The effects of social media digital channels on marketing and expanding the industry of e-commerce within digital world

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ABSTRACT

The primary research question investigated was: What is the effect of social media channels on e-commerce expansion and marketing by Jordanian firms? The specific objectives included examining social media channels' effect on Jordanian companies' marketing and exploring social media's impact on Jordanian e-commerce expansion. To achieve the research goal, a quantitative method was used in which fifty social media managers of Jordanian firms were recruited and surveyed. A key result from the analysis conducted was that social media enables word-of-mouth expression by users regarding certain brands that positively and significantly increase the marketing effect of the firms. The other result noted from the analysis is that an increasing number of loyal followers can eventually lead to reduced e-commerce of firms if they fail to align the products and services with customers' interests. One limitation of this research was a small sample, which reduced the generalization of the results. One recommendation from this research is that Jordanian firms should create entertaining and engaging social media posts that ensure customers can share their positive experiences using specific products, leading to significant marketing impact.

Keywords: Social media, marketing, e-commerce, Jordan, digital, impact, word-of-mouth, digital marketing, digitalization, digital channels

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1. Introduction

In the ever-evolving landscape of global commerce, there has been a significant transformation in how businesses market their products, which has reshaped the business environment [1]. A key driver of these changes is the symbiotic relationship between social media and e-commerce. Social media is interactive, enabling individuals to engage in online groups, forums, and communities that can drive sales and offer expert product advice and support [2]. It has been estimated that social media sales worldwide will make up to $1.298 billion and likely reach $3 trillion by 2026 [3]. The predicted growth in social media sales is illustrated in Figure 1. Social media have become a cornerstone of modern-day marketing, with the most popular platforms being Facebook, Instagram, Twitter, and LinkedIn. Social media marketing is a term that refers to creating and posting content on social media platforms to not only market commodities but also develop relationships and build community with the targeted consumer demographic [1]. Globally, there are 4.58 billion internet users, which means they can interact with their favorite brands online [4]. As a result, the massive market created by social media has become so attractive that businesses have devised ways to ensure that their posts generate interest among social media users to increase brand visibility and interaction [4]. Survey data indicates that 84% of individuals between 18 to 29 years old use social media platforms, while 81% between the ages of 30 to 49 also reported using social media platforms. Generally, 72% of individuals use social media platforms for about 2 hours daily [5]. The data indicates a high rate of social media use, with the figures projected to continue growing, thus indicating the critical part of marketing that social media occupies. Businesses can deploy a wide array of marketing techniques in promoting their brands, including influencer collaborations and data-driven advertising to drive sales and build brand loyalty.
Available data on the application of the various platforms indicates that the time users spend on the internet on social media is steadily rising, with the figure currently standing at around 151 times daily [6]. The number of people using various social media platforms has grown since the early 2000s, as indicated in Figure 2 [6]. The trends suggest that brands should continually improve their social media engagement to keep up with the trend.

Further, various age groups also depict the varying frequency of social media usage, with the platforms primarily popular among young people. Data shows that YouTube and Facebook are more popular among individuals aged between 18 and 24 years. At the same time, Instagram, Snapchat, and Twitter are more common among the 18- to 24-year-olds. The illustration of these trends is presented in Figure 3 below [6]. Generally, the trends show a decrease in usage by age.
Figure 3. Use of social media platforms by age group [6].

However, it is imperative to recognize that the effects of social media platforms on e-commerce can vary significantly across different markets and regions. As such, the current study delves into the specific context of Jordan, a country located in the Middle East. Specifically, as of 2023, there are 9.95 million Internet users in Jordan, with internet penetration within the country standing at 88%. 58.4% of the country's 6.61 million people use social media, indicating the immense opportunity for businesses to carry out e-commerce [7]. Generally, like all other countries, data shows that social media usage in Jordan continues to rise, with Facebook taking the most significant share. However, despite still holding the position as the most preferred social media platform, data shows that the use of Facebook in Jordan decreased by 350,000 (-6.7%) between 2022 and 2023, even as other social media platforms increased [7]. The trend can be explained by the increasing preference of other platforms as compared to Facebook, especially among the young demographic. In Jordan, 59.7% of internet users are on Facebook, which is considerably higher than 34.7% for those on Instagram and 11.2% of X users, but closely followed by 58.4% of users on YouTube [7]. The trend suggests that Facebook remains the most popular social media platform despite its declining preference among users in recent years.

