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The Moderating effect of Artificial Intelligence on the Relation between Consumer Privacy Concerns and Online Purchase Intention in Egypt

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Abstract:

Marketers need to understand Consumer Online Purchase intention (OPI) In terms of Artificial intelligence Tool, this research Examined the moderating effect of Privacy protection policy on Relation between Consumer privacy Concerns (CPC), Trust and risk Believes with online Purchase intention, a quantitative approach was held in Egypt , For Consumer who purchased at least once from Jumia or amaozon.com, Research results were held by an online Structured quantitative questionnaire Consisted of 38 questions with 8 demographical questions, the Quantitative analysis were analyzed by Statistical Package for the Social Sciences (SPSS) and Partial Least Squares (PLS). and research hypothesis was tested by the Coefficient of Determinations (R^2) and Path coefficient.

The Total Number of responses were 200 Participant, and the results were as follow there is a weak Positive relation between CPC and OPI, a Moderate Positive relationship between Trust believes and OPI, a Negative relationship between risk believes and OPI, and there is no Moderating Impact of Privacy Protection Policy on the relation between CPC, Trust and risk believes with OPI.

Keywords:

Privacy, Artificial intelligence, Policy, Purchase intention, Online, Online Purchase intention, Consumer, Trust, Risk, Believes.

1. INTRODUCTION

Artificial intelligence (AI) Or Machine Learning is now present all over the world Like China and UK (Robinson, Stephen Cory 2020). Many researches have discussed consumer Privacy protection policy in the era of artificial intelligence or machine Learning Such as (Fawaz, Linden and Harkous 2019) Research that discussed The purpose of privacy notices is to inform users about how companies collect, store, and manage their personal information. They can take various forms, such as privacy policies, app permissions, and privacy icons. Aside from notices, users must make informed decisions about opting in/out of companies' collection, processing, and sharing of their information. (Fawaz, Linden and Harkous 2019) Mentioned that A website or a smart device - accesses the user's data to provide the necessary functionality, the degree of data access, processing, and storage varies depending on the service's privacy practices. That's why E-businesses Applied AI or machine learning technology extensively to online shopping platforms in order to provide more accurate and individualized services to customers (Yin, and Qiu 2021). Developing comprehensive consumer databases and applying advanced data storage techniques to customers and used for developing more accurately targeted marketing which leads when time has passed to the raise of concerns of consumers about their own private information. The problem is that consumers have generally shown increasing concerns over privacy due to an increase in questionable and illegal activities on the Internet, such as the precipitous rise of junk mail, identity theft, and fraud. That Causes the arise in Consumer privacy concerns, disturb trust and increase Consumer risk, A question was answered by (Ginger 2018) as the technological advances Arise and E-businesses now are using Advanced Methods to Reduce Cost while collecting, Storing, processing and using the data. Big data or artificial intelligence tools are both one of the advanced Methods. Big data is used as an input by the most popular AI algorithms. To understand, forecast, and influence consumer behavior. And that may Arise Consumer privacy concerns, disturb trust and increase consumer risk that may affect the Online Purchase intention.

Consumer Privacy concerns / Trust believes / Risk believes in the Future May Cause a great effect on Purchase intention influenced by Artificial intelligence in terms of privacy protection Policy.

1.1 Research Problem

Online retailers Recently are using Artificial Intelligence Methods in order to serve their consumers in a better Way, those methods Allow Consumer to share their Information with other Party While Purchasing Online, that is Called Privacy Protection Policy of Online Retailer You Purchase from, One of the Artificial Intelligence Methods, Using Privacy Protection Policy Notes affect Online Purchase Intention based on literature Above. Besides it will raise the consumer concerns regarding their privacy, and that was Mentioned by (Malhotra, Kim & Agarwal 2004) That Consumer Privacy high concerns were Identified as one of the main problems that Disturbing Purchasing online. In Addition, Both Trust Believes and Risk Believes were affected by Privacy Protection Policy Based on literature Above, Those Believes Have Positive and negative Effects Respectively on Online Purchase Intention.

This Research Contribution Will Discuss How Privacy Protection Policy used by online retailers as a moderator on the relation Between Three Variables Consumer Privacy Concerns, Trust Believes and Risk Believes with Online Purchase Intention.

2. LITERATURE REVIEW

2.1 Online Purchase Intention

Customer online purchase intention is defined as the construct that quantifies the strength of a customer's intent to buy online (Thamizhvanan and Xavier 2013). And with the advent of E-businesses, online purchases have surpassed email and Web surfing to become the third most popular activity (Jamali, S.K., Samadi and Marthandan 2014)

The purchasing behavior of online customers is related to how customers decide which products or services to purchase online. In all three cases, the Internet has an impact on customer decision-making. pre-purchase, purchase, and post-purchase stages. As a result, the power of a consumer's intention to engage in purchasing behavior via the Internet will be determined by their online purchase intention in the web-shopping environment (Fatemeh and Bharani 2013). In an online shopping context, purchase intention is the end Final Factor of a number of different factors before Purchasing (Ling et.al. 2010).

