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FRESH FISH CONSUMPTION BEHAVIOUR IN PADANG CITY, INDONESIA

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ABSTRACT

The fresh fish consumption behaviour has been attracting the previous researchers. Unfortunately, few studies based on Indonesia were held by the researchers. Due to the lack of the previous study, the purposes of the study are to investigate the influence of attitudes, control of perceived behaviour, and subjective norm on intention to consume fish, and to examine the relationship of the fish consumption intention with consumption behaviour. The study applies plan behaviour theory to understand the raised phenomena in this paper. The number of respondents participated in this study is fifty-five. SEM-PLS is used to analysis data supported by assessment of measurement and structural model as the smart-pls procedure. The results indicate that there is a positive effect of attitude toward behaviour on intention to consume fish. Besides, fish consumption intention also has a significant association with consume behaviour. However, the effect of the norm and control of perceived behaviour on fish consumption intention is not significant. This finding confirms the theory of plan behaviour. Practically, this finding shows implicitly that to increase the fish behaviour consumption, the intention to consume fish and attitude toward fish consume behaviour should be increased.

Keyword: consumption behaviour, intention to behave, attitude, subjective norm, perceived behaviour control.

ABSTRAK

Penelitian topik prilaku konsumsi ikan telah menarik praktisi dan akademisi untuk mengkajinya. Namun, penelitian prilaku konsumsi ikan masih terbatas dengan menggunakan objek dari Indonesia. Untuk itu, penelitian ini bertujuan untuk menganalisis secara emprisi pengaruh sikap, kontrol prilaku yang dipersepsikan, dan norma subjektif terhadap niat untuk mengkonsumsi ikan. Selain itu, penelitian ini juga menganalisis secara empris dampak niat untuk mengkonsumsi ikan terhadap prilaku konsumsi ikan. Untuk menjelaskan fenomena konsumsi ikan, penelitian ini menggunakan teori perenanaan prilaku atau *theory of plan behaviour*. Jumlah sampel akhir adalah lima puluh lima responden. Analisa data menggunakan *structural equation model* (SEM) dengan *software smart* PLS. Dalam smart PLS, dua jenis penilaian dilakukan yaitu penilaian model pengukuran dan model struktural. Hasil penelitian menunjukan bahwa sikap berdampak positif terhadap niat untuk mengkonsumsi ikan. Selain itu, niat untuk mengkonsumsi ikan juga berdampak positif terhadap prilaku konsumsi ikan. Namun, norma subjektif dan kontrol prilaku yang dipersepsikan tidak berdampak terhadap niat untuk mengkonsumsi ikan. Hasil penelitian ini mengkonfirmasi *theory of plan behaviour* sebagian. Secara praktis, penelitian ini memberikan implikasi bahwa pihak pihak berkepentingan sebaik membangun sikap positif dikalangan masyarakat sehingga akan menimbulkan niat untuk mengkonsumsi ikan dan akhirnya meningkatkan prilaku konsumsi ikan sehingga tercapai Indonesia sehat.

Kata kunci: perilaku konsumsi, niat untuk berperilaku, sikap, norma subjektif, kontrol perilaku yang dipersepsikan.

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INTRODUCTION

Fresh fish consuming behaviour and products of seafood have been becoming a principal researchers' interest in the world due to the important aspect of fish, such as business of the fish industry, sustainability, food safety, nutrition and diet (Carlucci et al., 2015). Due to increasing the consumption of fresh fish, health authorities have a common interest (Badr, Salwa, & Ahmed, 2015). In fact, issues about health, ethic, money value and food safety become more important and consumer behaviour have changed significantly in recent decades (Tomic, et al., 2016). In addition, Tomic et al. (2016) add that fish consumption behaviour is influenced by healthiness and welfare, fish also has primacy in this aspect. In addition, fish is perceived as a source of food which has nutrition and salubriousness in general (Badr et al., 2015). Refers to Oken et al. (2012), fish is the source of primary food with acids of n-3 long chain poly unsaturated fat, which include acid of docosa hexaenoic (DHA) and acid of eicosa pentaenoic (EPA). Eating fresh fish minimum twice a week under normal diets would positively affect human health (Sioen et al., 2008). Consumption of fish has varied from one country to another country. In 2011, fish was consumed about 20 kg per capita in each year by European. Fish consumption in Indonesia increased by 12.9 kg from 21 kg in 2003 to 33.9 kg in 2012 (Tran et al., 2017). Therefore understanding what factor affecting fish consumption among people becomes research priority which is important (Thorsdottir et al., 2012). Study on fish consumption behaviour is not only important for government and policy makers to develop the food policy, but also for economists for marketing planning (Zhou et al., 2015).

There are bundle of studies on this subject has been done (Badr et al., 2015; Birch & Lawley, 2012; Cardoso, Lourenço, Costa, Gonçalves, & Nunes, 2013; Grieger, Miller, & Cobiac, 2012; Khan, Aldosari, & Hussain, 2018; Leek, Maddock, & Foxall, 2000; Miloševic, Zezelj, Gorton, & Barjolle, 2012; Murray, Wolff, & Patterson, 2017; Myrland, Trondsen, Johnston, & Lund, 2000; Olsen, 2003; Pieniak, Verbeke, Scholderer, Brunsø, & Olsen, 2008; Thong & Olsen, 2008; Thorsdottir et al., 2012; Tomic et al., 2016; Trondsen, Scholderer, Lund, & Eggen, 2003). Badr et al. (2015) studied the barriers consumption of freshwater fish in Morocco and concluded that three barriers link to the low fish consumption: quality, sensory and convenience barriers. In addition, Birch and Lawley (2012) explain and identify risks in consuming seafood by Australian consumers, including social, physical, functional, psychological and financial risks. Further, Cardoso et al. (2013) carried out survey into seafood consumption preference, such as consumption frequency, average meal portion, and usual culinary treatment amongst Portuguese consumers. Thus, Grieger et al. (2012) investigate the barriers and knowledge regarding to fish consumptions among older people of Australia. Beside, Khan et al. (2018) also explore behaviour of fish consumption and attitudes of fish farming among households in Saudi Arabia, and found the important factors, such as fish price and nutritional value of fish. Other authors, Leek et al. (2000) studied fish consumption determinants in UK and conclude that there are several determinants: situational relevance, negative properties, economy, versatility and convenience. Miloševic et al. (2012) describe the key factors in determining the foods in six

countries of Western Balkan (WBC): shopping amenities, sensory appeal, health and natural content. Murray et al. (2017) investigate the important factor why consume the seafood and conclude that the most important factors affecting the fish consume are taste, smell and appearance. Myrland et al. (2000) determine the seafood consume in Norway and found that there are several factors affecting fish consuming behaviour: lifestyle, reveal preference and barriers to consume. Olsen (2004) said that the habit of consuming seafood was due to moral necessity for health reasons rather than self-desire and seafood taste. Pieniak et al. (2008) survey the factor affecting the fish consumption behaviour in five European countries and identified that factors: health involvement, risk perception and health beliefs. Thong and Olsen (2008) test the theory of plan behaviour to understand the fish consuming behaviour among Vietnam and found that subjective norm and attitudes are the most important variables determining the fish consuming behaviour. Thorsdottir et al. (2012) investigate the fish consume behaviour and found that fish preparation, social pressure and cooking skills are the most important factors. Tomic et al. (2016) expanded plan behaviour theory to understand fish consumption behaviour in Croatia and they found that instinctive norms, control of behaviour, attitudes, moral necessity, health, availability and intentions had a relationship with the behaviour of consuming fish. Myrland et al. (2000) investigate the barriers to consume fish and recommended about how to increase the fish consumption through satisfying: convenient-oriented consumers, health-oriented family members and children's wishes.

Based on previous studies on fish consuming behaviour, there are no study using the Indonesia data. Fish consumption behaviour is a part of food demand and it is an important subject since it reflect the preferences of consumers or households (Zhou et al., 2015). Indonesia is the largest producer of fish in Southeast Asia and had second positioned in the world after China (Tran et al., 2017), but research on fish consumption at the household level in Indonesia is still very low. Especially, study apply the theory of plan behaviour (Ajzan, 1991). Therefore, there is desire need to understand why people consume fish by using the theory of plan behaviour. Thus, the aim of this paper is to determine the effect of attitudes, subjective norm and control of behaviour on desire to consume the fresh fish and determine the relationship between desire to consume and fish consuming behaviour. With the uniqueness of Indonesia social economic system, this study has purposes to add literature in consuming behaviour, especially the theory of plan behaviour. This paper is organised as follow. Second session is discussed about the theory and hypotheses development. Following by research method and result section which highlight the antecedents and consequence of intention to consume.

THEORY AND HYPOTHESIS DEVELOPMENT

Comsumption Behaviour

Consumption behaviour relate to choose or not a product based on several reasons. Consumption behaviour is important for several stakeholders, such as economist, policy makers and

etc. The positive effect of fish consumption has been documented by prior authors (Oken et al., 2012; Sioen et al., 2008). However, the negative effect of fish consumption also has been identified in the literature (e.g. Connelly, Lauber, McCann, Niederdeppe, & Knuth, 2019; Liu et al., 2018). Consume behaviour is derived from behavioural theory. Sheth, Newman, and Gross (1991) propose the theory of consumption value and suggest five values influencing the choices of consumer: function, condition, society, emotion and epistemic. Additionally, there are several theories to clarify and anticipate the human behaviour like the reasoned action theory (Fishbein & Ajzen, 1975) and the planed attitude theory (Ajzen, 1991). However, theory of plan behavior that dominated and commonly used from (Tomic et al., 2016; Verbeke & Vackier, 2005). According to the theory of plan behaviour, consuming behaviour is determined by intention to consume behavior (Tomic et al., 2016; Verbeke & Vackier, 2005). In addition, attitudes, instinctive norm and perceived behaviour control are determinants of intention to consume behaviour (Honkanen, Olsen, & Verplanken, 2005; Lee & Yun, 2015; Robinson & Smith, 2002; Thong & Olsen, 2008, 2012; Tomic et al., 2016; Verbeke & Vackier, 2005).

Intention to Consume

Intention refers to individual's willing and effort to performance the behaviour and it is assumed as factors of intention affecting the behaviour (Fishbein & Ajzen, 1975). In addition, Thong and Olsen (2008) state that behavioural intention is something like a plan to achieve the behaviour. Thus, Intention to consume behaviour is good predictor of consume behaviour (Honkanen et al., 2005). Theory of planned behaviour (Ajzen, 1991) suggest that intention to behave is predictor of behaviour. According to theory of reason action (TRA), Intention to behave is determined by attitude and subjective norm (Fishbein & Ajzen, 1975) and (Ajzen, 1991) add other variable (perceived behaviour control) as other predictor of intentionto behave. Olsen (2004) propose that intention to consume the fish is predictor of consume behaviour. Previous research of the effect of behavioural intention on behaviour has been done largely in many disciplines, such as human resources management, and marketing management. In marketing management, there is a limited study on fresh fish consumption behaviour. Thong and Olsen (2008) conclude that the intention to consume (motives) is positively related to consuming behaviour. In addition, Tuu, Olsen, Thao, and Anh (2008) also documented the positive influence of intention to manage on consume behaviour. Finally, Tomic et al. (2016) suggest that intentionto eat the fish encourage the consuming behaviour. Based on the theory and previous researches, we develop the first hypothesis as follow:

H1. Intention to consume fresh fish is positively related to consume behaviour.

Attitude Toward Fish Consumption

Eagly and Chaiken (1993) describe an attitudes as a psychological tendency that expressed by evaluating a particular entity with some degree. The degree could be polarity of like-dislike, good-bad, satisfaction-dissatisfaction, and favour -disfavour. Attitudes toward behaviour depend on self-

factor that describe positive or negative of personal in relation to behavioural consequences (Thong & Olsen, 2008). Attitude toward behaviour could be built from constructs, such as fish preference, acceptability, and perceived quality of fish (Olsen, 1999). Previous studies investigated the relationship between attitudes toward fish consume behaviour are many. Robinson and Smith (2002) documented the attitude is a significant prediction of intention to eat fish in Minnesota. Honkanen et al. (2005) conclude that attitudes has a positive association with intention to consume fish among Norwegian adult. Tuu et al. (2008) found that there is a positive relationship between attitudes and intention to consume fish in Vietnam. Finally, Tomic et al. (2016) state there is positive result in research the relationship behaviour and intention to consume fish. Based on the theory and previous research, we offer the second hypothesis as follow:

H2: Attitude toward behaviour has a positive effect on intention to consume fresh fish.

Subjective Norm

Subjective norm come from neighbourhood factors that describe someone perception of social force on him/her to performance or not performance the behaviour (Fishbein & Ajzen, 1975). In food choice, social elements shown more significant than genetic factor for development of personal distinction (Svein Ottar Olsen, 2004). This factors could be from family and friends (Verbeke & Vackier, 2005). For example, family that reject the certain product will not be chosen by that family. Olsen (2001) found that there is a significant result of personal norm on intentionto consume fish. Further, Robinson and Smith (2002) also documented a clear relationship between personal norm and motovation to consume fish. Moreover, Tuu et al. (2008) also investigate the intention to consume fish and subjective norm as one of significant predictors. Thong and Olsen (2008) also found that the personal norm has a clear association with intentionto consume fish. Finally, Tomic et al. (2016) conclude that there is a clear relationship between spersonal norm and intentionto consume fish. Hence, the proposed hypothesis is.

H3: subjective Norm has a positive association with motvation to consume fish.

Perceived Behaviour Control

Perceived behaviour control is defined as an individual's belief in how easy or difficult that behaviour action will occur (Ajzen, 1991). The perceived control over behaviour is higher if a person has more resources and opportunities (Olsen, 2004). People tends to engage in behaviour they intend to performance. in other word, people are more likely to do the things they want and they can control, but they tend not to do things they can't control (Thong & Olsen, 2008). Olsen (2004) divide the perceived control to be internal or external to the person. The internal factor could will power, compulsion, skills, knowledge, and lack abilities. Meanwhile, the external factors are time, opportunities, situation and dependence on other). There are few preceding studies research about the impact of perceived behaviour control on intention to consume fish. Robinson and Smith (2002) examine the relationship between perceived behavioural control and intentionto consume fish in

Minnesota and conclude that there is positive effect of perceived behavioural control on intention to consume fish. Tuu et al. (2008) documented that undertand behavioural control has a good result on intentionto consume fish. Thong and Olsen (2008) also determine the result of perceived behavior control on intention to consume fish and conclude that there is a significant relationship between perceived behavior control and intentionto consume fish. Next, Tomic et al. (2016) documented the good relationship between perceived understand attitude control and intentionto consume fish. As a consequence, the following hypothesis offered.

