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SHOPPING BEHAVIOR WEBROOMING IN FULFILLING INDIVIDUAL NEEDS FROM A PERSPECTIVE SELF-DETERMINATION THEORY

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ABSTRACT

The development of current consumer behavior shows shopping behavior using more than one channel to reduce fog. This study tries to offer a theoretical concept of omnichannel shopping behavior based on self-determination theory to explain what drives and motivates consumers to do webrooming behavior. This study was conducted using a survey method on 206 consumers who had done webrooming behavior using SEM-PLS analysis. Empirical results indicate that the needs of the three individuals with self-determination are proven to be drivers of consumers in doing webrooming behavior. However, unlike the testing of moderation variables, the three self-determination needs do not fully moderate and only product characteristics moderate the relationship between autonomy variables and webrooming behavior.

Keywords: *Consumer Behavior, Omnichannel, Shopping, Self-determination, Webrooming.*

INTRODUCTION

Consumer behavior while shopping has experienced a significant shift. Today, individuals interact with multiple touchpoints throughout their shopping journey, using multiple channels in a single purchase to reduce uncertainty (Flavián et al., 2016) *Consumers can utilize various touch points such as websites, physical stores, catalogs, internet kiosks, mobile applications, and call centers* (Awais et al., n.d.). *This phenomenon shows a shift in consumers towards omnichannel shopping.* (P. C. ; Verhoef et al., 2015), *define omnichannel management as the synergistic management of various*

channels owned by a business and available customer touch points, so that cross-channel customer experiences can be interacted and used simultaneously, both online and offline. Therefore, current service/product providers cannot ignore any one channel, whether online or offline (Awais et al., n.d.)*. Omnichannel provides great benefits for current customer attitudes and behavior* (Savastano et al., 2019)*. Behavior involving multiple online and offline channels allows consumers to avoid uncertainty and obtain the products they desire.*

Research on omnichannel shopping behavior is still very limited. Until now, theoretical explanations about shopping behavior using a combination of several channels are still very minimal (Daunt et al., n.d.)*. Consumers are driven to shop across channels by a variety of different motivations* (Balasubramanian et al., 2005)*;* (Heitz-Spahn, n.d.)*;* (Flavián, Gurrea, Services, et al., n.d.)*.* (Flavián, Gurrea, Interactive, et al., n.d.) *identified several factors that drive and motivate consumers in omnichannel behavior, including utility, hedonic value, cost, fairness, time, energy, and self-efficacy. A number of studies have attempted to describe behavior webrooming theoretically, like theory of value co-destruction* (Daunt et al., n.d.)*, contemporary theory* (Gensler et al., 2017)*, theory of planned behavior* (Arora & Sahney, 2018)*, transaction cost theory* (Akturk et al., n.d.)*, information-processing theory* (Santos et al., 2018)*, cognitive fit theory* (Flavián, Ibáñez-Sánchez, et al., n.d.)*, customer experience theory* (Flavián, Ibáñez-Sánchez, et al., n.d.)*, diffusion of innovations theory* (Flavián, Ibáñez-Sánchez, et al., n.d.)*, dan prospect theory* (Chon et al., 2018)*. With so many factors driving omnichannel behavior, it is difficult to reach clear, research-proven agreement on what actually drives that behavior* (Daunt et al., n.d.)*. This also raises questions about the factors driving webrooming behavior. Previous research in the field of marketing that discusses motivation generally fails to explain motives that are more directed towards global goals and does not offer enough of a comprehensive understanding of individual motivation* (Gilal et al., 2018)*. Apart from that, this research is motivated by the lack of previous research that examines behavior webrooming.*

LITERATURE REVIEW

Self-Determination Theory; Self-Determination Theory (SDT) or self-determination theory is a macro theory about motivation, emotions, and personality in an individual's social context, which is based on three basic needs: competence, relatedness, and autonomy (Ryan et al., 2004)*. Research in the field of psychology shows that both motivation and well-being depend heavily on the satisfaction of certain psychological needs (Peters et al 2018). SDT assumes humanistically that individuals naturally gravitate towards growth and self-regulation. This theory explains in detail how social and cultural forces influence personality development and global motivational orientation, as well as behavioral responses in various domains and specific tasks. Gilal et al. (2018) in their study covering*

