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EXTENDING TAM FOR INFORMATION SYSTEMS TO ACCEPTANCE RESEARCH/MODEL OF CONSUMER GOODS (CGAM): A THEORETICAL APPROACH

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Abstract

The aim is to broaden the Technology Acceptance Model (TAM) application to consumer goods and to conceptualise the Consumer Good Acceptance Model (CGAM) based on TAM while keeping its core elements and relationships as they were initially presented. Therefore, structural elements of the TAM were reviewed, critical statements of the usage of TAM and how it was constructed were considered to extend the TAM while eliminating flaws and creating value for manufacturers. The conceptualised CGAM is theoretically well supported. The framework upon which the TAM is created allows to adjust it to any acceptance process no matter which good it is. On condition that the definitions of the core elements of the TAM are adjusted, and relevant external factors for the consumer good are introduced. This study provides a new approach to widen the application area of the TAM by extending it to the acceptance of consumer goods.

Key Words

Technology Acceptance Model; consumer economics; consumer behaviour; consumer acceptance; behavioural intention.

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INTRODUCTION

The TAM is a widely applied model for technology-related acceptance research. It is an essential tool for researchers since acceptance can be seen as an influential variable for the successful introduction of new technology or products, as well as for its intended use (van der Laan, Heino & De Waard, 1997). Considering that people are "fundamentally decision makers" (Saaty, 2008, p.83) signifies that every action is eventually the result of a decision, consciously or unconsciously made (Nelson, 1970; Saaty, 2008). Consequently, every consumption decision is linked to an evaluative process that finally leads to a decision and thus to accepting and using chosen services or products (Adell, 2009; Bettmann, Johnson & Payne, 1991). This implies that acceptance is not only relevant in the context of technological products or IS but also for any consumer good designed to be bought by people.

The phenomenon of acceptance has therefore not only been an important topic in the field of IS and technology research (Benbasat & Barki, 2007) but also for consumer research and marketing studies (Gefen, Karahanna & Straub, 2003; Kollat, Engel & Blackwell, 1970; Pikkarainen et al., 2004; Siró et al., 2008). Contemplating the nature of decision making and the part this process plays in any behaviour, it is clear that the decision to use or buy something can ultimately lead to not only accepting a technology, but also a product or service. Therefore, relating it to the TAM and the fact that TAM has been used to study consumer acceptance in various settings (McCoy, Galletta & King, 2007; Roy, 2017; Childers, Carr, Peck & Carson, 2001) and is well supported and accepted, it is logical to presume its successful extension to non-technological consumer goods. Thus adjusting the TAM would allow to forecast the acceptance of goods while assessing the influence of culture, social influence and product characteristics.

This presumption proved to be accurate, based on the TAM's theoretical conceptualisation, showing a modified TAM, now called CGAM, is applicable for consumer goods. Consequently, the attempt to adapt the TAM for consumer goods is not only reasonable but also achievable and creates value for manufacturers.

WHAT IS ACCEPTANCE?

A common element in acceptance research is that there is no coherent and generally accepted definition of the term or how to measure acceptance (Lucke, 1995; Quiring, 2006). However, a consensus exists about the common and scientific use of the term, where its synonyms are "approval", "diffusion", and especially "adoption" (Lucke, 1995; Williams et al., 2009). A distinction between "acceptance" and "adoption" was made by Kollmann (2004) and by Renaud and Van Biljon (2008), describing "adoption" more like a process, and "acceptance" more like an attitude towards a technology playing an important role after the actual purchase. Considering the work of Adell (2009) and Kollmann (1998), acceptance is logically seen as a process,

and “adoption” and “acceptance” are used interchangeably. Especially when focusing on the acceptance of a consumer good, Adell’s (2009, p. 27) fourth criterion for acceptance appears to fit well applying it to consumer goods, namely: “This definition of acceptance aims for a behavioral change and may be seen as being based on the earlier categories, in that the will to use a system is based on drivers’ assessment of the usefulness of the system (as in category 2) as well as all other attitudes to the system and its effects (as in category 3).“ This acknowledges that a product cannot be accepted or declined without the consumer being aware of it, which presupposes that the decision to purchase, or at least sample, the product has already been made. This conception is coherent with the work of Adell (2009) and Kollmann (1998, 2004).

Additionally, researchers agree on one common factor in the acceptance process: that an individual’s judgment affects acceptance and acceptability. Regan et al. (2002, p. 10) states that “While everyone seems to know what acceptability is, and all agree that acceptability is important, there is no consistency across studies as to what ’acceptability’ is and how to measure it.”

