization can be affected by variability and constantly changing significance of the information, type of data(variety) is reaching big data to combine information, and quality(veracity) is the integrity of the source of information, its context, and its meaning to the analysis.

2.1. Operational Definitions

Theoretical framework	IoT	Sales performance	Entrepreneurial marketing
Definitions	A critical way to handle big data with internet methods to improve sales and it is one of the most profitable scopes of internet business as it is based on social media, the internet, and interconnected network. Also, it works as a competitive advantage for some companies in a competitive world and it is the most appropriate platform for Internet companies as it helps businesses obtain and develop required skills such as knowledge and technical skills.	A measurement that is done by the management to measure the effectiveness level of all marketing activities particularly market share and sales. Moreover, sales performance can be measured by sales growth, revenue, and market share.	Is a learning mechanism and it is when entrepreneurs who are starting a business for the first time use an Innovative approach to manage risks, optimize resources, and create value are being applied to identify and capitalize on various opportunities in order to acquire and retain profitable customers. Moreover, Entrepreneurial marketing dimensions are Innovativeness, Proactiveness, calculated risk-taking, Opportunity focus, Resource leveraging, Consumer intensity, and Value creation.

Entrepreneurial marketing Functions within an organization and a series of processes that enable the company to create, communicate and deliver value for its customers and manage its relationships with customers to benefit shareholders and the company. Also, it is when entrepreneurs create super value and put a high value on customer retention and considers the company profit. Moreover, entrepreneurial marketing works as a critical success factor in performing any project as well as it is very effective to achieve innovative objectives, and it is a very important element as it determines the organization's success. dimensions of Entrepreneurial marketing are Innovativeness which is the imaginary mind to create new things. Also, Proactiveness is an act of dealing with trouble in advance. On the other hand, calculated risk-taking relates to the probabilities that are carefully estimated before taking a chance. Moreover, opportunity focus is taking all opportunities to make success. In addition, resource leveraging is taking the most advantage of resources. Furthermore, Consumer intensity is used to compare products or organizations. Also, Value creation is delivering value to receive more value.

Sales performance is very important for all companies as it measures the performance done by the sales team in order to check whether the performance is effective or not. Sales performance is very common as it is used to manage and control sales. When the sales team meets or exceeds the management expectation the sales performance is high. The sales team performance is important as it shows every individual selling activity and this indicates if sales targets are achieved or not. Sales growth is the increase in product unit sales. Also, revenue is the total income of an investment. Moreover, market share is the total sales related to the total sales of the industry.

3. LITERATURE REVIEW

3.1 Relationship & impact of IoT on Sales Performance

Sales are a very important element that needs to be improved continuously to achieve high transformation. IoT is a system that handles big data by internet methods to improve sales and

profit. Moreover, IoT supports creativity to become a market leader in an effective way to market and promote a product. Also, IoT delivers services with high quality to all customers and improves customer services via the internet. In addition, IoT provides data that is effective, useful, and meaningful. For the e-commerce industry, it's important to measure Sales performance. So, we can measure it by checking the sales growth, revenue, and market share. Also, the e-commerce industry uses the IoT internet of things in many areas like social media, the internet, and interconnected network. So, the internet of things has a huge positive impact on sales performance as it supports sales and creates effective performance.

3.2. Relationship & impact of IoT on Entrepreneurial marketing

Entrepreneurial marketing capability and the connection of IoT have a positive effect on both product and process innovation. On the other hand, Entrepreneurial marketing is used to satisfy the customer and ensure customer loyalty and this lead to a high level of organizational success and improves the company's performance. Also, entrepreneurial marketing can transform the IoT. When integrating entrepreneurial marketing companies can develop 2 types of innovation in a direct or indirect way via IoT capability and alliance. For the e-commerce industry entrepreneurs can use Entrepreneurial marketing as it focuses on Innovativeness, Proactiveness, calculated risk-taking, Opportunity focus, Resource leveraging, Consumer intensity, and Value creation. Also, e-commerce industry depends on IoT internet of things as it uses social media, internet, and interconnected network. So, IoT has a huge positive impact on Entrepreneurial marketing as it provides companies with innovative ways to transform and benefit their company.

