

The Effect of Information Overload, and Social Media Fatigue on Online Consumers Purchasing Decisions: The Mediating Role of Technostress and Information Anxiety

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Abstract. This study aims to test the effect of information overload, information anxiety, and social media on online purchasing decisions. To achieve this goal, the deductive method was used by a means of the quantitative approach, and the data were collected using an electronic questionnaire consisting of a set of ready-made scales used in previous studies. The number of participants was 326 online shoppers. A structural equation modeling was used to test the study hypotheses using Amos 26 software. The study reached a set of results, the most important of which is that the availability of excessive product information negatively affects information anxiety, and social media stress effects on online purchasing decisions as well as to its impact on the occurrence of information concern. The current study contributes to achieve practical implications represented in the need of marketers to resort not to exaggerate the presentation of the information displayed in their products in order to prevent buyers from getting anxious. To solve this problem, the study proposes the establishment of governmental or private regulatory agencies via the Internet that work to control and standardize information related to products.

Keywords: Information overload, online purchase, information anxiety, technostress

1. Introduction

Information technology and e-commerce have changed the way consumers purchase products. These technologies have provided shoppers with many benefits such as: saving the costs of moving between stores in traditional shopping, and the availability of information that helps to choose the most appropriate products (Sarkar 2011). Social media is one of the most important contemporary technologies used in electronic shopping (Komodromos, Papaioannou, and Adamu 2018; Long et al., 2022).

Despite these benefits, the use of information technology led the shopper to obtain a very large amount of information. In the era of mobile Internet, users are forced to handle too much information (Fu et al. 2020). This is reflected negatively on Internet users generally in the so-called the phenomenon of information overload. Some studies have indicated that the consumer's behavior may be affected by information overload due to the amount of information on the Internet (Chang Lee et al. 2013).

Information overload is a serious problem that affects individuals' perception of a topic due to the availability of a large amount of information (Shrivastav and Hiltz 2013).

The phenomenon of information overload is one of the main challenges of the information age (Roetzel and Fehrenbacher 2020). It has faced all groups of individuals in the information society, including consumers who practice online shopping so that purchasing decisions have become more difficult due to the phenomenon of information overload. Infact, information overload is not new, but what is new is the exacerbation of this phenomenon with the existence of the Internet and the information technology revolution (Al-Kumaim 2020). The mental abilities of individuals such as perception and memory contribute greatly to the occurrence of the phenomenon of information overload (Gunaratne et al. 2020).

The process of online shopping is characterized by the fact that there is less direct interaction than it is in the traditional shopping, which is reflected in the difficulties that buyers face when the information on products is vague and complex (Li 2017).

Many studies have addressed the issue of information overload in many areas, including decisions in general (Hwang and Lin 1999; Phillips-Wren and Adya 2020), but few of them have examined the effect of this phenomenon on online purchasing decisions. On the other hand, few studies have examined the characteristics of social media network services and their role in information overload (Lee, Son, and Kim 2016).

Despite the literature results, the mediating role of information anxiety between information overload and purchasing decisions remains unclear. The literature review indicated that the mediating role of information anxiety between media fatigue and purchasing decisions was not studied by other researchers.

The main purpose of this study is to find out the best way for reducing the negative effects of information overload. This study aims to determine whether the online purchase decision is affected by the amount of information available to the shopper; in addition, to identify the role of social media fatigue and technostress on product selection.

The current study assumes that there exist many factors which reduce the ability of online shoppers to purchase products such as: information overload, information anxiety, and stress resulting from the use of social media and technostress.

This study contributes to identify the effect of information overload on the method used by shoppers when purchasing products over the Internet.

Research questions:

- Does increasing information overload reduce consumers' ability to make online product purchase decisions?
- Does the increased information overload lead to information anxiety for internet shoppers?

The current study consists of seven main sections. The first section is the introduction, which aims to explain the research problem. The second one is concerned with reviewing the literature. The third one includes the development of the research model and its hypotheses; the fourth one includes the research methodology. The fifth section is for data analysis. The sixth section is devoted to discuss the results whereas seventh section is about the future studies.

2. Related Works

This section presents the most important theoretical aspects related to the study variables and the most important findings of the previous studies.

2.1. Information overload

Information overload has been studied in the information systems literature as a negative phenomenon (Umeozor 2017). According to it, individuals receive information that exceeds their capabilities to deal with (Islam, Whelan, and Brooks 2018; Mustapar, Abdullah, and Noor 2016).

The information load is generally divided into two types: overload and underload (Hwang and Lin 1999). In the current study, the second type will be dealt with, which is the information overload due to the abundance of information available on the Internet. There are several terms which are synonymous with information overload infobesity (Gouws and Tarp 2017; Renjith 2017). The authors will adopt the term information overload as one of the most common terms.