literature from 1998 to 2018 stated that several consumer behavior theories, such as consumer decision model, theory of buyer behavior, theory of reasoned action, and theory of planned behavior, have been adopted by marketing scientists to understand consumer motivation. However, these theories fail to explain global goal-directed motives and do not offer enough of a comprehensive understanding of individual motivation. These theories focus on extrinsic motivation and do not predict the development of intentions from consumers' intrinsic motives. For example, a woman may choose to purchase designer clothing not to signal wealth and status (extrinsic motivation), but rather because of a natural interest in new clothing designs (intrinsic motivation) (Hagger et al., 2008)*. This encourages further research to explore more suitable alternatives, with previous research having developed a model of goal-directed behavior, proven to be able to predict consumer motivation well, namely self-determination theory* (Gilal et al., 2018)*.*

Meeting psychological needs allows individuals to determine their own behavior, become more responsible, active in achieving set goals, and strengthen social relationships, all of which contribute to increasing individual happiness (Deci et al., n.d.)*. This aspect is important in omnichannel shopping behavior, where shopping actions based on self-determination can meet consumer needs and increase their happiness.* (differences & 2020, n.d.) *states that self-determination theory is very broad and specific, because it explains in detail how social and cultural forces influence personality development and global motivational orientation, as well as behavioral responses in various domains and specific tasks. This theory focuses on the satisfaction of an individual's basic psychological needs, consisting of relatedness, competence, and autonomy, which are said to energize the internalization process and contribute to psychological health and growth* (Chen et al., 2015)*. These three basic needs have an important role in protecting or improving mental health* (Deci et al., n.d.)*.*

Webrooming; The development of more stable and reliable online devices has increased various online shopping activities using mobile devices to search for product information to minimize uncertainty. Webrooming is a special form of shopping research process (P. C. ; Verhoef et al., 2015)*, where consumers search for information online and then purchase products offline* (Fernández et al., n.d.)*. In this omni-channel shopping behavior, consumers use mobile applications or websites to compare prices or download coupons, then make purchases at physical stores* (Sopadjieva et al., n.d.)*.* (Flavián, Ibáñez-Sánchez, et al., n.d.) *describe webrooming as a cross-channel behavior that aims to help consumers make the best purchases by investing time and effort. For consumers trying to find the best alternative, webrooming is the optimal choice for searching for information through online channels (Flavián et al., 2019). Online channels provide more information gathering tools that aid consumer decision making* (Awais et al., n.d.)*.*

Previous research shows that consumers' channel choices vary by product category (Heitz-Spahn, n.d.). (Nelson, n.d.) *and* (Awais et al., n.d.) *divided search products into two categories: search products and experience products. These product characteristics influence consumer decisions in choosing shopping channels category* (Heitz-Spahn, n.d.).. *To reduce uncertainty in shopping, consumers search for information about products before purchasing, depending on where they can evaluate the product* (Sun et al., n.d.). *This decision is influenced by various factors such as product realizability, awareness, access to information, choice confidence, and satisfaction in the search process* (Reid et al., 2016). *Due to the different types of products available in online and offline channels, the level of perceived diversity is also* (Awais et al., n.d.).

(Awais et al., n.d.) *classified consumers' search for product information into two types: search products and experience products. Search products are easily accessible via online media, allowing consumers to obtain information and compare product attributes more easily* (Sun et al., n.d.). *In contrast, experiential products require direct interaction such as touching or trying the product before purchase. These products cannot be fully evaluated unless consumers have purchased them and used them before, with the primary attribute being experience or search costs* (Awais et al., n.d.). *In the context of webrooming behavior, this relationship will be stronger when product characteristics act as moderating variables. Based on the literature and research studies that have been discussed, this research focuses on webrooming behavior in the shopping context omnichannel. This behavior is explained theoretically through self-determination theory, which is based on three basic individual needs: competence, relatedness, and autonomy, with moderation by product characteristics.*

Table 1. Characteristics of Respondents Based on Product Purchases

Respondent Characteristics	Amount	Percentage (%)	Respondent Characteristics	Amount	Percentage (%)
Gender			**Education**		
Woman	138	67,3	JUNIOR HIGH SCHOOL	9	4,40
Man	67	32,7	SMA	50	24,40
Age			D3&S1	135	65,80
<17 years	7	3,40	S2	11	5,40
17-25 years old	140	68,30	**Income (Rupiah)**		