A theory of reasoned action proposed that consumer behavior can be predicted from intentions that correspond directly to that consumer behavior in terms of action, target, and context. When considering a purchase, intentional measures may be more effective than behavioral measures in capturing the customer's mind because customers may make purchases due to constraints rather than true preference (Choon, Lau Teck and Tan Hoi 2010). (Lim, Osman , Salahuddin, Romle & Abdullah 2016) have conducted a research

explain the relationship and the influence of perceived behavioral control and subjective norm on purchase intention as a mediating factor that affects online shopping behavior , and research findings showed that there is a strong relation between online purchase intention and online shopping behavior this indicates that online Purchase intention is the predictor of online shopping behavior and actual behavior of a consumer.

2.2 Consumer Privacy Concerns

Privacy is related to secretiveness and anonymity. Privacy is a multi-faceted notion with several problems (Tamara, Heng, Jeff and Paul 2013). To fully realize the potential of E-businesses, it is critical to fully understand consumers' online information privacy concerns. Despite a few trailblazing studies on the topic of online privacy in general (Fortes & Rita 2016).

According to a survey, 65 percent of respondents from US consumers would be more willing to provide information online if they knew it would not be misused. (Kuang, Shaio & Popova 2012).

Detailed Causes of consumer privacy concerns are divided into a number of central dimensions: personal information collection, unauthorized secondary usage, external unauthorized secondary usage of information, personal information errors, and improper access (Wirtz, Lwin & Williams 2007).

Concerns about consumer privacy arise when marketers combine data to create relational databases that contain comprehensive individual-level information about consumers, a practice that is becoming more common with databases and Internet technologies. Because consumer's privacy concerns about losing control over their information may erode relationships and, as a result, influence whether they will purchase online. (Mary, Sherry & Patricia 2006).

2.3 Trust Believes

Trust is described as the readiness to expose oneself to the activities of a trusted party based on a sense of confidence or assurance and a multifaceted, context-dependent concept (Thomas, Vishal & Hamid 2007).

Trust is defined as a behavior based on one person's perceptions of another person's attributes. Because the degree of uncertainty of a transaction in a virtual environment is lower, Because the stakes are larger than in a regular setting, trust becomes a critical aspect. In an online environment where the consumer has no direct influence over the vendor's behavior, trust should be especially important. One of the main reasons why

clients do not engage in commercial transactions on the internet is a lack of trust in online enterprises. (Carlos & José 2009).

Consumers' trust in websites is measured by how satisfied they are with their purchases. Consumers' trust in trustees is defined as their belief in their reliability and honesty. In e-Businesses, trust is a major motivator for consumer decisions to purchase. Although A research demonstrates that trust affects value co-creation and purchase intention in social network sites (Chen, Sun & Liu 2021).

Some researchers have explained some of the factors influencing consumers' online trust and purchase intentions, Online trust is critical to achieving satisfied and expected outcomes in online transactions. Where trust exists, consumers are more likely to believe that e-vendors will not engage in opportunistic behavior. (Yu-Hui & Stuart 2007).

2.4 Risk Believes

Researches stated that People's beliefs, attitudes, judgments, and feelings, as well as broader social or cultural values and dispositions, are all involved in risk perception. Because risk perception is highly subjective and influenced by societal influences and cognitive biases, the same hazard will mean different things to different people and in different contexts. Risk perception is a unique interpretation process, a process of making sense of a complex world in order to plan, choose, and act in that world (Stephen & Christine 2001).

(Kim 2007) Stated that a consumer's perception of risk is critical. They defined perceived barriers for online consumers who are debating whether to make an online purchase. Risk is defined as a consumer's belief about the possibility of unanticipated negative outcomes from an online transaction. Because of the concept of perceived risk first appeared in marketing literature, and several types of risk have been identified. And one of the researches Mentioned that Three types of risk are important in the case of online shopping: financial risk, product risk, and information risk (security and privacy), It is common for a customer who is making an online purchase to be hesitant to do so because the sense of risk can be overwhelming when compared to traditional shopping methods.

There are seven types of risk, financial performance, physical, psychological, social, time, and opportunity cost risk (Rachbini & Widarto 2017). Another concept of risk has come to be recognized as one of the most important factors in customer decision-making. Risk Believes Affecting customer behavior is their subjective perception of the risks that may occur. Customers begin to notice it when they are confronted with two factors: uncertainty

and (negative) consequences and the higher the perceived risks, the greater the uncertainty and negative consequences (Muhammad Ashoer1 & Syahnur Said 2016).