Indeed, there is no a single universally agreed definition of information overload (Bandyopadhyay and Zafar 2017); despite this fact, the literature agrees that overload occurs when the information is of an uncertain, complex, or ambiguous nature (Hu and Krishen 2019). The term overload is one of the terms that include many fields

and which generally represents the increase in a phenomenon that exceeds the ability of individuals to deal with it (Zhang et al. 2016).

From a technological perspective, information overload is one of the dimensions of technological overload, system feature overload, and communication overload (Karr-Wisniewski and Lu 2010).

The term information overload was first used by Bertram Gross in his book entitled *The Managing of Organization* which was published in 1964 (Renjith 2017). The term was later used by Alvin Toffler in his book (1970) *Future Shock* (Kliwer, Phillips, and Massanelli 2017). The problem of information overload is one of the problems individuals face in contemporary societies (Renjith 2017).

The decision-making process is influenced by the way individuals perceive the environment around them; and perception indeed affects the way individuals deal with information (Chen et al. 2018). Processing information from an administrative perspective means the amount of information that the decision-maker can use in the decision-making process during a specific period.

In the context of organizations, Hwang and Lin (1999) found that there is a relationship between information overload and the ability of managers to process information for the decision-making. it reduces decision makers' ability to make the best possible decision (Roetzel and Fehrenbacher 2020), and reducing the quality of decisions (Letsholo and Pretorius 2016). Zou and Webster (2014) found that information overload has a negative effect on performance. On the other hand, information anxiety is considered as the negative consequences of information overload (Eppler and Mengis 2004; Gouws and Tarp 2017). Information overload results in many negative states such as: the loss of time, frustration, and stress (Umeozor 2017); as well as information loss, forgetting, or distortion (Heylighen 2002).

Indeed, information overload in the context of the shopping process means the amount of information that a consumer receives before making a purchase decision (Huang and Zhou 2019). One of the reasons that encourage Internet shoppers to expand their access to product information is the easiness of obtaining information and the low costs of obtaining it (Su 2008). Ding, Zhang, and Wang (2017) have indicated in their study that the information overload leads to a decreased purchase decision-making.

Although the Internet provides vast amounts of information, much of it is not homogeneous, which causes information overload (Schmitt, Debbelt, and Schneider 2018). This means that this phenomenon does not occur only because of the large number of information but because of the content of the information.

One of the reasons that leads to the phenomenon of information overload is that the time available for the decision-maker to deal with the information is less than the time required to process this information (Letsholo and Pretorius 2016). From a

cognitive perspective, an overload occurs when the information received by an individual exceeds the cognitive limits (Zhang, Ding, and Ma 2020).

Based on previous studies, the causes leading to the information overload can be classified into: personal (Sasaki, Kawai, and Kitamura 2015), informational (Eppler and Mengis 2004), functional (Roetzel and Fehrenbacher 2020) and technical factors. The present study relies on the subjective perspective of being more compatible with the consumer behavior.

As for personal factors they are, in fact, associated with the abilities of individuals to assimilate and process information and to depend greatly on mental abilities, as well as the psychological state.

As for informational factors, they are related to the information itself and depend on two elements: the amount of information and the degree of clarity.

Concerning technological factors, most researchers agree that information technology plays two roles at the same time, as it contributed to increase the information overload and at the same time to reduce it (Bock et al. 2008). For example, using search engines retrieves far more information than any person can handle with the returned results. On the other hand, functional factors are those factors that are associated with work characteristics such as job stress (Roetzel and Fehrenbacher 2020).

The traditional way to address information overload is to filter the information by excluding information of little importance (Mahdi et al. 2020). In the context of dealing with internet shoppers, the information overload is countered by identifying the products by reading a few reviews that suit their needs (Kwon et al. 2015).

Depending on the previous ideas, (most)researchers believe that information overload is of several inputs that become much greater than the ability to process, which makes decision-makers have a limited ability to know the cognitive processing and therefore when an overload of information occurs, it is possible that a decrease in the quality of the decision.

In fact, the quality of information contributes clearly to positive decision-making (Hu and Krishen 2019). Eppler & Mengis (2003) and Roetzel and Fehrenbacher (2020) found that the quality of decisions increases when the amount of information available to the decision-maker increases to a certain level, and then after increasing information about that level information overload.

2.2. Information anxiety

Information anxiety is the tension that occurs due to the inability of individuals to access the necessary information, or the inability to understand it; and this is a consequence of information overload (Shrivastav and Hiltz 2013). It is a state of tension that results in individuals' inability to access the required information, or the inability to understand it (Bawden and Robinson 2009).