>25-30 years	44	21,50	<1.000.000	20	9,80
>30-35 years	13	6,30	≥1.000.000 – 2.500.000	57	27,80
>35-40 years	1	0,50	>2.500.000 – 5.000.000	48	23,40
>40	0	0,00	>5.000.000	23	11,20
Domicile			**Device used**		
Banten	3	1,50	Mobile Device (Hp)	95	46,30
Sumatra	17	8,30	Computer/PC	7	3,40
Sulawesi	2	1,00	Tablet	2	1,00
Nusa Tenggara	4	2,00	Time to search for product information through online channels		
In Yogyakarta	69	33,70	<1 hour	25	12,20
DKI Jakarta	16	7,80	≥1 hour – 2 hours	59	28,80
West Java	21	10,20	>2 hours – 4 hours	15	12,20
Central Java	57	27,80	>4 hours	5	2,40
East Java	15	7,30	Time to search for product information via offline channels		
Other	1	0,50	<1 hour	44	21,50
			≥1 hour – 2 hours	50	24,40
			>2 hours – 4 hours	6	2,90
			>4 hours	4	2,00

Table 2. Characteristics of Respondents Based on Product Purchases

Electronic Products	Product *fashion & Beauty*	Electronic Products	Product *fashion & Beauty*

	Amount	Percentage (%)	Amount	Percentage (%)		Amount	Percentage (%)	Amount	Percentage (%)
Expenditures purchasing products in a month (Rp)					Electronic Products purchased				
<100.000	18	17,30	13	12,90	Mobile Device (HP)	72	59,50		
>100.000 - 200.000	16	15,40	34	33,70	Earphone, mouse, keyboard	51	42,10		
>200.000 - 500.000	16	15,40	35	34,70	Household Electronics	50	41,30		
>500.000 -	23	22,10	16	15,80	*Speaker*	27	22,30		
1.000.000					TV	26	21,50		
>1.000.000 -	21	20,20	2	2,00	AC/Fan	22	18,20		
3.000.000					Gaming Equipment	20	16,50		
>3.000.000	10	9,60	1	1,00	*Hairdryer*	18	14,90		
Platform used to search for product information					Fashion & Beauty products purchased				
Social media	71	33,81	81	37,67	Clothing/fashion			73	22,39
E-Commerce	81	38.57	80	37,21	Sandals			28	8,59
Shop website	55	26.19	49	22,79	Cosmetics			62	19,02
Call Center	3	1,43	5	2,33	That			45	13,80

	Jewelry/accessories	45	13,80
	Other	73	22,39

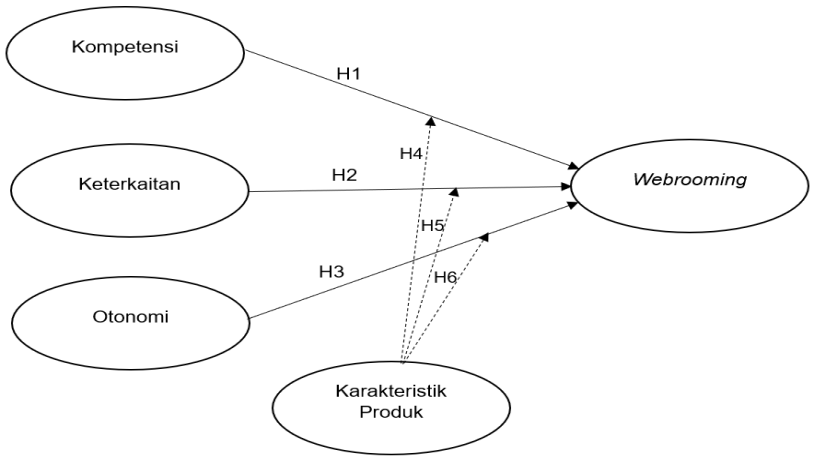

Figure 1. Research Model

RESEARCH METHOD

1) Data and Sample

This research uses an explanatory quantitative method by collecting data through an online survey using Google Form. The sampling technique applied is *non probability sampling,* that is *purposive sampling*, with Indonesian consumer respondents aged 15-64 years who have experience doing webrooming. A total of 266 responses were collected, but only 206 responses met the research criteria, or 77.44% of the total responses analyzed. Data were analyzed using SEM-PLS. Before testing the hypothesis, the data has gone through a filtering stage to eliminate *missing value* and outliers. Hypothesis testing also includes testing the validity, reliability and suitability of the model to ensure the research model has good suitability and quality indices (Laredo et al., n.d.).

