

LITERATURE REVIEW

EPSITEMOLOGY AND ONTOLOGY ON ONLINE
PURCHASING BEHAVIOUR RESEARCH

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I. INTRODUCTION

Online shopping is a phenomenon that is proliferating nowadays, as online and e-commerce sales channel are gradually integrated into the retail industry. According to Statista (2019), retail e-commerce sales worldwide are forecasted to reach 3.4 trillion US dollars, which translates into 13,7% of total global retail sales. This proportion is estimated to rise to 17,5% by 2021 (Statista, 2019). The convenience of online shopping is making it as an emerging trend among consumers, especially the millennials.

As a result, there has been a significant growth of qualitative, interpretive research in marketing, particularly in the field of online purchasing behaviour over the last decade. Compared to other topics such as cultural, anthropology and sociology, this is a relatively new development. Thus, the research in this field of online purchasing behaviour suffers from many drawbacks creating obstructions for further advances. While some of these drawbacks are related to the research methodology, for example, the division between researchers on the basis of methodological orientation, others can be connected as research philosophy problem.

The paper aims to explore the epistemological and ontological issues concerning research on consumer behaviour and their implications. The essay will be divided into two main parts: first, prior studies and research on the topic of online purchasing behaviour over the last ten years will be critically examined and reflected on the role of epistemology, ontology and axiology in shaping those researches. As the epistemological orientations determine the research process, we can discuss the epistemological issue to aware of the limitations related to created knowledge about the topic and provide direction of future research. Secondly, the author will carefully examine the study of Fortes and Rita in 2016: Privacy concerns and online purchasing behaviour: Towards an integrated model on the Journal of European Research on Management and Business Economics, focus on its research philosophy, ethics, reliability and validity.

II. LITERATURE REVIEW

1. Ontology and epistemology in research methods

1.1. Ontology

In the philosophical world, there is a variety of interpretations of ontology have been suggested. Crotty (1998), defined Ontology as “the study of being and is concerned with what is”, for instances “the nature of existence and structure of reality”. Similarly, Jupp (2006) gave the definition of ontology in SAGE Online Dictionary of Social research methods as “a concept that examines the relationship exist between different aspects of the society”. Slevitch (2011) explained the originality of the word “ontology”, which is the combination of onto in Greek means “being”, and logia is “science, study, theory”. As per the studies conducted by Richards (2003), it was observed that ontology is the theory that we take in to granted about the nature of reality and what exists. In 1994, the view of Guba and Lincoln were “that the ontological consideration is the form and nature of reality” thus, what can be known about it is “how thing really are” and “how things really work”. In short, ontology concerns our “beliefs about the social world and the nature and kind of reality” (Saunder, 2009). Over time, there have been two major positions of philosophical ontology has been developed: Objectivism and Constructionism. In Ontology Objectivism position, reality existed independently from the human mind and understanding, can be observed accurately and is built based on material and the physical world. It is the beliefs that material things such as energy, particles are more real than the human mind, or reality existed independently, regardless of the human mind. Whereas in Ontology Constructionism, reality existed through observer mind and socially constructed meaning. It is believed that the immaterial phenomenon like the “human mind and consciousness are more real than material things”. In this assumption, the reality is constructed in the mind of the observer. The objectivism ontology views consumer behaviour as an existing, stable and real system of beliefs and practices. Therefore, it is argued that consumer behaviour is an independent and objective phenomenon that can be accurately investigated and measured. This view of consumer behaviour leads to a positivistic/ analytical research strategy. In this way, the author of the studies perceives reality as tangible, concrete and real with possible explanation.