The online shopping environment is a fertile area for the phenomenon of anxiety among shoppers due to the risks that they are likely to face, which may be a breach of privacy or a credit card fraud (Celik 2016). One of the reasons that lead to a state of information anxiety is information overload (Bawden and Robinson 2009). As a result, the increased use of technology leads to increased informational anxiety (Eklof 2013).

2.3. Social media fatigue

Social media is an online service that aims to establish social relationships between individuals who have common interests (Luqman et al. 2017). Social media shopping has become more important than ever, as a must (Kim 2021).

In fact, there are two types of fatigue that individuals can experience: psychological and physiological (Ravindran, Yeow Kuan, and Hoe Lian 2014). The Yao, Phang, & Ling (2015) study found that psychological fatigue negatively affects the individuals' behavior. On the other hand, social media fatigue is the negative emotional impact of social media use (Zhang et al. 2016). Sometimes, it is called "social media burnout" (Han 2018). This phenomenon is characterized by a lack of desire to use these platforms (Liu and Ma 2018).

As a result, marketers realized that the use of social media has become an important part of their marketing strategies to reach the largest possible number of buyers (Akar and Topçu 2011). Social media marketing is defined as the use of social media platforms to promote the company's products (Akar and Topçu 2011). There are many symptoms related to technical fatigue, the most prominent of which is the individual's inability to focus attention, irritability, and a feeling of losing control over work (Ibrahim, Bakar, and Nor 2007). Some studies have found that media fatigue occurs for a variety of reasons, including information overload (Luqman et al. 2017).

Consumers obtain information about products from various sources, including the interaction between them through social media (Clemons 2009).

2.4. Technostress

The term technostress was first used by the psychologist Craig Brod in 1984, describing it as a disease that occurs due to the inability of individuals to deal with information and communication technologies (Ayyagari et al. 2011). Stress is commonly known as the perceptual state that individuals face when the demands on their environment exceed the limits of their ability to satisfy them (Tarafdar, Tu, and Ragu-Nathan 2010). Liu & Ma (2018) argue that social media addiction is a source of overload.

There are many types of stress that individuals can be exposed to; and one of these types is ICT stress, which is called technostress (Qi 2019). Stress is generally defined as a condition that individuals face when the volume of requests is greater than the number of available resources (Phillips-Wren and Adya 2020). Maier et al.'s study (2015) showed that social media use contributes to stress. Technostress is

defined as the psychological state related to the fear or unwillingness to use information technologies (Hartog 2017). It is a stress caused by the use of information technologies (Tarafdar, Cooper, and Stich 2017). It is the pressure resulting from the inability of individuals to deal with the changes taking place in information technology due to negative attitudes (Zainun, Johari, and Adnan 2019).

2.5. Purchase decision

From an administrative point of view, the decision is intended to select an alternative from a group of alternatives. Clients make purchasing decisions in order to satisfy their needs (Shah, Zahoor, and Qureshi 2019). In fact, the quality of information influences decisions to purchase products online (Lin et al. 2019).

3. Research Model and Hypothesis Development

The research model shown in Figure 1 was developed by depending on a number of previous literature to study the effect of a group of factors on the decisions to purchase products over the Internet, as a dependent variable. The information overload has been chosen because it is one of the factors that most Internet users are exposed to, which is expected to lead to a state of information anxiety. Since electronic shopping operations occur through information technology and social media, the variables related to their negative states have been chosen, namely technostress and social media fatigue as two independent variables that influence purchasing decisions.

3.1. Information overload and purchase decision

The stress caused by information overload negatively affects the quality of decisions (Marsden, Pakath, and Wibowo 2006). Because the information overload exceeds the capacity of decision-makers, some information is selected and processed at the expense of other information that may be more important (Phillips-Wren and Adya 2020). The results of the previous studies have shown an inverse relationship between information overload and purchasing decisions, so the more information is loaded will lead to a decrease in the quality of decisions to buy products from online stores (Chen, Shang, and Kao 2009). The study of Huang & Zhou (2019) concluded that perceptual information overload is negatively related to the quality of consumers' decisions. Depending on the mentioned above, the following hypothesis can be formulated:

H1: Information Overload (IO) positively related to Purchase Decision (PD)

3.2. Information overload and information anxiety

Although some researchers regard information anxiety as a synonym for information overload (Vinet and Zhedanov 2011), the findings of Girard (2005) indicate that they are two different things, and this is what the current study adopts. One of the previous

studies showed that individuals who suffer from social anxiety related to internet use ignore information when exposed to information overload (Hwang et al. 2020). Eklof (2013) mentioned that information anxiety arises from multiple factors, including information overload. Swar, Hameed, & Reyhav (2017) have found an association between information overload and the occurrence of negative psychological states such as: stress and anxiety. By depending on the above, the following hypothesis can be formulated:

H2: Information overload (IO) positively related to information anxiety (IA)

3.3. Technostress and information anxiety

The use of information technology sometimes leads to problems for users, which are technostress (Ayyagari et al. 2011). Technostress causes anxiety for users of information technology (Yang and Lin 2018). Technostress causes two types of physical problems, such as: eye strain and back pain; psychological problems are like: depression and anxiety (Tagurum YO, Okonoda KM, Miner CA 2017). Some studies, including the study (Gudur et al. 2013), indicated that technical complexity contributes to the occurrence of anxiety in individuals. From this discussion, the study proposes the following hypothesis:

H3: Technostress (TS) effect positively on information anxiety (IA)

3.4. Social media fatigue and information anxiety

The results of Dhir et al.'s (2018) study showed that fatigue caused by the use of social media leads to a higher level of anxiety among users of these applications. The results of Dhir et al.'s (2018) study were conducted on a group of social media users in India and indicated that the compulsive use of these technologies leads to increased anxiety.

Social media provides an access to large amounts of information, which can lead to the information overload phenomenon (Islam et al. 2018). Social media is often characterized by people communicating asynchronously, and this method has led to the accumulation of conversations. Consequently, it leads to an information overload (Gunaratne et al. 2020). The results introduced by Yu, et al's. (2018) conducted on a group of workers in some Chinese organizations showed that individuals are subject to fatigue caused by the excessive use of social media because of their exposure to an information overload. In fact, social media has caused negative emotions for many users of these technologies due to the boredom and exhaustion of dealing with large amounts of useless information (Guo et al. 2020). Social media provides online shoppers with various information about products (Gaol et al 2019). Because of the limited cognitive capabilities of individuals, it is expected that shoppers will suffer from technical stress due to the abundance of information; some studies have confirmed a relationship between information overload and technical stress (Ayyagari 2012). Results conducted by (Shi et al. 2020) on a group of Chinese

students who use social media showed that information overload can lead to a state of technical stress.

Based on the results of the studies referred to, it can be said that excessive use leads to an increase in information in a way that exceeds the ability of social media users to deal with it, which consequently leads to a state of information anxiety, so the following hypothesis can be presented:

H4: Social media fatigue (SMF) associated positively with information anxiety (IA)

3.5. Social media fatigue and purchase decision

The study conducted by Munir et al (2018) showed that the use of social media has an impact on participation in making a purchase decision. Jha's study (2019) showed that the communication between individuals through social media has an important role in forming a positive perception towards online purchases.

The decisions to buy online (to online buying) are affected by multiple factors, including promoting it via the Internet using viral marketing (Artanti, Hari Prasetyo, and Sulistyowati 2019; park et al., 2021). The findings of a study by Chou, Picazo-Vela, & Pearson (2013) revealed that the buying decisions of online buyers are affected by the number of reviews written on social media and others by buyers of high-priced products. Consumer buying behavior is influenced by social media availability (Shah et al. 2019). Based on the previous arguments, the following hypothesis can be proposed:

H5: Social Media Fatigue (SMF) related positively with purchase decisions (PD)

3.6. Information anxiety and purchase decision

Researchers have found that the overload online shoppers are subject to is stress and anxiety, which negatively affects the purchasing decision (Ding et al. 2017). Some studies have found that shoppers with technical anxiety are less likely to use self-service technology when making purchases (Meuter et al. 2003). Some studies, including the study (Soto-Acosta, Molina-Castillo, et al. 2014), found that information overload affects customers' intentions to buy online, so the following hypothesis is suggested:

H6: Information anxiety (IA) related positively with purchase decision (PD)

H7: Information Anxiety (IA) mediates the effect of Information Overload on Purchase Decision.

H8: Information Anxiety (IA) mediates the effect of Social Media Fatigue on Purchase Decision

