

Analyzing the purchasing behavior towards counterfeits in Constantine city (Algeria) using Ajzen's Theory of planned behavior (TPB): a Moderated Mediation

Analysis

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Abstract

We try through this paper to gauge the moderating effect of both religiosity and perceived behavioral control on the relationship between attitudinal and subjective norm factors, and purchasing counterfeits, mediated by intention implementation. We have limited the inferential test to the moderated mediation model which we divided into two sub-models: first stage moderation effect and second stage moderation effect. The first sub-model represents the moderating effect of religiosity on the relationship between the independent variables and intention implementation (the mediator), where we aim to depict whether an effect would occur or not, and if it does is it strong or weak. Whereas in second sub-model, we try to gauge the same effect but on the second part of the path and with another moderator, *i.e.* testing the moderating effect of perceived behavioral control on the relationship between intention implementation and purchasing counterfeits. The results are more than revealing and are presented within few pages.

keywords: Ajzen's theory of planned behavior, purchasing counterfeits, religiosity, moderated mediation analysis, conditional process analysis.

1. Introduction

Since the publication of Ajzen's book on the theory of planned behavior (TPB) in 1991, the theory has been widely developed by many researchers in several fields and domains. The theory is more salient and demonstrative when it's applied in the study of

ملخص

نحاول في هذا المقال قياس أثر التعديل لمتغيري "التدين" و"التحكم في السلوك المدرك" على العلاقة بين المتغيرات الموقفية والاجتماعية من جهة، و شراء المنتجات المقلدة من جهة أخرى مع إدراج "نية التنفيذ" (نية تنفيذ الشراء) كمتغير وسيط. وقد قمنا بدراسة إحصائية لنموذج "Ajzen" المعدل حيث قسمناه إلى نموذجين فرعيين: نموذج الأثر المعدل - مستوى أول، ونموذج الأثر المعدل - مستوى ثان. حيث تم قياس أثر المتغير المعدل الأول، التدين، على العلاقة بين المتغيرات الموقفية والاجتماعية من جهة، و المتغير الوسيط، نية التنفيذ، من جهة أخرى من خلال النموذج الفرعي الأول، وأثر المتغير المعدل الثاني، التحكم في السلوك المدرك، على العلاقة بين المتغير الوسيط من جهة، والمتغير التابع، شراء المنتجات المقلدة، من جهة أخرى من خلال النموذج الفرعي الثاني. وقد كانت النتائج أكثر من مفاجئة كما سيتم إيضاحه في المقال.

كلمات مفتاحية: نظرية "Ajzen" لسلوك المخطط، شراء المنتجات المقلدة، التدين، تحليل الوساطة المعدلة، تحليل المسار الشرطي.

unusual/unethical behaviors such as eating disorder, purchasing counterfeits, organic food or green products...etc. This paper presents a quick literature review related to the study of consumer's behavior through the analysis of the theory of planned behavior, as we try to identify what drives non deceptive consumers to purchasing counterfeits.

Purchasing a counterfeited product or a pirated software differs from purchasing a legal or authentic one; in a way that the value of the product on both scales, personal and social, is perceived differently (will be argued in few pages). Consumers purchase counterfeits for their low prices and mostly for their social adjustive function (Felix Tang et al., 2014), however, it's absurd to hurl the responsibility of the action upon the society's reclamation for conformity, since the actions are more controlled by the attitude a person is performing than by the social implications (Vitell and Muncy, 2005; Vitell, 2003). According to Chang (1998) unethical decision-making such as purchasing counterfeits is explained largely by the attitudes, where Wang et al. (2005) have concluded that attitudes towards counterfeiting are significant influencers of purchase intention. Moreover, it has been found that if the consumer attitudes towards counterfeiting is favorable, the higher are the chances that he/she will purchase counterfeit brands (Matos et al., 2007). Similarly, if consumers possess unfavorable attitudes towards counterfeiting, the less likely are the chances of purchase.

2. Model Discussion

The core idea of TPB (Ajzen's Theory of Planned Behavior) is that behavioral decisions are made according to a reasoned process where the behavior is influenced by attitude(s), subjective norms and behavior perceived control (smith et al., 2007); mediated by intention that plays a determining role in its prediction, and is described as follows: "People do what they intend to do and do not do what they do not intend" (Fishbein, and Ajzen, 1975). In addition, Penz and Stottinger (2008) stated that numerous studies have often applied the theory of planned behavior to piracy as well, which mainly measures highly functional benefits (D'astous, and Gargouri, 2001). However the theory has known decisive detours through the last decades, where several variables have been included in the model according to the circumstances of the study, and some constructive critiques have been highlighted.

In our study we've been focusing from the beginning on analyzing the variables that influence the purchase of counterfeits such as attitudinal factors and most importantly the moderators that have a very determining impact on the outcome variable (Amery .D Wu, and Bruno .D Zumbo, 2008). Therefore we have chosen, according to our appreciation of the literature and the objective of the study, to

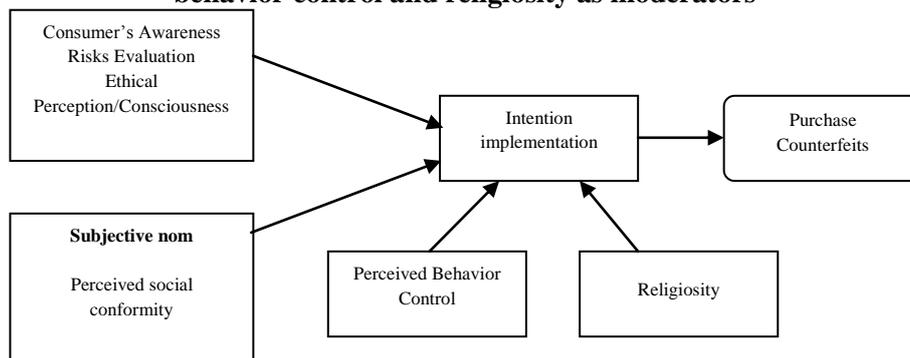
focus intensively on the study of attitudinal factors, and the mediating and moderating variables.