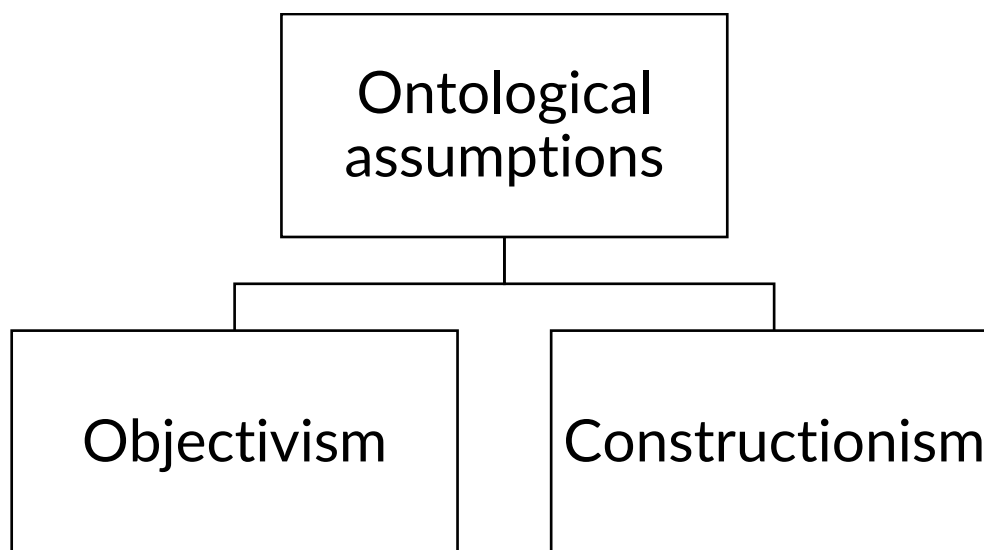


Figure 1: *Ontological assumptions (Adapted from Bryman, 2008)*

1.2. Epistemology

Epistemology, “or theory of knowledge”, is “concerned with the sources, nature and limitations of knowledge” (Richards, 2003). It helps to “shape and determine our particular view of the world and of reality”. Originally, the word itself comes from two Greek words: “Episteme” means “knowledge”, understanding, and “Logia” mean “science, study” (Slevitch, 2011). Example of epistemology questions are: “What does knowledge mean? What is the basis of true knowledge”? Or how do a person know that they know something? (Cohen, Manion and Morrison, 2007). They further explain epistemology by arguing that epistemology is the “assumptions which one makes about the very foundation of knowledge – its nature and form, how it can be acquired and how communicated to other human beings”. In research, the epistemological role is to help the researcher make the decisions about the method he or she will be using in their study. That is, if knowledge is viewed as real and tangible, the academic scholar need to play an observer role combine with testing measuring and et cetera.

In contrast, if knowledge is viewed as something personal and unique, then the researcher needs to have greater involvement with the subjects. There have been two major branches/ frameworks of philosophical epistemology have been developed: Empiricism and Rationalism. In Empiricism position, real knowledge is found on input from human observations and experience when beliefs and claims are justified whereas Rationalism

epistemology emphasises reason, rather than observation and experience, as the primary basis for claiming ideas. Indeed, the logical and rational human mind is the source of new knowledge, not the material world around us. To sum up, while the positivism/rationalism attempt at explaining, the interpretivism/empiricism aim to understand them.

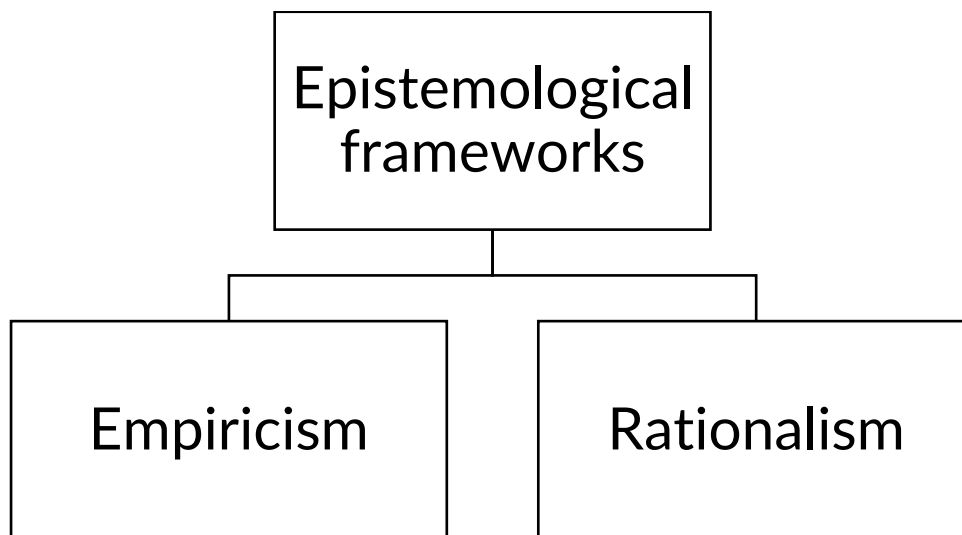


Figure 2: *Epistemological assumptions (Adapted from Bryman, 2008)*

To summarise, Allison & Hobbs (2006) clarified the main difference between ontology and epistemology is that while ontological consideration is about “What is the nature of the knowable, or what is the nature of reality?”, The epistemological consideration is about “What is the nature of the relationship between the knower (the inquirer) and the known (or knowledge)?”. In research, epistemology concerns with “what constitutes acceptable knowledge in a field of study” (Saunders, 2009, p.4), whereas ontology “raises questions of the assumption” (Saunders, 2009, p.410) that the researchers made about the commitment held to particular views in the study. To get a better understanding of the philosophical research and view discussed above, the author has summarised the main assumptions of each position in Appendix 1 and 2 of the essay.