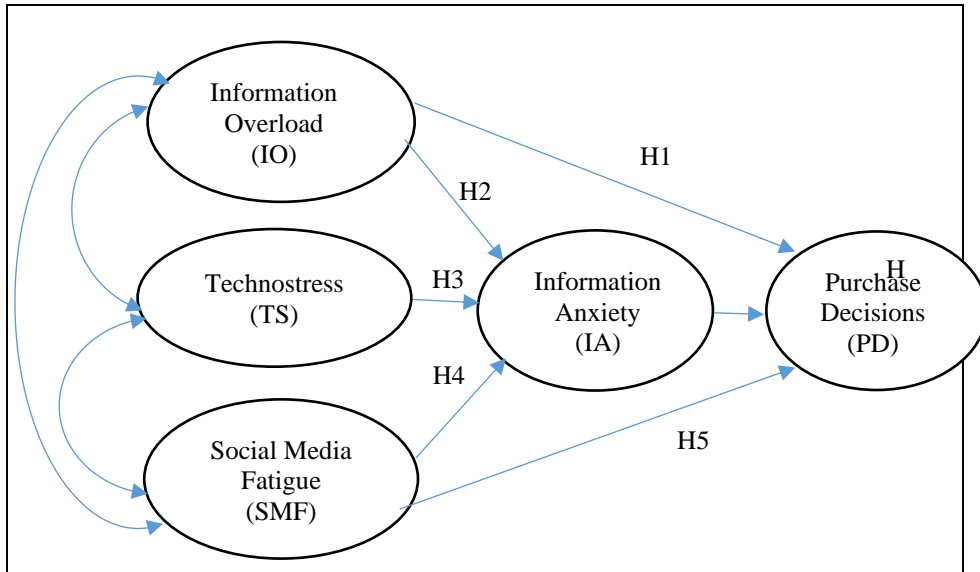


Fig. 1: Research model

4. Research methodology

4.1. Measurement development

The study adopted a set of ready-made measures included in the previous studies, as shown in Table 1. Since the scales are prepared in the English language, and the respondents are Arabic speakers, the scale has been translated into Arabic. The total number of indicators for the scale reached 25 indicators distributed on five factors.

All the survey questions were measured using a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree)

Table 1: Measurement of variables

Variables	Items	Sources
Information overload (IO)	5	(Zhang et al. 2016) (Karr-Wisniewski and Lu 2010) (Ayyagari 2012)
Technostress (TS)	5	(Mette et al. 2014) (Ayyagari et al. 2011)
Social Media Fatigue (SMF)	5	(Zhu and Bao 2018) (Bright, Bardi, and Landreth 2015)
Information Anxiety (IA)	5	(Girard and Allison 2008)
Purchase Decisions (PD)	5	(Gazzola et al. 2017) (Altarifi et al. 2015)
Total	25	

4.2. Sample and data collection

The electronic questionnaire was used as the main tool in collecting data for the current study; and the simple random sample was adopted by distributing the

questionnaire on social media sites specialized in online shopping in the Iraqi environment.

4.3. Participant demographics

Depending on the results of the survey that was conducted in this study, the results of the demographic characteristics of the research sample, which consisted of 326 participants, indicated that most of the individuals surveyed were females (68.4%), while the males form (31.6%). As for age groups, it is evident from Table 2 that the age group 15-25 obtained the highest percentage among the age groups of the research sample, which is (42.9%). The results also showed that the unmarried group had the highest percentage among other social cases (51.5%). As for the educational level, more than half of the research sample have a bachelor’s degree (56.1%).

Among the respondents, (52.5%) used the Internet daily for a period ranging between one and five hours.

Table 2: Demographics of the research sample

Category	Item	Frequency	Percentage(%)
Gender	Male	103	31.6
	Female	223	68.4
Age	15-25	140	42.9
	26-35	105	32.2
	36-45	56	17.5
	46-55	16	4.6
	56-65	7	2.1
	66-75	2	0.6
Marital Status	Single	168	51.5
	Married	150	46.0
	Widower	5	1.5
	Divorced	3	0.9
Educational Level	Reads and writes	5	1.5
	High school	59	18.1
	Bachelor	183	56.1
	Diploma	19	5.8
	Master	43	13.2
	PhD	17	5.2
Type of Work	Student	131	40.2
	Free work	34	10.4
	Employee	115	35.3
	Out of work	46	14.1
Average Daily of Internet Usage	1-5	171	52.5
	6-10	118	36.2
	11-15	37	11.3

5. Data analysis and results

To test the hypotheses of the study, Structural Equation Modeling (SEM) was used by AMOS 26 software. To achieve this, the statistical treatments were performed in two stages. The first stage was represented by the measurement model using confirmatory factor analysis (CFA) to verify the quality of the model and its conformity with the data, while the second one was represented by the integrated structural model to test the hypotheses (Anderson and Gerbing 1988).

5.1. Measurement model assessment

The Confirmatory Factor Analysis (CFA) was used in the pooled measurement model by linking all the constructs together in one model. The quality of the model was checked using reliability and validity. The measurement model consists of five latent variables, each of which is measured by five indicators.

In fact, reliability means the consistency between indicators that measure the same construct (Guo et al. 2020). To assess the reliability of the measurement model, Cronbach's Alpha and Composite Reliability (CR) were used to measure the internal consistency between the indicators and each construct of the measurement model. Some studies indicated that the Cronbach α value and the composite reliability are acceptable if it exceeds (0.60) (Awang 2014). Table 3 shows that all indicators' values are greater than (0.60), which means that internal consistency is achieved in the model.