H4: Perceived behaviour control has a positive association with intention to consume fish.

RESEARCH METHOD

The research object from community in Padang city, Indonesia. The 55 lecturers have participated in this study. The data used in this study is primary data gathered through online survey. There are two kinds of variables: latent dependent variable and latent independent variables. In an other word, there are two endogenous construct (consume behaviour and intention to consume) and three exogenous constructs (attitudes toward behaviour, subjective norms and perceived behaviour control). Attitude is measured by five items taken three items from (Verbeke & Vackier, 2005) and two items are from Tomic et al. (2016). Subjective norm is developed by Verbeke and Vackier (2005) which consists of four items. In addition, perceived behaviour control has three items developed by Verbeke and Vackier (2005). Further, intention to consume fish is adopted from (Ajzen, 1991). The consume behaviour was assessed by asking “how often have you consume fresh fish the past month”. All variables measured by 5-point scale likert with respond ranging from strongly disagree to strongly agree, except for consume behaviour. Fresh fish consume behaviour use scale: not very often to very often. Smart-pls is applied to analyse research data. Since this study based on the strong prior study (TPB) and further testing is the goal, covariance based-full-information estimation method is more appropriate (Chin & Newsted, 1999). There are two assessments in smart-pls: measurement model and structural model (Hair, Hult, Ringle, & Sarstedt, 2017). Assessment of measurement model use the construct validity which consists of convergent validity and discriminant validity (Vinzi, Chin, Henseler, & Wang, 2010). In addition, the assessment of structural model utilize the predictive relevance and predicitve power (Hair et al., 2017). Supported or not supported hypotheses are based on path coefficient and p value (Hair, Ringle, & Sarstedt, 2011).

RESULT AND DISCUSSION

This study was using 55 respondents as final sample. Analysis of demographic variable demonstrated in Table 1. According to respondent’s age, there are three respondents (5.45%) between 26 to 30 years old, eleven respondents from 31 to 36 years old (20%) and followed by three respondents (5.45%) with age of 36 to 40 years old. Finally, nineteenth respondents (35.55%) in 41 to 50 years old and more than 50 years old. Regarding to gender, twenty-eight respondents (50.91%)

is male and the rest is female (49.09%). Further, respondent with education of bachelor, master and doctor degree are 1.82%, 58.18%, and 40.00% respectively. Moreover, the position as lecturer, senior lecturer, Assoc. Prof, and professor is 23.64%, 38.18%, 30.91% and 7.27% respectively. Thus, income level is < Rp. 3 million, Rp. 3.1 million to Rp. 6 million, Rp. 6.1 million to Rp. 9 million, and > Rp. 9.1 million are 16.36%, 32.73%, 34.55%, and 16.36% respectively.

Table 1. Demographic Variable

Demographic	Category	Number	%
Age	26 – 30 year old	3.00	5.45
	31 – 36 year old	11.00	20.00
	36 – 40 year old	3.00	5.45
	41 – 50 year old	19.00	34.55
	Greater than 50 years old	19.00	34.55
Gender	Male	28.00	50.91
	Female	27.00	49.09
Education	Bachelor	1.00	1.82
	Master	32.00	58.18
	Doctor	22.00	40.00
Position	Lecturer	13.00	23.64
	Senior lecture	21.00	38.18
	Assoc. Prof	17.00	30.91
	Prof	4.00	7.27
Income	Less than Rp. 3 Million	9.00	16.36
	Rp 3.1 to Rp. 6 Million	18.00	32.73
	Rp. 6.1 to Rp. 9 Million	19.00	34.55
	Greater than Rp. 9 Million	9.00	16.36

Assessment of measurement model is construct validity analysis. The construct validity consists of convergent and discriminant validity. The result of convergent validity has shown in Table 1. All constructs have the outer loading more than 0.700 and it can conclude that the indicator reliability is adequate (Hulland, 1999). Cronbach's alpha (CA) and composite reliability (CR) used to see the internal consistency reliability and the result show that all constructs have CA and CR more than 0.7 and it reached the cut off value (Bagozzi & Yi, 1988). In addition, last convergent validity analysis apply AVE and all construct have the value of AVE more than 0.5 (Bagozzi & Yi, 1988). Based on the property above, it can be concluded that convergent legality of measurement model is valid.

Table 2. Convergent Legality

Construct	Indicator	Loading	CA	CR	AVE
Attitude	att1	0.940	0.942	0.956	0.813
	att2	0.910			
	att3	0.830			
	att4	0.930			
	att5	0.900			
IntCons	icf1	0.990	0.988	0.992	0.976
	icf2	0.990			
	icf3	0.990			
PerBevCon	pbc1	0.980	0.651	0.812	0.692
	pbc3	0.700			
SubNorm	sn1	0.900	0.858	0.905	0.705
	sn2	0.730			
	sn3	0.900			
	sn4	0.820			
ConsBeha	fcb	1.000	1.000	1.000	1.000

The output of discriminant validity can be viewed in Table 3. There are two assessments in this kind of validity: cross loading and Fornel-Lacker criterion, the loadings of an indicator on its assignment unobserved variable should be higher than its loadings on all other unobserved variables (Hair et al., 2017). Fail to indicate a lack of discriminants validity when 2 constructs are perfectly correlated, which renders this criterion ineffective for empirical research (Henseler, Ringle, & Sarstedt, 2015). The result show that all indicators on its assignment of latent variables is higher than its loadings on all other unobserved variable and the construct, therefore, has a good discriminant legality.

Table 3. Cross Loading

Items	Attitude	ConsBeha	IntCon	PerBevCon	SubNorm
att1	**0.9380**	0.7180	0.5330	-0.0360	0.4980
att2	**0.9110**	0.6970	0.4840	-0.0320	0.4120
att3	**0.8280**	0.5550	0.3560	0.0880	0.4800
att4	**0.9260**	0.6210	0.4610	0.0250	0.6130
att5	**0.8990**	0.6250	0.4270	-0.0520	0.5650
icf1	0.5240	0.4130	**0.9870**	0.1310	0.2440
icf2	0.4900	0.4240	**0.9900**	0.1740	0.2100
icf3	0.4930	0.4240	**0.9870**	0.1700	0.2110
pbc1	0.0020	-0.0490	0.1720	**0.9780**	-0.1260
pbc3	-0.0360	-0.1000	0.0470	**0.6520**	0.2020
sn1	0.5310	0.3420	0.2090	-0.1020	**0.9030**
sn2	0.4530	0.3840	0.1620	0.0050	**0.7290**
sn3	0.5120	0.3980	0.1750	-0.0920	**0.8990**
sn4	0.4080	0.2800	0.2020	-0.0100	**0.8150**
fcb	0.7190	**1.0000**	0.4260	-0.0660	0.4130

The result of Fornel-Lacker criterion has demonstrated in Table 4. The AVE of unobserved variable should be superior than the squared correlation between the unoberved variable and all other variables (Chin, 1998; Fornell & Larcker, 1981). Fornel-Lacker criterion result support the cross-loading result and it can be recapitulated that the construct is valid. The measurement model has shown in Figure 1. The next analysis is assessment of structural model.

Table 4. Fornel-Lacker Criterion

Variables	Attitude	ConsBeha	IntCon	PerBevCon	SubNorm
Attitude	**0.902**				
ConsBeha	0.718	**1.000**			
IntCon	0.507	0.426	**0.988**		
PerBevCon	-0.011	-0.075	0.149	**0.850**	
SubNorm	0.566	0.413	0.225	-0.020	**0.840**

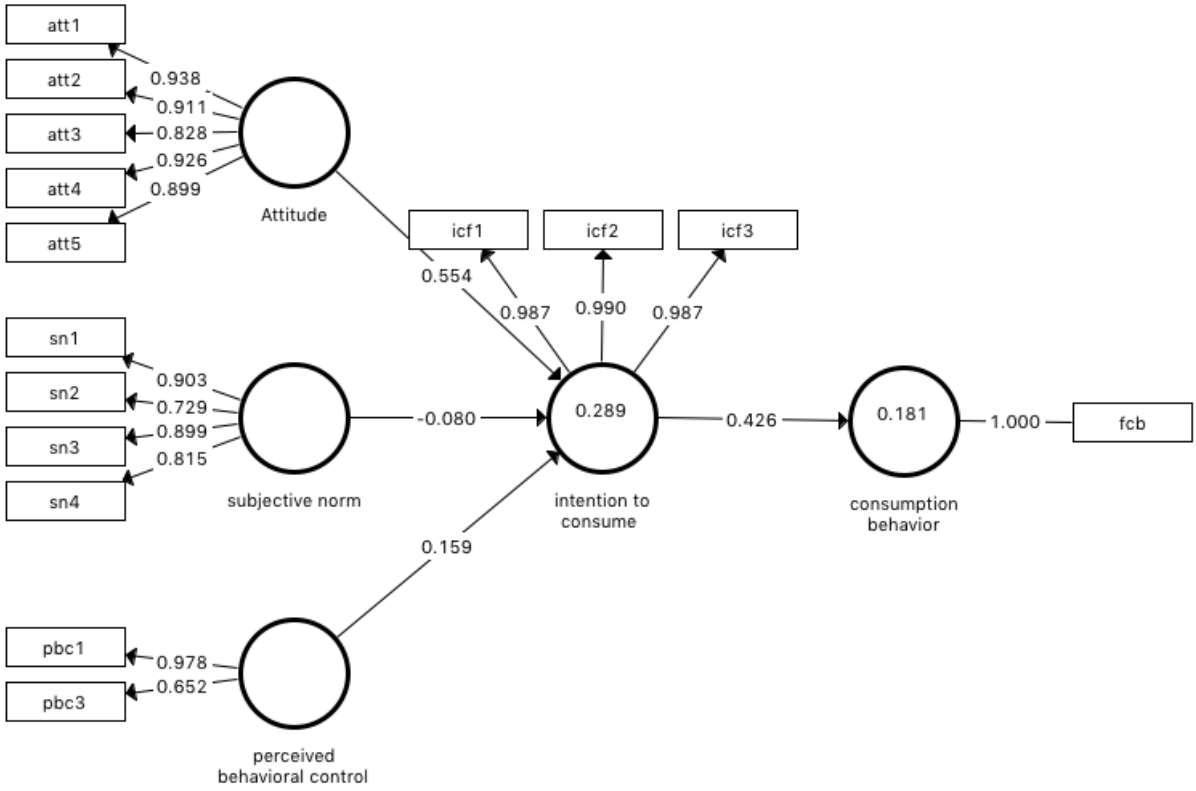

Figure 1. Measurement Model

Assessment of structural model use for hypothesis testing. It deals with the relationship between undiscover variables. There are two assessments for structural model: predictive relevance (Q square) and predictive power (R square). The relative effect of the structural model on the observed measures for latent dependent variable that evaluated by using Q square (Henseler et al., 2015). The Q square must be higher than 0 and the value of Q square is 0.02, 0.15, and 0.35 signify small, medium, and large predictive relevance of certain undiscover variable (Henseler, 2010). The

value of Q square in this model is more than 0 or signify small for fish consuming behaviour and medium for intention to consume.

Table 5. Assessment of Structural Model

Endogenous Construct	Q^2	Decision	R^2	Decision
IntCon	0.259	Medium	0.289	Moderate
ConsBeh	0.106	Small	0.181	Weak
Relationship	Path Coef	T Stat	P Values	Decision
Attitude -> intCon	0.543	3.689	0.000***	Accepted
IntCon -> ConsBeh	0.445	3.129	0.002***	Accepted
PerBehCon -> IntCon	0.142	1.063	0.288	Reject
SubNorm -> IntCon	-0.036	0.694	0.488	Reject

The value of R square is 0.289 and 0.181 for endogenous construct of intention to consume and consumption behaviour respectively. These values are categorised as moderate and weak (Chin, 1998). PLS-SEM aims at maximising R square of endogenous variable in path model. Further, two hypotheses are supported, and the rest are not supported. The supported hypothesis is the effect of attitudes toward behaviour on intention to consume fish (p-value=0.000) and the effect of intention to consume on consumption behaviour (p-value=0.002). Therefore, intention to consume fish has good relationship with attitude to behave (path coefficient=0.543). In addition, there is positive impact in intention to consume fish on consume behaviour which means that the higher the intentionto consume fish, the higher fish to consume. The structural model demonstrated in Figure 2.

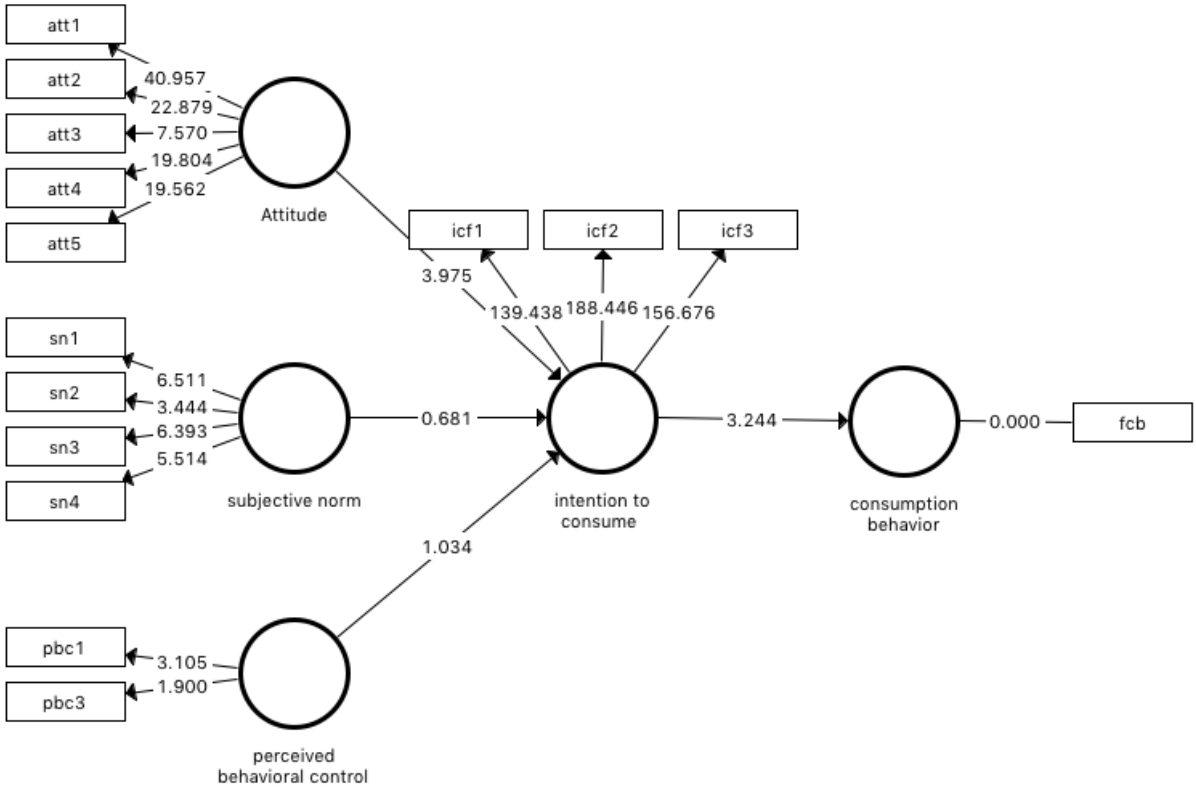

Figure 2. Structural Model

The effect of attitudes toward behaviour on intention to consume fish confirm the theory of plan behaviour which state that the attitude toward behaviour is one of intention to consume predictors (Ajzen, 1991). In addition, attitude toward fish consumption behaviour is important factor to choose the fresh fish among lecturer in private higher education institution. The factors from attitudes could be taste, negative affect, and nutrition (Olsen, 2004). In fact, (Olsen, 2004) add that condition and freshness of seafood is related to taste, and condition of seafood generally determined by quality of freshness. Therefore, research object of this study builds a positive attitude due to fishes in Padang are fresh and good quality. Further, most of lecturer are from west area Sumatra Island which fish is very familiar from their family. They have knowledge of nutrition embedded in fish. This finding is supported by several previous studies (Honkanen et al., 2005; Robinson & Smith, 2002; Tomic et al., 2016; Tuu et al., 2008).

