

## **The Impact of Supply Chain Practices on Customer Satisfaction through Social media in Jordanian Electronics Selling Companies**

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### **Abstract**

*The study aimed to identify the impact of supply chains on customer satisfaction through the social media of Jordanian companies selling electronics. A questionnaire was designed to collect data for the study. The study sample comprised (250) participants to whom the questionnaire was distributed. Only (205) of them were retrieved and the rest were excluded, as they were invalid for statistical analysis. Data analysis was conducted using the IBM-AMOS version 26 software. Results of the study unveiled that there is an impact with statistical significance of the supply-chain practices on customer satisfaction, through social media, pertaining to Jordanian companies selling electronics. Based on the findings the researchers came up with, they recommend that Jordanian companies should pay more attention to social media to reach the largest number of customers, especially youth.*

**Keywords:** *Customer satisfaction; Electronic vendors; Social media; Supply chains.*

### **1. Introduction**

The world has recently witnessed a drastic and remarkable development in all fields, especially the fields of communication and information technology which complicated the business environment. Thus, contemporary organizations ran their businesses and activities in a milieu characterized by competition and severe disturbances (Aityassine et al., 2021; Al- Quran et al., 2020). The increasing widespread of the internet and the incessant needs of customers obliged business organizations to adapt themselves to meet such needs. Such a thing impacted all actions of the organization ending up with what is known as electronic companies, manifested in supply chains that are controlled electronically (Al-Alwan et al., 2022; Al-khawaldah et al., 2022; Al-Nawafah et al., 2022). In light of such changes affecting local and international milieus, the organizations to survive had to intensify relations with their customers and meet their needs by using technology which enables them to make binary interaction much easier. (Alolayyan et al., 2018; Rigby, Darrell, Reicheld & Schefter, 2002) pointed out that many organizations started using electronic applications, like social media networks, to run customer relations to consolidate their activities with the aim of developing and reinforcing outstanding relations with them. (Hongthong & Chun Tan, 2013) also pointed out that customers should be provided with what they need at reasonable prices which is the key to satisfaction. This can be achieved through the active running of companies' supply chains. Supply chains constitute the structures, decisions, and electronic contacts used in providing electronic products by the supplying companies; that cover products' quality, way of presenting them, in addition to delivery (Alshawabkeh et al., 2022;

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AlTaweel & Al-Hawary, 2021; Alolayyan et al., 2022; Al-Awamleh et al., 2022). Whenever such electronics are publicized and immediately bought online, contacts start to verify quality through the internet and diversified means. Contacts with customers, willing to buy electronic commodities, are conducted via numerous electronic communication media available on the company's site, or through the electronic communication posted on these commodities (Al-Abbadi et al., 2022; Mohammad et al., 2022; Khalayleh & Al-Hawary, 2022; Mohammad, 2020; Mohammad, 2019 ).

Recently, labor organizations, due to the massive spread of information technology, rapid development, and corona pandemic, tend to use electronic applications to win customers' satisfaction through social media like: (Facebook, Snapchat, and Instagram). The motive behind conducting the current study was to detect the impact of supply chains' practices on customers' satisfaction through social media with regard to companies selling electronics in the greater city of Amman.

## **2. Theoretical framework**

### **2.1 Supply chains practices**

The concept of supply chain management has been changed to electronic supply chain management, due to the spread of information technology and re-engineering of organizations' processes. Laudon & Laudon (2017) called such organizations digital foundations because all business contacts with customers and suppliers were conducted digitally. (Aityassine et al., 2022; Kurdi et al., 2023; Ross, 2003) provided a clearer interpretation of the term Electronic Supply Chain Management (e. SCM) as a network of independent partners who only distribute products and special services of supply chains. They also orchestrate the abilities and resources of supply chains to secure competent operation and leadership in the market.

*Product flow:* This includes the flow of commodities between supplier and customer. It also includes any commodities returned by the customer, a system for orders' listing, shipments' sizes, and time of execution by listing plans for production processes to achieve the programmed product distribution (AL-Zyadat et al., 2022; Keely, et.al., 2005).