Prior research has shown that consumer evaluations and decisions to make online purchases of tangible goods, traditional services, or e-services are better explained when consumer risk assessments are taken into account. (Mauricio, Anthony & David 2010). (Mauricio, Anthony & David 2010) research contribution Framed privacy concerns as a risk assessment, allowing for more accurate measurement of the phenomenon and its consequences. Adding to previous research on the effects of perceived risk on e-services adoption.

2.5 Privacy Protection Policy

In recent studies, scientists have primarily focused on various data mining algorithms, particularly the association rules algorithm used for privacy protection, and Privacy protection algorithms in artificial intelligence technology can be classified into two broad categories: privacy protection technology for centralized data sets and privacy protection algorithm for distributed data , despite applying these privacy Protection algorithms and E-business are using this technology however Companies continue to fail to protect consumers' privacy. (Li & Hong-wei 2015) A privacy notice is an important tool for lowering the risks associated with disclosing personal information online. It informs customers about the company's practices in information. This information assists users in determining whether or not they want to provide personal information, or whether or not they want to participate in the website at all (Kuang, Shaio, Yen & Popova 2012)

Privacy Protection Policy Consists of 4 Dimensions as (Kuang, Shaio, Yen & Popova 2012) Mentioned

- Notification
- Choice
- Access
- Security

Consumers understand that providing personal information can be advantageous. Many people understand that detailed, accurate information leads to better service, more relevant messages, and promotions. As a result, consumers are willing to provide personal information under certain conditions (Kuang, Shaio, Yen & Popova 2012).

Security issues are well-known to be a major source of concern for online buyers. Security perceptions are divided into objective and subjective security concerns. Customer objective relates to things like security policy statements and technical safeguards,

whereas subjective security refers to how safe people think they are. (Fatemeh & Bharani 2013).

They stressed that the Internet is not a secure environment for online shopping and that online websites must use and consider security to protect customers' data. They also stated that online websites are the primary target of attackers (Chang & Chen 2008).

When consumers shop and browse online, whether knowingly or unknowingly, they give away data. Experience is frequently enhanced and made more personalized and efficient. A good example of a website that collects and stores customer data in order to improve the customer experience, The Amazon.com website provides a memorable shopping experience by keeping a record of returning customers. choices and preferences combines outstanding orders to save postage and has the ability to retain credit card information, previous orders, and delivery addresses. This is what called Privacy Protection Policy, based on improved online privacy protection, or even public perception of improved protection, but the two appear to be inextricably linked. It is widely assumed that People's trust in doing business online is shaped by the recipient's beliefs. 'Personal data will respect and safeguard their privacy.' After all, wouldn't that be the case? Would the consumer be more likely to buy online if consumer knew their personal information would not be disclosed? elsewhere? (Edwards & Lilian 2004).

2.6 Consumer Privacy Concerns and Online Purchase Intention

To fully realize the potential of online retailers, it is critical to fully understand consumers' online information privacy concerns. Despite a few trailblazing studies on the topic of online privacy in general (Fortes & Rita 2016) and the purpose of their study is to investigate how Internet privacy concerns affect consumers' willingness to make online purchases and After Analysis they established a negative Impact on Between Privacy Protection Policy and Online Purchase intention.

According to these studies (Liao, Liu, & Chen 2011) privacy concerns have a negative impact on online Purchase intention of the Consumer. and although with (Midha 2012) Research that illustrate that Consumer Privacy concerns influences intention to buy online through online retailers with negative effect.

Some researches although investigated the impact of consumers' concerns about information privacy (CFIP) on their behavioral intention to engage in online transactions to summarize, when online customers make a purchase, their privacy is a major concern. (Korzaan & Boswell 2008).

H1: There is a significant Effect between Consumer Privacy concerns and Online Purchase Intention of consumer.

2.7 Trust Believes and Online purchase intention

In electronic commerce, trust is recognized as an important factor in buyer-seller relationships and online purchase intent. In addition of that According to some studies, trust is a factor that influences attitude and risk taking. It has been discovered that a lack of trust has a negative impact on willingness to engage in online purchasing activities. And Trust has been identified as a predictor of online purchase intent by three researches. (Fatemeh and Bharani 2013).

The online consumer's beliefs and expectations of the online seller's characteristics are included in trust (McKnight et al., 2002)

Other Research confirmed that more than 63% of online users do not shop online due to a lack of trust. Trust is another factor that has a strong direct impact on online purchase intent (NECTEC 2006) and other researchers have stated that Customer online purchase intention has been influenced primarily by online trust and mentioned When it comes to online shopping, trust is essential. (Anita, Arun & M.J. 2013). Other research frame Work studied The influence of online trust as a mediating effect on customer online purchase intention studied. (Ganguly 2009)

Existing research has shown that trust beliefs have a positive influence on customers online purchases intention (Kwek , Lau & Tan 2010)

H2: There is a significant Positive Effect between Trust believes on Online Purchase intention of consumers

2.8 Risk Believes and online Purchase intention

One of the researches defined it as the amount of risk that is in a purchasing process, a consumer's perception is used to select or make a decision. And other researchers discovered that the degree of perceived risk influences online shopping intention, there is also a list of studies that mention risk as an important factor that has a strong relationship with trust. They discuss the negative impact of trust on risk and risk on trust. Because risk has a significant impact on online purchase intention, trust, and security, and they considered in their study as a factor to be included in the comprehensive model. (Fatemeh and Bharani 2013).