On the other hand, the converging validity was used to validate the scaling model, which means the degree of affinity between indices that measure specific constructs. This has been verified in two ways. The first way is represented by standard factor loads, which are considered acceptable when the index load on the factor exceeds a threshold of 0.60 (Awang 2012); the second one is represented by the average variance extracted (AVE), which must exceed a value of (0.50) (Fornell and Larcker 1981). Table 3 shows that all the values met the required loading criteria except for the SMF4 indicator, and all the factors met (AVE) except for the information overload.

The items that did not meet the required loading were removed, so three elements of information overload, two items of purchasing decisions, one item each from technostress.

Table 3: Reliability and convergent validity

Construct	Item	Mean	SD	Loading	Cronbach α	CR	AVE
Information Overload (IO)	IO2	3.75	0.97	0.686	0.615	0.617	0.446
	IO3	3.43	1.07	0.650			
Technostress (TS)	TS2	3.34	1.05	0.660	0.833	0.837	0.564
	TS3	3.32	1.06	0.781			
	TS4	3.27	1.10	0.803			
	TS5	3.56	1.16	0.751			

Social Media Fatigue (SMF)	SMF1	3.59	1.06	0.773	0.829	0.835	0.561
	SMF2	3.52	1.04	0.822			
	SMF3	3.27	1.09	0.774			
	SMF4	3.27	1.10	0.575			
Information Anxiety (IA)	IA1	3.29	1.02	0.668	0.835	0.817	0.528
	IA3	3.22	1.06	0.774			
	IA4	3.39	1.08	0.726			
	IA5	3.37	1.09	0.736			
Purchase Decisions (PD)	PD1	3.44	1.03	0.680	0.786	0.788	0.554
	PD4	3.39	1.12	0.740			
	PD5	3.01	1.15	0.807			

Discriminant validity refers to how much the constructs differ from one another (Chen et al. 2018). This is achieved when the square root of the average variance extracted (AVE) for each factor is greater than the correlation values between any two factors as illustrated in Table 4.

Table 4: Construct correlation matrix and the square roots of AVE

Construct	MSV	MaxR(H)	IO	TS	SMF	AI	PD
IO	0.324	0.618	0.668				
TS	0.511	0.845	0.570***	0.751			
SMF	0.511	0.848	0.428***	0.715***	0.749		
IA	0.280	0.821	0.504***	0.529***	0.502***	0.727	
PD	0.062	0.798	0.132	0.212**	0.249***	0.130	0.744

As for the conformity indicators, it is evident from Fig. 2 of the total measurement model that all the indicators of conformity quality achieved the thresholds specified in the references, indicating that the measurement model is compatible with the field data to an acceptable degree (chi-square / df = 1.77; RMSEA = 0.049; NFI = 0.921; CFI = 0.963; GFI = 0.933; AGFI = 0.904)

5.2. Structural model

Structural Equations Modeling (SEM) was used by Amos 26 software to test the causal relationships in the structural model for the study, and the quality of the structural model was verified by using match quality indicators through using the maximum likelihood method. Figure 3 shows that the match quality indicators are achieved according to Chi-square value / degrees of freedom = 1.76, CFI = 0.964, GFI = 0.933, AGFI = 0.904, NFI = 0.920, RMSEA = 0.048 and all indicators have exceeded their thresholds.

The relationships were tested in the structural model by using the coefficient of determination (R^2), which shows the amount of the contribution of the independent variables (Exogenous) in explaining the proportion of variance in the dependent

variables (Endogenous). Also the standard path factors were used, which are called beta values, which indicate the level of strength of the relationship between the independent and dependent variables; and their significance was checked by the critical value represented by the value of the t-test.