*Information flow:* This includes order sending and delivery status updating. Due to that, a communication and information system should be available to analyze and save data because accurate information reduces errors in the comprehensive and integrated performance of supply chain management. It also helps avoid errors in the export process. Having a competent and comprehensive information system helps in the flow of correct information regarding the place and time pertaining to the product, changes relevant to prices, and international and local markets (Rahamneh et al., 2023; Keely, et.al., 2005).

*Cash flow:* This includes credit terms, payment plans, shipment, ownership regulations, and purchases. This job is associated with order expectations, search for supply sources through the assessment and choice of competent and dependable suppliers to get competitive prices, etc. (Attiany et al., 2023; Al-Rwaidan et al., 2023; Keely, et., al. 2005). In addition, the flow includes financial feeding that comes from the production and distribution of commodities through producers, suppliers, and distributors (agents) (AlBrakat et al., 2023; Kopczak, & Johnson, 2003).

### **2.2 Social media**

This might be defined as a set of technologies and channels whose aim is to create a massive society of cooperative and fruitful participants. Tools of information technology, throughout decades, were made to support such cooperation (Al-Hawary & Al-Syasneh , 2020; Bradley, 2010). Another definition of the term states that social media is a set of new electronic means of information that partially or wholly share the following

characteristics: sharing, openness, awareness, dialogue, coherence, interdependence, and interaction (Hagetry, 2008). There are four dimensions of social media which are:

*Facebook:* This social media term spread on a large scale throughout the past years. It was first founded to support college networks only but later spread unlimitedly (Allison, 2008). Facebook helps users to interact with friends, co-workers, and families. It was founded in 2004 and is now considered a site for social interaction which 500 million people share (<http://www.facebook.com/>). The Facebook platform has certain features that enable the user to perform several tasks such as: creating a personal page, displaying images, sharing content with others, and communicating with them, in addition to sending messages and getting in direct contact with others. (Papacharissi, 2009).

*Snapchat:* This application was launched in 2011 by (Evan Spiegel & Bobby Murphy). The idea behind creating this application was: to send images that disappear after 24 hours, record a ten-second video, and benefit from the application's filtering quality (<https://ar.wikipedia.org/wiki>).

*Instagram:* It is an application for exchanging images between smartphones. The application allows users to take pictures, edit, upload, and share them with a variety of social networks. It is mostly favored by young people.

### 2.3 Customers' satisfaction:

Organizations try to meet and satisfy the desires of customers by providing products that meet their needs. These organizations are unable to identify such needs except by collecting data about the factors that affect customers' behaviors. Such an issue obligates collecting relevant comprehensive information on their purchase behavior for analysis. Such desires can't be propitiously met (Alhalalmeh et al., 2022; Omari, 2015). Satisfaction has three major dimensions which are:

*Customers' complaints:* Dealing with this issue is one of the most important things that serve customers; Not listening to them is bad, but the worse is not feeling with the customers (Amal Ben Khoja, 2014).

*Purchase repeat:* The purchase repeat reveals that the customer's satisfaction is achieved and his needs are met (Bayeh, 2008). Therefore, the required balance is achieved and purchase repeat will be guaranteed (Kahl & Close, 2011).

*Returns:* These are the products that are returned for several reasons. For example, whenever any product is defective or doesn't meet the customer's expectations, the return process starts and a return request for that product is issued; the company then initiates the return process.

### 2.4 Supply chain practices, Social media , and customer satisfaction

The study of (Jbouri, 2020) aimed to identify the mediating role information technology plays in the integrity of the supply chain with its dimensions (integration with suppliers, distributors, and customers) on sustainability with its (social, economic, and environmental) dimensions in Iraqi oil distribution company. Based on the findings, the study recommended that the company should constantly concentrate on integration with all elements of the supply chain, especially with suppliers. It also recommended continuing with the activities that reinforce social and environmental sustainability, besides applying information technology.