Perceived risk is a significant factor that influences online purchase intention. (Choi et al., 2003 & Zhou et al., 2007).

Consumers' perceived risks associated with online shopping have become an important research topic because they will directly influence consumer attitudes toward online purchases, and their attitudes will have a significant impact on online shopping behaviors, although another research that perceived risks in online shopping will have a negative impact on the intention to buy products online. When consumers intend to shop on the internet, it is natural for them to feel a sense of apprehension. However, the perceived risks associated with online shopping have not been fully identified, as many online retailers continue to face risks in the online business. (Shaizatulaqma, Thenmoli & Yen-Nee 2018).

H3: There is a significant negative effect between Risk Believes on Online Purchase intention of consumers.

2.9 Privacy protection policy and Consumer Privacy Concerns

(Kuang, Shaio, Yen & Popova 2012) Examined the impact between Privacy Policy and Consumer Privacy concerns and illustrate the Negative impact between both variables. (Wirtz, Lwin & Williams 2007) Mentioned that discovered that other researches 91 percent of those polled believed that businesses and governments were not doing enough to protect their privacy. As previously stated, businesses can take responsible actions such as adopting standard privacy policies. Policies and posting a notice of its privacy policies on its website.

Besides research Contribution and result shows the Negative relation between Organizational privacy protection policy and Privacy Concerns of consumer (Wirtz, Lwin & Williams 2007).

H4a: there is a moderation effect on the relation between Consumer privacy concerns and online purchase intention

2.10 Privacy protection policy and trust believes

(Kuang, Shaio, Yen & Popova 2012) Research contribution examined the relationship between Privacy protection policy and Trust, and string relationship accrued.

Before entering into a transactional relationship, consumers will seek out and carefully examine specific privacy protocols; they will not trust a store unless it employs trustworthy privacy practices. In other words, as important contract terms, privacy policies can influence shoppers' purchasing decisions (Yue Pan & Zinkhan 2006).

(Yue & George 2006) research Framework was to examine the strong relationship of The presence of an online privacy policy (as opposed to the absence of one) will result in higher trust perceptions.

H4b: there is moderation effect on the relation between Trust believes and Online Purchase intention.

2.11 Privacy Protection policy and risk believes

Previous research has found that perceived risk prevents Internet users from engaging in online transactions and marketing activities (Pavlou 2003). Similarly, consumers will be discouraged from disclosing personal information if they are concerned about the mishandling of their online personal information. Marketing researchers found that perceived risk negatively affected Internet users' willingness to disclose valuable personal information to online companies and marketers (Malhotra 2004)

Researchers have discovered that marketers' disclosure of information can improve consumer decision-making and choice. And The Internet as a distribution channel raises concerns about both consumer risk and the efficacy of information disclosure.

Privacy notices are an important tool for lowering the risk of the second exchange by informing consumers about the organization's information practices. This information can assist the consumer in determining whether or not to disclose information to an online marketer, or whether or not to engage with the Web site at all (Milne & Culnan 2004).

The greater the perceived level of control, the lower the risk. (Harris Interactive, 2002)

H4c: there is a moderation effect on the relation between Risk believes and Online Purchase intention

2.12 Privacy protection Policy and Online purchase intention

Online purchasing surveys have identified security as one of the top client concerns. Researchers believe that security is more than just a technical issue; it also involves human and organizational factors. It implies that, even in the best of circumstances, if a corporation uses technological approaches and solutions without considering how clients perceive a safe website, these technical solutions may be irrelevant (Fatemeh & Bharani 2013).

Consumers' perceptions of online vendor security are acknowledged to be a crucial factor in their purchasing decisions (Tsai and Yeh 2010).

Participants of (Janice , Serge , Lorrie & Alessandro 2010) completed an exit survey, they asked if the privacy icon (if present) influenced their purchasing decisions, if they understood what the icon represented, if they read any of the privacy policies and if those

privacy policies influenced their purchasing decisions. This collection of self-reported data was compared to and supplemented the quantitative findings of Experiment and resulted in that there is a huge effect between privacy protection policies of the company and Online Purchase intention of Consumer.