The effect of intention to consume fish on consumption behaviour is also to confirm the theory of plan behaviour (Ajzen, 1991). An intention to consume fish as the primary effort of consume behaviour (Olsen, 2004). In addition, the previous studies supported this findings, such as (Thong & Olsen, 2008), who conclude that intention to consume fish is positively related to consume behaviour in Vietnam. Findings of other scholars (Tomic et al., 2016; Tuu et al., 2008) are also consistent with this finding. The result of the effect of subjective norm and perceived behaviour control on intention to consume are consistent with previous studies done by (Robinson & Smith, 2002; Thong & Olsen, 2008; Tomic et al., 2016; Tuu et al., 2008).

CONCLUSION AND SUGGESTION

Consume behaviour is an important topic among marketers to understand the customers. However, this topic is also being discussed by fisheries economists. Theory of plan behaviour predicts that intention to behave is factor affecting the behaviour. In addition, intention to behave is influenced by attitudes, subjective norm and perceived behaviour control. Using an Indonesia's case, there is lack of studies investigated in this subject matter. Therefore, this study is investigating the predictor of fish consume behaviour among lecturers. Based on analysis of respondents' answers conducted on fish consumption behaviour by people in Padang City, it shows that: The people of Padang City very often consume fish (63.64%), often (29.09), and quite often (7.29%). This study concludes that an attitude toward behaviour has a positively significant relationship with fish consume behaviour. In addition, second finding also demonstrate that the significant association between intention to consume and fish consume behaviour.

The practical implication of this study is that related parties can use this finding to understand the fish consume behaviour by considering the attitudes and intention behaviour. The government needs to improve fish consumption behaviour by building an intention to consume fish through a fish-eating program, diversification of fishery products, and socialization of positive aspects of consuming fishery products. It is hoped that government will jointly create a fish-eating program

through an all-round cooking program for women by spouse grup, women Islamic forum and national anniversary events. Building a fishery product processing industry to create fast food fishery products, and promoting that fish are the main source of protein for intelligence because they contain amino acids and omega 3 and 5. The government needs to make a policy regarding the standard of fish prices, therefore when the fish season is not in season the price of fish is still affordable for the community to buy and during the fish season fishermen do not feel disadvantaged. So that the community is affordable in fulfilling family nutrition. The role of universities is also expected to promote that consuming fish is important for brain intelligence, and healthy body growth. The freshness of fish must be maintained by the existence of an ice factory near the market area. Theoretically, this finding partially confirms the theory of plan behaviour. In addition, the current findings also contribute to a growing body of literature of fish consume behaviour. Finally, several important limitations need to be taken into consideration. First, this study uses respondents from a private university. Besides, the study uses limited number of respondents. Besides, this study does not investigate the role of an intention to consume fish as mediator between consume behaviour predictors and consume behaviour. A number of possible future studies using the same empirical research are apparent. The future researcher can expand the research object. In addition, testing the role of an intention to consume as mediating variable between determinants of consumption intention and consume behaviour.

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FRESH FISH CONSUMPTION BEHAVIOUR IN PADANG CITY, INDONESIA

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Abstract

The fresh fish consumption behaviour has been attracting the previous researchers. Unfortunately, few studies based on Indonesia were held by the researchers. Due to the lack of the previous study, the purposes of the study are to investigate the influence of attitudes, control of perceived behaviour, and subjective norm on intention to consume fish, and to examine the relationship of the fish consumption intention with consumption behaviour. The study applies plan behaviour theory to understand the raised phenomena in this paper. The number of respondents participated in this study is fifty-five. SEM-PLS is used to analysis data supported by assessment of measurement and structural model as the smart-pls procedure. The results indicate that there is a positive effect of attitude toward behaviour on intention to consume fish. Besides, fish consumption intention also has a significant association with consume behaviour. However, the effect of the norm and control of perceived behaviour on fish consumption intention is not significant. This finding confirms the theory of plan behaviour. Practically, this finding shows implicitly that to increase the fish behaviour consumption, the intention to consume fish and attitude toward fish consume behaviour should be increased.

Keyword: consumption behaviour; intention to behave; attitude, subjective norm; perceived behaviour control

Abstrak

Penelitian topik prilaku konsumsi ikan telah menarik praktisi dan akademisi untuk mengkajinya. Namun, penelitian prilaku konsumsi ikan masih terbatas dengan menggunakan objek dari Indonesia. Untuk itu, penelitian ini bertujuan untuk menganalisis secara emprisi pengaruh sikap, kontrol prilaku yang dipersepsikan, dan norma subjektif terhadap niat untuk mengkonsumsi ikan. Selain itu, penelitian ini juga menganalisis secara empris dampak niat untuk mengkonsumsi ikan terhadap prilaku konsumsi ikan. Untuk menjelaskan fenomena konsumsi ikan, penelitian ini menggunakan teori perenanaan prilaku atau *theory of plan behaviour*. Jumlah sampel akhir adalah lima puluh lima responden. Analisa data menggunakan *structural equation model* (SEM) dengan *software smart* PLS. Dalam smart PLS, dua jenis penilaian dilakukan yaitu penilaian model pengukuran dan model struktural. Hasil penelitian menunjukan bahwa sikap berdampak positif terhadap niat untuk mengkonsumsi ikan. Selain itu, niat untuk mengkonsumsi ikan juga berdampak positif terhadap prilaku konsumsi ikan. Namun, norma subjektif dan kontrol prilaku yang dipersepsikan tidak berdampak terhadap niat untuk mengkonsumsi ikan. Hasil penelitian ini mengkonfirmasi *theory of plan behaviour* sebagian. Secara praktis, penelitian ini memberikan implikasi bahwa pihak pihak berkepentingan sebaik membangun sikap positif dikalangan masyarakat sehingga akan menimbulkan niat untuk mengkonsumsi ikan dan akhirnya meningkatkan prilaku konsumsi ikan sehingga tercapai Indonesia sehat.

Kata Kunci: Prilaku konsumsi, niat untuk berprilaku, sikap, norma subjektif, kontrol prilaku yang dipersepsikan

INTRODUCTION

Fresh fish consuming behaviour and products of seafood have been becoming a principal researchers' interest in the world due to the important aspect of fish, such as business of the fish industry, sustainability, food safety, nutrition and diet (Carlucci et al., 2015). Due to increasing the consumption of fresh fish, health authorities have a common interest (Badr, Salwa, & Ahmed, 2015). In fact, issues about health, ethic, money value and food safety become more important and consumer behaviour have changed significantly in recent decades (Tomic, at al., 2016). In addition, Tomic et al. (2016) add that fish consumption behaviour is influenced by healthiness and welfare, fish also has primacy in this aspect. In addition, fish is perceived as a source of food which has nutrition and salubriousness in general (Badr et al., 2015). Refers to Oken et al. (2012), fish is the source of primary food with acids of n-3 long chain poly unsaturated fat, which include acid of docosa hexaenoic (DHA) and acid of eicosa pentaenoic (EPA). Eating fresh fish minimum twice a week under normal diets would positively affect human health (Sioen et al., 2008). Consumption of fish has varied from one country to another country. In 2011, fish was consumed about 20 kg per capita in each year by European. Fish consumption in Indonesia increased by 12.9 kg from 21 kg in 2003 to 33.9 kg in 2012 (Tran et al., 2017). Therefore understanding what factor affecting fish consumption among people becomes research priority which is important (Thorsdottir et al., 2012). Study on fish consumption behaviour is not only important for government and policy makers to develop the food policy, but also for economists for marketing planning (Zhou et al., 2015).

There are bundle of studies on this subject has been done (Badr et al., 2015; Birch & Lawley, 2012; Cardoso, Lourenço, Costa, Gonçalves, & Nunes, 2013; Grieger, Miller, & Cobiac, 2012; Khan, Aldosari, & Hussain, 2018; Leek, Maddock, & Foxall, 2000; Miloševic, Zezelj, Gorton, & Barjolle, 2012; Murray, Wolff, & Patterson, 2017; Myrland, Trondsen, Johnston, & Lund, 2000; Olsen, 2003; Pieniak, Verbeke, Scholderer, Brunsø, & Olsen, 2008; Thong & Olsen, 2008; Thorsdottir et al., 2012; Tomic et al., 2016; Trondsen, Scholderer, Lund, & Eggen, 2003). Badr et al. (2015) studied the barriers consumption of freshwater fish in Morocco and concluded that three barriers link to the low fish consumption: quality, sensory and convenience barriers. In addition, Birch and Lawley (2012) explain and identify risks in consuming seafood by Australian consumers, including social, physical, functional, psychological and financial risks. Further, Cardoso et al. (2013) carried out survey into seafood consumption preference, such as consumption frequency, average meal portion,

and usual culinary treatment amongst Portuguese consumers. Thus, Grieger et al. (2012) investigate the barriers and knowledge regarding to fish consumptions among older people of Australia. Beside, Khan et al. (2018) also explore behaviour of fish consumption and attitudes of fish farming among households in Saudi Arabia, and found the important factors, such as fish price and nutritional value of fish. Other authors, Leek et al. (2000) studied fish consumption determinants in UK and conclude that there are several determinants: situational relevance, negative properties, economy, versatility and convenience. Miloševic et al. (2012) describe the key factors in determining the foods in six countries of Western Balkan (WBC): shopping amenities, sensory appeal, health and natural content. Murray et al. (2017) investigate the important factor why consume the seafood and conclude that the most important factors affecting the fish consume are taste, smell and appearance. Myrland et al. (2000) determine the seafood consume in Norway and found that there are several factors affecting fish consuming behaviour: lifestyle, reveal preference and barriers to consume. Olsen (2004) said that the habit of consuming seafood was due to moral necessity for health reasons rather than self-desire and seafood taste. Pieniak et al. (2008) survey the factor affecting the fish consumption behaviour in five European countries and identified that factors: health involvement, risk perception and health beliefs. Thong and Olsen (2008) test the theory of plan behaviour to understand the fish consuming behaviour among Vietnam and found that subjective norm and attitudes are the most important variables determining the fish consuming behaviour. Thorsdottir et al. (2012) investigate the fish consume behaviour and found that fish preparation, social pressure and cooking skills are the most important factors. Tomic et al. (2016) expanded plan behaviour theory to understand fish consumption behaviour in Croatia and they found that instinctive norms, control of behaviour, attitudes, moral necessity, health, availability and intentions had a relationship with the behaviour of consuming fish. Myrland et al. (2000) investigate the barriers to consume fish and recommended about how to increase the fish consumption through satisfying: convenient-oriented consumers, health-oriented family members and children's wishes.

Based on previous studies on fish consuming behaviour, there are no study using the Indonesia data. Fish consumption behaviour is a part of food demand and it is an important subject since it reflect the preferences of consumers or households (Zhou et al., 2015). Indonesia is the largest producer of fish in Southeast Asia and had second positioned in the world after China (Tran et al., 2017), but research on fish consumption at the household level in Indonesia is still very low. Especially, study apply the theory of plan behaviour (Ajzan, 1991). Therefore, there is desire need to understand why people consume fish by using the theory of plan behaviour. Thus, the aim of this paper is to determine the effect of attitudes, subjective norm and control of behaviour on desire to consume the fresh fish and

determine the relationship between desire to consume and fish consuming behaviour. With the uniqueness of Indonesia social economic system, this study has purposes to add literature in consuming behaviour, especially the theory of plan behaviour. This paper is organised as follow. Second session is discussed about the theory and hypotheses development. Following by research method and result section which highlight the antecedents and consequence of intention to consume.

THEORY AND HYPOTHESIS DEVELOPMENT

COMSUMPTION BEHAVIOUR

Consumption behaviour relate to choose or not a product based on several reasons. Consumption behaviour is important for several stakeholders, such as economist, policy makers and etc. The positive effect of fish consumption has been documented by prior authors (Oken et al., 2012; Sioen et al., 2008). However, the negative effect of fish consumption also has been identified in the literature (e.g. Connelly, Lauber, McCann, Niederdeppe, & Knuth, 2019; Liu et al., 2018). Consume behaviour is derived from behavioural theory. Sheth, Newman, and Gross (1991) propose the theory of consumption value and suggest five values influencing the choices of consumer: function, condition, society, emotion and epistemic. Additionally, there are several theories to clarify and anticipate the human behaviour like the reasoned action theory (Fishbein & Ajzen, 1975) and the planed attitude theory (Ajzen, 1991). However, theory of plan behavior that dominated and commonly used from (Tomic et al., 2016; Verbeke & Vackier, 2005). According to the theory of plan behaviour, consuming behaviour is determined by intention to consume behavior (Tomic et al., 2016; Verbeke & Vackier, 2005). In addition, attitudes, instinctive norm and perceived behaviour control are determinants of intention to consume behaviour (Honkanen, Olsen, & Verplanken, 2005; Lee & Yun, 2015; Robinson & Smith, 2002; Thong & Olsen, 2008, 2012; Tomic et al., 2016; Verbeke & Vackier, 2005).