The study of (Masarweh, 2019) attempted to measure the impact of information technology with its dimensions (program tools, human resources, networks, and databases) on the integration of supply chain management (suppliers, customers, and operations) in the Al-Manaseer group. The study concluded that technological information had an impact with statistical significance on the integration of supply chain management. The study recommended identifying the information technology concept,

applying it to competition processes, and increasing awareness of Manaseer’s higher management about the importance of the supply chain, one of the most essential concepts in modern management.

The study of (Mcttaney &Sheu, 2020) revealed that there was a relationship between social media applications (Facebook, Linked In, and Twitter) supply operation Business to Business (B2B) in particular. Social media is used as a framework to discover the way it could be used in the settings of supply chains B2B. The study presented management implications on social media deployment in the supply chain. The study by (Drejerska, Golebiewski & Fiore, 2019) attempted to identify how consumers can actively enjoy shopping. Social media provides a good opportunity for producing farmers to reinforce their relationship with consumers by establishing short-term supply chains. The study also examinedfarmers’ and companies’ use of social media. Based on above, the study hypotheses can be as:

H1: There is an impact of supply chain practices on customers’ satisfaction through social media

### 3. Study model

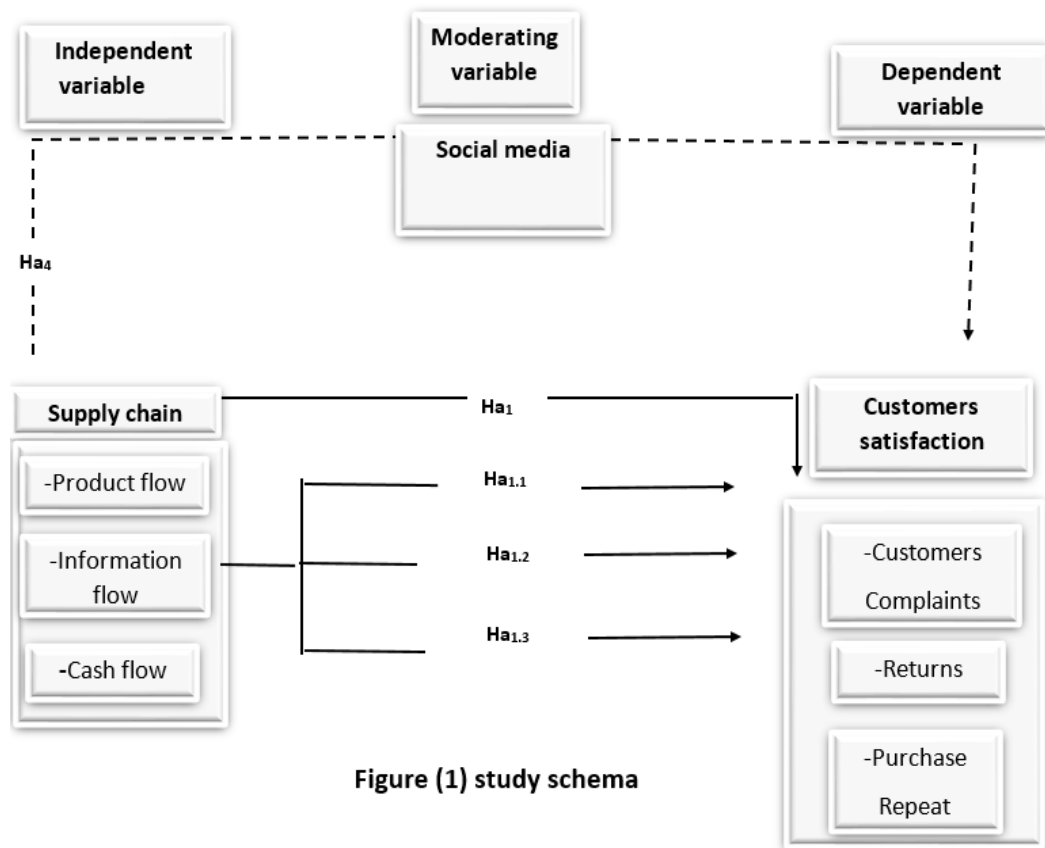


Figure (1) study schema

### 4. Methodology

#### 4.1 Study population and sample

The population comprises Jordanian companies that sell electronics: The researchers selected a propitious sample of (250) participants. A questionnaire was distributed to employees of these companies of which (212) responses (84.8%) were retrieved. After verifying the collected data, (10) responses were excluded for invalidity. Thus, the total

number of the questionnaire, subject to statistical analysis, was (202) with a percentage of (80.8%). Analysis unit of job position comprised (manager, assistant manager, department chair, administrative employee, and technician).