Research Model Aim is to examine the Significant Role between Consumer Privacy concerns and Purchase Intention of consumer, To Examine the Significant Positive Impact of Trust Believes on Purchase intention of the consumer, To Examine the Significant Negative Impact of Risk believes on Purchase intention of the consumer and to Examine the Moderate Effect of protection Privacy Policy on the relation between Consumer Privacy concerns, Trust believes and Risk believes with Consumer Online Purchase intention.

Proposed model For the Impact of Consumer Privacy concerns, Trust Believes and Risk Believes on Online Purchase Intention with the moderator effect on the relation. (See Figure 1)

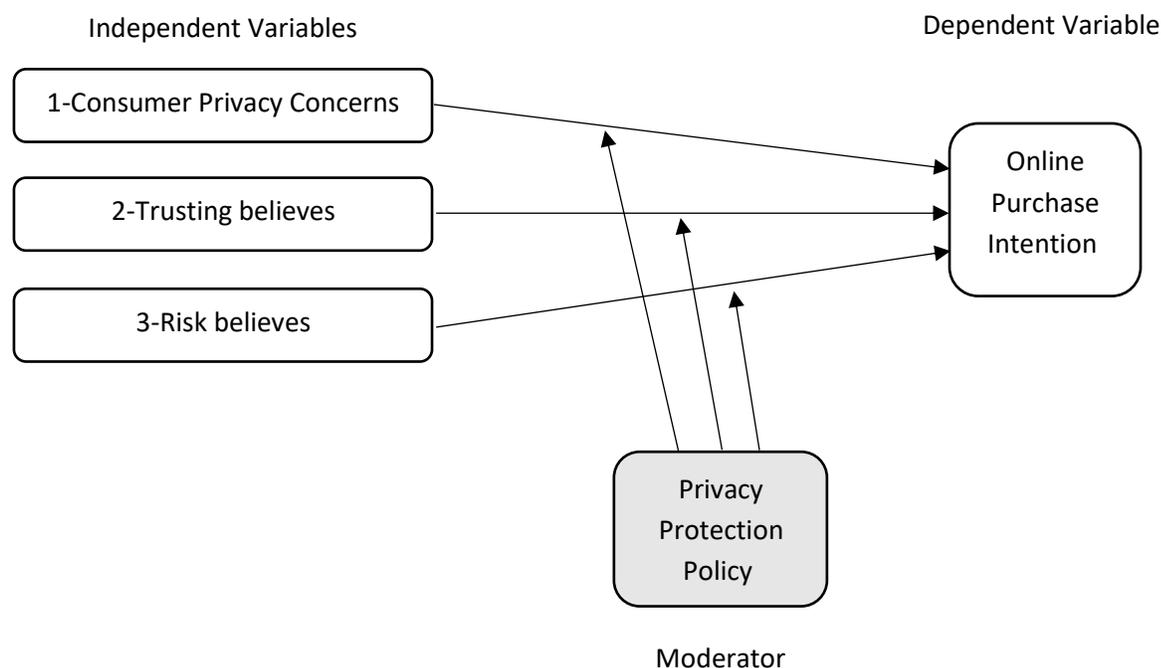


FIGURE 1
RESEARCH FRAMEWORK

3. DATA COLLECTION

A quantitative Approach was had held, by using an online questionnaire with Structured Type of Questions The data were collected from 200 customers in Egypt. In the data preparation and purification stage, 3 Cases were deleted due to missing values, the research model tested using Smart PLS 3.0 to test path coefficients and significance of relationships of the structure model and Statistical Package for social science SPSS.

TABLE 1
DEMOGRAPHICS ANALYSIS

Sample Characteristics	Descriptive	Frequency	Percentage
Gender	Male	91	45.5 %
	Female	109	54.5 %
Total		200	100%
Age (Years)	18-29	132	66.0 %
	30-39	31	15.5 %
	40-49	19	9.5 %
	More than 50	18	9.0 %
Total		200	100%
Education	Undergraduate student	135	67.5 %
	Postgraduate student	1	0.5 %
	Master holder	24	12.0 %
	PhD holder	30	15.0 %
	High school student	10	5.0 %
Total		200	100.0 %
Income	Less than 5,000	95	47.5 %
	From 5000 to 10,000	53	26.5 %
	More than 10,000	52	26.0 %
Total		200	100.0 %
Religion	Muslim	184	93.5 %
	Christian	13	6.5 %
Total		200	100.0 %
Purchase Frequency	One Time	64	32.0 %
	More Than one Time	107	53.5 %
	Never Purchased from online Platforms Within 12 Month	29	14.5 %
Total		200	100.0 %
Item Purchased	Electronics	36	18.0 %
	Fashion Products	38	19.0 %
	Food Items	5	2.5 %
	Other	51	25.5 %
	Multiple	52	26.0 %

	Did Not Purchase Online within 12 Month	18	9.0 %
Total		200	100.0 %
Price	Less than 1000	128	64.0 %
	1000-5000	54	27.0 %
	5000-10000	11	5.5 %
	More than 10000	7	3.5 %
Total		200	100.0 %

TABLE 1: shows summary for sample characteristics. It worth noting that 45.5 % of the sample are males while 54.5 % are females. For religion, the majority of respondents are Muslims. The percentage of purchase frequency for more than comprised of 53.5 % while customers who purchased one time accounted for 32.0 %. The majority of prices for items purchased accounted for were less than 1000. These results are in favor of the study objective to survey experienced employees in car industry. Statistics indicated that undergraduate students are the main respondents.

