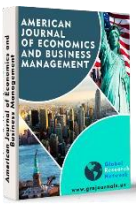

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Effective Use of Automating Productivity to Improve e-Marketing Strategies for Entrepreneurial Projects

An applied study of the opinions of a sample of customers on Iraqi e-commerce platforms (Souq.com Iraq, Yalla Market)

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Abstract:
This study aims to identify the role played by the effective use of production automation in improving e-marketing strategies for entrepreneurial projects. The study also focused on the essential elements of effective use, through which productivity can be improved, to develop e-marketing strategies that can contribute to entrepreneurial leadership. The importance of this study stems from its emphasis on the role of the effective use of production automation in e-marketing strategies, which is a significant challenge facing companies in the current economy. 165 electronic questionnaires were distributed to customers who purchased the aforementioned company's products. The statistical analysis program Smart PLS SPSS was used to analyze the research sample. The study results also showed that the effective use of production automation plays a significant role in achieving e-marketing strategies, as it can contribute to improving the performance of entrepreneurial projects and promoting innovation and change within companies. The study also revealed that customers who purchase products exhibit different preferences, reinforcing the importance of providing a distinctive customer experience. The most important recommendations are to enhance awareness and training, as companies are advised to develop strategies for the effective use of production automation to achieve e-marketing strategies and how to market and sell them effectively, and to qualify them to deal with customers seeking these products.

Keywords: Effective use, production automation, e-marketing strategies, entrepreneurial projects.

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Introduction

The recent developments that have taken place in the modern era have had a significant impact on making improvements through the development of effective strategies for digital and electronic marketing and the automation of production. This has greatly helped as it is a vital management for these improvements, and all of this is in the interest of entrepreneurial projects, as these projects are based on how marketing works in innovative ways to be effective in reaching and gaining customers in the targeted market segments. Therefore, these entrepreneurial projects strive greatly to automate production, considering that these projects are usually limited in terms of human resources as well as financially, so this strategy is a great opportunity to improve effectiveness and efficiency.

Accessing markets requires not only an innovative and effective marketing process, but also a productive tool that enables it to improve productivity. Through production automation, it is possible to achieve high productivity with efficiency and effectiveness. On the other hand, e-marketing, which is the primary tool for using modern technology in marketing, and through executive software for these marketing processes, such as emails, as well as other tools such as social media and campaign management, all of which greatly assist in analyzing data and arriving at innovative marketing processes. Smith (2021) also indicated that the automation used in e-marketing is not only a tool intended to save time, but rather goes far beyond that, as it is an essential and vital element in improving the customer experience through engagement. This also leads to the fact that the automation used can significantly contribute to the operational efficiency of entrepreneurial projects, enabling them to achieve results that help improve with less use of available resources.

Organizations operate in volatile and rapidly changing environments, so entrepreneurial projects, especially start-ups, face great risks in these environments. Therefore, the importance of this study stems from this research approach that seeks to clarify the conceptual frameworks related to the importance of e-marketing as one of the tools that work to increase efficiency, thus leading to a reduction in costs, and also to the use of another tool, which is production automation, which is also indispensable in increasing efficiency. Therefore, this research contributes significantly and effectively to providing the best practical strategies through which entrepreneurial projects can adopt this strategy to improve effective customer engagement and increase their production efficiency.

The aim of this research revolves around how to use effective automation to increase and improve the use of e-marketing strategies, as providing such solutions, instructions and practical guidance for such pioneering projects works to maximize their revenues and also contributes to improving innovative and enhanced performance that contributes to their sustainability in these markets that are considered competitive environments.

Methodology

First: The Research Problem

The world is witnessing significant and rapid digital transformations, and this is also reflected in organizations and the effective use of automation. The major problem in industrial organizations is how to use automation to keep pace with this development. This use must also be effective and achieve real improvements in the marketing strategies used, which contributes significantly to facing the challenges that occur in the surrounding environment. Entrepreneurs in these environments also face major challenges, which are limited to how to benefit from modern technological developments used to improve marketing strategies, thus enabling them to use limited resources in an optimal manner and be able to overcome such challenges. Therefore, the problem of this study lies in the effective use of production automation that achieves or helps in improving marketing strategies and maximizing the benefits resulting from them in the success of entrepreneurial projects.

Second: Research Aims

This research seeks to achieve a number of objectives, including the following:

1. This research seeks to investigate and measure the impact of production automation and e-marketing strategies, as well as to increase customer interaction in the target market.