Social media's influence on marketing and expanding the e-commerce industry has received mixed views from researchers. Specifically, according to Valerino, William, and Noemier [8], the application of social media has radically changed the way in which customers purchase products as well as the ways in which businesses carry out sales. Generally, the researchers elaborate that social media facilitates customer interactions, leading to an enhanced intention to buy. Moreover, brands apply social media to share information on their product features and prices, hence influencing purchase decisions and the growth in sales. The views are consistent with those of Javid, Nazari, and Ghaeli, who conducted a scientometrics analysis and noted that e-commerce volume has increased over the years due to the growing trend of social media usage [9]. However, the researchers also argue that the subject of e-commerce and social media usage has not been well-developed and hence needs more in-depth analysis to understand the actual influence and correlations. Therefore, the aspect of social media usage on the development of e-commerce is an ever-evolving area of study that requires further investigation to obtain data-focused outcomes for decision-making. In further cementing these arguments, Makrides, Vrontis, and Christofi argued that social media has created unprecedented opportunities for businesses to engage with their customers and, hence, expand their market reach [10]. As such, social media marketing has enabled companies to create an intended product image in a manner that directly drives sales. Considering the literature evidence, it is noted that social media occupies a central part in marketing and directly influences the volumes of sales and consumer loyalty created.

Several researchers have also explored the impact of social media on consumer loyalty in e-commerce. According to the evidence posited by Attar, Shanmugam, and Hajili, various activities on social media platforms influence the user's e-satisfaction and trust, which affect consumer purchase intentions [11][26]. In other words, social media can create and enhance brand credibility and, in turn, influence behavioral attributes such as trust,
Social media marketing presents a chance for startups and small businesses that utilize the business-to-customer (B2C) model to break the monopoly in a specific sector and ensure they gain a profitable market share. In Jordan, social media users have been rising over the past decade, but there is a gap in research on how the social media space can be utilized by B2C firms to effectively market their products and record significant increases in sales. Moreover, although existing research shows that diverse social media marketing strategies can be used to improve online sales, such as posting content that enhances brand image and credibility as well as engaging influencers, the studies have been conducted in other countries and may not be applicable to the Jordanian context. In this respect, the current study explored how B2C companies in Jordan identify the significant social media factors that affect the marketing and expansion of the e-commerce space in the country [28]. The next section indicates the method used to implement this study. The current study's main aim is to establish an understanding of the effects of social media channels on marketing and expanding the e-commerce industry within the digital world with a specific focus on Jordan. To achieve this aim, the study objectives include:

1. To explore social media channels' impact on marketing by Jordanian companies.
2. To examine social media's effect on e-commerce's expansion in the Jordanian digital world.

2. Materials and Methods
The current section indicates the procedure taken to complete this research. Some subtopics covered include research method, sampling, data collection, data analysis, and research philosophy.

2.1. Research philosophy
In the current study, a positivism philosophy has been adopted, considering that this study's data collection and analysis process aims to explore the various issues through statistical data analysis. The philosophy assumes that data reality can be determined from an objective point of [14]. The philosophy has been justified by the fact that genuine knowledge about a phenomenon can be judged through empirical measurements in order to drive reason and logic [15]. The philosophy was also considered scientific, improving the likelihood of coming up with more reliable interpretations from the observations made [15]. From the evidence available, the study emphasized obtaining a measurable determination of the effects of social media channels on marketing and expanding the industry of e-commerce within the digital world, hence the utilization of the philosophy. The generalizability of data enabled by the philosophy is viewed as aiding in developing objective conclusions from the observations made during the collection and analysis process.