3.1 Structure Model

As mentioned before that the structure model testing to estimate the structural paths among the latent variables. the most common approach to estimate the variance-based analysis is Smart PLS (Gefen et al., 2000). The model would be assessed by estimating the path coefficient, coefficient of determination (R²), bootstrapping of significance, and mediation analysis. The following sections outline the results of structure model assessment using Smart PLS. (see Figure 2)

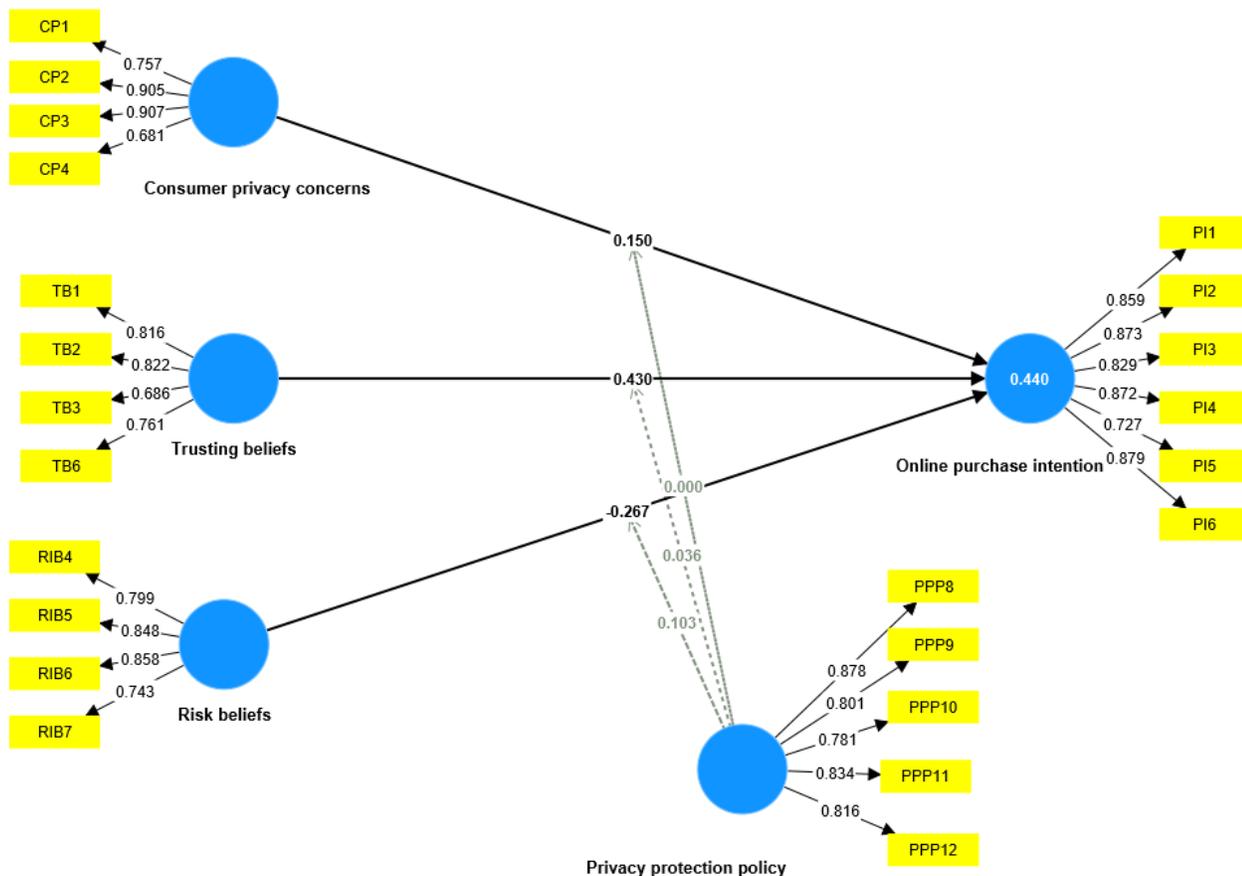


FIGURE 2
STRUCTURAL MODEL
TABLE 2
PATH COEFFICIENT

Path Relationship	Beta coefficient
Consumer privacy concerns -> Online purchase intention	0.150
Trusting beliefs -> Online purchase intention	0.430
Risk beliefs -> Online purchase intention	-0.267

TABLE 2: summarizes results of the PLS algorithm for path coefficients. The results revealed a positive but weak relationship between consumer privacy concerns and online purchase intention. While there is negative moderate relationship between risk beliefs and online purchase intention. Results showed a moderate relationship between trusting beliefs and online purchase intention.