2. Literature review of previous researches

2.1. Consumer behaviour perspective

Buyer behaviour is an abstract notion for research to define it. Most research about consumer behaviour is based on a realistic perspective at both ontological and epistemological levels. Edmund and Faison (1977) first defined consumer behaviour as “the assumption that people have a series of needs which lead to drive state”. Engel, Kollat and Miniard (1986) explained consumer behaviour as the acts of individuals involved in obtaining, using the goods and services, including the decision making process that encourage these acts. While the two authors describe the term as ontological method by defining it as “what is”, Kotler and Keller in 2011 considered consumer behaviour as the theory of knowledge or epistemology orientation, as consumer behaviour is the study of “how people buy, when they buy, what they buy and why they buy”. Recently, two management professors Dange and Kumar (2012) proposed a model namely FFF model for online customer behaviour, which takes both internal (perception, attitudes, motivation) and external factors (age, culture, demographics) into consideration. They took the purchasing behaviour as dependable variables and assumed that these factors would eventually impact the online buyer behaviour.

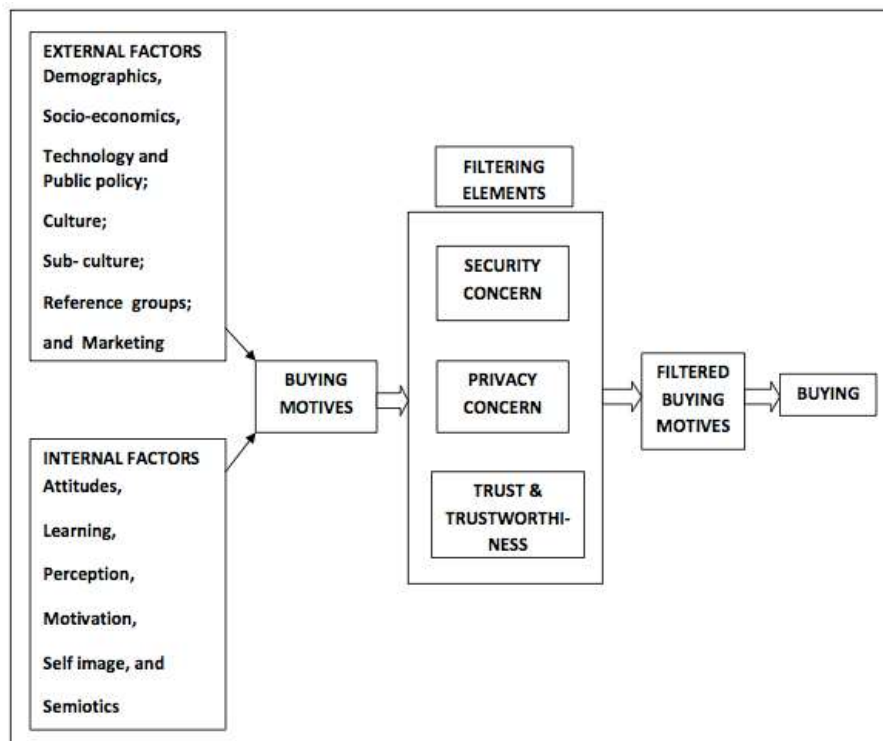


Figure 3: The FFF model of online consumer behaviour (Adapted from Dange and Kumar, 2012)

Clearly, this ontology objectivism views consumer behaviour as stable, existing and real system of practices. It is compatible with the epistemological rationalism which assumes that the external system is accessible to researchers (Duberley and Johnson, 2000). As a result, researchers argued that consumer behaviour is an independent phenomenon that can be accurately examined and investigated. This view has led to the positivistic and analytical research strategy, which mean that the majority of consumer behaviour research fall in quantitative method with the objective is to explain the concept as thoroughly as possible, and most of the time, the research result show that there is only one possible answer to a research question. Recently, Rahman, Khan and Iqbal (2017) conducted numerical experiments on hedonic values, trust and privacy on online consumers and found that utilitarian shopping which is based on rational and goal-oriented reason, positively influence their online purchasing intentions.

The utmost importance of a definite theory about one subject, in this case, buyer behaviour is that the core assumptions of the antecedents of behaviour will have substantial implication for the choice of variables and methodologies among researches. For instance, the FFF model mentioned above by Dange and Kumar (2012) considered buying motives as a variable, which consisting of internal and external factors. In a different study, Soonsawad (2013) examined conversion rate, which is the percentage of visitors to website that complete a desired goal (in this case making a purchase) out of the total number of visitors (Ayanso and Yoogalingam, see Soonsawad 2013), as the critical variable for the online buyer behaviour perspective. With the same objective, Rahman, Khan and Iqbal (2017) considered variables such as hedonic values, trust and privacy in their study.