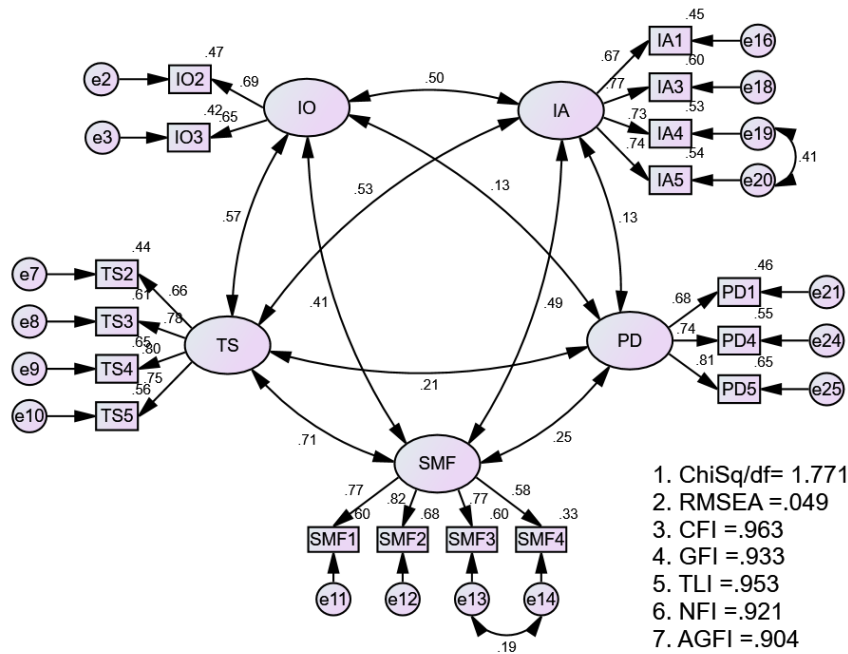


Fig. 2: Measurement model

The structural model shows that the contribution of information overload, technical stress, and social media fatigue in explaining the variance in information anxiety was (36%) only.

As for the contribution of information overload, social media fatigue, and information anxiety in explaining the variance in purchasing decisions for the study sample, was (6%) only.

Direct hypotheses were verified, and Table 5 of the structural model shows that the information overload ($\beta = 0.29$, $t = 2.94$) and the social media fatigue ($\beta = 0.22$, $t = 2.17$) have a positive and significant effect on information anxiety, which support the hypothesis of H2 and H4.

The study also found that social media fatigue ($\beta = 0.23$, $t = 2.72$) has a positive and significant effect on purchasing decisions, which supports hypothesis H5.

However, the findings showed that technostress ($\beta = .20$, $t = 1.71$) does not affect information anxiety, and information anxiety ($\beta = -0.005$, $t = -0.05$) and information overload ($\beta = 0.044$, $t = 0.44$). They do not influence purchasing decisions, so the hypotheses of H3, H1, and H6 are fully rejected.

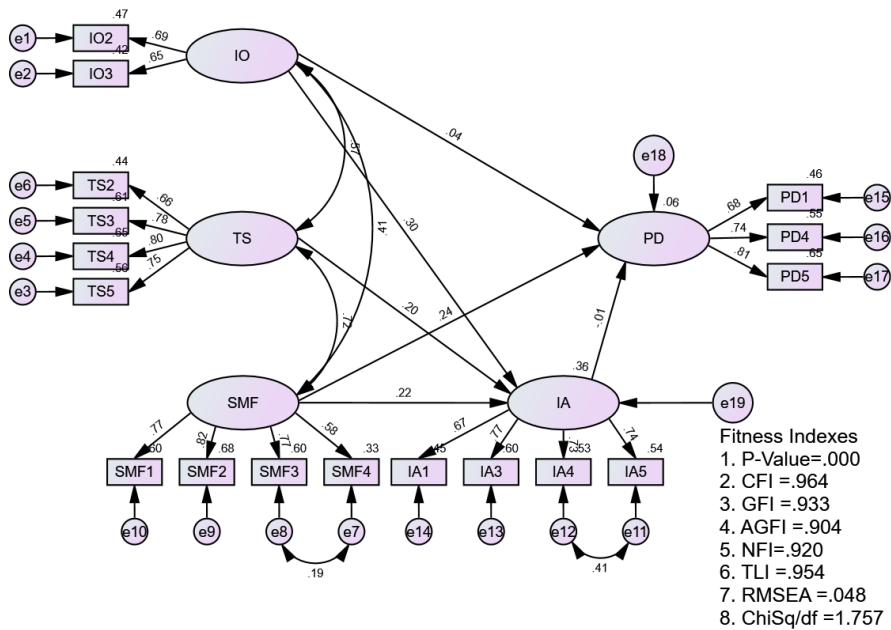


Fig. 3: Structural model

Table 5: Hypothesis testing results

Hypothesis	B	t-value	P-Value	Result
Direct effect				
H1: IO → PD	0.04	0.44	0.660	Unsupported
H2: IO → IA	0.29	2.94	0.003	Supported
H3: TS → IA	0.20	1.71	0.086	Unsupported
H4: SMF → IA	0.22	2.17	0.029	Supported
H5: SMF → PD	0.23	2.71	0.007	Supported
H6: IA → PD	-0.005	-0.056	0.955	Unsupported

Table 6 shows the insignificance of the mediating role of information anxiety between information overload and purchase decisions of buyers, and the insignificance of its mediating role between information anxiety and social media fatigue, thus rejecting hypotheses H7 and H8.