After a thorough examination of TPB's literature in purchasing counterfeits, we have determined the variables to be tested and analyzed; three attitudinal: Consumer's Awareness, Risks Perception, and Ethical Perception/Consciousness; one subjective norm: Perceived Social Conformity, one mediator: Implementation Intention, and two moderators: Perceived Behavioral Control and Religiosity. The TPB basically and foundationally uses "Intention" as mediator to explain how a person performs such a behavior (people usually do what they intend to do), however, if we take time to examine the theory in all its aspects and its applications, we would rather focus on the study of "Implementation Intention" as mediator than the Intention. As is going to be explained later in the section dedicated to expose the concept of "Intention Implementation", intention does not all the time lead to the expected action, therefore is considered as not very reliable variable to be testing the behavior, whereas the implementation intention more likely is; and because it is more conducive to the action than the intention.

2.1 The model:

The following figure presents the model that is analyzed and inferentially tested.

Fig 1 : TBP With implementation intention as mediator and perceived behavior control and religiosity as moderators



Source: established by the student according to the literature)

2.2 Attitudinal factors

2.2.1 Consumer's Awareness: Suraiya Ishak & Nur Faridah M. Zabil (2012) studied the relationship between consumer's awareness/knowledge and actual behavior. They found out that the high level of awareness assures to the consumer an extended control over his actions, and that more educated the consumer is, more he is aware about his environment, and more likely tends to exhibit a rational behavior in purchasing products. This variable is sensitive to

our study as the level of awareness determines if the purchase is rational or not. In this context the rationality the consumer exhibits in his decision making process is crucial in understanding the intention of purchase as the outcome (action of purchase) depends on whether the person is aware about the rationality of the performed action or not (Min Teah, et al., 2015).

2.2.2 Risks Perception:

There are different types of risks a consumer incurs during the purchase of a counterfeited product: financial risk, performance risk, social risk, prosecution risk...etc (Hernan E. Riquelme, and Eman Mahdi Sayed Abbas, 2012). The risks the consumers face in their daily purchases are the central construct in any mental reasoning (Denny McCorkle, et al., 2012), and evaluating these risks, especially when the consumer exhibits a low level of awareness (Irena Vida, et al., 2012), is a decisive variable to determine the attitude toward purchasing and consuming counterfeits. Evaluating the risk linked to the consumption of a counterfeit differs from market to another and from a country to another, depending on the over-control of legislation and the level of governmental involvement in the anti-counterfeit quest, and mostly the socio-cultural aspect of consumers.

2.2.3 Ethical Perception/Consciousness:

Consumer ethics can be defined as "the moral rules, principles and standards that guide the behavior of an individual (or group) in the selection, the purchase, the use, or the selling of goods, or services" (Muncy and Vitell, 1992). Ethical consciousness can be conceptualized as a value that an individual holds and interpreted as an enduring belief (Schwartz, 1992). In a study conducted by Alexandra Madar, Hazel H. Huang and Ting-Hsiang Tseng (2013) on the relationship between ethical intention and actual ethical behavior, they found out that there is a strong and positive correlation between ethical attitude (determined by ethical perception of the behavior and the ethical consciousness) and ethical intention, and that later, in the process, leads to an ethical behavior. Moral judgments and consumer's ethics have both been found to reduce purchase intentions of pirated software (Tan, 2002) and counterfeits (Maldonado, and Hume, 2005). Whereas Lysonki and Darvasula (2008) found out that purchasing or downloading of pirated music is driven by a strong belief that it is not ethically wrong (The results of the study are more than revealing). therefore an unethical intention, accordingly, leads to an unethical behavior, and with a low ethical consciousness and low ethical perception of the behavior, a person is more likely to exhibit an unethical behavior as purchasing counterfeits.

2.3 Subjective Norm

Perceived Social Conformity:

Social norms and regulations have great impact on the behavior of individuals, as a person performs a behavior or abstains from doing it, according to the prescriptions of the social group he/she is a part of (Ajzen, 1991). Meeting the social expectations and norms is highly determining of the individual's behavior, if he/she is more likely concerned with his/her social image more than the pertinence of the outcomes (Abdullah Al-Swidi, et al., 2014). The theory of planned behavior also predicted that an individual's intention to perform a behavior increases as he/she perceives that those who are important to him or her (significant others) accept and encourage that behavior (Ajzen, 1988). Past research has indicated that the relation between subjective norms and behavioral intention were weaker and less consistent than those between attitude and behavioral intentions (Ajzen, 1991). However, several studies supported the subjective norms-behavioral intention relationship as postulated by the theory of planned behavior (Al-Jabri, and Abdul-Gader, 1997; D'Astous, et al., 2005).

2.4 Mediator

Implementation Intention: While intentions specify a desired end point and signal a commitment to achieving the outcome, implementation intentions specify the plan to bring this intention into fruition. An implementation intention is an if/then plan formed by the individual that outlines when, where and how their intentions will be realized as actual behavior (Ajzen, 2002; Gollwitzer and Sheeran, 2006). This plan is internally developed in advance of the behavior/purchase, and specifies the situational cue to elicit the intended behavior ('When situation X arises, I will respond with behavior Y') (Michal J. Carrington, Benjamin A. Neville, and Gregory J. Whitwell, 2010).