In their essay, "Privacy concerns and online purchasing behaviour Towards an integrated model", Fortes and Rita (2016) analysed how concerns about the Internet privacy have "a significant impact on online buyer behaviour". They draw attention to the fact that "privacy concerns about personal information are the second most important factors for consumer toward online purchasing decision" — the study conducted via questionnaire to 900 individuals. The study failed to justify the ontology of why the privacy concern factors were chosen as a subject of research. This is the cause of missing the first and foremost factor of a research study: the philosophy/ epistemological considerations. In 2012, Saunders, Lewis

and Thornhill characterised the research design by” contemplating the layers of the research onion.” “The dimensions representing these concentric circles are delineated” and can be applied to any study:

- Philosophy / Epistemological Considerations(for example .
positivism, phenomenology, realism)
- Approaches (for example deductive versus inductive approaches)
- Strategy (for example experiment, survey, case study, ethnography, grounded research, et cetera)
- Methodological Choices (for example mono, mixed and multi methods)
- Time Horizons (e.g. cross-sectional versus longitudinal)
- Techniques and Procedures (data collection and analysis)

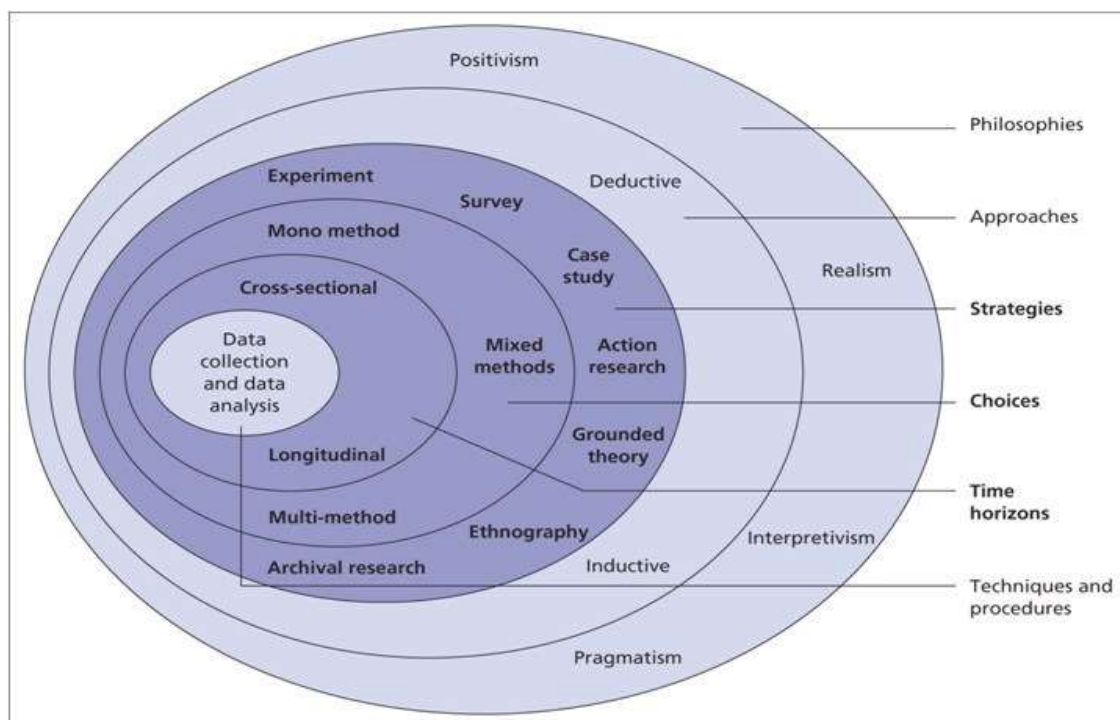


Figure 4: The research onion (Adapted from Saunders et al., 2012)

Considering its essential impact on the research process, the science philosophy, however, has been neglected, not only in the mentioned study by Fortes and Rita but also in recent consumer behaviour researches. Failure to identify the philosophy behind a theory

and to serious consider the implication of philosophy of science often result in confused and inconsistent research results. For example, while the research by Fortes and Rita (2016) above considered privacy concerns as primary elements of online buyer behaviour, Constantinides (see Soonsawad, 2013) found differences suggesting that in order to “deliver the maximum impact to online users” to make purchase decision, the first step would be to change the factor that can influence their experience while surfing the retailer website, which is the “Web components and their role as inputs in the consumer’s decision-making process”. However, these results were contradicted by the study of Lecinski (2011) at Google who conceptualised a new “mental model” namely “Zero moment of truth” (ZMOT) which recommended that the online purchasing decision making is subjected to the “quantity and quality of information that customer see about the goods or services” before they visit the website of the retailer.