TABLE 3

THE SIGNIFICANCE OF PATH COEFFICIENT

Hypotheses	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values	Decision
Consumer privacy concerns -> Online purchase intention	0.150	0.120	0.111	1.352	0.176	Not Supported
Trusting beliefs -> Online purchase intention	0.430	0.425	0.070	6.122	0.000**	Supported
Risk beliefs -> Online purchase intention	-0.267	-0.266	0.067	3.972	0.000**	Supported

**TABLE 4
MODERATION ANALYSIS**

Hypotheses	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Value	Decision
Privacy protection policy x Consumer privacy concerns -> Online purchase intention	0.000	0.000	0.075	0.003	0.998	Not Supported
Privacy protection policy x Trusting beliefs -> Online purchase intention	0.036	0.041	0.056	0.652	0.514	Not Supported
Privacy protection policy x Risk beliefs -> Online purchase intention	0.103	0.101	0.059	1.738	0.082	Not Supported

TABLE 4: The study’s results indicated insignificant moderation effect of privacy protection policy between all independent variables and Online purchase intention: privacy protection policy x consumer privacy concerns ($\beta = 0.000$, standard deviation = 0.075, t -statistic = 0.003, P value = 0.998)

**TABLE 5
SUMMARY OF HYPOTHESES TESTING**

	Hypotheses	(p > 0.05)	Significant (Yes/No)	Decision
H1	Consumer privacy concerns -> Online purchase intention	0.176	NO	Not Supported
H2	Trusting beliefs -> Online purchase intention	0.000**	Yes	Supported
H3	Risk beliefs -> Online purchase intention	0.000**	Yes	Supported
H4a	Privacy protection policy x Consumer privacy concerns -> Online purchase intention	0.998	NO	Not Supported

H4b	Privacy protection policy x Trusting beliefs -> Online purchase intention	0.514	NO	Not Supported
H4c	Privacy protection policy x Risk beliefs -> Online purchase intention	0.082	NO	Not Supported

4. Conclusion

This research studied the relationship between consumer privacy concerns and online purchase intention with a path coefficient ($\beta = 0.150$, standard deviation of 0.111, t -statistic = 1.352, and P value = 0.176) was not supported, as Consumer Privacy concern have a weak influence on Online Purchase intentions and almost have no influence, and there is positive relationship between trusting beliefs and online purchase intention ($\beta = 0.430$, standard deviation = 0.070, t -statistic = 6.122, P value = 0.000) supported. As Trust Believes of the consumer was the one of the main Factor that will Influence the Online Purchase Intention Positively, as this result ensured that when Consumer Trust an Online Retailer Like Jumia or amazon.com Their Online Purchase intention will Increase. and There is a negative relationship between risk beliefs and online purchase intention ($\beta = -0.267$, standard deviation = 0.067, t -statistic = 3.972, P value = 0.000) were supported as Risk one of the factors that will Influence Consumer Online Purchase intention. If there is a financial Risk or Product Risk or Private Information Risk Consumer will not have an intention to Purchase from online Retailers Like Jumia or Amazon.com.

For the 3 Independent Variables Consumer Privacy Concerns, Trust Believes and Risk Believes, after Applying the **Coefficient of Determination R^2** It's Clear that three Independent Variables Are Influencing the Dependent Variable Online Purchase Intention with $R^2 = 44\%$, therefore Marketers Should Aware and work on the three Independent Variables. and Finally for the moderation effect of privacy protection policy between all independent variables and Online purchase intention: privacy protection policy x consumer privacy concerns ($\beta = 0.000$, standard deviation = 0.075, t -statistic = 0.003, P value = 0.998), privacy protection policy x trusting beliefs ($\beta = 0.036$, standard deviation = 0.056, t -statistic = 0.652, P value = 0.514), privacy protection policy x risk beliefs ($\beta = 0.103$, standard deviation = 0.059, t -statistic = 1.738, P value = 0.082). These findings do not support H4a, H4b, and H4c, therefore, Privacy Protection Policy has no influence on the relation Between Consumer Privacy Concerns, Trust believes and Risk Believes with Consumer Online Purchase Intention, and Marketers Should Neglect or Focus on other Artificial Intelligence aspects Rather than the privacy protection Policy as Upon Results it's has no Influence.