Considering the statement by Regan et al. (2002), it becomes apparent that increasing knowledge about how and by what mechanism the acceptance of consumer goods is influenced, will not only help to improve acceptance but also provide valuable information for manufacturers as to how a product should be modified, and positioned in the market. Additionally, more profound knowledge may be gained of the nature of “acceptability” and how it could best be measured.

TAM: WHY IT SHOULD BE USED TO PREDICT CONSUMER ACCEPTANCE OF NON-TECHNOLOGICAL CONSUMER GOODS

The TAM developed by Venkatesh and Bala (2008), henceforth named TAM III, is an extension of the TAM originally devised by Davis (1989), and further developed as a TAM progression by Venkatesh and Davis (2000), herein referred to as TAM II. The original TAM was not only extended over the years through progressive research but also adapted to incorporate critical comment by Adams, Nelson and Todd (1992) and Davis and Venkatesh (1996).

Davis (1989) designed the original TAM to explain and predict the behaviour of technology users. Further, he aimed to detect factors that influenced the acceptance or rejection process. In order to do so, Davis used the Theory of Reasoned Action (TRA) to connect the five factors: system design features, perceived usefulness (PU), perceived ease of use (PEOU), attitude toward using and the actual system use (Davis, 1989; Davis, Bagozzi & Warshaw, 1989). However, the model’s core elements PU and PEOU are influenced by external variables (Arnold & Klee, 2016). These two factors are relevant in order to control the beliefs users have about a system. The model can also be used to foreshadow the behavioural intentions of prospective users and their actual system use (Davis, 1989; Davis, Bagozzi

& Warshaw, 1989). TAM was criticised as a subjective norm was not included as an influencing factor (Arnold & Klee, 2016). This deficiency was eliminated by Venkatesh and Davis in 2000 when they aimed for explanations of PU and usage intentions based on social influence and cognitive instrumental processes. Subjective norm, voluntariness and image, define the social influence processes, implying "the ways other people affect one's beliefs, feelings, and behaviour" (Mason, Conrey & Smith, 2007, p. 279; Venkatesh & Davis, 2000, p. 187). Cognitive instrumental processes are defined by job relevance, output quality, demonstrable results and perceived ease of use. By specifying the external variables influencing PU and behavioural intentions, Venkatesh and Davis (2000) created the TAM II.

Further development of TAM II towards the formulation of TAM III by Venkatesh and Bala (2008) is based on the Venkatesh (2000) model of determinants affecting PEOU. Venkatesh subsequently addressed the criticism that there was a lack of understanding about the determinants influencing one of the key drivers of acceptance (Taylor & Todd, 1995). The determinants can be divided into two categories: anchor and adjustment variables. The anchor variables, namely computer self-efficacy, perceptions of external control, computer anxiety and computer playfulness, are based on initial judgment and will be adjusted over time with the accumulation of experience. The evolution of the original TAM towards a more comprehensive and precise TAM III reflects the four components PU, PEOU, behavioural intention and use behaviour (from TAM I), and the moderating variable, voluntariness, and the variable, experience influenced by time (introduced in TAM II), all being considered core elements of the model. Additionally, the determinants of PU and PEOU are invariably adjusted whenever the product of interest changes (Pikkarainen et al., 2004; Venkatesh & Bala, 2008).

Limitations as Advocates

That aside, the focus of this conceptual research approach is on TAM III, as the most advanced version of the TAM. Besides the already discussed limitations, which Venkatesh, Davis and Bala have eliminated, current research lists the following aspects as critical.

Despite being a vastly accepted and widely used source for researchers TAM has been subject to criticism for leading research in new directions without fully understanding its antecedents (Benbasat & Barki, 2007). Despite this discussion being of great relevance in general, it is believed subordinate to the interests of this particular research at the present time. This belief arises because it is not the structure that is considered weak, but the restricted scope of research about its elements. Goodhue (2007) argues that TAM only reveals the factors influencing technology usage without capturing how technology affects user performance. Aiming to extend TAM to consumer goods, the effects on user performance are somewhat irrelevant, as the purpose of consumer goods is to satisfy needs, considering the four categories of consumer goods classification (Bucklin, 1963;

Holbrook & Howard, 1977; Holton, 1958; Luck, 1959), and focuses less on enhancing performances.