INTENTION TO CONSUME

Intention refers to individual's willing and effort to performance the behaviour and it is assumed as factors of intention affecting the behaviour (Fishbein & Ajzen, 1975). In addition, Thong and Olsen (2008) state that behavioural intention is something like a plan to achieve the behaviour. Thus, Intention to consume behaviour is good predictor of consume behaviour (Honkanen et al., 2005). Theory of planned behaviour (Ajzen, 1991) suggest that intention to behave is predictor of behaviour. According to theory of reason action (TRA), Intention to behave is determined by attitude and subjective norm (Fishbein & Ajzen, 1975) and (Ajzen, 1991) add other variable (perceived behaviour control) as other predictor of intentionto behave. Olsen (2004) propose that intention to consume the fish is predictor of consume behaviour. Previous research of the effect of behavioural intention on behaviour

has been done largely in many disciplines, such as human resources management, and marketing management. In marketing management, there is a limited study on fresh fish consumption behaviour. Thong and Olsen (2008) conclude that the intention to consume (motives) is positively related to consuming behaviour. In addition, Tuu, Olsen, Thao, and Anh (2008) also documented the positive influence of intention to manage on consume behaviour. Finally, Tomic et al. (2016) suggest that intentionto eat the fish encourage the consuming behaviour. Based on the theory and previous researches, we develop the first hypothesis as follow:

H1. Intention to consume fresh fish is positively related to consume behaviour.

ATTITUDE TOWARD FISH CONSUMPTION

Eagly and Chaiken (1993) describe an attitudes as a psychological tendency that expressed by evaluating a particular entity with some degree. The degree could be polarity of like-dislike, good-bad, satisfaction-dissatisfaction, and favour -disfavour. Attitudes toward behaviour depend on self factor that describe positive or negative of personal in relation to behavioural consequences (Thong & Olsen, 2008). Attitude toward behaviour could be built from constructs, such as fish preference, acceptability, and perceived quality of fish (Olsen, 1999). Previous studies investigated the relationship between attitudes toward fish consume behaviour are many. Robinson and Smith (2002) documented the attitude is a significant prediction of intention to eat fish in Minnesota. Honkanen et al. (2005) conclude that attitudes has a positive association with intention to consume fish among Norwegian adult. Tuu et al. (2008) found that there is a positive relationship between attitudes and intention to consume fish in Vietnam. Finally, Tomic et al. (2016) state there is positive result in research the relationship behaviour and intention to consume fish. Based on the theory and previous research, we offer the second hypothesis as follow.

H2: Attitude toward behaviour has a positive effect on intention to consume fresh fish

SUBJECTIVE NORM

Subjective norm come from neighbourhood factors that describe someone perception of social force on him/her to performance or not performance the behaviour (Fishbein & Ajzen, 1975). In food choice, social elements shown more significant than genetic factor for development of personal distinction (Svein Ottar Olsen, 2004). This factors could be from family and friends (Verbeke & Vackier, 2005). For example, family that reject the certain product will not be chosen by that family. Olsen (2001) found that there is a significant result of personal norm on intentionto consume fish. Further, Robinson and Smith (2002) also documented a clear relationship between personal norm and motovation to consume fish. Moreover, Tuu et al. (2008) also investigate the intention to consume fish and subjective

norm as one of significant predictors. Thong and Olsen (2008) also found that the personal norm has a clear association with intentionto consume fish. Finally, Tomic et al. (2016) conclude that there is a clear relationship between spersonal norm and intentionto consume fish. Hence, the proposed hypothesis is.

H3: subjective Norm has a positive association with motvation to consume fish

PERCEIVED BEHAVIOUR CONTROL

Perceived behaviour control is defined as an individual's belief in how easy or difficult that behaviour action will occur (Ajzen, 1991). The perceived control over behaviour is higher if a person has more resources and opportunities (Olsen, 2004). People tends to engage in behaviour they intend to performance. in other word, people are more likely to do the things they want and they can control, but they tend not to do things they can't control (Thong & Olsen, 2008). Olsen (2004) divide the perceived control to be internal or external to the person. The internal factor could will power, compulsion, skills, knowledge, and lack abilities. Meanwhile, the external factors are time, opportunities, situation and dependence on other). There are few preceding studies research about the impact of perceived behaviour control on intention to consume fish. Robinson and Smith (2002) examine the relationship between perceived behavioural control and intentionto consume fish in Minnesota and conclude that there is positive effect of perceived behavioural control on intention to consume fish. Tuu et al. (2008) documented that undertand behavioural control has a good result on intentionto consume fish. Thong and Olsen (2008) also determine the result of perceived behavior control on intention to consume fish and conclude that there is a significant relationship between perceived behavior control and intentionto consume fish. Next, Tomic et al. (2016) documented the good relationship between perceived understand attitude control and intentionto consume fish. As a consequence, the following hypothesis offered.

H4: Perceived behaviour control has a positive association with intention to consume fish

RESEARCH METHOD

The research object from community in Padang city, Indonesia. 55 lecturers have participated in this study. The data used in this study is primary data gathered through online survey. There are two kinds of variables: latent dependent variable and latent independent variables. In an other word, there are two endogenous construct (consume behaviour and intention to consume) and three exogenous constructs (attitudes toward behaviour, subjective norms and perceived behaviour control). Attitude is measured by five items taken three items from (Verbeke & Vackier, 2005) and two items are from Tomic et al. (2016). Subjective norm is developed by Verbeke and Vackier (2005) which consists of four items. In addition, perceived behaviour control has three items developed by Verbeke and Vackier

(2005). Further, intention to consume fish is adopted from (Ajzen, 1991). The consume behaviour was assessed by asking “how often have you consume fresh fish the past month”. All variables measured by 5-point scale likert with respond ranging from strongly disagree to strongly agree, except for consume behaviour. Fresh fish consume behaviour use scale: not very often to very often. Smart-pls is applied to analyse research data. Since this study based on the strong prior study (TPB) and further testing is the goal, covariance based-full-information estimation method is more appropriate (Chin & Newsted, 1999). There are two assessments in smart-pls: measurement model and structural model (Hair, Hult, Ringle, & Sarstedt, 2017). Assessment of measurement model use the construct validity which consists of convergent validity and discriminant validity (Vinzi, Chin, Henseler, & Wang, 2010). In addition, the assessment of structural model utilize the predictive relevance and predicitve power (Hair et al., 2017). Supported or not supported hypotheses are based on path coefficient and p value (Hair, Ringle, & Sarstedt, 2011).

RESULT AND DISCUSSION

RESULT

This study was using 55 respondents as final sample. Analysis of demographic variable demonstrated in Table 1. According to respondent’s age, there are three respondents (5.45%) between 26 to 30 years old, eleven respondents from 31 to 36 years old (20%) and followed by three respondents (5.45%) with age of 36 to 40 years old. Finally, nineteenth respondents (35.55%) in 41 to 50 years old and more than 50 years old. Regarding to gender, twenty-eight respondents (50.91%) is male and the rest is female (49.09%). Further, respondent with education of bachelor, master and doctor degree are 1.82%, 58.18%, and 40.00% respectively. Moreover, the position as lecturer, senior lecturer, Assoc. Prof, and professor is 23.64%, 38.18%, 30.91% and 7.27% respectively. Thus, income level is < Rp. 3 million, Rp. 3.1 million to Rp. 6 million, Rp. 6.1 million to Rp. 9 million, and > Rp. 9.1 million are 16.36%, 32.73%, 34.55%, and 16.36% respectively.

Table 1. Demographic Variable

Demographic	Category	Number	%
Age	26 – 30 year old	3.00	5.45
	31 – 36 year old	11.00	20.00
	36 – 40 year old	3.00	5.45
	41 – 50 year old	19.00	34.55
	Greater than 50 years old	19.00	34.55
Gender	Male	28.00	50.91
	Female	27.00	49.09
Education	Bachelor	1.00	1.82

	Master	32.00	58.18
	Doctor	22.00	40.00
	Lecturer	13.00	23.64
Position	Senior lecture	21.00	38.18
	Assoc. Prof	17.00	30.91
	Prof	4.00	7.27
	Less than Rp. 3 Million	9.00	16.36
Income	Rp 3.1 to Rp. 6 Million	18.00	32.73
	Rp. 6.1 to Rp. 9 Million	19.00	34.55
	Greater than Rp. 9 Million	9.00	16.36

Assessment of measurement model is construct validity analysis. The construct validity consists of convergent and discriminant validity. The result of convergent validity has shown in Table 1. All constructs have the outer loading more than 0.700 and it can conclude that the indicator reliability is adequate (Hulland, 1999). Cronbach's alpha (CA) and composite reliability (CR) used to see the internal consistency reliability and the result show that all constructs have CA and CR more than 0.7 and it reached the cut off value (Bagozzi & Yi, 1988). In addition, last convergent validity analysis apply AVE and all construct have the value of AVE more than 0.5 (Bagozzi & Yi, 1988). Based on the property above, it can be concluded that convergent legality of measurement model is valid.

Table 2. Convergent Legality

Construct	Indicattor	Loading	CA	CR	AVE
Attitude	att1	0.940	0.942	0.956	0.813
	att2	0.910			
	att3	0.830			
	att4	0.930			
	att5	0.900			
IntCons	icf1	0.990	0.988	0.992	0.976
	icf2	0.990			
	icf3	0.990			
PerBevCon	pbc1	0.980	0.651	0.812	0.692
	pbc3	0.700			
SubNorm	sn1	0.900	0.858	0.905	0.705
	sn2	0.730			
	sn3	0.900			
	sn4	0.820			
ConsBeha	fcb	1.000	1.000	1.000	1.000

The output of discriminant validity can be viewed in Table 3. There are two assessments in this kind of validity: cross loading and Fornel-Lacker criterion, the loadings of an indicator on its assignment unobserved variable should be higher than its loadings on all other unobserved variables (Hair et al., 2017). Fail to indicate a lack of discriminants validity when 2 constructs are perfectly correlated, which renders this criterion ineffective for empirical research (Henseler, Ringle, & Sarstedt, 2015). The result show that all indicators on its assignment of latent variables is higher than its loadings on all other unobserved variable and the construct, therefore, has a good discriminant legality.

Table 3. Cross Loading

Items	Attitude	ConsBeha	IntCon	PerBevCon	SubNorm
att1	**0.9380**	0.7180	0.5330	-0.0360	0.4980
att2	**0.9110**	0.6970	0.4840	-0.0320	0.4120
att3	**0.8280**	0.5550	0.3560	0.0880	0.4800
att4	**0.9260**	0.6210	0.4610	0.0250	0.6130
att5	**0.8990**	0.6250	0.4270	-0.0520	0.5650
icf1	0.5240	0.4130	**0.9870**	0.1310	0.2440
icf2	0.4900	0.4240	**0.9900**	0.1740	0.2100
icf3	0.4930	0.4240	**0.9870**	0.1700	0.2110
pbc1	0.0020	-0.0490	0.1720	**0.9780**	-0.1260
pbc3	-0.0360	-0.1000	0.0470	**0.6520**	0.2020
sn1	0.5310	0.3420	0.2090	-0.1020	**0.9030**
sn2	0.4530	0.3840	0.1620	0.0050	**0.7290**
sn3	0.5120	0.3980	0.1750	-0.0920	**0.8990**
sn4	0.4080	0.2800	0.2020	-0.0100	**0.8150**
fcb	0.7190	**1.0000**	0.4260	-0.0660	0.4130

The result of Fornel-Lacker criterion has demonstrated in Table 4. The AVE of unobserved variable should be superior than the squared correlation between the unoberved variable and all other variables (Chin, 1998; Fornell & Larcker, 1981). Fornel-Lacker criterion result support the cross-loading result and it can be recapitulated that the construct is valid. The measurement model has shown in Figure 1. The next analysis is assessment of structural model.

Table 4. Fornel-Lacker Criterion

Variables	Attitude	ConsBeha	IntCon	PerBevCon	SubNorm
Attitude	**0.902**				
ConsBeha	0.718	**1.000**			

IntCon	0.507	0.426	**0.988**		
PerBevCon	-0.011	-0.075	0.149	**0.850**	
SubNorm	0.566	0.413	0.225	-0.020	**0.840**

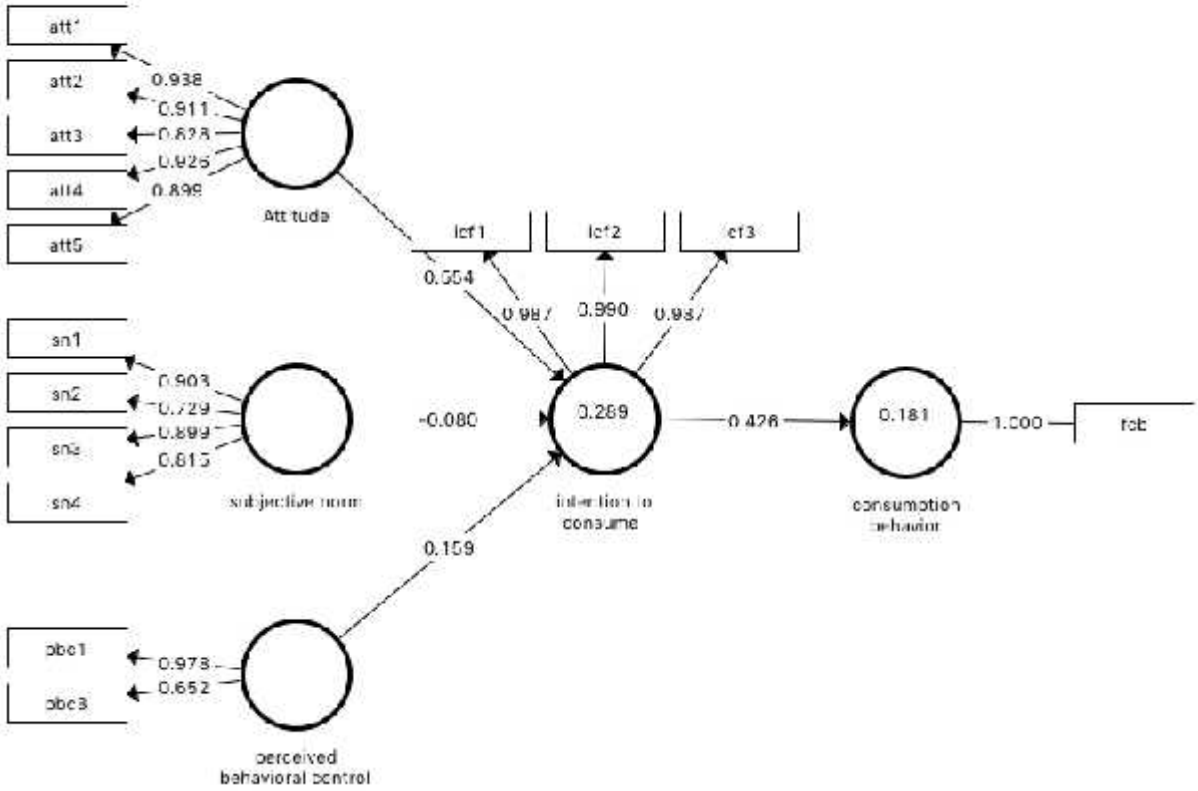

Figure 1. Measurement Model

Assessment of structural model use for hypothesis testing. It deals with the relationship between undiscover variables. there are two assessments for structural model: predictive relevance (Q square) and predictive power (R square). The relative effect of the structural model on the observed measures for latent dependent variable that evaluated by using Q square (Henseler et al., 2015). The Q square must be higher than 0 and the value of Q square is 0.02, 0.15, and 0.35 signify small, medium, and large predictive relevance of certain undiscover variable (Henseler, 2010). The value of Q square in this model is more than 0 or signify small for fish consuming behaviour and medium for intention to consume.