3.3. Relationship & impact of Entrepreneurial marketing on Sales performance

Entrepreneurial marketing has a major effect on sales performance. If entrepreneurial marketing is good and improves with time, this will lead to a really good sales situation as well sales performance of the company will increase. The E-commerce industry uses a lot of Entrepreneurial marketing which is based on Innovativeness, Proactiveness, calculated risk-taking, Opportunity focus, Resource leveraging, Consumer intensity, and Value creation. Moreover, the entrepreneurs in the e-commerce industry can determine sales performance based on sales growth, revenue, and market share. So, Entrepreneurial marketing has a huge positive impact on sales performance as it leads to an increase in sales and improves sales performance.

3.4. Relationship & impact of IoT & Entrepreneurial marketing on Sales Performance

If a company uses a good internet system to sell, and promote a product to customers then sales will increase as it reaches widely. If Entrepreneurial marketing is done and improved on a continual basis the sales performance will be high as it leads to an increase in sales of that product. The E-commerce industry implements Entrepreneurial marketing as it's based on Innovativeness, Proactiveness, calculated risk-taking, Opportunity focus, Resource leveraging, Consumer intensity, and Value creation. As well as, e-commerce industry uses the IoT internet of things in all services through social media, the internet, and interconnected network. Also, the e-commerce industry focuses on sales performance that can be measured by sales growth, revenue, and market share. So, IoT & Entrepreneurial marketing has a huge positive impact on Sales Performance as they provide more capabilities and innovative ways for the organization to achieve and support sales performance.

4. METHODOLOGY & RESEARCH DESIGN

Dubai / UAE is the place for all tourists. As a lot of tourists visit our country and prefer to spend their holidays here. So, many companies are using e-commerce to easily sell products or services to customers via the internet. That's why companies who use e-commerce should focus on delivering high-quality products and services to satisfy the customer and retain them. In this study, we are trying to find something new as we are trying to check whether Entrepreneurial marketing would mediate the relationship and impact of the internet of things IoT with improving sales performance at e-commerce in UAE.

This research study is considered quantitative as we are conducting a survey as well as we used empirical research as we use real-time data. In addition, the descriptive methodology is used as we describe the study situation as well as analytical methodology, has been used as we analysed the available information. Also, the explorative

methodology has been used as we are exploring new things. All of these methodologies are used to analyze and describe the collected data results. Moreover, we created a survey and collected data as well as constructing a questionnaire in order to measure IoT internet of things, sales performance, and Entrepreneurial marketing. We analyzed the data collected from the questionnaire by statistical methods. The study population involves 300 companies from e-commerce in the UAE. A clustered sample of 150 companies from e-commerce in Dubai was chosen. Also, this survey was given to top and medium-level employees in e-commerce. We used google forms for our survey with a total of 31 questions, 3 sections, each section includes a total of 9 questions as well as 5 point-Likert scale questions, was used with (strongly agree, agree, natural, disagree, strongly disagree).

4.1. Population & Sample & Unit of Analysis

- The Population is 300 companies of e-commerce sector in UAE.
- The Sample size is 150 companies from e-commerce in Dubai.
- Target respondents (Unit of Analysis) within my sample are 254 top and medium-level employees from the surveyed e-commerce in Dubai.

4.2. Data Collection method (Questionnaire) & Collecting Data

The research surveys a top and medium level of employees from e-commerce in Dubai. Using 5-point Likert scale questions in survey to gather numerical information from 254 top and medium-level employees from the surveyed e-commerce in Dubai.

5. DATA ANALYSIS & RESULT DISCUSSION

5.1. Reliability Analysis (Cronbach Alpha)

- Reliability of Internet of Things

In this part, we are measuring the reliability of the scale (questions) by looking at the Cronbach alpha which measures the internal consistency.