Price and cost have not been addressed in TAM or its extension, which is not necessarily critical as the TAM was mainly applied in workplace settings, where price and cost are more relevant for the firm. However, in the market place for consumer goods, price and costs are of great relevance as they can have an immense impact on the decision to accept and consume a good (Brown & Venkatesh, 2005; Coulter & Coulter, 2007; Lunceford, 2009). This suggests the relative unimportance of time and effort as sole drivers for the acceptance process (Venkatesh, Thong and Xu, 2012).

Additionally, voluntariness as a moderating variable is a theoretically well-supported TAM element, including the individual utilization of innovation. A voluntary usage setting of Information Technology (IT) usage in a working environment is an arguable inclusion as such decisions are mostly based on top-down directives. Again, this "weakness" in TAM can be utilized to support its adaptation for consumer goods because in that context, consumers usually do have a choice whether or not to purchase and use a product. Consequently, this reservation does not apply to TAM in a consumer good setting, presuming that usage or purchase behaviour is voluntary. In contrast to voluntariness, social influencing factors that might not have a significant impact in the working environment, are of greater relevance for consumer good acceptance (Ang, Ramayah & Amin, 2015; Malatji, van Eck & Zuva, 2020; Shan & King, 2015).

Theoretical Backup

So far, considering why TAM should be used to predict consumer acceptance of non-technological consumer goods, has been partially answered by using criticism of the model as advocacy for its extension towards consumer goods.

Regarding the theoretical background of TAM there are other aspects supporting the extension.

The initial TAM by Davis (1989) was built upon two theories that originated in the field of social psychology, the TRA by Ajzen and Fishbein (1980) and the Theory of Planned Behaviour (TPB) by Ajzen (1991). TRA is based on the precept that humans normally behave in a reasonable way, implying that information, both explicit and implicit, are considered. Similar to the process of acceptance, the theory is based on a causal chain; thus, different factors lead to specific behaviour. The enhancement by perceived behavioural control and consequently the development of the TPB allows, in contrast to the TRA, the inclusion of all behaviour – under full volitional control or not. TPB is the more suitable model to understand and predict human behaviour as the performance of a behaviour is more likely when its evaluation is positive, social pressure to perform the behaviour occurs, and people think they can do so or have the opportunity to do so (Ajzen, 2005). Given the origin of TAM, a modification of the TAM is a reasonable objective when creating an applicable model for the consumer goods market. This can be based on the relation of those theories with acceptance and consumer

behaviour. Accordingly, it can be assumed that the TAM would be applicable in testing the acceptance of any consumer good.

Literature research showed various applications and enhancements of TAM, focusing on different IS and applying new external variables (Lee, Kozar & Larsen, 2003). Additionally, research has taken TAM out of the working environment context to successfully apply it to non-organizational settings (Agarwal & Karahanna, 2000; Davis, Bagozzi & Warshaw, 1989, 1992; Mathieson, 1991; Szajna, 1994), supporting the research attempt to open up TAM for consumer goods.

Considering that new processes and constructs were included in closing knowledge gaps regarding human decision-making processes and behaviour, the TAM has a profound theoretical foundation. This makes it transferable to most consumer behaviour-related research, as the model well covers human behaviour and decision-making processes. Thus, changing its application area from technology applications to consumer goods, in general, is theoretically well supported. Moreover, as discussed above, several points of criticism are advantageous for the extension of TAM into consumer goods. This research hypothesises that an extension of TAM for consumer goods is possible while assuming all effects are unaltered.

Despite having argued that an extension of TAM for consumer goods is possible, the question of need and contribution remains. Several models are well-established in the field of consumer behaviour and marketing research. Table 1 shows some of these models, including their deficiencies and why the conceptualized CGAM is the better alternative. Additionally, it can be pointed out that some of these models are considered 'grand models' due to their large scope (Kassarjian 1982). Considerable complexity alone supports the case of transforming TAM into CGAM, as the aim is not only to extend TAM but to offer based on a well-tested model, a new model that allows easy adaptation even for manufacturers. Focusing the extension of the TAM on the external factors that influence PU and PEOU enables any company or product development department to adjust the model to their product of interest at a low expense rate.