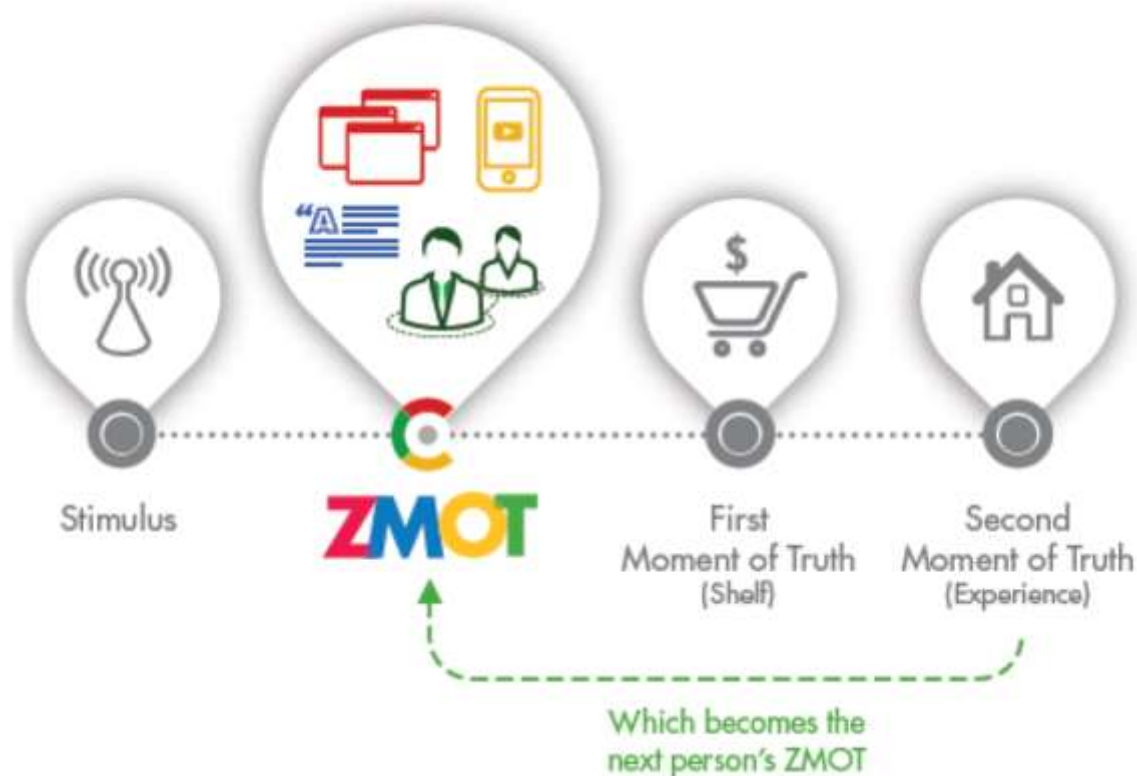


Figure 5: The Zero moment of truth (ZMOT) (Adapted from Lecinski, 2011)

As adapted from Cetina, Munthiu and Violeta (2012) Soonsawad (2013), Fortes and Rita (2016), Rahman, Khan and Iqbal (2017), three general perspectives of online consumer

behaviour can be recognised: consumer behaviour seen as situationally determined; consumer behaviour seen as a notion that relied on a decision making process; consumer behaviour seen as purposive, intentional and goal-directed. Although these definitions are not philosophically relevant to each other, they are essential for the study of consumer behaviour. The first two perspectives are based on the stimulus-response paradigm which considers that behavioural consequents are predictable from antecedent stimuli (Rahman, Khan and Iqbal, 2017, Fortes and Rita, 2016). Nevertheless, The third perspective stated that it is from knowledge of the process rather than a priori conditions (Soonsawad, 2013, Cetina, Munthiuxand Radulescu, 2012).