Implementation intentions positively mediate the relationship between intentions and behavior because these simple plans help individuals to get started in realizing their intentions, shield their intentions from unwanted influences and avoid conflict (Dholakia, et al., 2007; Gollwitzer, and Sheeran, 2006). Making if/then implementation plans also help individuals to execute existing habits (which enable them to shop on auto-pilot) or potentially make new ones (Ajzen, 2002; Gollwitzer, and Sheeran, 2006).

One of the most influential variable that could determine the plan(s) to be executed is past experience. It refers to the behavior conducted in the past and keeps arising as far as the environment persists. Past behavior could be understood as actions or reactions of a person in response to an internal or external stimuli in the past. In contrast, "Habits are conceived as goal-directed automatic behavior

which is mentally represented" (Lutz Sommer, 2011); i.e. the mental representations and the resulting action of a frequent performance, in similar situations in the past, can be automatically activated by environment replicas. The habitual behavior is triggered by environmental events and its performance acquires minimal attention and deliberate control, it's guided by past experience. In this specific point, Aarts (2007) highlighted the importance of habits in predicting the future behavior, and stated that when habits are weak, the behavior is predicted according to intentions and vice-versa.

Furthermore, researchers have shown that counterfeit buyers are different from non-buyers, and their experience with counterfeit purchase enhances attitudes towards counterfeiting, i.e. have more positive attitude (Wang et al., 2005; Tom et al., 1998). Tom et al. (1998) found that the majority of consumers who have never purchased counterfeit goods did not choose counterfeit products when offered the opportunity to buy them and they also did not express any intention to purchase counterfeit goods in the future.

2.5 Moderators

2.5.1 Perceived Behavioral Control:

Perceived Behavioral Control is useful in assessing an individual's actual control for a specific situation. It is likely to affect intentions and change the behavior indirectly. Therefore, it is considered to be an additional predictor of behavior (Ajzen, 2002).

However, Yzer (2012) argued that the empirical support against the moderation effects of Perceived Behavioral Control on behavior is not strong enough to justify that it is likely to affect the behavior directly. An individual's actual control over his or her environment does not entail that the performance will occur in a specific situation. An individual cannot perform the behavior if he or she does not have the required skills to perform the behavior. Situational factors are likely to obstacle to enhancing the behavioral performance.

Ajzen's (1991) study shows that perceived behavioral control improves intention in relation to positive attitudes and subjective norms. However, Eagly & Chaiken (1993) argue that Perceived Behavioral Control produces positive intention when an individual performs a positive attitude, but not when he performs a negative one. Their investigation shows that people will not perform the behavior if they are confident to do so. Therefore, there is a high possibility that Perceived Behavioral Control moderates attitudes and normative effects on intention. The study made by Umeh & Patel (2004) assists the results that moderation effects of Perceived Behavioral Control might be under high or low intensity to control the performance of the behavior.

2.5.2 Religiosity

The role of religion in influencing human judgment and behavior is evident and acknowledged. One plausible reason for this influence is that "religious belief(s) and practice(s) provide individuals with an unambiguous sense of right and wrong, clear rules for living, closeness with likeminded believers, a distinctive identity, and most important, the faith that their life is sanctioned and supported by God " (Hassan Aleassa et al., 2011).

The degree of the integration and involvement of religion reflects how religious an individual is. Accordingly, religiosity is defined as "a belief in God accompanied by a commitment to follow principles believed set forth by God" (Hernan E. Riquelme and Eman Mahdi Sayed Abbas, 2012). This definition implies that once religious beliefs and values are internalized, they become a reference point against which a person makes judgments and evaluations.

Less religious individuals' values are less restrictive they would be, so it is more likely that they will follow a pragmatic approach to reasoning. Religiosity is also a factor that seems to influence perceptions of social consequences in a willingness to purchase counterfeits. More religious people are less able to rationalize the cost, price and quality effectiveness of counterfeits than their less religious counterparts (Vida, 2007).

As the Algerian people are mostly concerned about religious beliefs and practices (what is at least common knowledge, and stated in the constitution "one religion"), not only in their way of living and social relationships, but when it comes to critical and ethical questions as well (purchase or not counterfeits, pirated downloads, stolen items...etc.), religion stands separately as a salient variable in the study.

3. Methodology

3.1 The methodological approach:

Empirically, we've tried to verify if the model (TPB), that is so claimed in the literature, would be applied on the Algerian society and culture, and that the Algerian consumer has the same motivations or constraints towards purchasing counterfeits as any consumer in the world. In order to verify the model discussed above we have conducted a conditional process analysis that enables us to analyze simultaneously the moderation and mediation effects.

There are several cases where moderator(s) and mediator(s) interact within the same model for which the literature has provided numerous conceptual models and inferential statistic tools (Deng and Kahn, 2009; Rucker, D. D., Preacher, K. J., Tormala, Z. L., & Petty, R. E, 2011; Stone-Romero, E. F., & Raposa, P. J, 2010; Taylor, A. B., MacKinnon, D. P.,&Tein, J.-Y, 2008) and which assist the researcher to best identify and fit his/her model.

Although there is no claim for one to use a specific case or model, there are some empirical considerations that direct us to choose up one model over another. In this paper we try to gauge a moderated mediation effect (A.F.Hayes, 2013, pp: 323-353) as we aim to demonstrate through the model that religiosity doesn't have a big significant effect on the consumer's behavior in contrast of what usually people think. Furthermore, we replaced "Intention" by "Intention Implementation" as we are deeply convinced (as explained in the literature review above) that the action of purchase is more likely related to the plan a person executes (when, where, and how to purchase) than the intention he formulates, because intention doesn't always lead to action.