2.2. Research method, approach, and design
The current study has adopted a quantitative research method in the data gathering and analysis process through the numerical data obtained from the surveys conducted. The application of the quantitative research method has been justified by its ability to enable the researcher to develop distinctive findings on the subject by collecting and analyzing tangible and measurable data [16]. Quantitative methodology was applied by collecting views from the research participants using survey tools involving questionnaires with questions assessed on a five-point Likert scale. Through the method, the researcher considers that distinctive findings on the research topic were obtained [17]. By applying quantitative methodology, the researcher improved the accuracy of the observations by developing numerical comparisons of the data obtained. Quantitative data was also considered
objective, relying on concrete data and fewer variables. The quantitative method also enabled the prediction of future trends in social media marketing through the extrapolation of the numerical data obtained [16]. Essentially, the method enhanced the study's relevance in making conclusions and recommendations, improving the research quality.

Additionally, the current study employed a deductive research approach. The deductive approach was justified in the present context since it enabled the connection of the hypotheses with the current analysis topic [17]. The approach was applied by developing a hypothesis based on the existing theories and then creating a research strategy to test the hypotheses. In this manner, the researcher was guided by certain limitations within which the study was conducted. The main advantage of the deductive approach utilized in the current study is that the researcher could develop reasoning based on a given point of view. As a result, the researcher developed an enhanced understanding of the effects of social media channels on marketing and expanding the e-commerce industry within the digital world. The nature of the approach in applying quantitative further enhances its applicability in the current context [18]. In retrospect, the deductive approach enabled the researcher to establish cause and effect more accurately. Unlike the inductive approach, the deductive approach enables the exploration of known theories on the effect of social media channels on marketing and expanding the e-commerce industry within the digital world.

A conclusive research design was also utilized in the current study, thus providing a way to verify observations made from existing data. A conclusive design assists in generating findings that are practically useful in reaching conclusions derived from data collected [19]. By applying the conclusive design, the researcher was able to develop an overall strategy that could be adopted to integrate different research components logically and coherently. In the application of the design, the researcher set out to evaluate and identify the most relevant course of action from the observations made.

2.3. Sampling
The current research population consisted of individuals working as social media managers of various companies in Jordan. The research population was considered to possess relevant information on the study topic, increasing the likelihood of obtaining relevant findings. Since it was impossible to study the entire research population, the researcher selected a representative part of the population to be involved in the study, making data gathering and analysis manageable. To choose the most representative part of the population, the researcher adopted simple random sampling to randomly select a subset of individuals from the more extensive set. Simple random sampling was justified by its simplicity, saving time and resources, thus enriching the study's outcome by freeing time to concentrate on other essential aspects of the study [20]. Simple random sampling was also justified by its ability to avoid any potential issues during participant selection. Simple random sampling was applied by first identifying small and medium-sized Jordanian businesses that used the business-to-customer (B2C) model and were available on social media, including Facebook, Twitter, and Instagram, and then contacting the managers of the accounts to sign up for this survey. A total of fifty participants were sampled using the process.

2.4. Data collection
The current research employed a questionnaire to gather data in a survey. The questionnaire was posted on the Survey Monkey platform, and links were given to participants. Consent forms were issued to participants before they were engaged in the survey to gain their permission. The survey process was done over one week. The data from completed surveys were compiled and analyzed to understand the different trends. One benefit of online surveys is enabling the gathering of large data within a short time [21]. The questionnaire used in this study contains three sections. The first section covers demographic information, the second part covers social media channels' impact on marketing, and the third part shows social media's impact on e-commerce expansion. Demographic data such as work experience was gathered to help show that the gathered data is reliable because it is from individuals with extensive knowledge of social media marketing. Meanwhile, age and gender demographic data were gathered to show that the results can be generalized because the data was not restricted to one gender or to a narrow age group. The second and third sections of the questionnaire employed a five-point Likert scale to measure the level of participants’ agreement with various statements related to this study. On the Likert scale, the value of 1 represented strongly disagree, while a value of 5 represented strongly agree. One benefit of the Likert scale was that it enabled the quantitative measurement of participants’ opinions,
thereby allowing for statistical analysis and conclusion on significant factors that influence online sales when using social media marketing. The data gathered was compiled in an Excel file and organized before analysis.