Table 1: Cronbach's Alpha

	Consistency analysis						
Variables	Internet of Things			Sales Performance	Entrepreneurial Marketing		
Questions	IT 12	IT 45	IT 78	SP1234 56789	EM 123	EM 456	EM 789
Code	3	6	9				
Cronbach Alpha	0.836	0.882	0.730	0.723	0.823	0.852	0.839

Table 1 shows the reliability test of the measurement scales with the help of Cronbachs Alpha. The Alpha value of all constructs was greater than the accepted standard value of 0.70, which indicates robust internal consistency and reliability of the items applied in the measurement of each variable. In particular, the IoT dimension rating (IT123 = 0.836, IT456 = 0.882, IT789 = 0.730) values are very reliable, which implies that the items are able to uniformly measure the aspect of IoT.

Analogously, the dependent variable Sales Performance (SP123456789 = 0.723) is also above the threshold which proves that the items are reliable measures of performance outcomes. Entrepreneurial Marketing constructs (EM123 = 0.823, EM456 = 0.852, EM789 = 0.839) show good internal consistency i.e. consistent consistent measurement. All in all, these findings indicate that the scales are all sound enough to undergo additional statistical analysis, therefore, the data obtained is harmonious and reliable in the context of hypothesis testing.

5.2. Descriptive (Mean)

In Table 2 the 3 dimensions of our first variable which is IoT Internet of Things are (worth derived "value") which refers to IT123 code, (data speed "velocity") which refers to IT456 code, and (relationships among data "visualization") which refers to IT789. The second variable which is SP Sales Performance has no dimensions. As well as, the 3 dimensions of our 3rd variable EM Entrepreneurial Marketing are (Innovativeness) which refers to EM123 code, (Proactiveness) which refers to EM456 code, and (Value creation) which refers to EM789. Correspondent corresponds to each question with 5 levels from 1 to 5. 1 refers to Strongly Disagree, 2 refers to Disagree, 3 refers to Natural, 4 refers to Agree, and 5 refers to Strongly Agree.

IT123 The correspondent corresponding to this dimension (worth derived "value") at a medium level. So, the occurrence of dimension is accepted because the mean= 3.05.

IT456 The correspondent corresponding to this

dimension (data speed "velocity") at a medium level. So, the occurrence of dimension is accepted because the mean= 2.96.

IT789 The correspondent corresponding to this dimension (relationships among data "visualization") at a medium level. So, the occurrence of dimension is accepted because the mean= 3.05.

Table 2: Descriptive Statistics (IoT)

	N	Min	Max	Mean	Std. Deviation
IT123	254	1.00	5.00	3.0577	.88176
IT456	254	1.00	5.00	2.9672	.85551
IT789	254	1.00	5.00	3.0512	.91755
Valid N (listwise)	254				

In Table 3 the it is mentioned that SP123456789 The correspondent corresponding to Sales Performance at a medium level. So, the occurrence of sales Performance is accepted because the mean= 3.18.

Table 3: Descriptive Statistics (Sales Performance)

	N	Min	Max	Mean	Std. Deviation
SP123456789	254	1.00	5.00	3.1842	.70830
Valid N (listwise)	254				

In Table 4 EM123 The correspondent corresponding to this dimension (Innovativeness) at a medium level. So, the occurrence of dimension is accepted because the mean= 3.17.

EM456 The correspondent corresponding to this dimension (Proactiveness) at a medium level. So, the occurrence of dimension is accepted because the mean= 3.10.

EM789 The correspondent corresponding to this dimension (Value creation) at a medium level. So, the occurrence of dimension is accepted because the mean= 3.13.

Table 4: Descriptive Statistics (Entrepreneurial Marketing)

	N	Min	Max	Mean	Std. Deviation
EM123	254	1.00	5.00	3.1732	.86238
EM456	254	1.00	5.00	3.1089	.85123
EM789	254	1.00	5.00	3.1339	.82587
Valid N (listwise)	254				

So, all means at a medium level. So, we can support the evidence that all dimensions are existing in the population.