3.2 sampling and data collection:

A sample of 208 consumers was chosen to conduct the study. The questionnaire was administered through a period of 2 months. The respondents were chosen according to a convenience sampling method as we try (from methodological POV) to profiling the persons who purchase counterfeits through different variables and factors such as age, martial situation, revenue...etc.

We've been conducting the study at the approximation of the souks^a (where we can purchase counterfeits for sure), where we questioned people who were entering and leaving the souk (The difficulty of finding cooperative persons who were willing to answer the questionnaire was enormous especially in this kind of markets). Three places were chosen in the city of Constantine to conduct the study: El-Khroub town, Constantine-Downtown, and Daksi town, where the most popular and active souks are situated.

3.3 General Hypotheses:

- Attitudinal variables do have strong direct effect on counterfeit purchase.
- Subjective Norm variable does have strong direct effect on counterfeit purchase.
- Religiosity does effect the path: independent variable^b - mediator (first stage moderation effect).
- Perceived control behavior does effect the path: mediator - dependent variable^c (second stage moderation effect).

3.4 Model-testing

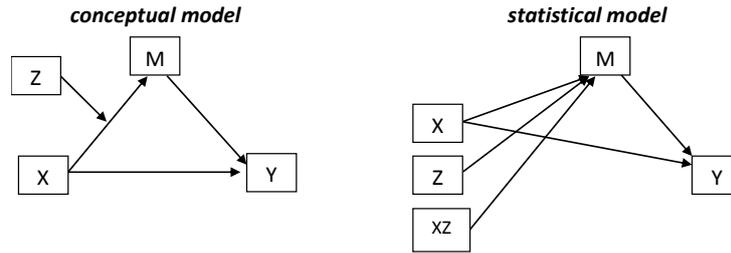
^a souk: is an Arabic word used to define a popular market or place where we can find diverse variety of products (low and medium-quality products and counterfeits mostly) and people with low and medium revenue.

^b independent variables: attitudinal variables and subjective norm.

^c dependent variable: purchase counterfeits.

3.4.1 First stage moderation effect

fig2. First stage moderation effect: Religiosity



coefficients:
 X-M: a_1 , Z-M: a_2 , XZ-M: a_3 , M-Y: b , X-Y: c

Source: established by the student according to the literature)

In this model we try to analyze the moderation effect of **religiosity** on the path independent-variable intention-implementation.

3.4.2 Model equations

The following equations represent the path diagram in fig.1 (right side):

$$M = i_m + a_1X + a_2Z + a_3XZ + e_m \dots\dots\dots (1)^d$$

$$Y = i_y + cX + bM + e_y \dots\dots\dots (2)$$

Thereof we get for each independent variable (Consumer's Awareness(X_1), Risks Perception(X_2), Ethical Perception/Consciousness(X_3), and Perceived Social-Conformity(X_4)) two (2) equations to test the moderated mediation.

The indirect effect of X on Y through M (ω in the notation below) is the product of the conditional effect of X on M from Equation (1) and the effect of M on Y controlling for X in Equation (2):

$$\omega = (a_1 + a_3 Z)b \dots\dots\dots (3)$$

Equation (3) can be rewritten in an equivalent form:

$$\omega = a_1b + a_3bZ \dots\dots\dots(4)$$

which is a line with intercept a_1b and slope a_3b . a_3b is a quantification of the effect of Z on the indirect effect of X on Y through M. Thus, in the first stage (and direct effect) moderation model, the indirect effect of X on Y through M is a linear function of Z. If the indirect effect is systematically larger or smaller for some values of Z than others, we expect that a_3b is different from zero.

3.4.3 Inferential Statistics

The following table shows the statistics related to the test of the model.

Tab (1): OLS Regression coefficients with Confidence Intervals^e

^d X_i : independent variables (Consumer's Awareness (X_1), Risks Perception(X_2), Ethical Perception/Consciousness(X_3), and Perceived Social-Conformity(X_4)); M: intention implementation; Z: religiosity.

	Intention Implementation (M)			Purchase Counterfeits (Y)		
	Coefficients 95% CI ^f			Coefficients 95% CI		
Consumer's Awareness (X) Intention Implementation(M) Religiosity (Z) X x Z Constant	a ₁ = 0.150 a ₂ = 0.138 a ₃ = -0.036 e _m = 3.404	0.014 -0.018 -0.214 3.297	0.285 0.295 0.143 3.510	C ^l = -0.101 b = -0.016	- 0.285 - 0.329	0.253 0.253 e _y = 2.815 1.886 3.743
R ² = 0.060 F(3,204) = 3.954, p = 0.009		R ² = 0.005 F(2,205) = 0.433, p = 0.649				
Risks Perception (X) Intention Implementation(M) Religiosity (Z) X x Z Constant	a ₁ = 0.194 a ₂ = 0.146 a ₃ = -0.038 e _m = 3.401	0.080 0.004 -0.189 3.300	0.307 0.287 0.112 3.503	C ^l = -0.157 b = -0.007	- 0.372 - 0.257	0.058 0.270 e _y = 2.737 1.829 3.645
R ² = 0.085 F(3,204) = 6.278, p = 0.000		R ² = 0.012 F(2,205) = 1.056, p = 0.350				
Ethics perception/Consciousness (X) Intention Implementation (M) Religiosity (Z) X x Z Constant	a ₁ = 0.269 a ₂ = 0.216 a ₃ = -0.176 e _m = 3.393	0.171 0.085 -0.176 3.296	0.367 0.347 0.053 3.490	C ^l = -0.350 b = 0.111	-0.544 -0.149	-0.157 0.370 e _y = 2.384 1.189 3.279
R ² = 0.161 F(3,204) = 13.014, p = 0.000		R ² = 0.066 F(2,205) = 6.371, p = 0.002				
Perceived Social-Conformity (X) Intention Implementation(M) Religiosity (Z) X x Z Constant	a ₁ = 0.146 a ₂ = 0.162 a ₃ = -0.164 e _m = 3.401	0.016 0.025 -0.324 3.300	0.276 0.299 -0.005 3.502	C ^l = 0.376 b = -0.100	0.135 -0.369	0.616 0.068 e _y = 3.101 2.183 4.019
R ² = 0.076 F(3,204) = 5.577, p = 0.001		R ² = 0.052 F(2,205) = 4.843, p = 0.009				