2.2. Empirical problem context

An empirical problem is a practical question “about the phenomena which are a part of a particular science's domain” (Laudan, see Bristor, 1985). Earlier, rational empiricists often treated empirical issues as they were present in the world as “objective pieces of unambiguous data or as if they had a life of their own”. Instead, it is well established in more contemporary philosophies of science that “researchers always approach problems through the lens of some conceptual network” (Laudan, see Bristor, 1985). A problem in one context may be translated very differently in another. For instance, several researchers might identify a customer browsing products online and define their research problem very differently. One might be concerned with the website experience of the retailers (Soonsawad, 2013); another might be interested in the motivations and barriers of consumers to online purchase. A third researcher might be studying the psychological and social factors that influence online consumer behaviour (Cetina, Munthiu and Radulescu, 2012), while a fourth researcher might be trying to develop an integrated model for maximally effective shopping behaviours under privacy concerns (Fortes and Rita, 2016).

In short, the philosophical dimension in the study of online consumer behaviour is crucial for several reasons. First, this dimension can demonstrate the contextual, which extends beyond logical empiricist philosophies, rather than the nature of empirical problems. It does not mean that researchers working from different frameworks cannot communicate or have no shared experiences. Socialisation, culture and education allows researchers to hold a multitude of shared experiences in common. Secondly, the framework can show that a

theory is useful in more than one problem context, but that the goals, assumptions and methodologies may differ by context. Experimentation using online advertising placement as stimuli might be part of the methodology. Third, an examination of the philosophic assumptions and implications within the problem-solving context can help researchers to judge the relevance of their approach. Lastly, the dimension continues to adopt a contemporary view of science by explicitly recognising subjective aspects of science.

Most of the difference happens around the role of construct and external validity in online consumer behaviour research and their relationship to one another. The online purchasing behaviour has been widely used as, four of the research studies which this essay covered cover the factors that can influence it.

3. Discussion on paper of Fortes and Rita (2016)

3.1. Methodological issues

In this part, the paper seeks to address the ethical and methodology issue of the study "Privacy concerns and online purchasing behaviour: Towards an integrated model" by Fortes and Rita (2016). Based on those issues, the author will comment on the reliability and validity of the research.

The research carried out online survey method to 900 Internet users age between 16 and 74 years in Portugal. The questionnaire was designed and developed from the scales presented in the previous studies in trust, concerns, perceived risk and behaviour intentions. The conceptual framework of the study is the Theories of Reasoned Action (TRA) and Planned Behaviour (TPB).

When conducting a buyer behaviour investigation, the researcher has three options: “to start a new research model, apply existing research model or to adapt it” (Vande Vijver and Leung, 1994). However, the majority of analysis methods and research models used in buyer behaviour studies are developed in the United States and translated into other languages to use in other countries. Therefore, the application of an existing model can be extremely risky because the respondents in different cultures might perceive the same construct differently. In this respect, Fortes and Rita (2016) used Theories of Reasoned Action (TRA) and Planned Behaviour (TPB) developed in 1960 by Fishbein and Ajzen (see Fortes and Rita, 2016).

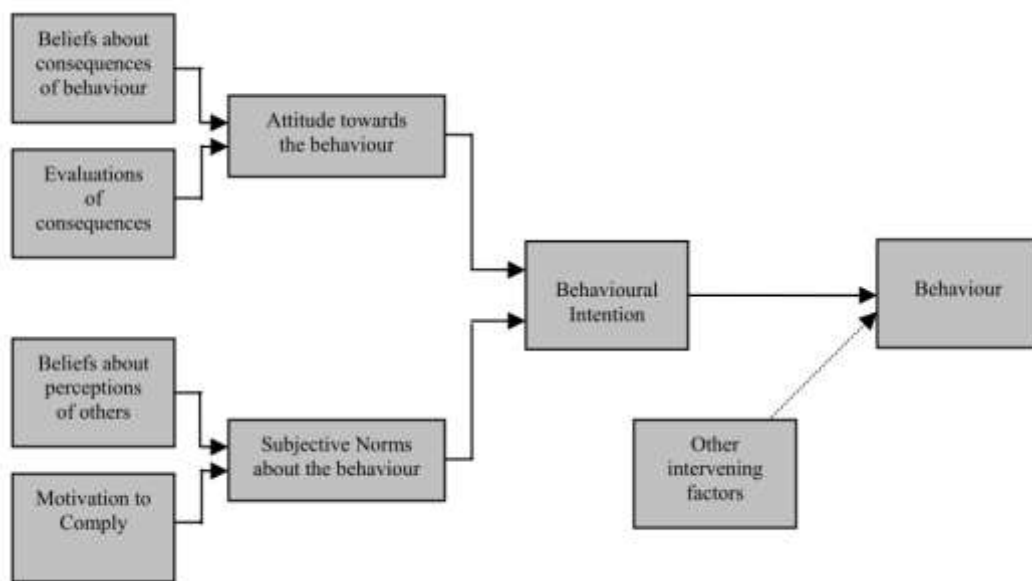


Figure 6: Theory of Reasoned action (Adapted from Fishbein and Ajzen (see Fortes and Rita, 2016))

In the empirical tests and applications of the TRA in the study, a high correlation of attitude (trust and privacy concerns) toward consumer behaviour have been found. However, some scholars have argued that the high correlation between actual practice and behavioural intention is simplistic because of circumstantial limitations (Sheppard, Hartwick et al. 1988).