Table 5: Frequency of demographic questions

	IN1		IN2		IN3		IN4	
	Educational Level	Valid percent	Major	Valid percent	Management Level	Valid percent	Course	Valid percent
	College Degree	36.2	Engineering	35.8	Employee	28.3	Yes	40.6
	High School	29.9	IT	16.1	Middle Manager	29.1	No	59.4
	Middle School	22.0	Marketing	27.2	Supervisor	27.6		
	Others	11.8	Media	20.9	Top Manager	15.0		
Total		100.0		100.0		100.0		100.0

5.3. Correlation relationship between variables

In the Table 6, we used the Pearson correlation. The correlation is between 0 and 1. Moreover, zero point to that there is no correlation. However, one point to that there is a perfect correlation. Moreover, 0 to 0.299 indicate a weak correlation. And, from 0.3 to 0.699 indicate a medium correlation.

The correlation between IT123, IT456, IT789, and SP123456789 is 0.511 which refers to medium correlation. We get statistical evidence to prove a medium relationship between IT123, IT456, IT789, and SP123456789.

In the Table 7 the correlation between IT123, IT456, IT789, and EM123, EM456, and EM789 is 0.368 which refers to medium correlation. We get statistical evidence to prove a medium relationship between IT123, IT456, IT789, & EM123, EM456,

and EM789.

In the Table 8 the correlation between SP123456789 and EM123, EM456, and EM789 is 0.586 which refers to medium correlation. We get statistical evidence to prove a medium relationship between SP123456789 and EM123, EM456, and EM789.

Table 6: Correlation Coefficients

		IT123	IT456	IT789	SP123456789
IT123	Pearson Correlation	1	.486**	.376**	.511**
	Sig. (2-tailed)		<.001	<.001	<.001
	N	254	254	254	254
IT456	Pearson Correlation	.486**	1	.489**	.543**
	Sig. (2-tailed)	<.001		<.001	<.001
	N	254	254	254	254
IT789	Pearson Correlation	.376**	.489**	1	.490**
	Sig. (2-tailed)	<.001	<.001		<.001
	N	254	254	254	254
SP123456789	Pearson Correlation	.511**	.543**	.490**	1
	Sig. (2-tailed)	<.001	<.001	<.001	
	N	254	254	254	254
**. Correlation is significant at the 0.01 level (2-tailed).					

Table 7: Correlation Coefficients

		IT123	IT456	IT789	EM123	EM456	EM789
IT123	Pearson Correlation	1	.486**	.376**	.477**	.482**	.368**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001	<.001
	N	254	254	254	254	254	254
IT456	Pearson Correlation	.486**	1	.489**	.400**	.390**	.431**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	<.001
	N	254	254	254	254	254	254
IT789	Pearson Correlation	.376**	.489**	1	.329**	.457**	.524**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	<.001
	N	254	254	254	254	254	254
EM123	Pearson Correlation	.477**	.400**	.329**	1	.541**	.456**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001	<.001
	N	254	254	254	254	254	254
EM456	Pearson Correlation	.482**	.390**	.457**	.541**	1	.606**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		<.001
	N	254	254	254	254	254	254
EM789	Pearson Correlation	.368**	.431**	.524**	.456**	.606**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	
	N	254	254	254	254	254	254
**. Correlation is significant at the 0.01 level (2-tailed).							

Table 8: Correlation Coefficients

		EM123	EM456	EM789	SP123456789
EM123	Pearson Correlation	1	.541**	.456**	.586**
	Sig. (2-tailed)		<.001	<.001	<.001
	N	254	254	254	254
EM456	Pearson Correlation	.541**	1	.606**	.573**
	Sig. (2-tailed)	<.001		<.001	<.001
	N	254	254	254	254

EM789	Pearson Correlation	.456**	.606**	1	.478**
	Sig. (2-tailed)	<.001	<.001		<.001
	N	254	254	254	254
SP123456789	Pearson Correlation	.586**	.573**	.478**	1
	Sig. (2-tailed)	<.001	<.001	<.001	
	N	254	254	254	254
**. Correlation is significant at the 0.01 level (2-tailed).					