Table 1: Benefits of CGAM over existing models

Model	Focus	Deficiencies	Benefits of CGAM
Engel-Blackwell-Kollat-Model (1979)	"1. To highlight more clearly the interrelationships between stages in the decision process and the various endogenous and exogenous variables. 2. To clarify the relationship between attitude and behavior to reflect the contribution of Fishbein extended model. Beliefs and	Information and experience are characterised as an important phase upon which several of the decision process stages of problem recognition are based. Additionally, the scope of application is unclear. (Rau & Samiee, 1981) The linear structure does not represent the buyer decision-making, as	Experience is not a primary requirement; this is particularly valuable concerning innovative products. Thus, the CGAM enables acceptance to be tested even before the market launch, without the consumer having

	intentions are introduced as explicit variables for the first time as in normative compliance. 3. To define variables with greater precision and to specify functional relationships to permit empirical testing" (Engel, Blackwell, Kollat 1979).	those elements might not occur in that specific order or even concuurently (Bringer &Lutz, 1986; Phillips & Bradshaw, 1992).	any experience with the product.
Howard-Sheth Model (1969)	Explains consumer's brand choice behaviour over a period of time based on stimulus-response (Howard & Sheth, 1969).	Complex, especially for routine purchases. Additionally, consumer's do not follow the complete path of the model (Olshavsky & Granbois, 1979).	CGAM does not specially require the consumer to follow a specific buying or decision process behaviour. Further, it is simple enough to be applied for all kind of goods, with high or low engagement rate.
Nicosia Model (1966)	Explains consumer behaviour by creating a link between the organization and the consumer (Nicosia, 1966).	Assumes the presence of predispositions influenced by firm or brand. Additionally, it is rather difficult to find a distinct focus, as Nicosia's attempt to point out a focus is all-encompassing. Additionally, it is from a marketer's perspective and not a consumer's. Validity of the suggested relationships is not empirically supported. (Nicosia, 1966; Rau & Samiee, 1981; Tuck 1976)	CGAM allows to test consumer acceptance for products that are new to the market or not specifically connected to a specific firm or brand.
The theory of planned behavior (TPB) (Ajzen, 1991)	"The theory of planned behavior (TPB) has been used successfully to explain and predict behavior in a multitude of behavioral domains." (Ajzen, 2020, p. 341)	Non in this context. Was used as foundation for TAM.	As Ajzen stated 1991 the TPB is open for further adjustment and introduction of new predictors, thus considering how Davis (1989) did this a further adjustment while considering the current variables is in principle possible (Ajzen, 1991).

Source: Own survey.

Summarising, the benefit of CGAM is that it allows an early-stage acceptance determination while also generating knowledge about the factors influencing the level of acceptance. Additionally, CGAM does not focus on brands or firms or implies knowledge about a firm or brand, nor does it presume experience. Therefore, CGAM is a more practice- and manufacturer-oriented model.

CONCEPTUALISATION OF CGAM

As stated above, Pikkarainen et al. (2004) and Venkatesh and Bala (2008) pointed out that the external variables determining PU and PEOU will need adjustment whenever the product of interest changes. These determinants correspondingly form the starting point for the modification process. They can be divided into four categories: social influence processes, cognitive instrumental processes (Venkatesh & Davis, 2000), as well as anchor, and adjustment, variables (Venkatesh & Bala, 2008).

In contrast to other approaches extending the TAM beyond IS, where variables were incorporated depending on the specifics of the context within which the study's focus was situated (Hsu & Lu, 2004), extending TAM for consumer goods calls for a more radical approach. As it is not sufficient to just add more variables or exchange a few, the complete set of variables determining PU and PEOU will need to be adjusted so that the characteristics of the good of interest can be met, consequently requiring a departure from the main body of TAM III as Venkatesh and Bala (2008) conceived it. This approach was also suggested by Benbasat and Barki (2007). In order to extend TAM, the core elements will remain as they were, although the definitions of PU and PEOU need also to be adjusted. Some of the variables influencing PU and PEOU will be adopted from TAM III, with consequent changes in the definitions required. All newly integrated variables are, on the one hand, defined based on the literature, while incorporating the finding from Förster (2017), or the definitions are, on the other hand, based on what the construct aims to address in the case of consumer good acceptance.

Admittedly, this approach is rather general, as no classification for what kind of consumer good this model will be conceptualised is given. There are two types of consumer goods, which are further segmented into three groups. The first type concerns frequency and duration, differentiating between durable, semidurable, and non-durable goods (Graber-Kräuter, 2018). The buying decision process characterises the second type, which includes convenience, shopping, and speciality goods. For more detailed definitions, see Holton (1958). Since this paper is based on Förster (2017), the focus is on convenience goods. However, the goal is to develop a generally applicable CGAM.

