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MAPPING IDEA & LITERATURE FORMAT

Theory of Planned Behaviour in Marketing: Cognitive Consideration on Purchase Decision

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Abstract The desire to search for products sequentially is dominated by the gifts or rewards offered and the costs of searching for a product itself. A person's cognitive ability will affect when they stop searching for a product until they decide to buy without remembering. Advances in computerized technology that are more intensive, like today's purchase decisions, will be faster and better. Cognitive intelligence and preferences as well as long-term memory in superior decision making, if applied, will avoid negative purchase decision results, where consumers who have good numeracy skills will produce more explicit mental representations; this process can be necessary for superior decision making. Resume of prior research in this study use 13 of manuscript form scopus databased index in year 2017 - 2021. The proposition in this mapping is Correlation Theory of planned behavior theory in the aspect of the field of management (e.g., marketing, Technology, Marketing, E-Commerce) make a positive contribution as a grounded theory to explain the variable antecedent and also its correlation to other theories.

Keywords: Theory of Planned Behavior, Literature Review, Consumer Behavior, Customer Satisfaction.

JEL Classification Code: M30, M31, C44, D11

1. INTRODUCTION

Cognitive limitations affect every decision-making on purchasing a product, making it irrational (Wattanacharoensil, W., & La-Ornuat, D, 2019). Confidence in product selection has a significant impact on purchase intention. Finding a preferred product virtually can increase self-confidence; this is following the theory of feelings as information which shows that trust in the development of choice has a significant impact on buying decisions. (Kowalczyk, P., Siepmann, C., & Adler, J, 2020). The desire to search for products sequentially is dominated by the gifts or rewards offered and the costs of searching for a product itself. A person's cognitive ability will affect when they stop searching for a product until they decide to buy without remembering. With the advancement of computerized technology that is more intensive today, purchasing decisions will be faster and better. However, Risk Aversion, Psychological Effort Costs, and errors in decision making are essential things that cause deviant behavior in buying decisions (Bhatia, S., He, L., Zhao, WJ, & Analytis, P. P, 2021). Consumer assessment of the available information on a product is based on the ability of cognitive reflection (Andor, MA, Frondel, M., Gerster, A., & Sommer, S, 2019), by conducting research on 3,600 families in Germany in evaluating product efficiency energy. Consumers with a high cognitive, reflective level will determine the information provided more detail, while consumers with low cognitive reflectiveness will not pay attention to them. In online buying, cognitive and affective attitudes can be influenced by functional attributes (product information, money savings, convenience, and perceived ease of use) and hedonic attributes of online shopping sites and ultimately decide to make purchases online (Moon, MA, Khalid, MJ, Awan, HM, Attiq, S., Rasool, H., & Kiran, M, 2017). In research (Chen, A., Lu, Y., & Wang, B, 2017), online purchasing decisions are influenced by social commerce components (SCC) both in terms of cognitive, affective dimensions and how these attitude dimensions determine customer purchase intentions, Cognitive assessment has higher predictive power than practical assessment. The reviews about a product usually found on social media do not necessarily affect either the cognitive

assessment or affective assessment, and the concept of understanding in making a purchasing decision provides a comprehensive picture. It broadens the scope of the application of social learning theory. On the other hand, research (Guo, J., Wang, X., & Wu, Y, 2020) reviewing the perspective of emotional content in online customer reviews shows that favorable online customer reviews lead to higher purchases. The results of his research show an emotional bias. Positive for online customer reviews and carries critical practical implications for sellers and consumers.