2) Measurement

The measurement development in this research used two separate questionnaires based on respondents' shopping experiences in purchasing electronic products as well as fashion and beauty. Respondents were asked to imagine and remember their experiences in purchasing electronics and fashion & beauty products while filling out the questionnaire. At the beginning of the questionnaire, respondents were given definitions of foreign terms used in the questions to make it easier for them to answer.

To measure each latent variable, this study adapted the item scale that had been used in previous research and translated it from English to Indonesian. The scale for measuring

the need for competence, the need for relatedness, and the need for autonomy was adapted from (P. Verhoef et al., 2007), while the scale for measuring webrooming behavior was adapted from (Awais et al., n.d.).

DATA ANALYSIS AND DISCUSSIONS

1) Validity and Reliability Test

Validity tests in this research include content validity, face validity and construct validity, which were carried out using Warp-PLS 0.8 software. Content validity is carried out by adapting measurement items to conceptual definitions of constructs that have existed in previous research, to ensure appropriate representation (Neuman, 2014). Face validity testing is carried out through assessments by supervisors who are considered experts in their field. Construct validity consists of two aspects: convergent validity and discriminant validity (Neuman, 2014). Convergent validity is identified by ascertaining the values *Average Variance Extracted* (AVE) reaches 0.50 or more (*Hair, J., Black, W., Babin, B., Dan Anderson, R (2019)*), and the factor loading value for each item is more than 0.50.

Discriminant validity is determined by comparing the AVE value with the correlation value between latent variables. The AVE of a construct must be greater than the largest correlation between that construct and other constructs (*Hair, J., Black, W., Babin, B., Dan Anderson, R (2019*) 663). Reliability testing is carried out by checking the values of Cronbach's *alpha* and *Composite Reliability*, which must be more than 0.70 to ensure internal consistency of the measurement ((*Hair, J., Black, W., Babin, B., Dan Anderson, R (2019):* 123).

Table 3. *Convergent Validity* and *Composite Reliability*

Indicator	***Convergent Validity***		***Composite Reliability***	***Cronbach's alpha***
	Loading Factor	**AVE**		
Ko1	0.871	0.755	0.925	0.892
Ko2	0.899			
Ko3	0.853			
Ko4	0.852			
Ke1	0.888	0.802	0.942	0.917
2nd	0.916			
Ke3	0.875			
Ke4	0.902			
Ot1	0.864	0.758	0.926	0.893
Ot2	0.892			

Ot3	0.898			
Ot4	0.827			
Web1	0.812	0.696	0.901	0.854
Web2	0.873			
Web3	0.861			
Web4	0.788			

Note: Ko=Competency Requirements; Ke=Relationship Needs; Ot=Need for autonomy; Web=Behavior *Webrooming;* Kar= Product Characteristics

Table 4. Discriminant Validity

Variable	Is	When	Ot	Web
Is	0.869	0.753	0.813	0.659
When	0.753	0.895	0.768	0.632
Ot	0.813	0.768	0.871	0.691
Web	0.659	0.632	0.691	0.834

2) Hypothesis test

Hypothesis testing was carried out using WarpPLS 0.8 software, based on two questionnaires distributed separately and focusing on product characteristics (customer experience) as a moderating variable. Of the six hypotheses tested, four were supported and two were not supported at the 0.05 significance level. The first hypothesis shows a significant P value with a positive beta path coefficient (β), which means the hypothesis is supported. This shows that there is a significant positive influence of the variables needed for competence, relatedness, and autonomy on webrooming behavior. In other words, the higher the need for competence, relatedness, and autonomy, the higher the webrooming behavior, and vice versa.