2.5. Data analysis
Data analysis involves gaining meaning from the data collected to interpret the study's outcome. The analysis process aimed to clean, transform, and model data to draw conclusions and recommendations. In line with the quantitative data collected, the current study applied statistical analysis to gain meaning from the data. Statistical analysis was justified by its relevance to quantitative data and its ability to make empirical inferences from observations [22]. Statistical analysis was completed in Excel software, in which descriptive and inferential statistical analysis was done. Descriptive statistical analysis was applied by determining central tendency values such as mean and standard deviation and organizing them in tables, charts, and graphs to reveal patterns and trends relevant to drawing conclusions. The data analysis process presented the key ideas of the study in a logical and more organized manner, hence improving the study's outcome in terms of problem identification and solutions. Meanwhile, inferential analysis involved conducting an analysis of variance (ANOVA) and regression.

The analysis was done to determine social media marketing strategies that can be used to significantly improve online sales by identifying the p-values and regression coefficients from the output. The independent variables included social media marketing and e-commerce expansion factors. Social media marketing factors involved interactivity, informativeness, personalization, word-of-mouth, and extent of interesting content, while the e-commerce expansion factors included the size of the targeted audience, customer trust, involvement of influencers, development of loyal fanbase, and customer-generated content. Meanwhile, the dependent variable involved the extent of online sales growth, which can be achieved based on the different social media marketing and e-commerce expansion strategies. The output from the analysis is shown in the next section.

2.6. Ethical considerations
In this research, the confidentiality principle was observed by storing data gathered in password-protected folders in a computer to prevent illegal access by third parties. Additionally, data gathered for this study was only used for the sole purpose of exploring the topic and not deployed for a different goal. Meanwhile, the autonomy principle entails respecting the dignity and rights of participants and allowing them to leave the study at any stage without victimization [25]. For this study, autonomy was followed by informing participants that they had the freedom to skip questions or exit the survey without explanations and would not experience any negative consequences.

3. Results and discussion
The results from the statistical analysis were presented in this section. The section indicates the demographic information of participants, descriptive statistics output, and regression analysis results.

![Participants Distribution Based on Age](image.png)

Figure 4. Participants distribution based on age
Figure 4 shows that respondents were selected from a wide age range from 18-65 years. The finding implies that the obtained result was not affected by age bias and could be generalized for all age groups. Additionally, the finding shows that most participants were 36-45 years old (42%). Additionally, participant distribution based on gender was summarized in Figure 5.

![Participants Distribution Based on Gender](image)

Figure 5. Participants distribution based on gender

As shown in Figure 5, the equal number of male and female participants in the survey. The finding suggests that the findings obtained in this research were highly reliable because they considered the perspectives of both genders. The distribution of participants based on work experience was summarized in Figure 6.

![Participants Distribution Based on Work Experience](image)

Figure 6. Participants’ distribution based on work experience

The result in Figure 6 indicates that the work experience of most participants (78%) was greater than 3 years. The finding reveals that the selected participants had adequate knowledge of social media marketing and hence enabled the development of reliable findings and conclusions for this research. Apart from work experience, the participants were asked about the extent to which they felt social media impacted marketing and E-commerce in the Jordanian digital world, and the result is summarized in Figure 7.

![Extent of Social Media Channels Impact on Marketing and online sales](image)

Figure 7. The extent of social media channels' impact on marketing and online sales
The result in Figure 7 shows that most participants (50%) felt that social media channels affected marketing and online sales to a large extent and a very large extent. Only a small percentage of participants (12%) indicated that social media channels affected marketing and e-commerce to a small extent or not at all. The result suggested that social media is crucial for attracting customers and improving sales. In this respect, more data was gathered to understand how social media channels affect marketing and E-commerce expansion, and the results are shown in the following sections.