PU was defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p. 320). Since systems are no longer the focus, the perception of what constitutes PU, and its addresses, must be modified. A more social

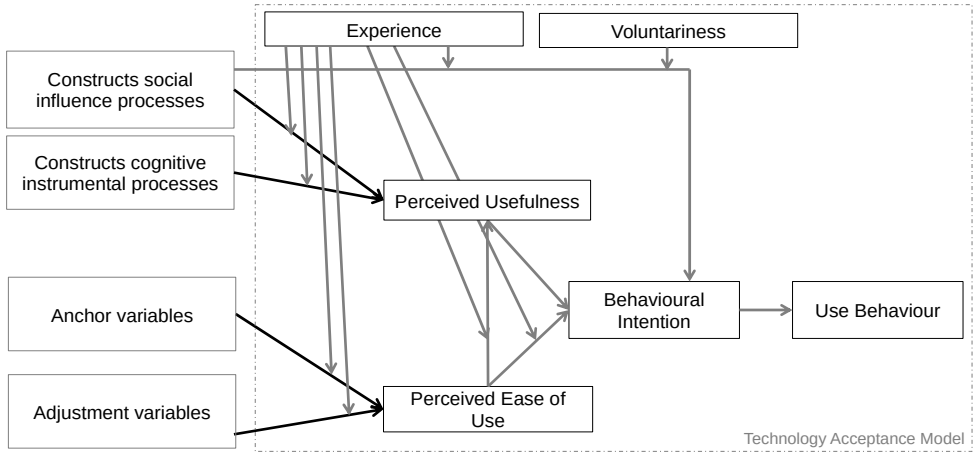
influence-based definition was proposed by Förster (2017, p. 35): “PU is the degree to which a person believes that consuming a particular product would increase their social status or contribute to the image they are trying to communicate to the outside world” *consistent with their lifestyle and needs* (as subsequently qualified). In order to adjust the definition for PEOU to be more product-oriented, Förster (2017, p. 35) defined PEOU as follows: “PEOU is the degree to which a person believes that consuming or buying a product would be free of effort” *while also considering the investment-to-benefit-ratio* (as subsequently qualified). Both definitions are addressing the shift towards products while failing to include all categories of determinants. Before introducing new definitions for PU and PEOU, it is indispensable to consider the definitions of the four variable categories influencing PU and PEOU.

The concepts influencing PU are social influence processes, which imply “the ways other people affect one’s beliefs, feelings, and behavior” (Mason, Conrey & Smith, 2007, p. 279; Venkatesh & Davis, 2000, p. 187) and cognitive instrumental processes. The latter focuses on the linkage of higher-level goals to specific actions which are essential for goal achievement (Venkatesh, 2000). Förster (2017, p. 39) introduced a new description of cognitive instrument processes: “consumers form judgments about PU in parts based on cognitively comparing what a product is capable of in terms of representing what they want to communicate to the outside world”. In addition, the variables influencing PEOU are anchor and adjustment variables. Anchors are general information upon which individuals can rely on in the absence of specific knowledge. Besides, anchoring information is often unconsciously included in the decision-making process. Adjustment variables relate to beliefs based on actual interaction with a system or product (Venkatesh, 2000).

The two moderating variables, experience and voluntariness, are also seen as core elements of TAM. Venkatesh and Davis (2000) implied that experience diminishes the effect social influence has on PU and usage intention over time. Voluntariness is defined as “the extent to which potential adopters perceive the adoption decision to be nonmandated” (Agarwal & Prasad, 1997, p. 564). This would differentiate the mandatory and voluntary usage settings, as the contingency of mandatory usage setting impacts the compliance effect of subjective norms on the intention to use. Additionally, the effect of a subjective norm on intention to use is strengthened by the compliance effect, increasing as an individual’s need to fulfil a social actor’s expectations. The social actor is considered as an executor of rewards and punishment dependent on the implementation and non-implementation of the relevant behaviour (French & Raven, 1959; Venkatesh & Davis, 2000).

Figure 1 presents the framework upon which the CGAM will be conceptualised while considering all TAM III’s underlying assumptions as correct.

Figure 1: TAM III as framework for conceptualisation



Source: Own illustration based on Venkatesh & Bala (2008).