However, in (Fu, H., Ma, H., Bian, J., Wang, C., Zhou, J., & Ma, Q, 2019), online sales provide information about products considered dishonest and will mislead consumers. Significantly reducing consumer buying intentions in the long term, online sellers must comply with laws and regulations to attract and retain consumers. This is supported by research (Park, J., & Hill, WT, 2018) investigating the cognitive effort function associated with regret after making a purchase based on incorrect information about a product on an online shopping site, where this mental effort will be increasingly deployed to justify a useless investment. Consumer purchasing decisions online are also influenced by the focus of information provided in online forums both related to prices, discounts, and quality of the products offered (Fu, H., Ma, H., Bian, J., Wang, C., Zhou, J., & Ma, Q. 2019). For the price issue, other research that supports is that sellers need an understanding of the consumption patterns that develop in society; in addition to the factors mentioned above, price is indeed the main element in everyday purchasing decisions, so it fosters thoughts in the minds of consumers to make a good purchase. Continuously, this method was studied using neuroimaging tools to explore the underlying neural mechanisms for revealing the influence of price on prosocial and non-prosocial consumers. (Medina, CAG, Martinez-Fiestas, M., Viedma-del-Jess, MI, & Aranda, LA C, 2020). Cognitive intelligence and preferences, as well as long-term memory in superior decision making, if applied, will successfully avoid negative purchase decision results, where consumers who have good numeracy skills will produce more apparent mental representations. This process can be necessary for superior decision-making. (Sobkow, A., Olszewska, A., & Traczyk, J. (2020). Regarding the mindset of consumers in purchasing decisions, consumers will tend to make unexpected instant purchases if they In an affective state, the seller can promote an idea or by placing an eye-catching product in a visible location; ease of payment is also essential in the comfort of transaction processing (Sohn, YS, & Ko, M. T, 2021).

2. Literature Review Procedure

This study uses a bibliometric literature review approach with a sample mapping literature of 13 articles from 2017 - 2021 years under the Scopus indexed journal Table 1 illustrates the results of the literacy mapping that we have summarized. In connection with the presentation in the Introduction section, the proportion of our analysis results has also been stated in section 3.

3. Conclusion and Proposition

- H1: Correlation Theory of planned behavior theory in the aspect of the field of management on purchase decision make a positive contribution as a grounded theory to explain the variable antecedent and also its correlation to other theories.

Table 1: Mapping Literature

Journal	Research Problem	Variable/item	Theory	Result
A systematic review of cognitive biases in tourist decisions (Wattanacharoensi l & La-ornual, 2019)	1) Based on the current stage of literature on cognitive biases in key tourism literature, what are the general characteristics of the existing articles? 2) What are the most frequent bias types found in the tourist decision making context? 3) How can cognitive biases occur in different tourism stages, starting from destination choice to post-visit experience?	1. Pre trip Experience (Destination Choice Selection, Tourism Product Rating, Tourism Product Choice) 2. On-site experience 3. Post-trip experience 4. Cognitif Bias	Theory of planned behavior	These findings illustrate that tourist decisions are more complex than original thoughts. Recent literature reports that tourists have a limited memory that may impede their decision-making process.
Cognitive, affective, and behavioral consumer responses to augmented reality in e-commerce: A comparative study (Kowalczyk et al., 2021)	This study explores the relative advantage of augmented reality (AR) over web-based product presentations. We develop a consumer response model and compare consumers' reactions to the IKEA Place app and IKEA mobile website on smartphones	1. AR characteristics (Interactivity, Sistem Quality, Product Informativeness). 2. Affective Responsess (Immersion, enjoyment) 3. Cognitive Responses (Media Usefulness, Choice Confidence) 4. Behavioral Responses (Reuse Intention, Purchase Intention)	Theory of uses and gratifications Theory of feelings-as-information	The results reveal that AR outperforms web-based product presentations by generating greater immersion and enjoyment, whereas the opposite is true for media usefulness. The findings further show that behavioral responses (reuse and purchase intention) are formed by affective (immersion, enjoyment, product liking) and cognitive (media usefulness, choice confidence) responses to the AR characteristics (interactivity, system quality, product informativeness, reality congruence). Since the reuse intentions of AR apps result from enjoyment and usefulness, retailers should improve system quality, product informativeness, and reality congruence to enhance media usefulness and interactivity to increase enjoyment. To achieve high purchase intentions, they should also increase interactivity, as it boosts product liking and in turn ensures confidence about the chosen products.
Cognitive models of optimal sequential search with recall (Bhatia et al., 2021)	We studied people's behavior in a classic dynamic decision making problem, referred to as optimal stopping with recall. In this problem, decision makers can choose between a large number of options, and	1. Computational (optimal) 2. Algorithmic (satisficing) 3. Sequential search. 4. Risk aversion, 5. Psychological effort cost,	Theory of Risk Aversion Theory of Decision Making	We put forward an array of cognitive models and use parametric model fits on participant-level search data to examine why decision makers adopt seemingly suboptimal thresholds. We find that people's behavior is