There are many authors provide strong support for the predictive validity of the Theories of Planned Behaviour (TBP) as it gives a simple explanation of the motivational and informational influences on consuming behaviour (Conner and Armitage, see Bray, 2008). Nevertheless, this model also has some drawbacks which limit the scope of use and the

extent to which it can be deemed to be a complete model of consumer buying behaviour. According to Solomon et al. (see Bray, 2008), The predictive ability of the TPB and TRA depends on the author's ability to measure and recognise all extended attributes that are considered by the consumer if forming their attitude. Undoubtedly, many consumption situations are highly complex and influenced by an excess of both subconscious and conscious factors rendering this premise optimistic. In this case, there are only factors related to trust and risk are considered while developing the questionnaire and analysing the result.

Moreover, the TPB and TRA models rely on the assumption that the consumer undertakes comprehensive processing in their mind before purchase behaviour, an assumption that is challenged by other philosophical approaches (Bray, 2008). The reliance on cognition appears to neglect any influence that could result from emotion, culture, demographics, or elements of the retailer websites. Solomon et al. (see Bray 2008) comment that behaviour in certain circumstances may "result not from attitude evaluation, but the overall effective response in a process called 'affect-referral'".

3.2. Validity and Reliability

As mentioned earlier, the paper select privacy concerns as the primary variable without clear justification and explication of "why" and "how" because it failed to identify the research philosophy, which is the first layer of the research onion (Saunders, Lewis and Thornhill, 2012). In the paper introduction, the author explained that due to the fact that only "38% of European Union consumers purchase online in 2013, and 14% of company turnover generated from E-commerce", and listed previous literature that recognised the important of trust and security in E-commerce to justify privacy concerns is the main factor that influences online purchase behaviour. Obviously, these claims are not valid enough to prove that privacy concerns are the main factor that influences online consumer behaviour. This assumption falls to the extent of content validity in research. Salkind (2010) describes content validity to the "extent to which the items on a test are fairly representative of the entire domain the test seeks to measure". The author has failed to mention other factors for instance attitudes, motivations, culture, trust, perception et cetera (Dange and Kuma, 2012).

To have good content validity, a measure of a consumer's toward online shopping would have to reflect all of the aspects.

Also, the study also have weak face validity. According to Salkind (2010), face validity, also called logical validity, is a “form of validity where researcher applies a superficial and subjective assessment of whether or not the study measures what it is supposed to measure”. The face validity of this study is unreliable since the sample is Portuguese who age from 16 to 74 years old. Since the population sample is limited in Portugal, the test result is not enough to represent European consumer behaviour. For instance, the figure below illustrated that 98% of Portuguese Internet users age 16-24 in 2016 are daily online shopper, while the same figure for the EU is 71%. 67% of Portuguese Internet user age 55+ in 2016 are online shopper, while in EU the figure is 50%. Thus, the result of this study could not accurately measure the privacy concerns of the EU customer in general.



Figure 7: Internet shopper by age group in the EU (adapted from Eurostat, 2017)



Figure 8: Internet shopper by age group in Portugal (Adapted from Statista, 2016)

Being able to run the equation modelling with LISREL version 8.80, the authors set the software tools that encompass the entire content relating to the variable. The result $X^2/df=3.440$ and $RMSEA=0.0521$, which are below the maximum recommended values of 5 and 0.97, which indicates that the result from the confirmatory factor analysis is valid and overall fit the data completely. All constructs have an average variance extracted (AVE) above the minimum recommended value of 0.50 proved the reliability of the measurement model. Also, the results from the structural model confirm the acceptance of all twelve proposed hypotheses and the reliability of the research model. Considering the first hypothesis of the research: "Privacy concerns on the internet have a negative effect on trust in eCommerce (H1a) and a positive effect on the perceived risk of eCommerce." The outcome of the model shared the same result with the previous study by Arshad et al. (2015), concluding that privacy concerns about the Internet generate a negative impact on online consumer behaviour and a positive effect on the perceived behavioural risk. The rest of the hypotheses are presented in Appendix 3 of the essay.