2. One of the primary objectives this study seeks to achieve is to understand and identify the relationship between production automation and improve the methods used in organizations' e-marketing strategies.

3. This research seeks to identify the most important challenges facing the use of production automation and how to overcome, implement, and overcome them.

4. This research attempts to contribute, albeit in a simple way, to presenting the most important recommendations it reaches and to explore how to effectively implement production automation to improve e-marketing strategies.

Third: The Importance of Research

The importance of the research is highlighted by the topics addressed. This research addresses several important points that can be summarized as follows:

1. This research contributes to enriching the literature in the areas covered by the research, both in terms of production automation and e-marketing strategies. This enhances understanding, application, and integration of technology in the use of marketing strategies.

2. Entrepreneurial projects often require the implementation of effective marketing strategies for their success. Therefore, this research contributes, albeit in a small way, to providing recommendations for improving their effectiveness using automation and marketing strategies.

3. E-marketing strategies can be improved by achieving sustainable projects, which in turn contribute significantly to the use of production automation, which significantly helps reduce costs and increase revenues, thus helping achieve project sustainability.

4. Production automation plays a significant role in achieving the competitive advantage that organizations strive to achieve. Therefore, emerging organizations seek to leverage production automation as a tool to achieve this advantage in the target market, given these market challenges.

Fourth: Research Hypotheses

The current research seeks to achieve a set of hypotheses, as follows:

Main Hypothesis: To prove the relationship between the effective use of production automation and e-marketing strategies from a statistical perspective. From this hypothesis, there are the following related hypotheses : There is a significant relationship between the technical dimension and E-marketing strategies.

1. The economic dimension plays a statistically provable role in achieving E-marketing strategies.

2. There is a significant relationship between the human dimension and E-marketing strategies.

3. There is a significant relationship between the environmental dimension and E-marketing strategies.

Fifth: Hypothetical Research Model

The hypothetical research plan consists of two variables, one of which is independent, which is (effective use of production automation), and it contains four basic dimensions, which are (technical dimension, economic dimension, human dimension and environmental dimension). As for the second variable, which is the dependent variable, which is (electronic marketing strategies), this plan can be explained as in Figure (1) below:

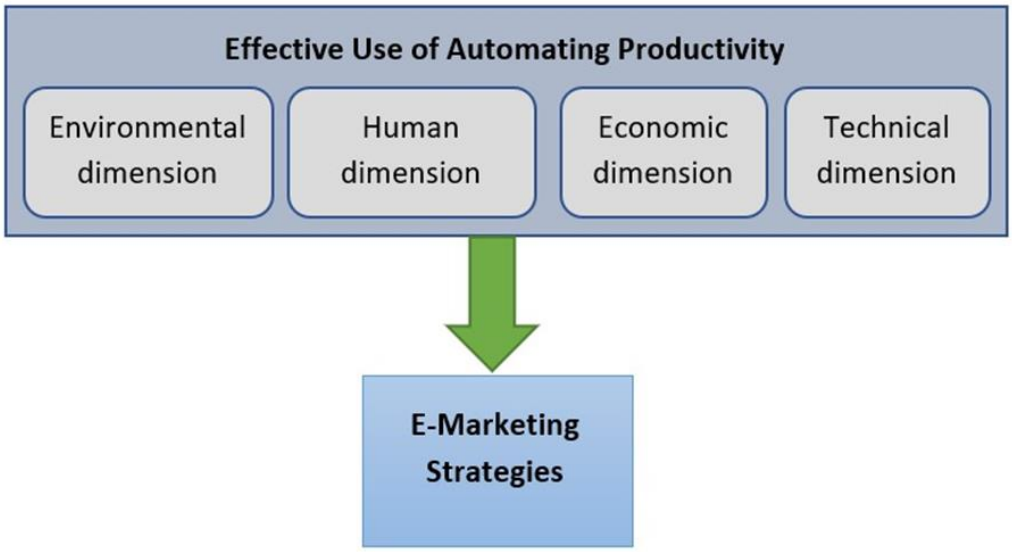

Figure (1) Hypothetical study model

Sixth: Research Sample

This study was applied to a sample of customers who use Iraqi e-commerce platforms such as (Souq.com Iraq, Yalla Market), where an electronic questionnaire was distributed to customers randomly and a number of returned questionnaires were collected, amounting to 178 questionnaires, while the number of questionnaires suitable for statistical analysis amounted to 175 questionnaires, after excluding 3 questionnaires that were not suitable for statistical analysis.