	have to sequentially sample the options to learn their exact utility by paying a non-negligible search cost. This problem is characterized by a clear-cut optimal solution, which is defined by a predetermined stopping threshold: Decision makers should continue sampling options until they encounter one with a utility higher than the stopping threshold.	6. Decision error		consistent with optimal search if we allow participants to display risk aversion, psychological effort cost, and decision error. Thus, decision makers appear to be able to search in a resource-rational manner that maximizes stochastic risk averse utility. Our findings shed light on the psychological factors that guide sequential decision making, and show how threshold models can be used to describe both computational and algorithmic aspects of search behavior.
Cognitive reflection and the valuation of energy efficiency (Andor et al., 2019)	this paper explores the impact of cognitive reflection on consumers' valuation of energy efficiency, as well as its interaction with consumers' response to the EU energy label. Using a standard cognitive reflection test, our results indicate that consumers with low cognitive reflection value energy efficiency less than those with high scores	1. cognitive reflection 2. cognitive abilities	policy insights from economic theory	we find that consumers with a low level of cognitive reflection respond strongly to grade-like energy efficiency classes and tend to disregard detailed information on annual energy use, while the opposite holds true for consumers with a high level of cognitive reflection.
Consumer's perceptions of website's utilitarian and hedonic attributes and online purchase intentions: A cognitive-affective attitude approach (Moon et al., 2017)	The study aims to investigate consumers' perceptions regarding attributes of online shopping websites that influence their cognitive and affective attitudes and also online purchase intentions.	1. cognitive and affective attitudes 2. purchase intentions 3. affective attitude 4. Utilitarian Attributes 5. Hedonic Attribute	theory of planned behavior (TPB)	Study showed that data is normally distributed and the values of skewness and kurtosis were within the recommended thresholds (± 1 , ± 3) as suggested by Tabachnick, Fidell, and Osterlind (2001) and Cameron (2004). Furthermore, the tolerance level and variance inflation factors (VIF) were used to examine the multi-collinearity among independent variables (Diamantopoulos & Winklhofer, 2001). The VIF value of the first order variables varied from 1.56 to 2.11 and tolerance values varied from 0.47 to 0.64. Therefore, multi-collinearity is not a concern for all the variables
Customers' purchase decision-making process in social commerce: A social learning perspective (Chen et al., 2017)	investigated the roles of social commerce factors on customers' purchase decision-making. Based on the social learning theory, we develop a research model to examine how customers' learning behavior along	1. External Interaction Process (Learning from forums and communities, Learning from ratings and reviews, Learning from social recommendation) 2. Internal Psychological Process (Cognitive	the social learning theory	The results from a survey of 243 actual users of social commerce websites suggest that cognitive and affective appraisals are the main predictors of purchase intention, with cognitive appraisal having a higher predictive power than affective appraisal. In addition, learning from forums and communities and learning from ratings and