The descriptive statistics from the survey conducted were summarized in Tables 1 and 2. The first result in Table 1 shows the social media impact on marketing by various Jordanian firms.

### Table 1. Social media (SM) channels effect on marketing in Jordan

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Sample Variance</th>
<th>Skewness</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactivity</td>
<td>3.66</td>
<td>1.2056</td>
<td>1.4535</td>
<td>-1.1936</td>
<td>50</td>
</tr>
<tr>
<td>Informativeness</td>
<td>3.52</td>
<td>1.1292</td>
<td>1.2751</td>
<td>-0.2731</td>
<td>50</td>
</tr>
<tr>
<td>Personalization</td>
<td>3.64</td>
<td>1.1739</td>
<td>1.3780</td>
<td>-0.6669</td>
<td>50</td>
</tr>
<tr>
<td>Word-of-mouth</td>
<td>3.66</td>
<td>1.0022</td>
<td>1.0045</td>
<td>-0.3976</td>
<td>50</td>
</tr>
<tr>
<td>Trendy and interesting posts</td>
<td>3.68</td>
<td>1.0774</td>
<td>1.1608</td>
<td>-0.9477</td>
<td>50</td>
</tr>
</tbody>
</table>

1The Likert scale used in the survey was on a range of 1-5, which means that a mean value of 3 was neutral, a mean value greater than three shows that participants agreed with a statement, while a mean value less than 3 showed they disagreed with a specific statement.

Table 1 shows that participants agreed with all the statements on how social media channels affect marketing since means values were greater than 3. Among the variables, the highest agreement was noted, showing that social media channels allow marketers to incorporate trendy and exciting topics that attract customers and increase their engagement in the marketing process (mean = 3.68; s.d 1.0774). The finding suggests that, unlike other marketing channels, social media enables creative expression by including trendy topics, which reduces the formal aspects of marketing and makes them more attractive to customers. Another finding of interest in Table 1 shows a skewness value of -1.1936, which is beyond the recommended range of -1 to 1 and suggests that there were extremely differing responses regarding whether the social media interaction features of shares and comments influence the marketing ability of Jordanian firms. Nonetheless, the high mean of 3.66 suggests that the disagreements were among a few respondents, and most of them agreed with the statement. Meanwhile, the descriptive statistics showing how social media affects E-commerce expansion are summarized in Table 2.

### Table 2. Social media channels' effects on e-commerce expansion

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Sample Variance</th>
<th>Skewness</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of targeted audience</td>
<td>3.48</td>
<td>1.1822</td>
<td>1.3976</td>
<td>-0.7224</td>
<td>50</td>
</tr>
<tr>
<td>Customer trust</td>
<td>3.84</td>
<td>1.0947</td>
<td>1.1984</td>
<td>-0.8363</td>
<td>50</td>
</tr>
<tr>
<td>Involvement of influencers</td>
<td>3.46</td>
<td>1.1104</td>
<td>1.2331</td>
<td>-0.3609</td>
<td>50</td>
</tr>
<tr>
<td>Developing loyal fanbase</td>
<td>3.38</td>
<td>1.1229</td>
<td>1.2608</td>
<td>-0.4531</td>
<td>50</td>
</tr>
<tr>
<td>Customer-generated content</td>
<td>3.22</td>
<td>1.2002</td>
<td>1.4404</td>
<td>-0.1490</td>
<td>50</td>
</tr>
</tbody>
</table>

2The skewness for the data was within -1 to 0, which means that it is moderate and that the participants did not present extremely contrasting views regarding social media channels’ impact on e-commerce expansion.