Seventh: Research Measures

The research criteria that were relied upon and shown in the table below are specific to the research variables of the independent variable (use of production automation) as well as the dependent variable (digital marketing strategies) and they are as follows:

Variables	Items	Dimension	Approved Standard
Effective Use of Automating Productivity	4	Technical Dimension	Porter & Heppelmann (2017)
	4	Economic Dimension	
	4	Human Dimension	
	4	Environmental Dimension	
E-Marketing Strategies	4	Social Dimension	Kingsnorth, S. (2022)
	4	Environmental Dimension	
	4	Strategic Dimension	

Source: Prepared by the researcher based on the above sources

Theoretical Aspect

The Concept of Effective use of Production Automation

With rapid technological advancements, production automation has become one of the cornerstones of developing industrial processes and enhancing operational efficiency. This research seeks to achieve a primary goal, which is to clarify the concept, benefits, and dimensions of production automation for organizations in order to maximize the benefit from the application of this production automation in these organizations. Production automation refers to how technology and systems are used in production and its industrial processes, as well as in reducing human resources and their intervention in business, and

how to increase productivity through this automation in a precise manner. According to the researcher Schuh et al. (2017), production automation relies heavily on approved technologies such as industrial robots and some systems used for digital control. More important than these are artificial intelligence and the Internet. All of these can be used as tools to improve the efficiency of manufacturing operations. Therefore, in the same context, the researcher Groover (2018) indicated that production automation can make a significant contribution to transforming a set of traditional operations into intelligent analytical uses that rely on data. This can therefore contribute to improving overall performance and, consequently, reducing operational errors in production operations.

Baines et al. (2020) indicated that production automation can play a significant and key role in the digital transformation of industrial production automation, contributing to the reduction of lost time and thus enhancing supply chain efficiency. In the same context, Brynjolfsson & McAfee (2014) indicated that artificial intelligence technologies and their integration into production automation significantly contribute to improving the decision-making process, which ultimately helps reduce waste of raw materials. Rüttimann & Stöckli (2016) also discussed the same topic, noting that production efficiency in modern manufacturing environments can be achieved at several optimal levels by integrating automated systems with human resources.

Xu (2021) argued in the same context regarding production automation, in which he indicated that it is not just a technology, but is also one of the strategies integrated with technologies. Also, one of the advantages of these technologies is that they contribute significantly to achieving a competitive advantage in the target markets by relying on industrial data. In the same general context, Kagermann (2015) indicated that advanced and productive automation represented in smart manufacturing usually contributes significantly to responding to rapid changes in the market, which has allowed institutions to achieve this high production flexibility in manufacturing.

Researchers Rüßmann et al. (2015) pointed out that production automation, which can utilize and support artificial intelligence and internet technologies, not only reduces material waste but also enhances operational efficiency and increases environmental sustainability, making it an integral part of the strategy used in sustainable manufacturing.

The Importance of Effective use of Production Automation

Production automation is of great importance to organizations that keep pace with modern developments in the modern era, as Kaplan & Haenlein (2019) indicated that the importance can be summarized in the following:

- Of great importance in production automation is that it increases productivity and contributes to increasing production rates. This also leads to reducing lost production time and thus enhances the competitiveness of industrial establishments in the global and local markets.
- Improving quality: Automation systems help reduce human error and achieve high levels of accuracy in manufacturing.
- Reducing costs: Reducing reliance on manual labor reduces operating costs while increasing the efficiency of resource use.
- Enhancing occupational safety: Automation reduces human intervention in hazardous processes, reducing work accidents and improving the work environment.
- Promoting sustainability: The intelligent use of automation helps optimize resource consumption and reduce waste, supporting environmental goals.

Dimensions of Production Automation

The effective use of production automation has a set of dimensions that Porter &

Heppelmann (2017) pointed out as follows:

1. Technical Dimension: Includes the use of artificial intelligence, smart control systems, and the Internet of Things to increase the efficiency of production processes.

2. Economic Dimension: Focuses on the impact of automation in reducing operating costs and increasing return on investment.

3. Human Dimension: Related to developing human resource skills to adapt to modern technology and ensure optimal use of automation.

4. Environmental Dimension: Includes reducing environmental impact by improving energy consumption and reducing industrial waste.