Table 6: Indirect effects

Path (Hypothesis) (Relationship)	Standardized Indirect Effect	Standardized Direct Effect	Bootstrapping Bias-corrected 95		p-value	Mediation Type	Results
			Lower	Upper			

H7: IO → IA → PD	-0.002	0.044	- 0.059	0.05 5	0.99 3	No mediatio n	Unsupport ed
H8: SMF → IA → PD	-0.001	0.236	- 0.049	0.04 2	0.94 5	No mediatio n	Unsupport ed

6. Discussion

Social media has become an integral part of the daily life of most societies around the world; and the phenomenon of electronic shopping is one of the contemporary phenomena that accompanied technological developments, and it has been widely used in social media.

Many previous studies have dealt with issues related to information overload in various fields (Alheneidi 2019; Ledzińska and Postek 2017). However, the review that was performed showed that previous studies did not examine the effect of information overload resulting from the use of social media on online purchasing decisions in the Arab environment in general and in Iraq specifically.

Indeed, the results support three out of eight hypotheses. The current study found many results. Firstly, the effect of information overload clearly on the occurrence of information anxiety H2 in the studied individuals, and this can be justified by the fact that the information that exceeds the carrying capacity of shoppers increases the resulting stress. Because some individuals believe that there is important information that they cannot absorb, and this result is consistent with a study (Gouws and Tarp 2017; Umeozor 2017) in which he indicated that information overload causes an information anxiety state.

Secondly, the current study reached an important conclusion, which is that social media fatigue leads to the occurrence of information anxiety in individuals H4, and the reason for this can be attributed to the excessive use of social media, which exposes individuals to obtain different information that they cannot obtain to distinguish between right and wrong. This result is consistent with a study by Dhir et al. (2018) in which they indicated that the stress of social media led to a state of anxiety and fatigue among a sample of adolescents in India.

Thirdly, the results of the current study showed that social media fatigue affects online purchasing decisions H5, and this can be explained by the fact that the pressure from social media use affects consumers' decisions to purchase products.

Contrary to expected, information overload does not affect purchasing decisions H1. This result converges with what Muller (2014) who found that information overload does not affect shoppers' buying behavior. The reason behind this may be related to the ability of shoppers to avoid this situation because they have some experience and knowledge of electronic stores that provide the products they need.

In contrary to our expectations, technostress does not affect the occurrence of information anxiety among the respondents H3, and it is expected that the reason

behind this is that technostress has more to do with the physical aspect than it is related to the psychological aspect.

In contrary to what was expected, the results showed that anxiety about information does not affect purchasing decisions on the Internet, which led to the rejection of hypothesis H6, and the reason behind this may be that the shoppers can deal with trusted sellers, and therefore the information they obtain is reliable and they do not have a state of anxiety. In fact, one of the possible reasons behind this is that shoppers have a high level of awareness, and what confirms this is that most of the research sample have a bachelor's degree or (higher), and this result is consistent with the findings by the study of Bjelland et al. (2008) which showed that low educational levels are associated with a high degree of anxiety. Indeed, the other reason is that the respondents' experience in online shopping led to this result, and this is consistent with what some studies have found that anxiety occurs when dealing with new systems (Donmez-Turan 2019).

The results also showed that there is no mediating role for information anxiety between information overload and online purchase decisions, and perhaps the reason behind this is the absence of anxiety when purchasing products over the Internet, for shoppers to know the types of products that suit their needs and that they obtain from reliable sources.

Despite the impact of social media fatigue on the occurrence of information anxiety, the latter did not mediate the relationship between media fatigue and purchasing decisions.

7. Conclusion, Implications, Limitations and Future Research

The development in mobile phone technology and the Internet has led to the expansion of online shopping so that it is no longer limited to local markets (Jin and Lim 2021).

Based on the results of the current study, it can be concluded that the information anxiety of online shoppers is caused by information overload. This means that the large number of information available on the Internet regarding the products offered in electronic stores constitutes concern among shoppers due to their low ability to process and perceive the large amount of information, in addition to the conflict of some information and its contradictions. In addition to what mentioned above, the state of information anxiety occurs due to the tiredness of using social media, and all of the above affect the decision of shoppers to purchase products.

We believe that the beneficiaries of the results of this research are of two categories: the first being the internet shoppers, by not searching for information about products more than they should do, to prevent the occurrence of information anxiety, because the excess information may confuse the shoppers. The second category is for marketers, by dividing the market into market segments, then working

on designing a promotional program that suits the target group so that this category receives the appropriate information about the product.

The results of the current study have theoretical and practical implications. On the theoretical level, this study examined the influence of a group of factors related to making an online purchase decision that previous studies did not fully address.

On the practical level, the results of the current study can give a benefit to two categories of beneficiaries: the first being the internet shoppers, by not searching for more information about products than they should, to prevent the occurrence of information anxiety, because the excess information may confuse the minds of individuals. The second category is for marketers, by dividing the market into market segments, then working on designing a promotional program that suits the target group so that this category receives the appropriate information about the product.

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