	three main social commerce components (SCCs) affects customers' attitude in both cognitive and affective dimensions and how such attitude determines customers' purchase intention.	Appraisal, Effective Appraisal). 3. Decision Making (Purchase Intention)		reviews have significant influences on both cognitive and affective appraisals, while learning from forums and communities plays a more important role in formulating affective appraisal and learning from ratings and reviews plays a more important role in determining cognitive appraisal.
Don't trick me: An event-related potentials investigation of how price deception decreases consumer purchase intention (Fu et al., 2019)	the effect of price deception on consumer purchase decision making when they have sufficient knowledge about the price information.	1. price deception 2. deceptive condition 3. truthful condition	Theory of Decision Making	these results revealed the negative impact of price deception on purchase decision making and its potential neural substrates.
Exploring the role of justification and cognitive effort exertion on post-purchase regret in online shopping (Park & Hill, 2018)	The current paper investigated the function of justification and cognitive effort related to regret, specifically in the online shopping context in two studies	1. cognitive effort. 2. justification	Behavioral decision theory	The results from qualitative data, however, suggest that some participants assumed that laptops have hedonic values as well (e.g., I can watch movies on my laptop), even though it was mainly primed as utilitarian goods in the cover story.
Is User-Generated Content Always Helpful? The Effects of Online Forum Browsing on Consumers' Travel Purchase Decisions (Brooks & Johnston, 2012)	This study examines how the unique information environment of online forums affects consumers' information acquisitions, and further impacts their purchase behavior. Based on the information foraging theory, we hypothesize that the relevant information patches in online forums facilitate consumers' information acquisition processes and increase purchase intention	1. Focal product page browsing 2. Online forum browsing 3. Focal Product Purchase	information foraging theory	Our results indicate that only focal product online forum information patch browsing significantly increases purchase probability, and the information complexity of online forum patch browsing has an inverted U-shape effect on purchase behavior.
Multiple numeric competencies predict decision outcomes beyond fluid intelligence and cognitive reflection (Sobkow et al., 2020)	The goal of the present study was to compare the relative contribution of different cognitive abilities and preferences to superior decision making. Additionally, we aimed to test whether skilled decision makers have better and more sophisticated long-term memory representations of personally meaningful risky situations.	1. Cognitive Abilities 2. Decision Making	Skilled Decision Theory	We found that multiple numeric competencies predicted decision making beyond fluid intelligence and cognitive reflection. Especially, the acuity of symbolic-number mapping (a measure of approximate numeracy) was the most robust single predictor of superior decision making.
Positive emotion bias: Role of emotional content from online	investigated the impact of review valence on purchase decisions, but has reported mixed	1. Perceived Credibility 2. Pleasant vs unpleasant online reviews	Signaling theory	The results show that pleasant online customer reviews lead to a higher purchase likelihood compared to unpleasant ones. Perceived credibility

customer reviews in purchase decisions (Guo et al., 2020)	findings. To reconcile these mixed findings, this study unearths the understanding of review valence from the perspective of the emotional content in online customer reviews. To explore the effect of emotional content on purchase decisions and the moderating role of emotional content on non-emotional content and purchase decisions based on a heuristic-systematic model, a laboratory experiment with 106 subjects was used to empirically test the research hypotheses.	3. Perceived diagnosticity 4. Purchase Decision		and perceived diagnosticity have significant influence on purchase decisions, but only in the context of unpleasant online customer reviews. The findings demonstrate positive emotion bias for online customer reviews, and carry important practical implications for both sellers and customers.
The impact of planned vs. unplanned purchases on subsequent purchase decision making in sequential buying situations (Sohn & Ko, 2021)	purchase. We investigated the moderating roles of the justification heuristic and two different payment methods (individual payment vs. bundle payment).	1. Precedent purchase type 2. Justification Heuristic 3. Payment method for precedent 4. Willing to Pay	goal theory	The results revealed that payment method is not related to planned purchasing. This research can have strategic marketing implications, as it examines differences in the maximum willingness to pay for subsequent purchases depending on whether the precedent purchase was planned or unplanned. Moreover, the results suggest that using the justification heuristic and considering the payment method can be practical retail strategies.
The processing of price during purchase decision making: Are there neural differences among prosocial and non-prosocial consumers? (Medina et al., 2020)	assessed the differences of price processing among consumers adopting sustainable habits (prosocial) as opposed to those who have not (non-prosocial). This is the first study to resort to neuroimaging tools to explore the underlying neural mechanisms that reveal the effect of price on prosocial and non-prosocial consumers.	1. prosocial consumers 2. non-prosocial consumers 3. Price	Social exchange theory:	The study found that prosocial participants (vs. non-prosocial) placed much more value during the purchase decision-making process on collective costs (environment, animals and society: $p < .01$) and on collective benefits (environment, animals and society: $p < .01$). The Mann-Whitney U test revealed a quasisignificant difference on the import placed on price for both groups ($p \approx .06$). In fact, it is the non-prosocial group that reports higher values for this individual cost

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