

An Analysis of the Impact of Augmented Reality Marketing (ARM) on Maltese Millennials in the context of Online Shopping

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1. Research Problem

The Internet has revolutionised the way consumers purchase. While online shopping can be thought of as a service experience (Hilken et al., 2017) providing customers with numerous benefits, it can also present numerous limitations. One of the most significant limitations is that online shopping prevents customers from experiencing physical contact with the product that they intend to purchase, thus, forcing them to evaluate the product based upon their judgment and perception. Rapid technological advancements in recent years have led to the emergence of numerous immersive technologies, one of which is Augmented Reality (AR). Augmented Reality augments computer simulated objects within a real environment, giving customers the impression that the virtual object exists within a real environment (Dacko, 2017). Such technology has been developed through the use of mobile applications due to advances in mobile device technologies (Irshad and Awang, 2016) and in various sectors, most prominently within the marketing sector. Augmented Reality Marketing and its ability to place a virtual product in the customer's hand, enables potential customers to interact with the virtual product, prior to making an effective purchasing decision (Yaoyuneyong et al., 2016).

The purpose of this research is to analyse the impact of Augmented Reality Marketing by investigating the perception, acceptance and adoption of AR applications by Maltese Millennials when shopping online. The focus of this research is upon the Maltese Islands, since the Maltese population in general tends to have a preference for avoiding uncertainty and resisting innovation when compared to other EU countries such as Germany and the Netherlands (Hofstede Insights, 2020).

2. Literature and Methodology

Augmented Reality, innovates the marketing field primarily by blurring the boundaries that exist between the real and virtual environments, as AR simulates digital content within the real world in real time (Javornik, 2014). This gives rise to the concept of spatial presence where the

consumer becomes completely immersed into the experience to the extent that the role of AR, making that experience possible, would be forgotten. This results in the individual believing that the entire experience is real (Hilken et al., 2017).

The willingness of consumers to utilise a technology is critical for its success within the market (tom Dieck and Jung, 2018). To illustrate, Google Glass, an early entrant AR technology within the market failed because it was not accepted and utilised by individuals due to privacy concerns (Hilken et al., 2017). User acceptance of an innovative technology can be determined through the application of various models, with the Technology Acceptance Model (TAM) being the most renowned model for predicting user acceptance, being accepted and validated by various researchers (Leue, Jung and Kingdom, 2013; tom Dieck and Jung, 2018). A variant of the TAM is the Consumer Technology Acceptance Model (cTAM) (Figure 1), adapting technology acceptance to the consumer context (Bruner and Kumar, 2005).

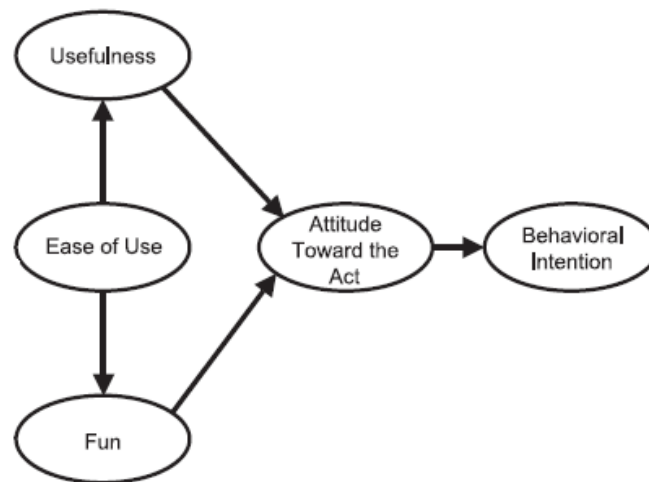


Figure 1 – The cTAM, as proposed by (Bruner and Kumar, 2005).

Through a proposed framework (Figure 2), integrating the cTAM and three external variables (Interactivity, Physical Control and Information Quality), this research explores the antecedents of the attitude and behavioural intention of customers to make use of AR applications when shopping online. ‘Attitude’, is often associated with the acceptance of a particular technology, being defined by Renaud and Biljon, (2008, p.2) as “...an attitude towards a technology...” being “...influenced by various factors” whereas ‘Intention’ is often associated with the adoption of a particular technology, being defined by Renaud and Biljon (2008, p.1) as “...a process – starting with the user becoming aware of the technology, and ending with the user embracing the technology and making full use of it”.

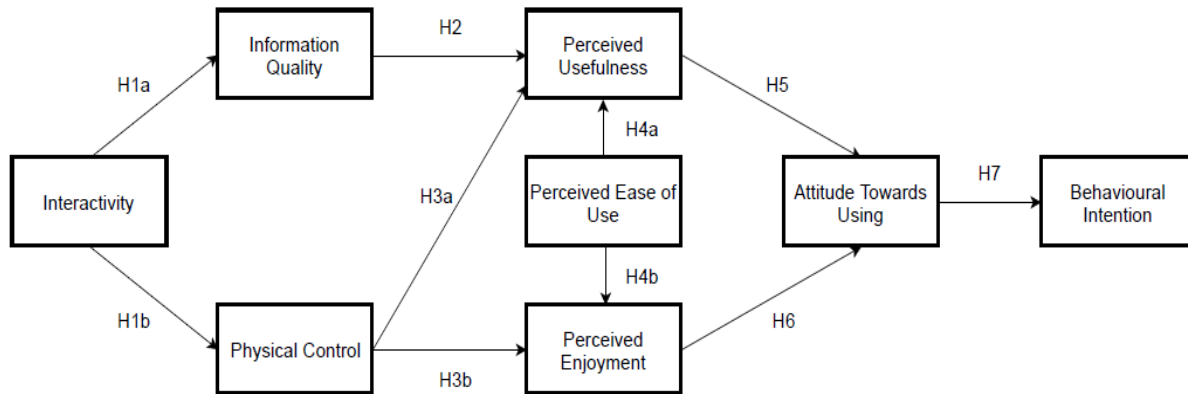


Figure 2 - The proposed framework, where a total of 10 relationships were defined through hypotheses.

3. Discussion and Implications

This research has analyzed the extent to which Maltese Millennials will accept and adopt AR applications in their online shopping activities, in an effort to satisfy the research objective, that is, to investigate the impact of ARM on Maltese Millennials. Our research found support for all hypotheses explaining relationships between the constructs within the proposed framework. Furthermore, through multiple regression analysis, *Information Quality* and *Perceived Enjoyment* were identified as the antecedents of *Attitude* whereas *Perceived Usefulness* and *Attitude* were identified as the antecedents of *Behavioral Intention*.

Overall, Maltese Millennials seem to have favorable perceptions and attitudes towards AR applications. Maltese Millennials also exhibited favorable behavioral intentions towards adopting AR applications. Taken together, these findings suggest that in actual fact, Augmented Reality Marketing seems to have a positive impact upon Maltese Millennials provided that they are likely to accept and adopt such technology in their online shopping activities.

Based upon the results emerging from this research, brands implementing AR applications should focus on three aspects, namely *Information Quality*, *Usefulness* and *Enjoyment*. Brands should provide high quality information to users through high quality tracking in an effort to ensure that the virtual object is appropriately aligned with the users' real environment. Brands should also ensure that the AR application is enjoyable to use, by for instance providing more control to users. Finally, brands should make the AR application useful for its purpose through, for instance, the generation of high quality information. Focus on such elements might be beneficial since *Information Quality* and *Perceived Enjoyment* were identified as the antecedents of *Attitude*, resulting in technology acceptance whereas *Perceived Usefulness* was identified as one antecedent of *Behavioral Intention*, resulting in technology adoption.

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