Source: According to SPSS outputs

As shown in the table above, at each level of the test of one independent variable we hold the other independent variables constant (*i.e.* when we test X₁ we hold X₂, X₃, and X₄ constant; and so on when testing each X) as it is assumed that there is no interdependent relationship between the independent variables or at least no perfect interdependence (see Appendix).

The results show a non significant direct effect of both Consumer's Awareness (C^l = -0.101, CI -0.285 to 0.253, p=0.649) and Risk Perception (C^l = -0.157, CI - 0.372 to 0.058, p=0.350) on counterfeit purchase as the CI contains zero and the p-value for each effect is > 0.05. However, for Ethical perception (C^l = -0.350, CI -0.544 to -0.157, p= 0.002) and Perceived Social Conformity (C^l = 0.376, CI 0.135 to 0.616, p=0.009) we depict a significant direct effect on counterfeit purchase.

^e Number of bootstrap samples for bias corrected bootstrap confidence intervals: 10000, Level of confidence for all confidence intervals in output: 95,00, the following variables were mean centered prior to analysis: Religiosity, Consumer's Awareness, Risk Perception, Ethical Perception, Perceived Social Conformity

^f CI: Confidence Interval

A test of moderation of the effect of attitudinal variables on intention implementation by religiosity yields a non significant result, as the CI of the product for each attitudinal variable contains zero ($X_1: a_3=-0.036, CI -0.214$ to $0.143, p= 0.060/ X_2: a_3=-0.038, CI -0.189$ to $0.112, p=0.000/ X_3: a_3=-0.176, CI -0.176$ to $0.053, p=0.000$), whereas a significant moderation is yielded in the effect of the subjective norm (Perceived Social Conformity) on intention implementation through different values of religiosity ($a_3= -0.164, CI -0.324$ to $-0.005, p=0.001$).

In this model, the indirect effect of X on Y through M is a function, defined as the product of the conditional effect of X on M from Equation (1) and the effect of M on Y controlling for X from Equation (2):

$$\omega_{x1} = (a_1 + a_3Z)b = a_1b + a_3bZ = -0.002 + 0.0006.Z$$

$$\omega_{x2} = (a_1 + a_3Z)b = a_1b + a_3bZ = -0.001 + 0.0003.Z$$

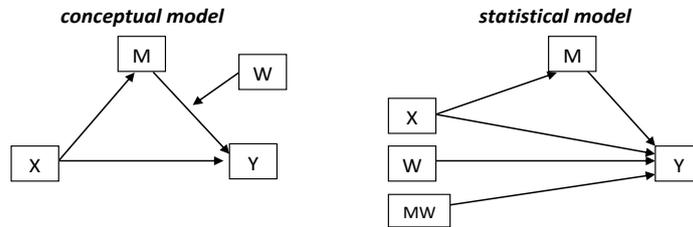
$$\omega_{x3} = (a_1 + a_3Z)b = a_1b + a_3bZ = 0.030 - 0.0195.Z$$

$$\omega_{x4} = (a_1 + a_3Z)b = a_1b + a_3bZ = -0.015 + 0.0164.Z$$

which is a linear of function of Z with intercept a_1b and slope a_3b .

3.4.5 Second stage moderation effect:

fig3. Second stage moderation effect: Perceived Behavioral Control



coefficients:
 X-M: a, M-Y: b_1 , W-Y: b_2 , MW-Y: b_3 , X-Y: C^{\setminus}

Source: established by the student according to the literature)

In this model we try to analyze the moderation effect of perceived behavioral control on the path intention- implementation purchase-counterfeit.

3.4.6 Model equations:

The following equations represent the path diagram in fig.2 (right side):

$$M = i_m + aX + e_m \dots\dots\dots (5)$$

$$Y = i_y + C^{\setminus} X + b_1M + b_2W + b_3MW + e_y \dots\dots\dots (6)^{\S}$$

the indirect effect of X on Y through M is the product of the effect of X on M from Equation (5) and the conditional effect of M on Y from Equation (6):

$$\omega = a(b_1 + b_3W) \dots\dots\dots (7)$$

Equation (7) can be rewritten in equivalent form as

^{\S} W: perceived behavioral control

model is sufficient to claim moderation of mediation, this analysis as typically interpreted supports the conclusion that the indirect effect of the independent variables (attitudes and subjective norm) on counterfeit purchase through intention implementation depends on perceived control behavior.

Although the moderation of the path "mediator-dependent variable" is verified at every test level for attitudinal variables (X_1 : $b_3 = -0.414$, CI -0.737 to -0.092, $p = 0.109$ / X_2 : $b_3 = -0.415$, CI -0.724 to -0.105, $p = 0.038$ / X_3 : $b_3 = -0.0383$, CI -0.697 to -0.070, $p = 0.000$), we cannot say the same for Perceived Social Conformity where moderation does not occur (X_4 : $b_3 = -0.436$, CI -0.756 to 0.114, $p = 0.009$) as the CI contains zero. Yet, it is comprehensible in this case as we have control over our behavior (attitudes) and not over the behavior of the society.