Table 5. Hypothesis Testing

Pathways to Behavior *Webrooming*		
Construct	**Beta (*b*)**	***p-value***
Competency Requirements	0.208	<0.001*
Relatedness Needs	0.186	0.003
Need for Autonomy	0.425	<0.001*

Needs Moderation Pathway to-the Behavior *Webrooming*

Construct	Beta (*b)*	*p-value*
Competency Requirements	-0.080	<0.122
Relatedness Needs	-0.023	<0.372
Need for Autonomy	-0.126	<0.033

The results of the moderation test show that only product characteristic variables can moderate the relationship between the need for autonomy variable and the webrooming behavior variable. This is proven by the P-value of hypothesis 6 which is smaller than the agreed significance level of 0.05, with a positive beta path coefficient (β). Thus, the relationship between the need for autonomy and webrooming behavior will be stronger if it is moderated by the product characteristics that customers have based on their shopping experience. In contrast, different results are shown by hypotheses 4 and 5, where the P-value for hypothesis 4 (0.12) and hypothesis 5 (0.37) is greater than the 0.05 significance level. This shows that the relationship between the competency need and relatedness variables is not influenced by product characteristic variables based on consumer shopping experience.

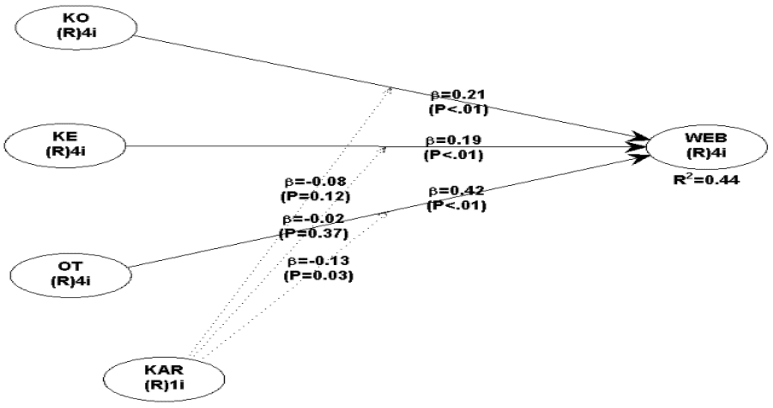

Figure 2. Hypothesis Test Results with Structural Model.

CONCLUSIONS AND SUGGESTIONS

This research aims to test the influence of self-determination theory which consists of the need for competence, relatedness, and autonomy on webrooming behavior, with moderation by product characteristics based on consumer shopping experiences. Data

analysis shows that of the six hypotheses tested, four were supported and two were not. The results of hypothesis testing show that the three basic individual needs—the needs for competence, relatedness, and autonomy—have a significant positive influence on webrooming behavior. However, product characteristics as a moderating variable only influence the relationship between the need for autonomy and webrooming behavior, while the relationship between the need for competence and relatedness and webrooming behavior is not moderated by product characteristics.

The results of hypothesis testing also confirm previous research findings (Chen et al., 2015; Chen and Jang, 2010) that three basic individual needs—competence, relatedness, and autonomy—positively influence self-determination or self-determination, which in the context of this research represented by consumer webrooming behavior. Webrooming behavior is considered an optimal channel combination strategy to increase self-confidence, because searching for information via the web increases consumer knowledge and preferences regarding products (Flavian et al., 2019). Consumers feel that to carry out webrooming behavior, they do not need the need for competence and connection with a group or social environment. This is related to the internalization of the consumer's self which originates from personal will and not from external factors, involving the consumer's values and self-concept. Individuals tend to internalize behaviors that are rewarded by their environment or group, but full internalization requires the experience of autonomy in those activities (Legault, 2017). Therefore, the need for autonomy has the strongest influence in driving consumers to engage in cross-channel behavior.

The need for autonomy has the strongest influence in encouraging consumers to carry out webrooming behavior because it is related to consumer internalization which involves strong values and self-concept. The need for autonomy is an individual's intrinsic tendency to assimilate and integrate external objects (Deci and Ryan, 1985). In the research of Sørebø et al. (2009), the need for autonomy among teachers using e-learning reflects the desire to regulate their own engagement, which is the basis of self-determined intrinsic motivation. The internalization process reflects an individual's intrinsic tendency to transform external objects into something self-determined and move from heteronomy to autonomy (Deci and Ryan, 1985). This is also in line with self-determination theory, which states that individuals become increasingly autonomous when the internalization process functions more effectively in bringing external objects into coherence with themselves (Ryan et al., 1995).

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