The Concept of Electronic Marketing Strategies

The modern era is witnessing rapid and modern technological and digital developments. Therefore, organizations must constantly keep pace with these developments because electronic marketing in organizations is a fundamental pillar of their success and also their direction in penetrating markets. Therefore, organizations rely on competitive markets. Penetrating markets and reaching customers requires modern technologies as well as multiple electronic marketing strategies that contribute significantly to expanding the scope of access to these customers, which enhances their loyalty to the brands used and thus achieves a sense of belonging to this brand. This is the primary goal of the research based on identifying electronic marketing strategies and studying them in terms of their importance and various dimensions, with a focus on the literature on this topic.

Digital marketing strategies refer to how digital media is used to promote products and services. This approach requires a combination of digital plans, tools, and technologies to maximize engagement with customers in target markets (Chaffey & Ellis-Chadwick, 2019). Digital marketing strategies that rely heavily on social media, as well as multiple tools such as email and search engines, enable them to effectively target audiences, providing a competitive advantage for digital markets in reaching audiences (Kotler et al., 2021).

Ryan (2016) indicated, according to a study he conducted on digital marketing strategies, that these strategies depend on a combination of content marketing as well as the need for some behavioral data of target customers in the markets through digital advertisements that target them. This has also contributed to improvements and enhancements in the rates of conversion to these types of strategies. In the same context, Kingsnorth (2022) indicated that these strategies greatly need the use of artificial intelligence technologies and these marketing tools need digital analysis in the specializations, methods and marketing means used. According to these needs, it is possible to know what the customers' needs are as well, and in the end we will know what can enhance the effectiveness used in marketing.

Straub (2020) also explained that e-marketing is one of the strategies that can help in interacting with customers directly due to its integration with customers in a different way through some channels through which it reaches the audience, such as live chat, as well as marketing techniques that can increase the chances of obtaining interaction and building long-term relationships with customers. On the other hand, Solomon et al. (2019) indicated that these strategies in marketing that rely on digital technologies help in analyzing big data, and through this we can obtain a complete understanding of consumer behavior in a more accurate and interactive way, which helps us in improving the strategies used by using appropriate advertising.

In the same context, Järvinen & Taiminen (2016) indicated that the use of e-marketing enhances an organization's ability to conduct digital analysis, thus enhancing its ability and effectiveness in making marketing decisions related to the organization. Through this, we can provide or access a deeper insight into these concepts regarding the use of marketing and customer needs in the markets. We can also clarify the viewpoint of Lemon

& Verhoef (2016), who indicated that these digital marketing channels can help improve the customer experience and thus lead to achieving the sustainable competitive advantage that the organization seeks.

The Importance of E-Marketing Strategies

The importance of digital marketing and its contribution can be explained according to Lemon & Verhoef (2016), as follows:

- Increasing customer reach: Digital channels provide broader opportunities to reach a global audience.
- Improving targeting: Using digital analytics allows for precise targeting.
- Reducing marketing costs: Compared to traditional marketing, digital marketing can be more cost-effective.
- Improving customer experience: Continuous engagement with customers improves their experience and increases satisfaction.
- Strengthening the brand: Digital marketing strategies provide greater opportunities to enhance brand recognition and increase customer loyalty.

Dimensions of E-Marketing Strategies

In the modern era, digital markets are the primary tool for gaining significant market share and targeting markets where they can achieve a competitive advantage. This can be achieved through digital marketing. By leveraging advanced technologies, companies can improve customer targeting, reduce operational costs, and enhance customer loyalty, leading to sustainable growth in the digital business environment. The most important basic dimensions of digital marketing strategies can be identified according to Kingsnorth, S. (2022):

1. Social Dimension: Relates to customer interaction through social media and the impact of digital networks on purchasing decisions.

2. Environmental Dimension: Includes sustainable marketing strategies that promote environmental awareness through digital campaigns.

3. Strategic Dimension: Addresses how to design integrated digital marketing strategies to achieve business objectives.

Practical Aspect

This part of the research will address the practical and applied side of the research by analyzing and proving the hypotheses, as well as knowing the extent of the research sample's response to the questionnaire items. As a preliminary step, the variables will be coded to facilitate their knowledge in the practical side.

Table (1): Scale items and their coding

Variables symbol	Variables
UAP	Effective Use of Automating Productivity
EMS1	E-Marketing Strategies

First: Collecting and Examining Data

The questionnaires were distributed to customers who use Iraqi e-commerce platforms such as (Souq.com Iraq, Yalla Market) and the number of questionnaires valid for statistical analysis was 175.