The indirect effect in this model is the product of the effect of X on M from Equation (5) and the conditional effect of M on Y from Equation (6):

$$\omega_{X1} = a(b_1 + b_3W) = ab_1 + ab_3W = -0.005 - 0.077W$$

$$\omega_{X2} = a(b_1 + b_3W) = ab_1 + ab_3W = -0.002 - 0.087W$$

$$\omega_{X3} = a(b_1 + b_3W) = ab_1 + ab_3W = 0.019 - 0.097W$$

$$\omega_{X4} = a(b_1 + b_3W) = ab_1 + ab_3W = -0.012 - 0.068W$$

which is a linear function of W with intercept ab_1 and slope ab_3 .

4. Discussion and Conclusion

From the beginning of this paper we've been trying to present the factors (or variables) that may lead non deceptive consumers to purchase counterfeits, and applying some inferential tests to gauge the impact of these variables on the act of purchase, through a moderated mediation analysis, which is a conditional process analysis of a model including both mediator(s) and moderator(s).

The model that is presented in the literature is what seems to best fit reality, which includes (as explained in model discussion) the factors that would shape the behavior of a person toward counterfeits. Where most studies have agreed, through different empirical verifications, that people with low level of awareness and low level of ethics, and with no considerations for risks related to purchasing and consuming counterfeits, are more likely to exhibit a favorable behavior toward purchasing counterfeit; whereas people with high level of awareness and high level of ethics, and great sense of risk evaluation, are more likely to reject the behavior (i.e. not willing to purchase counterfeits).

Furthermore, religiosity that represent the degree of one's conformity to religious standards should have, in Islamic countries, a direct impact on social relationships and personal behavior, as it is acknowledged to direct the life-path of Muslim people. Thereof, we tried to verify if these assumptions are true as far as the people inhabitants/ of Constantine are considered.

Surprisingly, the first results that are presented in the inferential tests above, show no effect of consumer's awareness and risks perception on purchasing counterfeits, what leads us to think that people of Constantine are

far away from recognizing counterfeits or even comprehend the phenomenon of counterfeiting, and that counterfeits do not present, at a mental and cognitive level, a danger for them (the first assumption has not been met).

Furthermore, the results show, as well, that ethics are a determine factor in shaping the behavior of the person and that is likely to effect the act of purchase, yet these results do not confirm with certainty that this factor is narrowly effecting the purchase of counterfeits (deeper studies need to be conducted to resolve the question).

Moreover, as we go far in the tests, the effect of perceived social conformity is claimed to be effecting the purchase of counterfeits and that people are more receptive to social stimuli (the second assumption has been met), *i.e.* the social standards are more likely to control the consumer's behavior, and to determining the life-path of people of Constantine; which means that purchasing counterfeits may be a social behavior (everyone does it so why not me).

In addition, we integrated religiosity in the model to verify if it has or not an impact on the behavior of consumers, and we started with the assumption that Muslim people care a lot about religion and that would curve and direct their behavior. Actually, the results show a different reality, that religiosity has no effect on attitudes people are performing, and that if a person is about to behave negatively, religiosity couldn't moderate the path and therefore has no control over the consumer's attitudes.

However, this could mean that because people do not perceive counterfeits as dangerous or unethical products that religiosity has no effect; and on parallel if counterfeits are perceived as unethical purchases, maybe in this case religiosity could have the desired effect. Furthermore, we depict a salient moderation effect of religiosity on the relationship between perceived social conformity and the intention of purchasing counterfeits, what does it mean? it means simply that religion is a social phenomenon, and if religion is socially embraced (as the positive impact of the subjective norm on the act of purchase is stated in the results) it would have strong effect on the intention of purchase, *i.e.* if society cares about religion so we do, and just in this case religiosity may make a person to not purchase counterfeits even-though he/she has positive attitude toward the behavior (meaning that they don't purchase when they intend to).

In the second part of the analysis, we tried to test the moderation effect of perceived behavioral control on the relationship between the intention of purchasing and the act itself, and because the literature has questioned in many occasions the reliability of this variable in moderating the path independent variable-intention, we realized that maybe it moderates the path intention-action. And indeed, the results show that a person has control over his attitudes and the society's prescriptions (the assumption has been met), as situational factors in this case may be more influential than attitudes or subjective norm, and more likely to be analyzed and tested instead of attitudes (as far as the sample is concerned).

As we come to the end of the paper we have realized that purchasing counterfeits is a delicate subject to test, for the simple fact that we are compelled to analyze people's cognitive, affective, and attitudinal state which is in most cases difficult (if not impossible) to do. Furthermore, the results that we have presented and explained can be interpreted differently according to the researcher perspective or to the changing study environment; where, in different situations or samples or even target profiles, the relationship with no effect or with a weak one can have a strong impact in a different environment or with a different profile (people with different demographic factors).

6. Limitations and acknowledgement

The model that has been constructed is not to be generalized and so are the results of the study. The results concern only the analysis of a moderated mediation case, and a more elaborated model with more results are to be conducted and presented in the PhD thesis defense. This paper is a first step made by the researcher towards more deeper studies and more detailed test in the subject.