III. CONCLUSION

To conclude, the paper has explored the research philosophy concerning studies on online consumer behaviour over the last decades. Many models and instruments from earlier are

also compared and discussed with the recent development in this area. Consumer behaviour is not a new concept in the business world, but online purchasing behaviour is a crucial topic for e-retailer to understand the underlying motivations of the consumer to purchase online.

This study also has several limitations. For example, in five of the analysed articles, no study implement qualitative research. To the best of the author's knowledge, no report has been found so far has been found using qualitative research to study online consumer behaviour. The findings in this study could be useful to obtain insights for future studies on qualitative research on this topic. Secondly, I did not take into consideration the differences between consumer behaviour in rural areas and urban areas to choose the article. Therefore the articles only examined consumer behaviour in cities. Due to the Internet availability nowadays, customers in rural areas now can order online. This limitation could open new potential for further studies on online consumer behaviour in rural areas.

Through carefully analysed and examined previous papers, I, the author can identify the drawbacks of research without research philosophy and learn the importance of research union in developing the research. The literature review is a crucial starting assignment that inspires the whole Doctorate of Business Administration (DBA) route for me as a beginner.

Learn about the importance of the research union, to develop the research philosophy

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V. APPENDIX

APPENDIX 1: ONTOLOGICAL POSITION

ONTOLOGICAL POSITIONS (nature of the world and existence)	
Position	Assumptions
Objectivism	• Reality exists <i>independently</i> of our beliefs or understanding • Reality can be observed directly and accurately • A clear distinction exists between our beliefs about the world and the way the world is • Only material or physical world is considered 'real' • Social phenomena and their meanings cannot change • Events have causes and determined by other circumstances • The casual links between events and their causes can eventually be uncovered by science • Life is defined in 'measurable' terms rather than inner experiences • Notions of choice, freedom, individuality and moral responsibility are excluded
Constructionism	• External reality exists but is only known through human mind and socially constructed meanings • There is no shared social reality, only a series of different individual constructions of it • Reality is subjective • There exist only estimate or approximate observations or views of reality • Social phenomena and their meanings are continually being accomplished by social actors • Social phenomena and their meanings are produced through social interaction and are in a constant state of revision • Life is defined in 'estimate' terms based on inner experiences of humans where choice, freedom and individual responsibility are appreciated

Table 1: Ontological Position

APPENDIX 2: EPISTEMOLOGICAL POSITION

EPISTEMOLOGICAL POSITIONS (nature of knowledge and how it is acquired)	
Position	Assumptions
Rationalism	• The world is independent of and unaffected by the researcher • Facts and values are distinct • Objective and value-free inquiry is possible • Disputes are resolved through observations • Methods of natural science are appropriate for the study of social phenomena • Knowledge is produced through the senses based on careful observation • Only phenomena (and hence knowledge) confirmed by the senses can be genuinely regarded as knowledge • Knowledge is seen as hard, tangible and objective • Knowledge is arrived at through gathering of facts • Social world is approached through the <i>explanation</i> of human behaviour
Empiricism	• The researcher and the social world impact on each other • Facts and values are not distinct • Objective and value-free inquiry is not possible since findings are inevitably influenced by the researchers' perspectives and values • Methods of natural science are <i>not</i> appropriate for the study of social phenomena for the social world is not governed by law-like regularities but mediated through meaning and human agency • Knowledge is produced by exploring and understanding the social world of the people being studied • Knowledge is seen as personal, subjective and unique • The researcher understands the social world using both his/her as well as the participants' understanding • Social world is approached through the <i>understanding</i> of human behaviour

APPENDIX 3: TWELVES HYPOTHESES OF THE CHOSEN ARTICLE

1. privacy concerns on the internet have a negative effect on trust in EC (H1a) and a positive effect on perceived risk of EC
2. trust in EC has a negative effect on perceived risk of EC
3. privacy concerns on the Internet have a negative effect on the perceived usefulness of EC (H3a) and on the perceived ease of use of EC (H3b).
4. perceived ease of use of EC has a positive effect on perceived usefulness of EC (H4)

5. privacy concerns on the Internet have a negative effect on perceived control over EC use (H5)
6. trust in EC has a positive effect on perceived control over EC use
7. perceived control over EC use has a positive effect on perceived ease of use of EC (H7)
8. Attitude towards the use of EC suffers a positive effect of trust in EC and a negative effect of perceived risk of EC
9. attitude towards the use of EC suffers a positive effect of perceived usefulness of EC (H9a) and of perceived ease of use of EC.
10. perceived usefulness of EC has positive effect on intention to use EC
11. perceived control over EC use has a positive effect on intention to use EC (H11)
12. Attitudes towards the use of EC has a positive effect on intention to use EC (H12)