Table 5. Assessment of Structural Model

Endogenous Construct	Q^2	Decision	R^2	Decision
IntCon	0.259	Medium	0.289	Moderate
ConsBeh	0.106	Small	0.181	Weak
Relationship	Path Coef	T Stat	P Values	Decision

Attitude -> intCon	0.543	3.689	0.000***	Accepted
IntCon -> ConsBeh	0.445	3.129	0.002***	Accepted
PerBehCon -> IntCon	0.142	1.063	0.288	Reject
SubNorm -> IntCon	-0.036	0.694	0.488	Reject

The value of R square is 0.289 and 0.181 for endogenous construct of intention to consume and consumption behaviour respectively. These values are categorised as moderate and weak(Chin, 1998). PLS-SEM aims at maximising R square of endogenous variable in path model. Further, two hypotheses are supported, and the rest are not supported. The supported hypothesis is the effect of attitudes toward behaviour on intention to consume fish (p-value=0.000) and the effect of intention to consume on consumption behaviour (p-value=0.002). Therefore, intention to consume fish has good relationship with attitude to behave (path coefficient=0.543). In addition, there is positive impact in intentionto consume fish on consume behaviour which means that the higher the intentionto consume fish, the higher fish to consume. The structural model demonstrated in Figure 2.

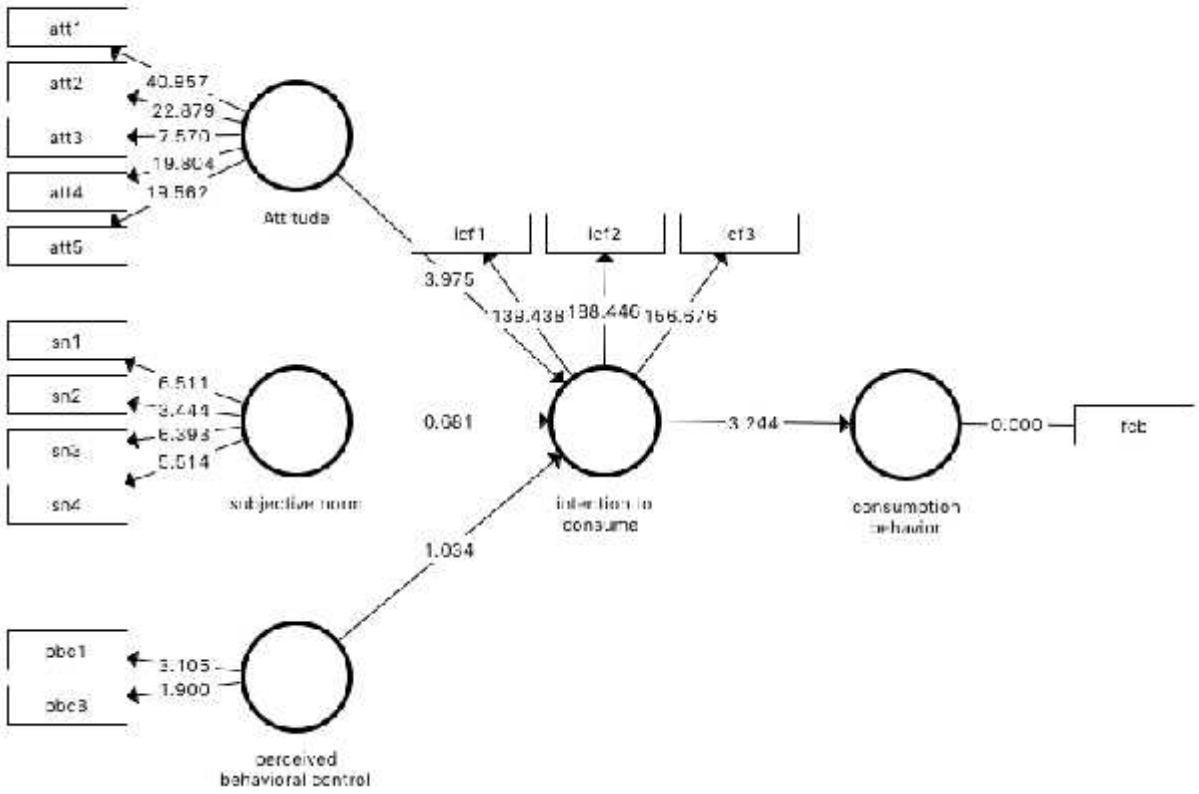

Figure 2. Structural Model

DISSCUSSION

The effect of attitudes toward behaviour on intention to consume fish confirm the theory of plan behaviour which state that the attitude toward behaviour is one of intention to

consume predictors (Ajzen, 1991). In addition, attitude toward fish consumption behaviour is important factor to choose the fresh fish among lecturer in private higher education institution. The factors from attitudes could be taste, negative affect, and nutrition (Olsen, 2004). In fact, (Olsen, 2004) add that condition and freshness of seafood is related to taste, and condition of seafood generally determined by quality of freshness. Therefore, research object of this study builds a positive attitude due to fishes in Padang are fresh and good quality. Further, most of lecturer are from west area Sumatra island which fish is very familiar from their family. They have knowledge of nutrition embedded in fish. This finding is supported by several previous studies (Honkanen et al., 2005; Robinson & Smith, 2002; Tomic et al., 2016; Tuu et al., 2008).

The effect of intention to consume fish on consumption behaviour is also to confirm the theory of plan behaviour (Ajzen, 1991). An intention to consume fish as the primary effort of consume behaviour (Olsen, 2004). In addition, the previous studies supported this findings, such as (Thong & Olsen, 2008), who conclude that intention to consume fish is positively related to consume behaviour in Vietnam. Findings of other scholars (Tomic et al., 2016; Tuu et al., 2008) are also consistent with this finding. The result of the effect of subjective norm and perceived behaviour control on intention to consume are consistent with previous studies done by (Robinson & Smith, 2002; Thong & Olsen, 2008; Tomic et al., 2016; Tuu et al., 2008).

CONCLUSION AND SUGGESTION

Consume behaviour is an important topic among marketers to understand the customers. However, this topic is also being discussed by fisheries economists. Theory of plan behaviour predicts that intention to behave is factor affecting the behaviour. In addition, intention to behave is influenced by attitudes, subjective norm and perceived behaviour control. Using an Indonesia's case, there is lack of studies investigated in this subject matter. Therefore, this study is investigating the predictor of fish consume behaviour among lecturers. Based on analysis of respondents' answers conducted on fish consumption behaviour by people in Padang City, it shows that: The people of Padang City very often consume fish (63.64%), often (29.09), and quite often (7.29%). This study concludes that an attitude toward behaviour has a positively significant relationship with fish consume behaviour. In addition, second finding also demonstrate that the significant association between intention to consume and fish consume behaviour. The practical implication of this study is that related parties can use this finding to understand the fish consume behaviour by considering the attitudes and intention behaviour. The government needs to improve fish consumption behaviour by building an intention to consume fish through a fish-eating

program, diversification of fishery products, and socialization of positive aspects of consuming fishery products. It is hoped that government will jointly create a fish-eating program through an all-round cooking program for women by spouse grup, women Islamic forum and national anniversary events. Building a fishery product processing industry to create fast food fishery products, and promoting that fish are the main source of protein for intelligence because they contain amino acids and omega 3 and 5. The government needs to make a policy regarding the standard of fish prices, therefore when the fish season is not in season the price of fish is still affordable for the community to buy and during the fish season fishermen do not feel disadvantaged. So that the community is affordable in fulfilling family nutrition. The role of universities is also expected to promote that consuming fish is important for brain intelligence, and healthy body growth. The freshness of fish must be maintained by the existence of an ice factory near the market area. Theoretically, this finding partially confirms the theory of plan behaviour. In addition, the current findings also contribute to a growing body of literature of fish consume behaviour. Finally, several important limitations need to be taken into consideration. First, this study uses respondents from a private university. Besides, the study uses limited number of respondents. Besides, this study does not investigate the role of an intention to consume fish as mediator between consume behaviour predictors and consume behaviour. A number of possible future studies using the same empirical research are apparent. The future researcher can expand the research object. In addition, testing the role of an intention to consume as mediating variable between determinants of consumption intention and consume behaviour.

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FRESH FISH CONSUMPTION BEHAVIOUR IN PADANG CITY, INDONESIA

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Abstract

The fresh fish consumption behaviour has been attracting the previous researche Unfortunately, few studies based on Indonesia were held by the researchers. Due to the lack of the previous study, the purposes of the study are to investigate the influence of attitudes, control of perceived behaviour, and subjective norm on intention to consume fish, and to examine the relationship of the fish consumption intention with consumption behaviour. T study applies plan behaviour theory to understand the raised phenomena in this paper. The number of res dents participated in this study is fifty-five. SEM-PLS is used to analysis dat upported by assessment of measurement and structural model as the smart-pls procedure. The results indicate that there is a positive effect of attitude toward behaviour on intention to consume fish. Besides, fish consumption intention also has a significant association with consume behaviour. However, the effect of the norm and control of perceived behaviour on fish consumption intention is not significant. This finding confirms the theory of plan behaviour. Practically, this finding shows implicitly that to increase the fish behaviour consumption, the intention to consume fish and attitude toward fish consume behaviour should be increased.

Keyword: consumption behaviour; intention to behave; attitude, subjective norm; perceived behaviour control

Abstrak

Penelitian topik prilaku konsumsi ikan telah menarik praktisi dan akademisi untuk mengkajiny Namun, penelitian prilaku konsumsi ikan masih terbatas dengan menggunakan objek dari Indonesia. Untuk itu, penelitian ini bertujuan untuk menganalisis secara emprisi pengaruh sikap, kontrol prilaku yang dipersepsikan, dan norma subjektif terhadap niat untuk mengkonsumsi ikan. Selain itu, penelitian ini juga menganalisis secara empris dampak niat untuk mengkonsumsi ikan terhadap prilaku konsumsi ikan. Untuk menjelaskan fenomena konsumsi ikan, penelitian ini menggunakan teori perenanaan prilaku atau *t ory of plan behaviour*. Jumlah sampel akhir adalah lima puluh lima responden. Analisa data menggunakan *structural equation model* (SEM) dengan *software smart* PLS. Dalam smart PLS, dua jenis penilaian dilakukan yaitu penilaian model pengukuran dan model struktural. Hasil penelitian menunjukan bahwa sikap berdampak positif terhadap niat untuk mengkonsumsi ikan. Selain itu, niat tuk mengkonsumsi ikan juga berdampak positif terhadap prilaku konsumsi ikan. Namun, norma subjektif dan kontrol prilaku yang dipersepsikan tidak berdampak terhadap niat untuk mengkonsumsi ikan. Hasil penelitian ini mengkonfirmasi *theory of plan behaviour* sebagian. Secara praktis, penelitian ini memberikan implikasi bahwa pihak pihak berkepentingan sebaik membangun sikap positif dikalangan masyarakat sehingga akan menimbulkan niat untuk mengkonsumsi ikan dan akhirnya meningkatkan prilaku konsumsi ikan sehingga tercapai Indonesia sehat.

Kata Kunci: Prilaku konsumsi, niat untuk berprilaku, sikap, norma subjektif, kontrol prilaku yang dipersepsikan

INTRODUCTION

Fresh fish consuming behaviour and products of seafood have been becoming a principal researchers' interest in the world due to the important aspect of fish, such as business of the fish industry, sustainability, food safety, nutrition and diet (Carlucci et al., 2015). Due to increasing the consumption of fresh fish, health authorities have a common interest (Badr, Salwa, & Ahmed, 2015). In fact, issues about health, ethic, money value and food safety become more important and consumer behaviour have changed significantly in recent decades (Tomic, at al., 2016). In addition, Tomic et al. (2016) add that fish consumption behaviour is influenced by healthiness and welfare, fish also has primacy in this aspect. In addition, fish is perceived as a source of food which has nutrition and salubriousness in general (Badr et al., 2015). Refers to Oken et al. (2012), fish is the source of primary food with acids of n-3 long chain poly unsaturated fat, which include acid of docosa hexaenoic (DHA) and acid of eicosa pentaenoic (EPA). Eating fresh fish minimum twice a week under normal diets would positively affect human health (Sioen et al., 2008). Consumption of fish has varied from one country to another country. In 2011, fish was consumed about 20 kg per capita in each year by European. Fish consumption in Indonesia increased by 12.9 kg from 21 kg in 2003 to 33.9 kg in 2012 (Tran et al., 2017). Therefore understanding what factor affecting fish consumption among people becomes research priority which is important (Thorsdottir et al., 2012). Study on fish consumption behaviour is not only important for government and policy makers to develop the food policy, but also for economists for marketing planning (Zhou et al., 2015).