Considering the previously discussed definitions of the variable categories influencing PU and PEOU, determinates can be selected based on consumer good characteristics and their general validity. General validity is important here in so far as the determinants should be applicable for consumer goods in general.

Variables of the construct of social influence processes

Starting with variables of the construct of social influence processes, subjective norm and image are two determinates which are adapted from TAM. Subjective norm was defined as a “person’s perception that most people who are important to him think he should or should not perform the behaviour in question” (Fishbein & Ajzen, 1975, p. 302) and has direct influence on PU and behavioural intention, as well as image. Research by Stafford (1966) supports the integration of the variable subjective norm, as his research showed that adaptation of brand choices is often influenced by the leader of one social group since he or she influences its group members.

Image also has a direct effect on PU and is a significant factor when it comes to communicating one’s own image to the outside world. The transferred image can be linked to the self-concept of a person, which is described as “beliefs a person holds about their attributes, and how they evaluate these qualities” (Solomon et al., 2010, p. 144). In the context of social interaction, the image that is communicated to others evokes a higher concern “about the social appropriateness of products and consumption activities” (Solomon et al., 2010, p. 149). In the context of consumer goods, there are two relevant definitions regarding image. First, image as "the degree to which use of an innovation is perceived to enhance one’s image or status in one’s social system" (Moore & Benbasat, 1991, p. 195); this is consistent with TAM II. Second, Keller defined image in the context of brands as “perceptions about a brand as reflected by the brand associations held in memory” (Keller, 1993, p. 2). Taking into account that TAM originated from

theories in the field of social psychology, it is of great relevance that a person's image can be related to a product image, including variables addressing these topics.

A newly integrated variable in the context of social influence processes is social conformity; addressing a person's desire to fit in, while avoiding negative attention (Jahoda, 1959). Cialdini and Goldstein (2004, p. 606) referred to conformity as "the act of changing one's behavior to match the responses of others". Considering social conformity, especially in the context of consumer goods, is important. As was pointed out by McCracken (1986), consumer goods are used to extract cultural meaning, since cultural meaning is projected from a culturally constituted world onto consumer goods. Furthermore, through goods, cultural meaning is made visible for the individual as well as conveying an inherent concreteness that individuals would not otherwise have (McCracken, 1986). Attitudes and expectations subconsciously received from others also influence one's own behaviour. Thus, considering social influence for the consumer goods' acceptance process is a necessity (Venkatesh & Morris, 2000).

Considering all proposed variables for the construct of social influence processes, their relevance is supported by a statement made by McCracken (1986, p. 73): "goods allow individuals to discriminate visually among culturally specified categories by encoding these categories in the form of a set of material distinctions".

All three variables directly affect PU, while the subjective norm is also moderated by experience and affects behavioural intention. The latter relation is not only moderated by experience but also by voluntariness.

Variables of the construct of cognitive instrumental processes

Moving on to the construct of cognitive instrumental processes, two variables can be used irrespective of the consumer good of interest. The first variable is lifestyle and the second is perceived quality/brand status. "Lifestyle is described as a certain type of behavior, or preference for a certain type of behavior, in which consumption plays an important role" (Sijtsema et al., 2002, p. 572). Perceived quality, as well as brand status, can influence the market success of a product (Richardson, Dick & Jain, 1994). Kolter (2000, p. 3) described quality as "the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs". Additionally, O'Cass & Choy (2008, p. 342) hold that "Brand status refers to consumer's perceptions of quality, prestige, price of a brand and its capability to act as a status or success symbol". Combining these two aspects enables a consideration of the quality-related characteristics of the consumer goods and how these are perceived by the consumer, as well as delving more deeply into interactions between the two variables i.e., how the perception of brand status influences perceived quality, and vice versa.

A third variable for measuring the construct of cognitive instrumental processes could be the trend factor, although it might not have significant relevance for some consumer goods, as for example, convenience goods as described by Holton (1958, p. 53): "convenience goods are those goods for

which the probable gain from making price and quality comparison among alternative sellers is thought to be small relative to consumer's appraisal of searching costs in terms of time, money and effort". It can also be assumed that for those goods, the benefit of considering the tendency to change would also be small compared to the effort needed to assess the trend factor of that good.

These three variables directly affect PU without being moderated by experience or voluntariness.