Table 2 finding shows that participants agreed with all the statements (mean > 3) on how social media channels influence e-commerce expansion, hence improving sales. Among the statements, it is noted that the highest agreement by participants was regarding social media channels increasing customers' trust by enabling them to verify information on products, thereby increasing online sales (mean = 3.84; s.d 1.0947). The result implies that in using social media platforms to market products, companies should strive to provide accurate information that can be verified by customers to increase consumer trust and ensure higher sales. Although descriptive
statistics are crucial in showing trends in the dataset, they do not show the significance of results; hence, regression analysis was conducted, and the output was presented in the following sections.

The regression analysis was done in line with the big data analytics scope of this course. Big data analytics entails uncovering trends and correlations in large datasets to help make informed decisions. In this regard, regression analysis was done to identify the significant factors that should be prioritized when seeking to improve social media marketing and E-commerce expansion. The regression output is summarized in Tables 3, 4, and 5.

Table 3. Regression model results

<table>
<thead>
<tr>
<th>Regression model Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.71712938</td>
</tr>
<tr>
<td>R Square</td>
<td>0.514274548</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.38972956</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.775758584</td>
</tr>
<tr>
<td>Observations</td>
<td>50</td>
</tr>
</tbody>
</table>

Table 4. Anova results

<table>
<thead>
<tr>
<th>ANOVA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>df</td>
<td>SS</td>
</tr>
<tr>
<td>Regression</td>
<td>10</td>
</tr>
<tr>
<td>Residual</td>
<td>39</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
</tr>
</tbody>
</table>

Table 5. Regression coefficient results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.0294</td>
<td>0.8298</td>
<td>1.2406</td>
<td>0.2222</td>
</tr>
<tr>
<td>Intercept</td>
<td>-0.1008</td>
<td>0.0984</td>
<td>-1.0244</td>
<td>0.3120</td>
</tr>
<tr>
<td>Interactivity</td>
<td>-0.0078</td>
<td>0.1196</td>
<td>-0.0649</td>
<td>0.9486</td>
</tr>
<tr>
<td>Informativeness</td>
<td>0.1162</td>
<td>0.1004</td>
<td>1.1572</td>
<td>0.2542</td>
</tr>
<tr>
<td>Personalization</td>
<td>0.4832</td>
<td>0.1400</td>
<td>3.4524</td>
<td>0.0014</td>
</tr>
<tr>
<td>Word-of-mouth</td>
<td>0.0960</td>
<td>0.1264</td>
<td>0.7594</td>
<td>0.4522</td>
</tr>
<tr>
<td>Trendy and interesting posts</td>
<td>0.1583</td>
<td>0.1059</td>
<td>1.4950</td>
<td>0.1430</td>
</tr>
<tr>
<td>Size of targeted audience</td>
<td>0.1161</td>
<td>0.1228</td>
<td>0.9458</td>
<td>0.3501</td>
</tr>
<tr>
<td>Customer trust</td>
<td>0.0095</td>
<td>0.1260</td>
<td>0.0758</td>
<td>0.9400</td>
</tr>
<tr>
<td>Involvement of influencers</td>
<td>-0.2477</td>
<td>0.1167</td>
<td>-2.1230</td>
<td>0.0402</td>
</tr>
<tr>
<td>Developing loyal fanbase</td>
<td>0.0588</td>
<td>0.1206</td>
<td>0.4875</td>
<td>0.6286</td>
</tr>
</tbody>
</table>

3 The R-square values show the accuracy of model prediction and help to reveal whether more variables are needed.
4 P-value helps to identify the significant factors by checking those with values less than 0.05.

A crucial result from Table 3 is that the regression model had an R-square value of 0.5142, which means that the variables considered had a prediction accuracy of 51.42%. The model's accuracy is quite high but can be improved by adding more variables, such as consumer behavior patterns. Nonetheless, Table 4 result shows that the regression model was significant in predicting online sales, as shown by an ANOVA p-value of 0.001, which is less than 0.05. The result in Table 5 also revealed that two factors related to social media channels significantly affect online marketing and sales. Specifically, the result showed that social media channels enable the spreading of word of mouth by consumers based on personal experiences, thereby significantly improving the marketing of products ($\beta_4 = 0.4832; p = 0.0014 < 0.05$). The finding confirmed the first alternative hypothesis, $H_1$, showing a significant relationship between using social media and the marketing effect.