4.1 Results Discussion

- H1 which proposed a relationship between consumer privacy concerns and online purchase intention Were not supported, as Consumer Privacy concern have a weak influence on Online Purchase intentions and almost have no influence, in other words Concerns about Privacy of consumer will not Prevent the consumer to Purchase from Online Retailers Like Jumia or amazon.com. and this result was different than other Literatures as (Shukla 2014) Study Results stated that there is a negative influence Between Consumer privacy concerns and Online Purchase intention, and (Liao and Cheung, 2011) Research Shows that If a consumer is concerned about their privacy, it has a negative impact on their attitudes toward online shopping. Although with (Rahman, Khan & Iqbal 2018) Research Indicated that Privacy concerns among consumers have a negative impact on their attitudes toward online purchasing. This Shows that Some of the past research results are Different from this research result, or we can say it is barely Close as this research results shows that it's a weak positive relationship, these differences may be Due to Different Research took place in Different Countries or Consumer openness for new technologies and new development in Online Purchasing Changed or using other variables that may Have an impact on consumer Privacy concerns influenced Online purchase intention.
- H2, which draws a positive relationship between trusting beliefs and online purchase intention supported. As Trust Believes of the consumer was the one of the main Factor that will Influence the Online Purchase Intention Positively, as this result ensured that when Consumer Trust an Online Retailer Like Jumia or amazon.com Their Online Purchase intention will Increase. This research result was Similar to other researches as (Liao, Liu & Chen 2011) Stated that Trust Believes Have a positive influence on Online Purchase intention and although for (Fortes & Rita 2016) Research that showed same results for Trust believes that have a strong Positive Relation with Consumer Online Purchase intention.
- H3, which proposed a negative relationship between risk beliefs and online purchase intention supported, as Risk one of the factors that will Influence Consumer Online Purchase intention. If there is a financial Risk or Product Risk or Private Information Risk Consumer will not have an intention to Purchase from online Retailers Like Jumia or Amazon.com. this results is similar to Some of researchers results such as (Kim and Lennon 2013) That argued that The higher the perceived risk of shopping at online retailers, the lower the consumer's confidence Purchase plans for the online retailer, For (Kamalul, Mohan & Goh 2018) Research

results stated that there a negative Influence from Perceived risk on Online Purchase intention of consumer. And (Akhlaq & Ahmed 2015) discovered that perceived risk has a negative impact on consumer intentions to buy online. This suggests that when consumers learn that an online transaction is risky, their desire to buy decreases.

For the 3 Independent Variables Consumer Privacy Concerns, Trust Believes and Risk Believes, after Applying the **Coefficient of Determination R^2** It's Clear that three Independent Variables Are Influencing the Dependent Variable Online Purchase Intention with $R^2 = 44 \%$, therefore Marketers Should Aware and work on the three Independent Variables.

- H4, moderation effect of privacy protection policy between all independent variables and Online purchase intention: privacy protection policy x consumer privacy concerns findings do not support H4a, H4b, and H4c , therefore , Privacy Protection Policy has no influence on the relation Between Consumer Privacy Concerns , Trust believes and Risk Believes with Consumer Online Purchase Intention , and Marketers Should Neglect or Focus on other Artificial Intelligence aspects Rather than the privacy protection Policy as Upon Results it's has no Influence.

Finally, this Research Concluded That the Most Independent Variable that influence on Online Purchase Intention of Online Retailers is Trusting Believes, Risk Believes and Consumer Privacy Concerns have a weak Influence, and overall Three Variable Together Have an influence with 44 % on the Chance to Purchase Online for jumia or amazon.com.

5. Recommendations for Future researches

- This Research was applied on 2 Online retailers Only Jumia and Amazon.com, therefore other researches Can Adopt Other Online Retailers in Egypt.
- Privacy Protection Policy one of the research Hypothesis (Moderator) and is one of the aspects of Artificial intelligence, other researches should Contribute with other artificial intelligence tools that the Online Retailers Use to know their influence on Online Purchase Intention.
- This Research was Applied in Egyptian Consumer Only, and other researches can apply this research in other Countries or to do a Comparison Between Countries.
- Other Independent Variables Can be applied with the same Moderator Privacy Protection Policy as this research shows there is no influence of Moderator on

the relation between Variables, but other Future researches Could Find an Influence of the same Moderator with different independent Variables.

- Other Researches Could Know the influence of Variables on Both Online Purchase intention and offline Purchase Intention as a comparison, or which is better, Artificial intelligence with offline retailers or Artificial intelligence with Online retailers.

6. Research Limitations

- This Study took a place in Egypt Only, Representing Egyptian's attitudes toward Online shopping, and research results may change if Target audiences changed.
- Sample Audience were randomly selected, and research results may change if sample audience changed to other types.
- Research adopted two Online Retailers Only (Jumia and amazon.com) To conduct the research, and other Online Retailers Could be concluded as a sample case, not only online retailers in Egypt, it could be foreign retailers.

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