Table (1) provides personal and job information about members of the study sample as follows:

Table (1): Personal and profession characteristics of study sample members

Variable	Group	Frequency	Percentage %
Gender	Male	125	62.88
	Female	77	38.12
Age group	Less than 20 years	13	6.43
	20-30	52	25.74
	30-40	64	31.68
	40 and more	73	36.15
Academic qualification	General certificate of Education (GCE)	8	3.96
	Intermediate diploma	52	25.74
	B. A	111	54.95
	M.A	27	13.37
	Ph.D.	4	1.98
Job experience	Less than 5 years	15	7.43
	5-10	25	12.38
	10-15	15	7.43
	15-20	115	56.92
	20 and more	32	15.84
Job title	Manager	25	12.38
	Assistant Manager	27	13.37
	Chairman	52	25.74
	Administrative employee	88	43.56
	Technician	10	4.95

#### 4.2 Multicollinearity test

The following tests: skewness, variance inflation, and tolerance were administered to ensure data integrity of analysis of the multicollinearity hypotheses. It was found that there was no correlation between this test and independent variables according to the results of variance inflation Factor (VIF) and (Tolerance) test pertaining to each variable of the independent ones, taking into consideration that (VIF) never exceeds the value (10) and the (Tolerance) value should not also be higher than (0.05). The natural distribution of data was secured through computing (skewness) coefficient. When data are naturally distributed, the value of the skewness coefficient will be between ( $\pm 1$ ). The following table (2) presents the results of such tests.

Table (2): Tests of (VIF), Tolerance variance, and skewness coefficient

Collinearity Statistics			
Dimensions of the independent variable	Variance coefficient VIF	Tolerance variant	Skewness
Product flow	3.055	0.327	0.134
Information flow	4.061	0.246	0.240
Cash flow	3.423	0.155	0.642
Facebook's means of communication	4.969	0.106	0.417
Snapchat means of communications	3.984	0.214	0.362
Instagram means of communication	2.324	0.143	0.410

Table (2) shows that the results of (VIF) for all dimensions of the independent and mediator variables were less than (10), ranging between (0.143-0.327). This indicates that there was no high correlation of (Multicollinearity) between dimensions of the

independent and mediator variables. Computing skewness coefficient whose value was confined to ( $\pm 1$ ) confirms that data are naturally distributed.

#### 4.3 Descriptive analysis

Table (3) shows that the mean for dimensions of supply chain variables was (3.59) which reflects that Jordanian electronic companies have achieved a mean of “Medium” significance. Information flow was rated first with a (3.70) mean and (0.87) deviation, while the cash flow mean was (3.62) and (0.83) deviation. The product flow rated last with a (3.45) mean and (0.89) deviation.

Table (3): means and standard deviations of supply chain dimensions

T-test	Supply chains	Mean	Std	Rank	Significance
1-5	Product flow	3.45	0.89	5	Medium
6-10	Information flow	3.70	0.87	1	High
11-15	Cash flow	3.62	0.83	2	Medium
Total mean for supply chain dimensions		3.59	Medium		

The following table illustrates the mean for of the independent variable of social media.

Table (4): means and deviations of the social media variable

T-test	Social media	Mean	Std	Rank	Significance
16-20	Facebook	3.44	0.92	1	Medium
21-25	Snapchat	3.31	0.87	3	Medium
26-30	Instagram	3.42	0.96	2	Medium
The total mean of social media		3.34	Medium		

Table (4) shows that the total mean of using social media variable by the companies of concern was (3.34) with a “medium” significance; face book rated first with (a 3.44) mean and “medium” significance. Instagram rated second with (3.42) mean and “medium” significance; while Snapchat rated last with (3.31) mean and “medium” significance.