5.4. Regression (impact between variables)

In Table 9 the dependent variable is Sales performance SP123456789 and the independent variable is IoT internet of things IT123, IT456, and IT789.

The determination coefficient is the R^2which indicates that we have some changes in the dependent variable.

Is the independent variable a reason for these changes in the dependent variable?

41 % of the changes in the dependent variable (Sales Performance) are because of the independent variable (IoT internet of things).

Table 9: Regression Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.647[a]	.418	.411	.54339
a. Predictors: (Constant), IT789, IT123, IT456				

Statistical rule or conditions to accept or reject the hypothesis: T statistic= 8.06 > T table= 1.64 & significant= 0.001 < 0.05

Both conditions are matched in the statistics. So, I will accept the hypothesis that claims that IT123 (worth derived "value") impacts SP123456789.

Every time the independent predict 0.22 of the dependent. So, this determines the level of impact or effect.

Table 10: Regression Analysis

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.217	.151		8.064	<.001
	IT123	.224	.045	.279	4.966	<.001
	IT456	.238	.049	.288	4.830	<.001
	IT789	.189	.043	.244	4.346	<.001
a. Dependent Variable: SP123456789						

This regression results obtained in the table 10 summarize that all three independent variables (IT123, IT456, and IT789) are positively and significantly affecting the dependent variable (SP123456789). In particular, the strongest standardized effect is observed with IT456 (β = 0.288, p < .001), then with IT123 (β = 0.279, p < .001), and weakest with IT789 (p <.001, 0.244). The t-values of 4.346 up to 4.966 and the level of significance (p <.001 in all predictors) indicate that such effects are strong and cannot have been as a result of chance. The positive unstandardized coefficients (B values) also imply that the higher each of the independent variables, the higher is the dependent variable. The constant value (B = 1.217, p < .001) implies a positive baseline value of the dependent variable assuming that all the predictors are constant. Altogether, the model gives good indications reflecting that IT123, IT456 and IT789 are all significant and positive predictors of SP123456789, and therefore, they are all important predictors of the dependent construct.

6. CONCLUSION & RECOMMENDATIONS

The key aim of our study is checking whether Entrepreneurial marketing would mediate the relationship and impact of the internet of things IoT to enhance sales performance at e-commerce in the UAE. In this study, the dependent variable is Sales performance and it depends on the IoT internet of things which is the independent

variable. Also, the meditator variable is Entrepreneurial marketing. This study is planned to define the connection and explain impact between all variables. The research tries to understand, describe, and explain further about these relationships.

Sales performance is very common as it is used to manage and control sales. When the sales team meets or exceeds the management expectation this indicates that sales performance is high. And it is an important factor that needs to be controlled in every organization. Moreover, IoT is a critical way to handle big data with internet methods to improve sales and it is one of the most profitable scopes of internet business as it is based on social media, the internet, and interconnected network. Running your business with IoT can make very good positive results as it may increase the company's competitive advantage, easy to get more customers as nowadays everything is found on the internet. Also, IoT can make an organization's reputation improve to be high and good. Moreover, entrepreneurial marketing works as a critical success factor in performing any project as well as it is very effective to achieve innovative objectives, and it is a very important element as it determines the organization's success. This research shows the impact of the IoT internet of things dimensions as well as will be beneficial with good implications. Also, the research proves a medium relationship between IoT internet of things, sales performance, and Entrepreneurial marketing. This study contributes to demonstrating the mediating role of EM Entrepreneurial marketing between IoT internet of things and SP sales performance. This study investigates the strategies to enhance the usage of IoT to make a positive impact on sales performance through entrepreneurial marketing.

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