The result suggested that for effective marketing, companies should seek customers' views on products to ensure the marketing process is supported by customers' word-of-mouth rather than relying solely on the company.
commercials posted on social media. Additionally, the result in Table 5 showed that social media enables the development of loyal fans, which can significantly reduce online sales ($\beta_9 = -0.2477; p = 0.0402 < 0.05$). The finding confirmed the second alternative hypothesis, $H_2$, indicating that social media channels have a negative and significant effect on Jordanian e-commerce expansion. Although the result was unexpected, it suggested that developing loyal fans on social media means that any company's perceived comments that go against conventional beliefs and views of followers can lead to an exit of many fans and a significant reduction in online sales by the company.

4. Conclusion
The current section presents a discussion of key findings from the survey. The subtopics covered include the social media channel's impact on marketing and the social media channel's effect on e-commerce expansion. Moreover, the study's limitations and recommendations are presented.

The first research objective involved exploring how social media channels affect marketing by Jordanian firms. The regression finding obtained showed that the social media feature of word-of-mouth recommendations by customers has a positive and significant effect on the Jordanian firm's marketing strategies. The finding implied that when customers spread brand awareness on social media, the marketing effect is more significant than when companies initiate the process. The result is similar to that of Kumar and Singh, who underlined that creating engaging content on social media ensures customers can share their experiences regarding product usage, leading to increased brand awareness [13]. The result can also be explained by Makrides, Vrontis, and Christofi, who observed that social media channels enable customers to engage with other users on product quality and performance, influencing them to buy such products [10]. However, the obtained findings contrast the views of Lin et al., who explained that social media is only a mediating factor between individuals' previous experience with using a brand and their intention to purchase [12]. In this case, social media is used to validate what the individuals already believe regarding a specific brand. Therefore, from the results and literature, it is realized that social media channels can significantly and positively impact marketing when social media managers develop exciting content that encourages customers to engage and share their first-hand experiences of using a product.

The second research objective was to explore social media channels' impact on e-commerce expansion in Jordan. The regression result from the analysis indicated that the social media development of loyal fans has a negative and significant effect on e-commerce expansion. The result implied that social media could adversely affect e-commerce expansion and sales when companies fail to align their posts with loyal fans' expectations. In such instances, conflicting views with loyal fans may mean a sudden decline in the purchase of company products, leading to e-commerce contraction. The finding is aligned with the views of Attar et al., who observed that consumer purchase intentions on social media are often influenced by their e-satisfaction and trust levels based on perceived brand credibility [11]. The obtained finding also resonates with the views of Javid et al., who noted that companies depicted an increase in online sales with an increasing number of loyal fans on social media [9]. However, the obtained result contrasts the views of Lin et al., who explained that customers' intention to buy is mainly shaped by their previous experiences and that social media is only a mediating factor in verifying their perceptions regarding a brand [12]. From the obtained findings and literature, Jordanian firms should strive to meet customer expectations and provide positive experiences when engaging on social media to reduce the risk of loyal fans leaving and improve brand image and sales.

5. Recommendations and future studies
The first recommendation for practice is that Jordanian firms should develop engaging social media content to ensure customers can willingly express their word-of-mouth views regarding experiences using a brand. The strategy can ensure more new customers purchase the brand because they become convinced of the quality of the specific product. The second recommendation is that companies should depict caution when posting social media content that contrasts with the contemporary views of followers. The strategy is crucial in ensuring loyal fans do not boycott the companies' products due to conflicting ideologies.

Moreover, future studies should employ qualitative data to gain detailed insight and better explain the findings noted in this research. In particular, future studies should explore the reason for the conclusions obtained, showing that increasing the number of loyal fans on social media can lead to reduced online sales. The other recommendation for theory is that more studies are needed in several countries other than Jordan to improve.
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Declaration of competing interest
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