There are bundle of studies on this subject has been done (Badr et al., 2015; Birch & Lawley, 2012; Cardoso, Lourenço, Costa, Gonçalves, & Nunes, 2013; Grieger, Miller, & Cobiac, 2012; Khan, Aldosari, & Hussain, 2018; Leek, Maddock, & Foxall, 2000; Miloševic, Zezelj, Gorton, & Barjolle, 2012; Murray, Wolff, & Patterson, 2017; Myrland, Trondsen, Johnston, & Lund, 2000; Olsen, 2003; Pieniak, Verbeke, Scholderer, Brunsø, & Olsen, 2008; Thong & Olsen, 2008; Thorsdottir et al., 2012; Tomic et al., 2016; Trondsen, Scholderer, Lund, & Eggen, 2003). Badr et al. (2015) studied the barriers consumption of freshwater fish in Morocco and concluded that three barriers link to the low fish consumption: quality, sensory and convenience barriers. In addition, Birch and Lawley (2012) explain and identify risks in consuming seafood by Australian consumers, including social, physical, functional, psychological and financial risks. Further, Cardoso et al. (2013) carried out survey into seafood consumption preference, such as consumption frequency, average meal portion, and usual culinary treatment amongst Portuguese consumers. Thus, Grieger et al. (2012) investigate

the barriers and knowledge regarding to fish consumptions among older people of Australia. Beside, Khan et al. (2018) also explore behaviour of fish consumption and attitudes of fish farming among households in Saudi Arabia, and found the important factors, such as fish price and nutritional value of fish. Other authors, Leek et al. (2000) studied fish consumption determinants in UK and conclude that there are several determinants: situational relevance, negative properties, economy, versatility and convenience. Miloševic et al. (2012) describe the key factors in determining the foods in six countries of Western Balkan (WBC): shopping amenities, sensory appeal, health and natural content. Murray et al. (2017) investigate the important factor why consume the seafood and conclude that the most important factors affecting the fish consume are taste, smell and appearance. Myrland et al. (2000) determine the seafood consume in Norway and found that there are several factors affecting fish consuming behaviour: lifestyle, reveal preference and barriers to consume. Olsen (2004) said that the habit of consuming seafood was due to moral necessity for health reasons rather than self-desire and seafood taste. Pieniak et al. (2008) survey the factor affecting the fish consumption behaviour in five European countries and identified that factors: health involvement, risk perception and health beliefs. Thong and Olsen (2008) test the theory of plan behaviour to understand the fish consuming behaviour among Vietnam and found that subjective norm and attitudes are the most important variables determining the fish consuming behaviour. Thorsdottir et al. (2012) investigate the fish consume behaviour and found that fish preparation, social pressure and cooking skills are the most important factors. Tomic et al. (2016) expanded plan behaviour theory to understand fish consumption behaviour in Croatia and they found that instinctive norms, control of behaviour, attitudes, moral necessity, health, availability and intentions had a relationship with the behaviour of consuming fish. Myrland et al. (2000) investigate the barriers to consume fish and recommended about how to increase the fish consumption through satisfying: convenient-oriented consumers, health-oriented family members and children's wishes.

Based on previous studies on fish consuming behaviour, there are no study using the Indonesia data. Fish consumption behaviour is a part of food demand and it is an important subject since it reflect the preferences of consumers or households (Zhou et al., 2015). Indonesia is the largest producer of fish in Southeast Asia and had second positioned in the world after China (Tran et al., 2017), but research on fish consumption at the household level in Indonesia is still very low. Especially, study apply the theory of plan behaviour (Ajzan, 1991). Therefore, there is desire need to understand why people consume fish by using the theory of plan behaviour. Thus, the aim of this paper is to determine the effect of attitudes, subjective norm and control of behaviour on desire to consume the fresh fish and determine the relationship between desire to consume and fish consuming behaviour. With the uniqueness of Indonesia social economic system, this study has purposes to add literature in consuming

behaviour, especially the theory of plan behaviour. This paper is organised as follow. Second session is discussed about the theory and hypotheses development. Following by research method and result section which highlight the antecedents and consequence of intention to consume.

THEORY AND HYPOTHESIS DEVELOPMENT

COMSUMPTION BEHAVIOUR

Consumption behaviour relate to choose or not a product based on several reasons. Consumption behaviour is important for several stakeholders, such as economist, policy makers and etc. The positive effect of fish consumption has been documented by prior authors (Oken et al., 2012; Sioen et al., 2008). However, the negative effect of fish consumption also has been identified in the literature (e.g. Connelly, Lauber, McCann, Niederdeppe, & Knuth, 2019; Liu et al., 2018). Consume behaviour is derived from behavioural theory. Sheth, Newman, and Gross (1991) propose the theory of consumption value and suggest five values influencing the choices of consumer: function, condition, society, emotion and epistemic. Additionally, there are several theories to clarify and anticipate the human behaviour like the reasoned action theory (Fishbein & Ajzen, 1975) and the planed attitude theory (Ajzen, 1991). However, theory of plan behavior that dominated and commonly used from (Tomic et al., 2016; Verbeke & Vackier, 2005). According to the theory of plan behaviour, consuming behaviour is determined by intention to consume behavior (Tomic et al., 2016; Verbeke & Vackier, 2005). In addition, attitudes, instinctive norm and perceived behaviour control are determinants of intention to consume behaviour (Honkanen, Olsen, & Verplanken, 2005; Lee & Yun, 2015; Robinson & Smith, 2002; Thong & Olsen, 2008, 2012; Tomic et al., 2016; Verbeke & Vackier, 2005).

INTENTION TO CONSUME

Intention refers to individual's willing and effort to performance the behaviour and it is assumed as factors of intention affecting the behaviour (Fishbein & Ajzen, 1975). In addition, Thong and Olsen (2008) state that behavioural intention is something like a plan to achieve the behaviour. Thus, Intention to consume behaviour is good predictor of consume behaviour (Honkanen et al., 2005). Theory of planned behaviour (Ajzen, 1991) suggest that intention to behave is predictor of behaviour. According to theory of reason action (TRA), Intention to behave is determined by attitude and subjective norm (Fishbein & Ajzen, 1975) and (Ajzen, 1991) add other variable (perceived behaviour control) as other predictor of intentionto behave. Olsen (2004) propose that intention to consume the fish is predictor of consume behaviour. Previous research of the effect of behavioural intention on behaviour has been done largely in many disciplines, such as human resources management, and marketing management. In marketing management, there is a limited study on fresh fish consumption

behaviour. Thong and Olsen (2008) conclude that the intention to consume (motives) is positively related to consuming behaviour. In addition, Tuu, Olsen, Thao, and Anh (2008) also documented the positive influence of intention to manage on consume behaviour. Finally, Tomic et al. (2016) suggest that intentionto eat the fish encourage the consuming behaviour. Based on the theory and previous researches, we develop the first hypothesis as follow:

H1. Intention to consume fresh fish is positively related to consume behaviour.

ATTITUDE TOWARD FISH CONSUMPTION

Eagly and Chaiken (1993) describe an attitudes as a psychological tendency that expressed by evaluating a particular entity with some degree. The degree could be polarity of like-dislike, good-bad, satisfaction-dissatisfaction, and favour -disfavour. Attitudes toward behaviour depend on self factor that describe positive or negative of personal in relation to behavioural consequences (Thong & Olsen, 2008). Attitude toward behaviour could be built from constructs, such as fish preference, acceptability, and perceived quality of fish (Olsen, 1999). Previous studies investigated the relationship between attitudes toward fish consume behaviour are many. Robinson and Smith (2002) documented the attitude is a significant prediction of intention to eat fish in Minnesota. Honkanen et al. (2005) conclude that attitudes has a positive association with intention to consume fish among Norwegian adult. Tuu et al. (2008) found that there is a positive relationship between attitudes and intention to consume fish in Vietnam. Finally, Tomic et al. (2016) state there is positive result in research the relationship behaviour and intention to consume fish. Based on the theory and previous research, we offer the second hypothesis as follow.

H2: Attitude toward behaviour has a positive effect on intention to consume fresh fish

SUBJECTIVE NORM

Subjective norm come from neighbourhood factors that describe someone perception of social force on him/her to performance or not performance the behaviour (Fishbein & Ajzen, 1975). In food choice, social elements shown more significant than genetic factor for development of personal distinction (Svein Ottar Olsen, 2004). This factors could be from family and friends (Verbeke & Vackier, 2005). For example, family that reject the certain product will not be chosen by that family. Olsen (2001) found that there is a significant result of personal norm on intentionto consume fish. Further, Robinson and Smith (2002) also documented a clear relationship between personal norm and motovation to consume fish. Moreover, Tuu et al. (2008) also investigate the intention to consume fish and subjective norm as one of significant predictors. Thong and Olsen (2008) also found that the personal norm has a clear association with intentionto consume fish. Finally, Tomic et al. (2016) conclude

that there is a clear relationship between spersonal norm and intentionto consume fish. Hence, the proposed hypothesis is.

H3: subjective Norm has a positive association with motvation to consume fish

PERCEIVED BEHAVIOUR CONTROL

Perceived behaviour control is defined as an individual's belief in how easy or difficult that behaviour action will occur (Ajzen, 1991). The perceived control over behaviour is higher if a person has more resources and opportunities (Olsen, 2004). People tends to engage in behaviour they intend to performance. in other word, people are more likely to do the things they want and they can control, but they tend not to do things they can't control (Thong & Olsen, 2008). Olsen (2004) divide the perceived control to be internal or external to the person. The internal factor could will power, compulsion, skills, knowledge, and lack abilities. Meanwhile, the external factors are time, opportunities, situation and dependence on other). There are few preceding studies research about the impact of perceived behaviour control on intention to consume fish. Robinson and Smith (2002) examine the relationship between perceived behavioural control and intentionto consume fish in Minnesota and conclude that there is positive effect of perceived behavioural control on intention to consume fish. Tuu et al. (2008) documented that undertand behavioural control has a good result on intentionto consume fish. Thong and Olsen (2008) also determine the result of perceived behavior control on intention to consume fish and conclude that there is a significant relationship between perceived behavior control and intentionto consume fish. Next, Tomic et al. (2016) documented the good relationship between perceived understand attitude control and intentionto consume fish. As a consequence, the following hypothesis offered.

H4: Perceived behaviour control has a positive association with intention to consume fish

RESEARCH METHOD

The research object from community in Padang city, Indonesia. 55 lecturers have participated in this study. The data used in this study is primary data gathered through online survey. There are two kinds of variables: latent dependent variable and latent independent variables. In an other word, there are two endogenous construct (consume behaviour and intention to consume) and three exogenous constructs (attitudes toward behaviour, subjective norms and perceived behaviour control). Attitude is measured by five items taken three items from (Verbeke & Vackier, 2005) and two items are from Tomic et al. (2016). Subjective norm is developed by Verbeke and Vackier (2005) which consists of four items. In addition, perceived behaviour control has three items developed by Verbeke and Vackier (2005). Further, intention to consume fish is adopted from (Ajzen, 1991). The consume behaviour was assessed by asking “how often have you consume fresh fish the past month”. All variables measured by 5-point scale likert with respond ranging from strongly disagree to strongly agree,

except for consume behaviour. Fresh fish consume behaviour use scale: not very often to very often. Smart-pls is applied to analyse research data. Since this study based on the strong prior study (TPB) and further testing is the goal, covariance based-full-information estimation method is more appropriate (Chin & Newsted, 1999). There are two assessments in smart-pls: measurement model and structural model (Hair, Hult, Ringle, & Sarstedt, 2017). Assessment of measurement model use the construct validity which consists of convergent validity and discriminant validity (Vinzi, Chin, Henseler, & Wang, 2010). In addition, the assessment of structural model utilize the predictive relevance and predicitve power (Hair et al., 2017). Supported or not supported hypotheses are based on path coefficient and p value (Hair, Ringle, & Sarstedt, 2011).

RESULT AND DISCUSSION

RESULT

This study was using 55 respondents as final sample. Analysis of demographic variable demonstrated in Table 1. According to respondent's age, there are three respondents (5.45%) between 26 to 30 years old, eleven respondents from 31 to 36 years old (20%) and followed by three respondents (5.45%) with age of 36 to 40 years old. Finally, nineteenth respondents (35.55%) in 41 to 50 years old and more than 50 years old. Regarding to gender, twenty-eight respondents (50.91%) is male and the rest is female (49.09%). Further, respondent with education of bachelor, master and doctor degree are 1.82%, 58.18%, and 40.00% respectively. Moreover, the position as lecturer, senior lecturer, Assoc. Prof and professor is 23.64%, 38.18%, 30.91% and 7.27% respectively. Thus, income level is < Rp. 3 million, Rp. 3.1 million to Rp. 6 million, Rp. 6.1 million to Rp. 9 million, and > Rp. 9.1 million are 16.36%, 32.73%, 34.55%, and 16.36% respectively.

Table 1. Demographic Variable

Demographic	Category	Number	%
Age	26 – 30 year old	3.00	5.45
	31 – 36 year old	11.00	20.00
	36 – 40 year old	3.00	5.45
	41 – 50 year old	19.00	34.55
	Greater than 50 years old	19.00	34.55
Gender	Male	28.00	50.91
	Female	27.00	49.09
Education	Bachelor	1.00	1.82
	Master	32.00	58.18
	Doctor	22.00	40.00
Position	Lecturer	13.00	23.64
	Senior lecture	21.00	38.18

	Assoc. Prof	17.00	30.91
	Prof	4.00	7.27
Income	Less than Rp. 3 Million	9.00	16.36
	Rp 3.1 to Rp. 6 Million	18.00	32.73
	Rp. 6.1 to Rp. 9 Million	19.00	34.55
	Greater than Rp. 9 Million	9.00	16.36

Assessment of measurement model is construct validity analysis. The construct validity consists of convergent and discriminant validity. The result of convergent validity has shown in Table 1. All constructs have the outer loading more than 0.700 and it can conclude that the indicator reliability is adequate (Hulland, 1999). Cronbach's alpha (CA) and composite reliability (CR) used to see the internal consistency reliability and the result show that all constructs have CA and CR more than 0.7 and it reached the cut off value (Bagozzi & Yi, 1988). In addition, last convergent validity analysis apply AVE and all construct have the value of AVE more than 0.5 (Bagozzi & Yi, 1988). Based on the property above, it can be concluded that convergent legality of measurement model is valid.