As for customers’ satisfaction, the means and standard deviations of responses were calculated as presented in table (5).

Table (5): means and deviations for responses concerning customers’ satisfaction

T-test	Social media	Mean	Std	Rank	Significance
31-35	Complaints	3.54	0.79	1	Medium
36-40	Returns	3.19	0.88	3	Medium
41-35	Purchase repeat	3.28	0.72	2	Medium
The total mean of customers satisfaction		3.38	Medium		

Table (5) reveals that the responses of sample members ranged between (3.28-3.54). The significance level for all dimensions of customer satisfaction ranked “medium” rating first after complaints whose mean was (3.54) and second after returns whose mean was (3.28).Purchase repeat rated last with (a 3.19) mean. The total mean for the satisfaction variable ranked “medium” with a (3.38) mean.

## 5. Analysis

The supply chains have a statistical functional imp. The supply chains with their aggregate dimension have a statistical functional impact on customers’ satisfaction, through social media, at the function level ( $\alpha \leq 0.05$ ) in Jordanian electronics companies. This hypothesis was selected by making use of Amos v.23 together with the Statistical Package for Social Sciences (SPSS) to verify the direct and indirect influence of aggregate supply chains on customer satisfaction. Table (6) elucidates the results.

Table (6): Test results of the study hypotheses by outcomes of path analysis of Amos programming

Domain	Chi <sub>2</sub>	GFI	CFI	RMSEA	Sig*	Values of direct impact coefficients		Value of indirect impact coefficients	Total impact	Calculated T	Sig*
Supply chains for customers' satisfaction via social media	32.947	0.96	0.97	0.05	0.00	Supply chains for customers' satisfaction	0.428	0.256*	0.428	11.385	0.00
						Supply chains in social media	0.517			0.517	13.544
						Social media in customers' satisfaction	0.495	0.428 + (0.495) × (0.517)	0.495	15.741	0.000
						Customers' supply chains via social media			0.684	14.997	0.000

- GFI : The goodness of the Fit Index must be Proximity to one
- CFI : Comparative Fit Index Must be Proximity to one
- RMSEA : Root Mean Square Error of Approximation (0.08,0.05)
- SC : Supply Chain
- CS : Customer Satisfaction
- SM : Social Media

The results in table (6) reflect the influence of social media as follows: the calculated (chi<sub>2</sub>) value was (32.947) at the function level ( $\alpha \leq 0.05$ ); the Goodness of fit index (GFI) was (0.96), approximate to one, complete suitability; comparative Fit Index (CFI) was (0.97), approximate to one; Root Mean Error of Approximation (RMESA) was (0.05), approximate to zero; the direct influence on customers' satisfaction was (0.428), while that influence on social media was (0.517) which reflects that social media affects chains. The direct influence of social media with its aggregate dimensions on customer satisfaction was (0.495) which reflects the influence of the media. The indirect influence of the chains on customers through the media as a mediator variable was  $(0.495 * 0.517 = 0.256)$  which shows that social media improves customer satisfaction. About the impacts of (T) calculated value on paths (1), at the level ( $\alpha \leq 0.05$ ), they were as follows: (Chainscustomers' satisfaction), it was (11.385) on the second (chainssocial media), it was (13.544) and on the third (social media customers' satisfaction) was (15.741). Such results reveal that supply chains influence customers through media. It also confirms the assumption of the fourth hypothesis that the supply chains, with their aggregate dimensions, affect customers' satisfaction through social media at the function level ( $\alpha \leq 0.05$ ) in Jordanian companies of electronics.

The following figure (2) illustrates such an influence.