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References:

1. Aarts, (2007), "health and goal-directed behavior: the non-conscious regulation and motivation of goals in their pursuit", *health psychology review*, Vol1, Nr 1 ,pp 53-82.
2. Abdullah Al-Swidi, Sheikh Mohammed Rafiul Huque, Muhammad Haroon Hafeez and Mohd Noor Mohd Shariff, (2014), " The role of subjective norms in theory of planned behavior in the context of organic food consumption", *British Food Journal*, Vol. 116 No. 10, pp. 1561-1580.
3. Ajzen, (2002), "residual effect of past on later behavior: habituation and reasoned action perspectives", *personality and social psychology review*, Vol 6, N2, pp107-122.
4. Ajzen, I. (1991), "The theory of planned behavior", *Organizational Behaviour and Human Decision Processes*, 50(2), pp179-211.
5. Ajzen, I. (1988), "Attitudes, Personality, and Behavior", Open University Press, Milton Keynes, England.
6. Ajzen, I., & Fishbein, M. (1977), "Attitude-behavior relations: a theoretical analysis and review of empirical research", *Psychological Bulletin*, 84(5), pp 888-918.
7. Ajzen, I. and Fishbein, M. (1975), "Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research", Addison-Wesley, Reading, MA.
8. Ajzen, I. (2002) "Perceived Behavioral Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behavior", *Journal of Applied Social Psychology*, 32(4), pp 665–683.
9. Al-Jabri, I. and A. Abdul-Gader, (1997), "Software Copyright Infringements: An Exploratory Study of the Effects of Individual and Peer Beliefs", *Omega* 25(3), pp335–344.
10. Alexandra Madar, Hazel H. Huang & Ting-Hsiang Tseng, (2013), "Do Ethical Purchase Intentions Really Lead to Ethical Purchase Behavior? A Case of Animal-Testing Issues in Shampoo", *International Business Research*, Vol. 6, No. 7.
11. Amery .D Wu & Bruno .D Zumbo (2008), " Understanding and using mediators and moderators", *Social Indicators Research*, 87, pp 367-392.

12. Andrew F. Hayes, "Introduction to Mediation, Moderation, and Conditional Process Analysis", 2013, Guilford Press, UK-London.
13. Chang Man Kit (1998), "Predicting unethical behavior: A comparison of the Theory of Reasoned Action and the Theory of Planned Behavior", *Journal of Business Ethics*, 17(16), 1825-1834.
14. D'astous A. and Gargouri E.(2001), "Consumer evaluations of brand imitations", *European Journal of Marketing*, vol 35, Issue 1/5, pp 153-167.
15. D'astous, A., F. O. Colbert and D. Montpetit (2005), "Music Piracy on the Web – How Effective are Anti-Piracy Arguments? Evidence from the Theory of Planned Behavior", *Journal of Consumer Policy* ,28, 289–310.
16. Deng, X., & Kahn, B. E. (2009). Is your product on the right side?: The location effect on perceived product heaviness and package evaluation. *Journal of Marketing Research*, 46, 724–738.
17. Denny McCorkle, James Reardon, Douglas Dalenberg, Andrew Pryor, and John Wicks, (2012)," Purchase or Pirate: A Model of Consumer Intellectual Property Theft", *Journal of Marketing Theory and Practice*, vol. 20, no. 1, pp. 73–86.
18. Dholakia, U. M., R. Bagozzi and M. Gopinath, (2007), "How Formulating Implementation Plans and Remembering Past Actions Facilitate the Enactment of Effortful Decisions", *Journal of Behavioral Decision Making* 20, pp343–364.
19. Felix Tang, Van-Ing Tian, & Judy Zaichkowsky, (2014), "Understanding counterfeit consumption", *Asia Pacific Journal of Marketing and Logistics*, vol 26, No1, pp 4-20.
20. Gary Akehurst,(2012), "Re-examining green purchase behavior and the green consumer profile: new evidences", *Management Decision*, Vol. 50 No. 5, pp. 972-988.
21. Gollwitzer, P. M. and P. Sheeran, (2006), "Implementation Intentions and Goal Achievement: A Meta-Analysis of Effects and Processes", *Advances in Experimental Social Psychology*, 38,pp 69–119.
22. Hassan Aleassa, John Michael Pearson, & Scott McClurg, (2011), "Investigating Software Piracy in Jordan: An Extension of the Theory of Reasoned Action", *Journal of Business Ethics*, 98: pp663–676.
23. Hee Yeon Kim and Jae-Eun Chung, (2011), "Consumer purchase intention for organic personal care products", *Journal of Consumer Marketing*, 40–47.
24. Hernan E. Riquelme, Eman Mahdi Sayed Abbas, & Rosa E.Rios, (2012), " Intention to purchase fake products in an Islamic country", *Education, Business and Society: Contemporary Middle Eastern Issues* Vol. 5 No.1, pp6-22.
25. Irena Vida and Mateja Kos Koklic, Monika Kukar-Kinney, Elfriede Penz, (2012), "Predicting consumer digital piracy behavior The role of rationalization and perceived consequences", *Journal of Research in Interactive Marketing* Vol. 6 No. 4, pp. 298-313
26. Joanne R smith, Shuang Liu, Peter Liesch, Cindy Callois, Ren Yi, Stephanie Daly, (2010), "The role of behavioral, normative, and control beliefs in the consumption of Australian products and services by Chinese consumers", *Australian Marketing journals*, pp 206-2013.
27. Lutz Sommer, (2011), "the theory of planned behavior and the impact of past behavior", *International business and economics research journal*, Vol 10, N1, pp 91-110.
28. Lysonski, S. and Durvasula, S. (2008), "Digital piracy of MP3: consumer and ethical predispositions", *Journal of Consumer Marketing*, Vol. 25, pp. 167-78.
29. Mahmut Sonmez, Deli Yang, Gerald Fryxell, (2013), "Interactive Role of Consumer Discrimination and Branding against Counterfeiting: A Study of Multinational Managers' Perception of Global Brands in China", *journal of business ethics*, 115: 195-211.
30. Maldonado, C. and Hume, E.C. (2005), "Attitudes toward counterfeit products: an ethical perspective", *Journal of Legal, Ethical and Regulatory Issues*, Vol. 8, pp. 105-17.
31. Matos C. A., Ituassu C. T., and Vargas Rossi C. A. (2007), "consumer attitudes toward counterfeits: a review and extension", *Journal of Consumer Marketing*, vol 24, Issue1, pp 36-47