Table 2. Convergent Legality

Construct	Indicattor	Loading	CA	CR	AVE
Attitude	att1	0.940	0.942	0.956	0.813
	att2	0.910			
	att3	0.830			
	att4	0.930			
	att5	0.900			
IntCons	icf1	0.990	0.988	0.992	0.976
	icf2	0.990			
	icf3	0.990			
PerBevCon	pbc1	0.980	0.651	0.812	0.692
	pbc3	0.700			
SubNorm	sn1	0.900	0.858	0.905	0.705
	sn2	0.730			
	sn3	0.900			
	sn4	0.820			
ConsBeha	fcb	1.000	1.000	1.000	1.000

The output of discriminant validity can be viewed in Table 3. There are two assessments in this kind of validity: cross loading and Fornel-Lacker criterion, the loadings of an indicator on its assignment unobserved variable should be higher than its loadings on all

other unobserved variables (Hair et al., 2017). Fail to indicate a lack of discriminants validity when 2 constructs are perfectly correlated, which renders this criterion ineffective for empirical research (Henseler, Ringle, & Sarstedt, 2015). The result show that all indicators on its assignment of latent variables is higher than its loadings on all other unobserved variable and the construct, therefore, has a good discriminant legality.

Table 3. Cross Loading

Items	Attitude	ConsBeha	IntCon	PerBevCon	SubNorm
att1	**0.9380**	0.7180	0.5330	-0.0360	0.4980
att2	**0.9110**	0.6970	0.4840	-0.0320	0.4120
att3	**0.8280**	0.5550	0.3560	0.0880	0.4800
att4	**0.9260**	0.6210	0.4610	0.0250	0.6130
att5	**0.8990**	0.6250	0.4270	-0.0520	0.5650
icf1	0.5240	0.4130	**0.9870**	0.1310	0.2440
icf2	0.4900	0.4240	**0.9900**	0.1740	0.2100
icf3	0.4930	0.4240	**0.9870**	0.1700	0.2110
pbc1	0.0020	-0.0490	0.1720	**0.9780**	-0.1260
pbc3	-0.0360	-0.1000	0.0470	**0.6520**	0.2020
sn1	0.5310	0.3420	0.2090	-0.1020	**0.9030**
sn2	0.4530	0.3840	0.1620	0.0050	**0.7290**
sn3	0.5120	0.3980	0.1750	-0.0920	**0.8990**
sn4	0.4080	0.2800	0.2020	-0.0100	**0.8150**
fcb	0.7190	**1.0000**	0.4260	-0.0660	0.4130

The result of Fornel-Lacker criterion has demonstrated in Table 4. The AVE of unobserved variable should be superior than the squared correlation between the unoberved variable and all other variables (Chin, 1998; Fornell & Larcker, 1981). Fornel-Lacker criterion result support the cross-loading result and it can be recapitulated that the construct is valid. The measurement model has shown in Figure 1. The next analysis is assessment of structural model.

Table 4. Fornel-Lacker Criterion

Variables	Attitude	ConsBeha	IntCon	PerBevCon	SubNorm
Attitude	**0.902**				
ConsBeha	0.718	**1.000**			
IntCon	0.507	0.426	**0.988**		
PerBevCon	-0.011	-0.075	0.149	**0.850**	
SubNorm	0.566	0.413	0.225	-0.020	**0.840**

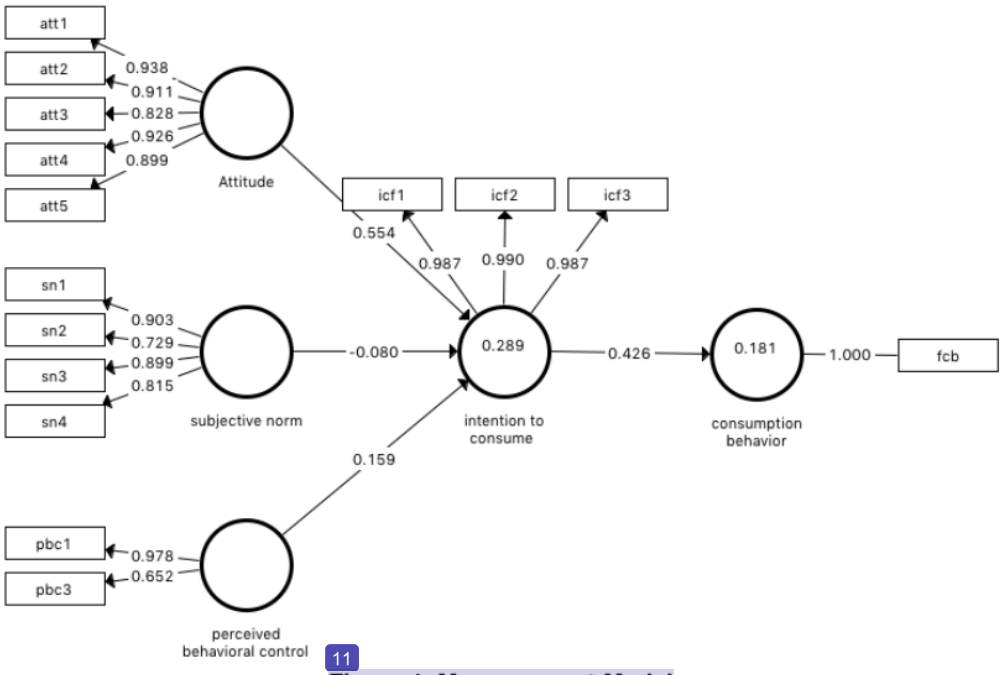

Figure 1. Measurement Model

Assessment of structural model use for hypothesis testing. It deals with the relationship between undiscover variables. there are two assessments for structural model: predictive relevance (Q square) and predictive power (R square). The relative effect of the structural model on the observed measures for latent dependent variable that evaluated by using Q square (Henseler et al., 2015). The Q square must be higher than 0 and the value of Q square is 0.02, 0.15, and 0.35 signify small, medium, and large predictive relevance of certain undiscover variable (Henseler, 2010). The value of Q square in this model is more than 0 or signify small for fish consuming behaviour and medium for intention to consume.

Table 5. Assessment of Structural Model

Endogenous Construct	Q^2	Decision	R^2	Decision
IntCon	0.259	Medium	0.289	Moderate
ConsBeh	0.106	Small	0.181	Weak
Relationship	**Path Coef**	**T Stat**	**P Values**	**Decision**
Attitude -> intCon	0.543	3.689	0.000***	Accepted
IntCon -> ConsBeh	0.445	3.129	0.002***	Accepted
PerBehCon -> IntCon	0.142	1.063	0.288	Reject
SubNorm -> IntCon	-0.036	0.694	0.488	Reject

The value of R square is 0.289 and 0.181 for endogenous construct of intention to consume and consumption behaviour respectively. These values are categorised as moderate and weak(Chin, 1998). PLS-SEM aims at maximising R square of endogenous variable in path model. Further, two hypotheses are supported, and the rest are not supported. The supported hypothesis is the effect of attitudes toward behaviour on intention to consume fish (p-value=0.000) and the effect of intention to consume on consumption behaviour (p-value=0.002). Therefore, intention to consume fish has good relationship with attitude to behave (path coefficient=0.543). In addition, there is positive impact in intentionto consume fish on consume behaviour which means that the higher the intentionto consume fish, the higher fish to consume. The structural model demonstrated in Figure 2.

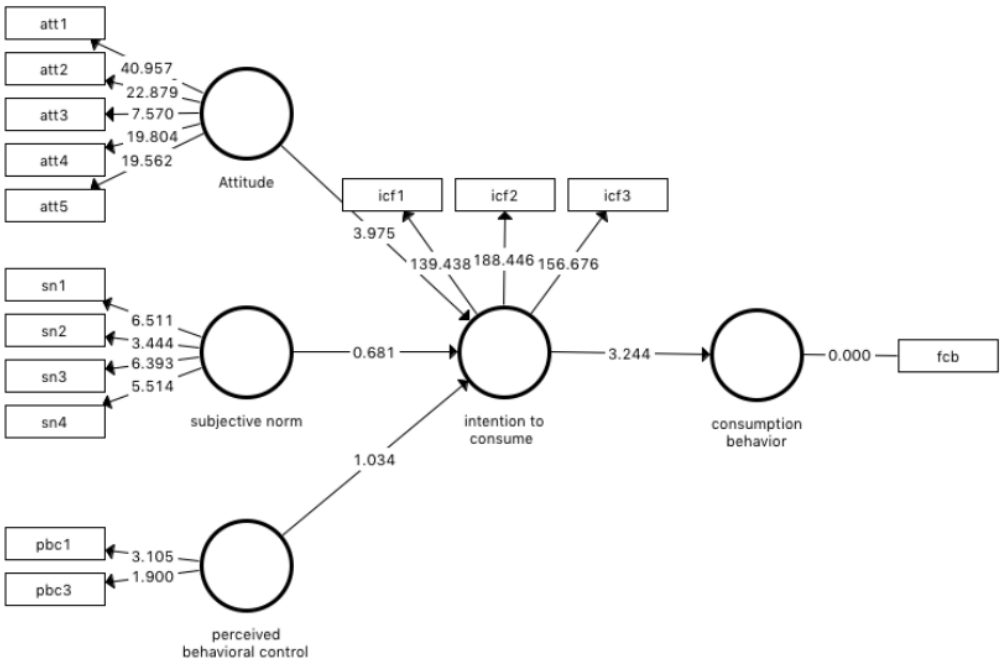

Figure 2. Structural Model

DISSCUSSION

The effect of attitudes toward behaviour on intention to consume fish confirm the theory of plan behaviour which state that the attitude toward behaviour is one of intention to consume predictors (Ajzen, 1991). In addition, attitude toward fish consumption behaviour is important factor to choose the fresh fish among lecturer in private higher education institution. The factors from attitudes could be taste, negative affect, and nutrition (Olsen, 2004). In fact, (Olsen, 2004) add that condition and freshness of seafood is related to taste, and condition of

seafood generally determined by quality of freshness. Therefore, research object of this study builds a positive attitude due to fishes in Padang are fresh and good quality. Further, most of lecturer are from west area Sumatra island which fish is very familiar from their family. They have knowledge of nutrition embedded in fish. This finding is supported by several previous studies (Honkanen et al., 2005; Robinson & Smith, 2002; Tomic et al., 2016; Tuu et al., 2008). The effect of intention to consume fish on consumption behaviour is also to confirm the theory of plan behaviour (Ajzen, 1991). An intention to consume fish as the primary effort of consume behaviour (Olsen, 2004). In addition, the previous studies supported this findings, such as (Thong & Olsen, 2008), who conclude that intention to consume fish is positively related to consume behaviour in Vietnam. Findings of other scholars (Tomic et al., 2016; Tuu et al., 2008) are also consistent with this finding. The result of the effect of subjective norm and perceived behaviour control on intention to consume are consistent with previous studies done by (Robinson & Smith, 2002; Thong & Olsen, 2008; Tomic et al., 2016; Tuu et al., 2008).

CONCLUSION AND SUGGESTION

Consume behaviour is an important topic among marketers to understand the customers. However, this topic is also being discussed by fisheries economists. Theory of plan behaviour predicts that intention to behave is factor affecting the behaviour. In addition, intention to behave is influenced by attitudes, subjective norm and perceived behaviour control. Using an Indonesia's case, there is lack of studies investigated in this subject matter. Therefore, this study is investigating the predictor of fish consume behaviour among lecturers. Based on analysis of respondents' answers conducted on fish consumption behaviour by people in Padang City, it shows that: The people of Padang City very often consume fish (63.64%), often (29.09), and quite often (7.29%). This study concludes that an attitude toward behaviour has a positively significant relationship with fish consume behaviour. In addition, second finding also demonstrate that the significant association between intention to consume and fish consume behaviour. The practical implication of this study is that related parties can use this finding to understand the fish consume behaviour by considering the attitudes and intention behaviour. The government needs to improve fish consumption behaviour by building an intention to consume fish through a fish-eating program, diversification of fishery products, and socialization of positive aspects of consuming fishery products. It is hoped that government will jointly create a fish-eating program through an all-round cooking program for women by spouse grup, women Islamic forum and national anniversary events. Building a fishery product processing industry to create fast food fishery products, and promoting that fish are the main source of protein for intelligence because they contain amino acids and omega 3 and 5. The

government needs to make a policy regarding the standard of fish prices, therefore when the fish season is not in season the price of fish is still affordable for the community to buy and during the fish season fishermen do not feel disadvantaged. So that the community is affordable in fulfilling family nutrition. The role of universities is also expected to promote that consuming fish is important for brain intelligence, and healthy body growth. The freshness of fish must be maintained by the existence of an ice factory near the market area. Theoretically, this finding partially confirms the theory of plan behaviour. In addition, the current findings also contribute to a growing body of literature of fish consume behaviour. Finally, several important limitations need to be taken into consideration. First, this study uses respondents from a private university. Besides, the study uses limited number of respondents. Besides, this study does not investigate the role of an intention to consume fish as mediator between consume behaviour predictors and consume behaviour. A number of possible future studies using the same empirical research are apparent. The future researcher can expand the research object. In addition, testing the role of an intention to consume as mediating variable between determinants of consumption intention and consume behaviour.

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FRESH FISH CONSUMPTION BEHAVIOUR IN PADANG CITY, INDONESIA

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Abstract

The fresh fish consumption behaviour has been attracting the previous researchers. However, there is lack of study using the Indonesia's data. Therefore, this study aims to investigate the effect on attitudes, subjective norm, and perceived behaviour control on intention to consume fish. Besides, this study also investigates the relationship between intention to consume fish and consume behaviour. The theory of plan behaviour is applied to understand the raised phenomena in this research. The number of respondents participated in this study is fifty-five. SEM-PLS is applied to analysis the research data by using the smart-pls. Assessment of measurement and structural model is conducted to complete the smart-pls procedure. The result show that there is a positive significant effect of attitude toward behaviour on intention to consume fish. Besides, the intention to consume fish also has a significant association with consume behaviour. However, the effect of subjective norm and perceived behavioural control on intention to consume fish are not significant. This finding confirms the theory of plan behaviour. Practically, this finding implies that to increase the fish consume behaviour, it should increase the intention to consume fish and attitude toward fish consume behaviour.