Second: Descriptive Analysis

Descriptive analysis of the research, which is based on describing the sample being researched for the research variables, is done by answering the questionnaire paragraphs and knowing the arithmetic mean of the answers, as well as the standard deviation that measures the extent of data dispersion from its hypothetical mean, which is shown in the table below. These results showed that the questionnaire paragraphs exceeded the hypothetical mean of 3 for the research variable, which is (effective use of production automation), as well as for the variable (electronic marketing strategies), which is shown below:

Table (3): Results of the descriptive analysis

Items	Mean	Standard Deviation
UAP1	3.353	0.86
UAP2	3.392	0.86
UAP3	3.523	0.99
UAP4	3.451	1.02
UAP5	3.399	0.97
UAP6	3.503	0.97
UAP7	4.431	1.41
UAP8	3.856	1.09
UAP9	3.778	0.78
UAP10	4.863	0.85
UAP11	3.340	0.76
UAP12	3.817	0.76
Effective Use of Automating Productivity	3.88	0.81
EMS1	4.33	1.73
EMS2	4.53	0.95
EMS3	4.39	0.93
EMS4	4.43	0.91
EMS5	4.20	1.11
EMS6	3.55	0.73
EMS7	3.26	0.75
EMS8	4.24	0.89
EMS9	3.96	0.74
EMS10	4.30	1.03
EMS11	4.35	1.00
EMS12	4.28	1.02
E-Marketing Strategies	3.89	0.84

Source: SPSS output

Third: Evaluation of the Quality of the Scale

The hypothesis testing process precedes the basic step of assessing the quality of the scale. The criteria for this are as follows, according to (Hair et al., 2014):

- Cronbach's alpha = 0.7
- Composite reliability = 0.6
- Average variance extracted (AVE) = 0.5

Using the Smart PLS program, the measurement model was constructed, which is shown in Figure (2) below:

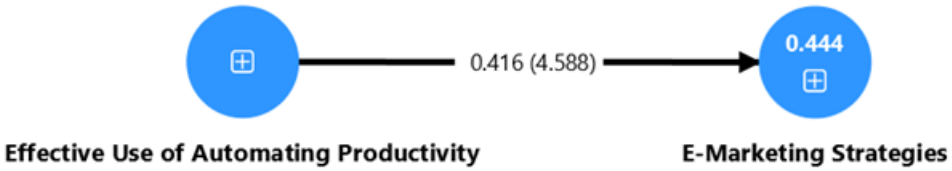

Figure (2) Measurement model for research variables

Source: Outputs Smart PLS

Table (4) Results of the measurement tool test

Variable	Items	Saturations	Cronbach's alpha	Composite stability	AVE
Effective Use of Automating Productivity	UAP1	0.773	0.957	0.959	0.556
	UAP2	0.848			
	UAP3	0.841			
	UAP4	0.819			
	UAP5	0.795			
	UAP6	0.776			
	UAP7	0.808			
	UAP8	0.786			
	UAP9	0.833			
	UAP10	0.835			
	UAP11	0.764			
	UAP12	0.865			
E-Marketing Strategies	EMS1	0.768	0.933	0.936	0.540
	EMS2	0.747			
	EMS3	0.758			
	EMS4	0.842			
	EMS5	0.800			
	EMS6	0.754			
	EMS7	0.778			
	EMS8	0.829			
	EMS9	0.803			
	EMS10	0.787			
	EMS11	0.763			
	EMS12	0.795			

Source: SmartPLS output

The results shown in Table (2) above, which showed the tests that the analyses showed to measure the modified model, which showed the acceptable saturations in the table, and the acceptable limits in Cronbach's alpha were acceptable within the limits, and also the composite stability that exceeded the acceptable limits in the attached table, show these results:

Fourth: Testing Hhypotheses

To test the hypotheses, we first define the most important criteria used in the test. These criteria are as follows, according to (Hair et al., 2014):

- Path coefficient significance: a value greater than or equal to 1.96
- Path coefficient significance: a value less than or equal to 0.05

- The coefficient of interpretation (R2) is as follows: (0.25 is weak, 0.5 is medium, 0.75 is high)

To test the hypothesis of influence, a structural model was constructed, as shown in Figure (3) below:

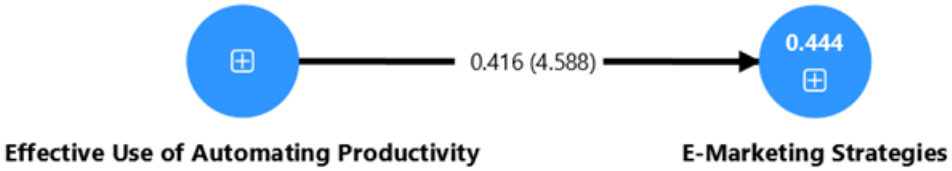

Figure (3) Path model for the research variables

Source: Smart PLS output

Table (5): Results of testing the study hypotheses

Path	P Value	Value T	R^2	Result
→ E-Marketing Strategies Effective Use of Automating Productivity	0.000	4.588	0.416	Acceptance
→ E-Marketing Strategies Technical Dimension	0.000	7.535	0.534	Acceptance
→ E-Marketing Strategies Economic Dimension	0.000	11.221	0.655	Acceptance
→ E-Marketing Strategies Human Dimension	0.000	6.544	0.555	Acceptance
→ E-Marketing Strategies Environmental Dimension	0.000	3.842	0.342	Acceptance

Source: SmartPLS output

Discussion of Results

The above results can be explained according to what was reached through statistical analysis and matching them according to the standards that were established and relied upon in the statistical analysis, where the results showed that the main hypothesis: There is a significant relationship between the effective use of production automation and electronic marketing strategies. This hypothesis is accepted because the value (T=4.588) and this value is acceptable according to the above standards, as well as the value (P=0.000), which indicates the significance of the relationship between the variables and the acceptance of the hypothesis, as well as the value of the path coefficient of influence reached (0.416). As for the sub-hypotheses, they were as follows:

1. The first sub-hypothesis: The results showed that this hypothesis is acceptable, according to the analysis results. The path coefficient, or the value of the influence in the relationship between the two variables, reached 0.534, while the value of (T=7.535) and the value of (P=0.000) all indicate that the first sub-hypothesis is accepted.

2. The second sub-hypothesis: The results showed that this hypothesis is acceptable, according to the analysis results. The path coefficient, or the value of the influence in the relationship between the two variables, reached 0.655, while the value of (T=11.221) and the value of (P=0.000) indicate that the first sub-hypothesis is accepted.

3. The third sub-hypothesis: The results showed that this hypothesis is accepted, according to the analysis results. The path coefficient, or the value of the influence in the relationship between the two variables, reached 0.555, while the value of (T=6.544) and the value of (P=0.000) indicate that the first sub-hypothesis is accepted.

4. The fourth sub-hypothesis: The results showed that this hypothesis is accepted, according to the analysis results. The path coefficient, or the value of the influence in the relationship between the two variables, reached 0.342, while the value of (T=3.842) and the value of (P=0.000) indicate that the first sub-hypothesis is accepted.

Conclusions

1. Through the results achieved in the practical aspect of the research, the results demonstrated that production automation can contribute to improving operational efficiency, which leads to a reduction in operating costs and, consequently, can enhance the organization's ability to compete in global and local markets.

2. The results also demonstrated that production automation can contribute more accurately and effectively to directing digital marketing strategies through the analysis of customer and client data, thus developing accurate market targeting strategies.

3. The effective use of production automation, combined with its integration with e-marketing, significantly and effectively contributes to providing a better customer experience by easily reaching customers via digital channels. This will significantly help us increase customer satisfaction and, consequently, gain customer loyalty.

4. The results also demonstrated that production automation clearly contributes to improving the organization's marketing campaign management, thus helping to reduce waste in time and costs. This also positively impacts the organization's returns.

Recommendations

1. It is preferable to use strategic methods in managing digital marketing tools that help entrepreneurial projects invest. These strategies, in turn, can enhance production efficiency, thus improving the organization's ability to utilize digital marketing, enabling it to reach its target markets.

2. We recommend the use of effective production automation in data collection tools in marketing operations for accurate analysis. This helps understand consumer behavior and customer desires, and enables marketing campaigns to address these desires.

3. The organization should develop specialized training programs on how to use production automation. This will enable the organization to maximize the benefit from these employees more accurately and effectively in their work once they have mastered the process.

4. It is preferable for artificial intelligence technologies deployed in marketing operations, through the content provided, and automation used, to be more precisely focused on the interests of customers and clients in the markets, to ensure we gain the highest level of customer engagement.

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