Anchor variables

Moving on to the determinants of PEOU, there are two variables that can be proposed as generalised anchors while recognising that the selection is based on constructs addressing purchase-situation related issues. First is availability, relating to how easily a product can be accessed, taking into account its present for the consumer and the frequency, intensity and visibility of product offerings. Second is price, which "refers to the cost or sacrifice exchanged for the promised benefits" (Grier & Bryant, 2005, p. 323), and influences every consumption decision. However, the importance of these varies depending on the consumer good in question, as research has shown price sensitivity varies among products and consumption settings (Wakefield & Inman, 2003).

A third option, which might not be as generalisable as the previous two is handling. In this context, issues regarding the general handling of a product can be included, e.g., the effort needed to consume a product or prepare it for consumption. Depending on the product in question, other aspects such as the way the product is offered, the temperature of consumption and offerings, can also be of relevance. Additionally, aspects concerning changes in those characterises can determine whether change can improve acceptance by simplifying handling. The variables effecting PEOU are all moderated by experience.

Adjustment variables

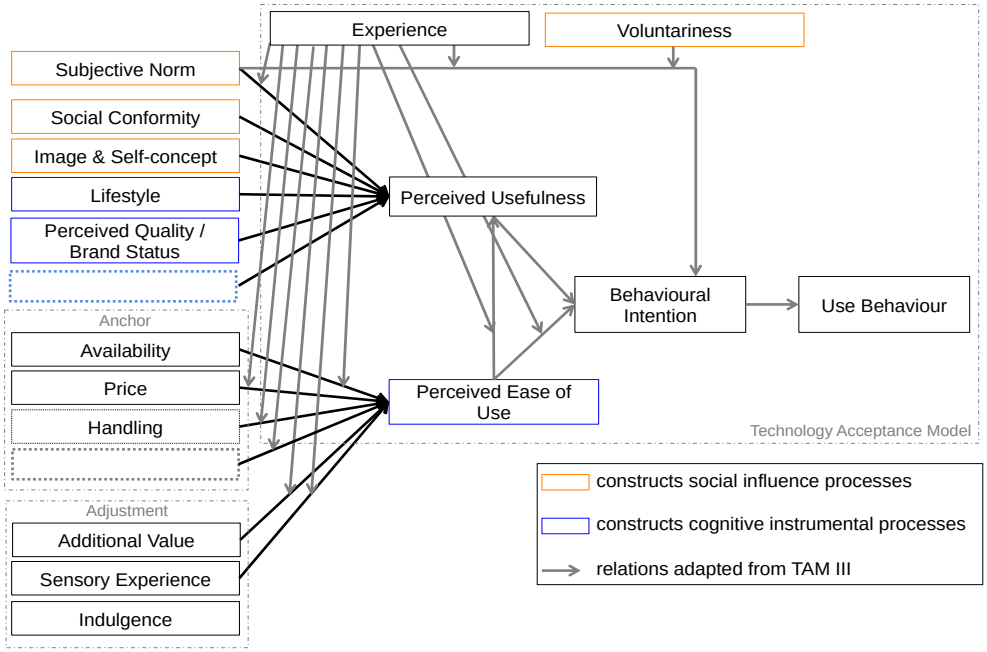
The adjustment variables presented by Venkatesh and Bala (2008) need to be replaced, as previously explained, by adjustment variables that can be used to address more specific consumer good characteristics. Therefore, additional value, sensory experience and indulgence are proposed. Additional value refers to "the tangible and concrete attributes that a consumer may directly experience when using or consuming the product" (Lai, 1995, p. 383), hedonic benefits that are "acquired from a product's capacity to meet a need of enjoyment, fun, pleasure, or distraction from work or anxiety" (Lai, 1995, p. 384), as well as holistic benefits, which are "perceptual benefit(s) acquired from the complementarity, coherence, compatibility, and consistency in a product constellation as a whole" (Lai, 1995, p. 384).

Considering that consumption is not only influenced by external factors such as availability, price and handling, there are more complex enjoyment-focused adjustment variables such as sensory experience, that needs to be considered. Sensory experience includes the perception of a product with all your senses, including visualising, smelling, hearing, touching and tasting (Smith, 2013). Certainly, sensory characteristics concerning taste, texture and appearance can influence the consumption decision (Clark, 1998). Therefore, sensory-experience is an adjustment variable, just as hands-on experience is necessary to evaluate these aspects of a product. With regard to criticism (Venkatesh, 2000) observes that TAM does not give valuable information to manufacturers on how to guide development, including the construct that sensory experience helps overcoming this deficiency.