32. Michal J. Carrington, Benjamin, A. Neville, & Gregory J. Whitwell, (2010), "Why Ethical Consumers Don't Walk Their Talk: Towards a framework for Understanding the Gap Between the Ethical Purchase Intentions and Actual Buying Behavior of Ethically Minded Consumers", *Journal of Business Ethics*, 97:139–158.
33. Min Teah and Ian Phau, Yu-an Huang, (2015), " Devil continues to wear "counterfeit" Prada: a tale of two cities", *Journal of Consumer Marketing*, 32/3,pp 176–189.
34. Muncy, J.A. and Vitell, S.J. (1992), "Consumers ethics: an investigation of the ethical belief of the final consumer", *Journal of Business Research*, Vol. 24, pp. 297-311.
35. Penz, E. and Sto'ttinger, B. (2008), "Corporate image and product similarity – assessing major demand drivers for counterfeits in a multi-country study", *Psychology & Marketing*, Vol. 25 No. 4, pp. 352-381.
36. Promotosh Barua, (2013), "The Moderating Role of Perceived Behavioral Control: The Literature Criticism and Methodological Considerations", *International Journal of Business and Social Science* Vol. 4 No. 10 [Special Issue – August 2013].
37. Rucker, D. D., Preacher, K. J., Tormala, Z. L., & Petty, R. E. (2011). Mediation analysis in social psychology: Current practice and new recommendations. *Personality and Social Psychology Compass*, 5/6, 359–371.
38. Schwartz, S.H. (1992), "Universals in the content and structure of values: theoretical advances and empirical tests in 20 countries", *Advances in Experimental Social Psychology*, Vol. 25, pp. 1-65.
39. Stone-Romero, E. F., & Raposa, P. J. (2010). Research design options for testing mediation models and their implications for facets of validity. *Journal of Managerial Psychology*, 25, 697–712.
40. Suraiya Ishak & Nur Faridah M. Zabil, (2012), "Impact of Consumer Awareness and Knowledge to Consumer Effective Behavior", *Asian Social Science*, Vol. 8, No. 13, 2012.
41. Tan, B. (2002), "Understanding consumer ethical decision making with respect to purchase of pirated software", *Journal of Consumer Marketing*, Vol. 19, pp. 96-111.
42. Taylor, A. B., MacKinnon, D. P., & Tein, J.-Y. (2008). Tests of the three-path mediated effect. *Organizational Research Methods*, 11, 241–269.
43. Tom, G., Garibaldi, B., Zeng, Y. and Pilcher, J. (1998), "Consumer demand for counterfeit goods", *Psychology & Marketing*, Vol. 15, pp. 405-21.
44. Umeh, K., & Patel, R. (2004), "Theory of planned behavior and ecstasy use: An analysis of moderator-interactions", *British journal of health psychology*, 9(1), pp25–38.
45. Vida, I. (2007), "Determinants of consumer willingness to purchase non-deceptive counterfeit products", *Managing Global Transitions*, Vol. 5, pp. 253-70.
46. Vitell, S.J. (2003), "Consumer ethics research: review, synthesis and suggestions for the future", *Journal of Business Ethics*, Vol. 43 Nos 1/2, pp. 33-47.
47. Vitell, S.J. and Muncy, J. (2005), "The Muncy-Vitell consumer ethics scale: a modification and application", *Journal of Business Ethics*, Vol. 62 No. 3, pp. 267-275.
48. Wang, F., Zang, H., Zang, H. and Ouyang, M., (2005), "Purchasing pirated software: an initial examination of Chinese consumers", *Journal of Consumer Marketing*, Vol. 22, pp. 340-51.
49. Yu-Shan Chen & Ching-Hsun Chang, (2012) "Enhance green purchase intentions The roles of green perceived value, green perceived risk, and green trust", *Management Decision*, Vol. 50 No. 3, pp. 502-520.

Appendix

The following table shows the inter-correlation between the independent variables.

Correlations

		Attitude1	Attitude2	Attitude3	Subjective norm
Spearman's rho	Attitude1				
	Correlation Coefficient	1,000	,333**	,119	-,007
	Sig. (2-tailed)	.	,000	,086	,920
	N	208	208	208	208
	Attitude2				
	Correlation Coefficient	,333**	1,000	,488**	,157*
	Sig. (2-tailed)	,000	.	,000	,024
	N	208	208	208	208
	Attitude3				
	Correlation Coefficient	,119	,488**	1,000	,298**
	Sig. (2-tailed)	,086	,000	.	,000
	N	208	208	208	208
Subjective norm					
Correlation Coefficient	-,007	,157*	,298**	1,000	
Sig. (2-tailed)	,920	,024	,000	.	
N	208	208	208	208	

** . Correlation is significant at the 0.01 level (2-tailed)

* . Correlation is significant at the 0.05 level (2-tailed)

the highest correlation index is 0.488 (2-tailed test) which means weak interdependency between the different independent variables.