Figure 2

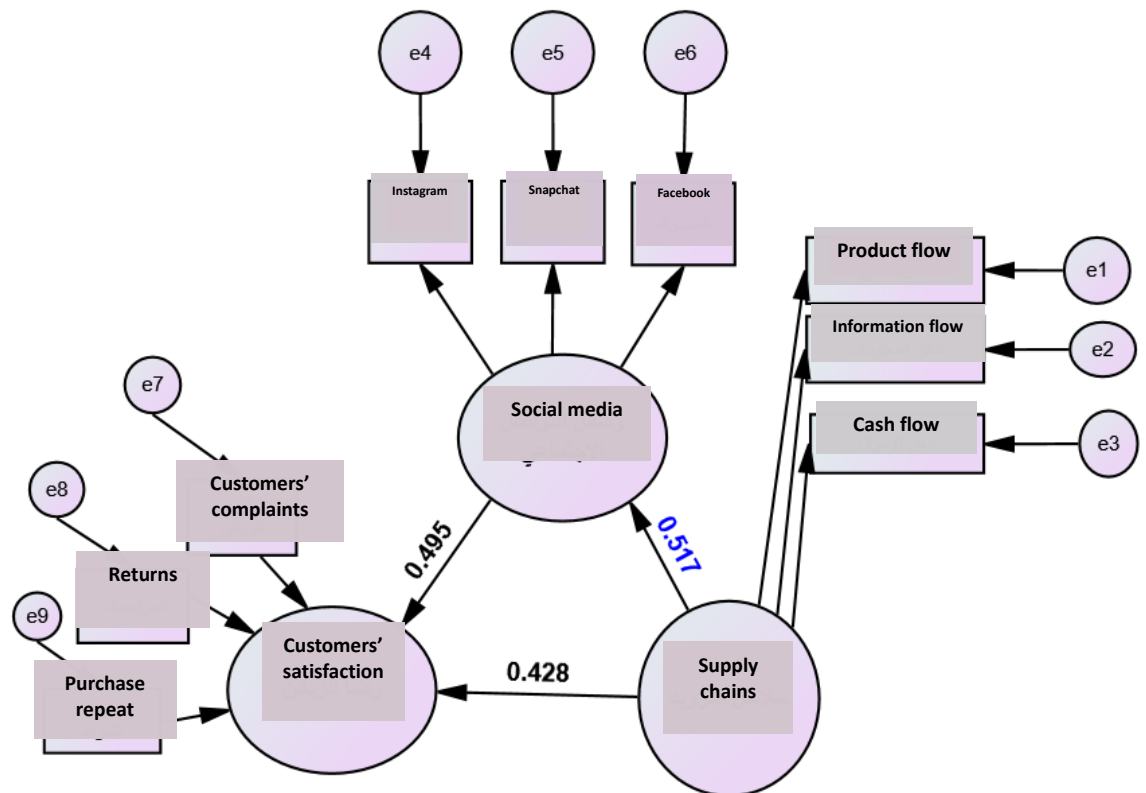


Figure (2): Impact of supply chains on customers' satisfaction with Jordanian electronics companies through social media

## 6. Results

The results might be outlined in the following:

SPSS results of the study hypothesis indicated that there was a direct statistical significance reflected in the (0.428) value and an indirect one in the value (0.495) in the supply chain, with its aggregate and separate dimensions, on customers' satisfaction in the presence of social media with its aggregate dimensions as a mediator variable. The researchers' path analysis was conducted through the application of (Amos V:23). Based on Spss results, the researchers see that the growing interest in supply chain practices will be reflected by the influence of social media. Consequently, the companies of concern showed more interest in using social media as a means of customer satisfaction, the subject of this study.

## 7. Recommendations

With reference to findings of the study, the researchers would like to recommend the following:

- 1- To show more interest in social media as to reach more consumers, especially youth who are the major concern for such companies.
- 2- To focus on developing promotion techniques by using modern technology, websites, and the internet to identify the needs and problems of consumers.
- 3- To encourage companies to intensively promote safe payment via social media means by which many consumers like to purchase.
- 4- To create files for the customers who deal with the companies and to constantly contact them through messages or WhatsApp to maintain contacts.



5- To recommend companies conduct referential comparisons to benefit from the pioneering ones in the field of electronic supply to learn and to constantly improve supply chains.

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