The third adjustment variable is indulgence which can be referred to as enjoying life and having fun (Hofstede, 2011). However, indulgence is also often associated with adverse outcomes or negative feelings, especially when they result from impulsive behaviour (Ramanathan & Williams, 2007).

All three variables are moderated by experience while affecting PEOU.

Figure 2: Consumer Goods Acceptance Model



Source: Own illustration based on Venkatesh & Bala (2008).

DISCUSSION & CONCLUSION

This paper presents a conceptualised model, based on TAM, which should help to measure acceptance of a product and by what process the acceptance of the product is effected. Additionally, it is hoped to encourage

fellow researchers to consider this approach and take the idea of TAM to the next level by using the proposed CGAM.

The revision of the theoretical concepts of the TAM showed that the newly conceptualised CGAM has great potential, proving to be a valid extension of the TAM to consumer goods in practice. First, acceptance is a core element of the TAM and a significant variable of every human decision-making process (McCracken, 1986). Behaviour can be influenced, as well as led by acceptability, as the theoretical work by Adell (2009) and Kollmann (1998; 2004) showed. Understanding the concept of acceptance and how reaching the state of accepting something is a crucial process when extending the TAM towards consumer goods. Second, human behavioural patterns and decision-making processes are essential for the TAM, given that its structure originates from the TRA and TPB (Ajzen, 1991; Ajzen & Fishbein, 1980). Those topics are also well covered in the CGAM. Third, TAM's development process towards TAM III reflects considered research and ensures that known shortcomings and flaws have been dealt with (Venkatesh, 2000; Venkatesh & Bala, 2008), giving rise to a well-structured and supported model. Using the TAMs theoretical background and its structure to widen its application area to consumer goods in general, is also well supported, as the foundation is well-based on social psychological constructs, which are crucial to understanding and predicting human behaviour (McCracken, 1986).

The presented model is accompanied by some blanks for which variables are proposed in this paper. However, whether these blanks for variables can be generalised or better left as blank spaces to fit the characteristics of the product of interest, still needs to be discussed. The presented model is a solid framework that can be used to study consumer acceptance for consumer goods while allowing researchers to readily adjust the model to their needs. Considering how often TAM has been modified to be applicable for different technology use settings (Lee, Kozar & Larsen, 2003; Taherdoost, 2018), leaving the blank spaces as presented in Figure 2 seems appropriate and more flexible, considering the vast diversity of consumer goods (Bucklin, 1963; Grabner-Kräuter, 2018). In Figure 2 the specifically listed variables are based on the outcomes of the literature research, and highly recommended for the acceptance assessment of consumer goods. The variables suggested for the blank spaces, such as trend factor or handling, need to be reassessed when applying the model to a specific type of consumer good.

Since this study is based on Förster's (2017) approach to extend the TAM by using tea-to-go as a proxy for consumer goods, more specifically convenience goods, this issue has not been further addressed. However, as mentioned above, there are several types of consumer goods. Hence future research should test the CGAM as it is presented while comparing its applicability, validity and reliability using different kinds of consumer goods. In addition to that, it would be possible to assess whether the presented CGAM is simple and thus generalisable or too specific and therefore not applicable for any type of consumer good.

In the CGAM there are several variables focused on the factors influencing human behaviour, but also several variables which allow the representation of characteristics of consumer goods. While leaving the model with blank spaces might be seen as an easy way out, they strengthen the CGAM insofar as they allow specific inputs to correspond to the product being considered, thus allowing greater specificity and flexibility in use. Furthermore, these blanks create flexibility and easy application, which is crucial for manufacturers, who need to test possible acceptance of newly developed products in a quick and easy manner, that still generates valuable and reliable insights.

In order to test the validity of the presented model it needs to be applied in a specific use situation. In a following paper the conceptualised CGAM will be applied using "tea-to-go" as an example for consumer goods. As discussed, applying the model to a specific consumer good might require the addition of some variables that relate to the specific characteristics of the consumer good. Additionally, some of the embedded variables may need to be reconsidered and tested for their applicability in the context of the "tea-to-go" case.

Despite having conceptualized a consumer good acceptance model without having specified the type of consumer good, the contribution is not totally limited. As there is still need for theoretical adjustment and further exploration, the presented CGAM has great value for the German tea-industry, as they gave insights about challenging issues and key factors. Those have been greatly considered while developing the new variables for CGAM (Förster, 2017) and thus CGAM can be used to test the acceptance and it's driver for tea-to-go.

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