Keyword: consumption behaviour; intention to behave; attitude, subjective norm; perceived behaviour control

INTRODUCTION

Fresh fish consuming behaviour and seafood products has been becoming an interest of principal researchers in the world due to the important aspect of fish, such as business of the fish industry, sustainability, food safety, nutrition and diet (Carlucci et al., 2015). Due to increasing the consumption of fresh fish, health authorities have a common interest (Badr, Salwa, & Ahmed, 2015). In fact, issues about health, ethic, money value and food safety become more important and consumer behaviour have changed significantly in recent decades. Tomic, Matulic, and Jelic (2016). In addition, Tomic et al. (2016) add that fish consumption behaviour is influenced by healthiness and welfare, fish also has primacy in this aspect. In addition, fish is generally perceived as a source of nutritious and salubrious food (Badr et al., 2015). According to Oken et al. (2012), fish is the primary food source of n-3 long chain polyunsaturated fatty acids, including docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA). Eating fresh fish minimum twice a week under normal diets would positively affect human health (Sioen et al., 2008). Fish consumption has varied from one country to another country. In 2011, fish was consumed about 20 kg per capita in each year by European. Fish consumption in Indonesia increased by 12.9 kg from 21 kg in 2003 to 33.9 kg in 2012 (Tran et al., 2017). Understanding what factor affecting fish consumption

among people is therefore an important research priority (Thorsdottir et al., 2012). Study on fish consumption behaviour is not only important for government and policy makers to formulate the food policy, but also for economists for marketing planning (Zhou et al., 2015).

There are bundle of studies on this subject has been done (Badr et al., 2015; Birch & Lawley, 2012; Cardoso, Lourenço, Costa, Gonçalves, & Nunes, 2013; Grieger, Miller, & Cobiac, 2012; Khan, Aldosari, & Hussain, 2018; Leek, Maddock, & Foxall, 2000; Miloševic, Zezelj, Gorton, & Barjolle, 2012; Murray, Wolff, & Patterson, 2017; Myrland, Trondsen, Johnston, & Lund, 2000; Olsen, 2003; Pieniak, Verbeke, Scholderer, Brunsø, & Olsen, 2008; Thong & Olsen, 2008; Thorsdottir et al., 2012; Tomic et al., 2016; Trondsen, Scholderer, Lund, & Eggen, 2003). Badr et al. (2015) examine the barriers freshwater fish consumption in Morocco and conclude that three barriers link to the low fish consumption: quality, sensory and convenience barriers. In addition, Birch and Lawley (2012) explain and identify risks in consuming seafood by Australian consumers, including social, physical, functional, psychological and financial risks. Further, Cardoso et al. (2013) carried out survey into seafood consumption preference, such as consumption frequency, average meal portion, and usual culinary treatment amongst Portuguese consumers. Thus, Grieger et al. (2012) investigate the knowledge and barriers regarding to fish consumptions among older Australians. Beside, Khan et al. (2018) also explore fish consumption behaviour and fish farming attitudes among households in Kingdom of Saudi Arabia and found the important factors, such as fish price and nutritional value of fish. Other authors, Leek et al. (2000) study the determinants of fish consumption in UK and conclude that there are several determinants: situational relevance, negative properties, economy, versatility and convenience. Miloševic et al. (2012) describe the key factors in determining the foods in six Western Balkan countries (WBC): shopping amenities, sensory appeal, health and natural content. Murray et al. (2017) investigate the important factor why consume the seafood and conclude that taste, smell and appearance are the most important factor affecting the fish consume. Myrland et al. (2000) determine the seafood consume in Norway and found that there are several factors affecting fish consuming behaviour: lifestyle, reveal preference and barriers to consume. Olsen (2004) said that the habit of consuming seafood was due to moral necessity for health reasons rather than self-desire and the taste of seafood. Pieniak et al. (2008) survey the factor affecting the fish consumption behaviour in five European countries and identified that factors: health involvement, risk perception and health beliefs. Thong and Olsen (2008) test the theory of plan behaviour to understand the fish consuming behaviour among Vietnam and found that subjective norm and attitudes are the most important variables determining the fish consuming behaviour. Thorsdottir et al. (2012) investigate the fish consume behaviour and found that fish preparation, social pressure and

cooking skills are the most important factors. Tomic et al. (2016) expanded the theory of plan behaviour to understand fish consumption behaviour in Croatia and found that instinctive norms, behavioural control, attitudes, moral necessity, health, availability and intentions had a relationship with the behaviour of consuming fish. Myrland et al. (2000) investigate the barriers to consume fish and recommended about how to increase the fish consumption through satisfying: convenient-oriented consumers, health-oriented family members and children's wishes.

Based on previous studies on fish consuming behaviour, there are no study using the Indonesia data. Fish consumption behaviour is a part of food demand and it is an important subject since it reflect the preferences of consumers or households (Zhou et al., 2015). Indonesia is the largest fish producer in Southeast Asia and had second positioned in the world after China (Tran et al., 2017), but research on fish consumption at the household level in Indonesia is still very low. Especially, study apply the theory of plan behaviour (Ajzan, 1991). Therefore, there is desire need to understand why people consume fish by using the theory of plan behaviour. Thus, this study aims to investigate the effect of attitudes, subjective norm and behavioural control on desire to consume the fresh fish and determine the relationship between desire to consume and fish consuming behaviour. With the uniqueness of Indonesia social economic system, this study has purposes to add literature in consuming behaviour, especially the theory of plan behaviour. This paper is organised as follow. Second session is discussed about the theory and hypotheses development. Following by research method and result section which highlight the antecedents and consequence of intention to consume. The conclusions section draws conclusions in the main finding and insight for future research.

Consumption behaviour relate to choose or not a product based on several reasons. Consumption behaviour is important for several stakeholders, such as economist, policy makers and etc. The positive effect of fish consumption has been documented by previous researchers (Oken et al., 2012; Sioen et al., 2008). However, the negative effect of fish consumption also has been identified in the literature (e.g. Connelly, Lauber, McCann, Niederdeppe, & Knuth, 2019; Liu et al., 2018). Consume behaviour is derived from behavioural theory. Sheth, Newman, and Gross (1991) propose the theory of consumption value and suggest that there are five values influencing the consumer choices: functional, conditional, social, emotional and epistemic values. In addition, there are several theories to explain and predict the human behaviour, such as theory of reasoned action (Fishbein & Ajzen, 1975) and theory of planed attitude (Ajzen, 1991). However, theory of plan behavior that dominated and commonly used from (Tomic et al., 2016; Verbeke & Vackier, 2005). According to the theory of plan behaviour, consuming behaviour is determined by intention

to consume behavior (Tomic et al., 2016; Verbeke & Vackier, 2005). In addition, attitudes, instinctive norm and perceived behaviour control are predictors of intention to consume behaviour (Honkanen, Olsen, & Verplanken, 2005; Lee & Yun, 2015; Robinson & Smith, 2002; Thong & Olsen, 2008, 2012; Tomic et al., 2016; Verbeke & Vackier, 2005).

Intention refers to individual's willing and effort to performance the behaviour and it is assumed as factors of intention affecting the behaviour (Fishbein & Ajzen, 1975). In addition, Thong and Olsen (2008) state that behavioural intention is something like a plan to achieve the behaviour. Thus, Intention to consume behaviour is good predictor of consume behaviour (Honkanen et al., 2005). Theory of planned behaviour (Ajzen, 1991) suggest that intention to behave is predictor of behaviour. According to theory of reason action (TRA), Intention to behave is determined by attitude and subjective norm (Fishbein & Ajzen, 1975) and (Ajzen, 1991) add other variable (perceived behaviour control) as other predictor of intentionto behave. Olsen (2004) propose that intention to consume the fish is predictor of consume behaviour. Previous research of the effect of behavioural intention on behaviour has been done largely in many disciplines, such as human resources management, and marketing management. In marketing management, there is a limited study on fresh fish consumption behaviour. Thong and Olsen (2008) conclude that the intention to consume (motives) is positively related to consuming behaviour. In addition, Tuu, Olsen, Thao, and Anh (2008) also documented the positive influence of intention to manage on consume behaviour. Finally, Tomic et al. (2016) suggest that intentionto eat the fish encourage the consuming behaviour. Based on the theory and previous researches, we develop the first hypothesis as follow

H1. Intention to consume fresh fish is positively related to consume behaviour.

Eagly and Chaiken (1993) define attitudes as a psychological tendency that expressed by evaluating a particular entity with some degree. The degree could be polarity of like-dislike, good-bad, satisfaction-dissatisfaction, and favour -disfavour. Attitudes toward behaviour depend on self factor that describe positive or negative of personal in relation to behavioural consequences (Thong & Olsen, 2008). Attitude toward behaviour could be built from constructs, such as fish preference, acceptability, and perceived quality of fish (Olsen, 1999). Previous studies investigated the relationship between attitudes toward fish consume behaviour are many. Robinson and Smith (2002) documented the attitude is a significant prediction of intention to eat fish in Minnesota. Honkanen et al. (2005) conclude that attitudes has a positive association with intention to consume fish among Norwegian adult. Tuu et al. (2008) found that there is a positive relationship between attitudes and intention to consume fish in Vietnam. Finally, Tomic et al. (2016) state there is positive result in

research the relationship behaviour and intention to consume fish. Based on the theory and previous research, we offer the second hypothesis as follow.

H2: Attitude toward behaviour has a positive effect on intention to consume fresh fish

Subjective norm come from neighbourhood factors that describe someone perception of social force on him/her to performance or not performance the behaviour (Fishbein & Ajzen, 1975). In food choice, social elements shown more significant than genetic factor for development of personal distinction (Svein Ottar Olsen, 2004). This factors could be from family and friends (Verbeke & Vackier, 2005). For example, family that reject the certain product will not be chosen by that family. Olsen (2001) found that there is a significant result of personal norm on intentionto consume fish. Further, Robinson and Smith (2002) also documented a clear relationship between personal norm and motovation to consume fish. Moreover, Tuu et al. (2008) also investigate the intention to consume fish and subjective norm as one of significant predictors. Thong and Olsen (2008) also found that the personal norm has a clear association with intentionto consume fish. Finally, Tomic et al. (2016) conclude that there is a clear relationship between spersonal norm and intentionto consume fish. Hence, the proposed hypothesis is.

H3: subjective Norm has a positive association with motvation to consume fish

Perceived behaviour control is defined as an individual's belief in how easy or difficult that behaviour action will occur (Ajzen, 1991). The perceived control over behaviour is higher if a person has more resources and opportunities (Olsen, 2004). People tends to engage in behaviour they intend to performance. in other word, people are more likely to do the things they want and they can control, but they tend not to do things they can't control (Thong & Olsen, 2008). Olsen (2004) divide the perceived control to be internal or external to the person. The internal factor could will power, compulsion, skills, knowledge, and lack abilities. Meanwhile, the external factors are time, opportunities, situation and dependence on other). There are few preceding studies research about the impact of perceived behaviour control on intention to consume fish. Robinson and Smith (2002) examine the relationship between perceived behavioural control and intentionto consume fish in Minnesota and conclude that there is positive effect of perceived behavioural control on intention to consume fish. Tuu et al. (2008) documented that undertand behavioural control has a good result on intentionto consume fish. Thong and Olsen (2008) also determine the result of perceived behavior control on intention to consume fish and conclude that there is a significant relationship between perceived behavior control and intentionto consume fish. Next, Tomic et al. (2016) documented the good relationship between perceived understand attitude control and intentionto consume fish. As a consequence, the following hypothesis offered.

H4: Perceived behaviour control has a positive association with intention to consume fish

RESEARCH METHOD

The research object from community in Padang city, Indonesia. 55 lecturers have participated in this study. The data used in this study is primary data gathered through online survey. There are two kinds of variables: latent dependent variable and latent independent variables. In an other word, there are two endogenous construct (consume behaviour and intention to consume) and three exogenous constructs (attitudes toward behaviour, subjective norms and perceived behaviour control). Attitude is measured by five items taken three items from (Verbeke & Vackier, 2005) and two items are from Tomic et al. (2016). Subjective norm is developed by Verbeke and Vackier (2005) which consists of four items. In addition, perceived behaviour control has three items developed by Verbeke and Vackier (2005). Further, intention to consume fish is adopted from (Ajzen, 1991). The consume behaviour was assessed by asking “how often have you consume fresh fish the past month”. All variables measured by 5-point scale likert with respond ranging from strongly disagree to strongly agree, except for consume behaviour. Fresh fish consume behaviour use scale: not very often to very often. Smart-pls is applied to analyse research data. Since this study based on the strong prior study (TPB) and further testing is the goal, covariance based-full-information estimation method is more appropriate (Chin & Newsted, 1999). There are two assessments in smart-pls: measurement model and structural model (Hair, Hult, Ringle, & Sarstedt, 2017). Assessment of measurement model use the construct validity which consists of convergent validity and discriminant validity (Vinzi, Chin, Henseler, & Wang, 2010). In addition, the assessment of structural model utilize the predictive relevance and predicitve power (Hair et al., 2017). Supported or not supported hypotheses are based on path coefficient and p value (Hair, Ringle, & Sarstedt, 2011).

RESULT AND DISCUSSION

This study was using 55 respondents as final sample. Analysis of demographic variable demonstrated in Table 1. According to respondent’s age, there are three respondents (5.45%) between 26 to 30 years old, eleven respondents from 31 to 36 years old (20%) and followed by three respondents (5.45%) with age of 36 to 40 years old. Finally, nineteenth respondents (35.55%) in 41 to 50 years old and more than 50 years old. Regarding to gender, twenty-eight respondents (50.91%) is male and the rest is female (49.09%). Further, respondent with education of bachelor, master and doctor degree are 1.82%, 58.18%, and 40.00% respectively. Moreover, the position as lecturer, senior lecturer, Assoc. Prof, and professor is 23.64%, 38.18%, 30.91% and 7.27% respectively. Thus,

income level is < Rp. 3 million, Rp. 3.1 million to Rp. 6 million, Rp. 6.1 million to Rp. 9 million, and > Rp. 9.1 million are 16.36%, 32.73%, 34.55%, and 16.36% respectively.

Table 1. Demographic Variable

Demographic	Category	Number	%
Age	26 – 30 year	3.00	5.45
	31 – 36 year	11.00	20.00
	36 – 40 year	3.00	5.45
	41 – 50 year	19.00	34.55
	Greater than 50 years	19.00	34.55
Gender	Male	28.00	50.91
	Female	27.00	49.09
Education	Bachelor	1.00	1.82
	Master	32.00	58.18
	Doctor	22.00	40.00
Position	Lecturer	13.00	23.64
	Senior lecture	21.00	38.18
	Assoc. Prof	17.00	30.91
	Prof	4.00	7.27
Income	Less than Rp. 3 Million	9.00	16.36
	Rp 3.1 to Rp. 6 Million	18.00	32.73
	Rp. 6.1 to Rp. 9 Million	19.00	34.55
	Greater than Rp. 9 Million	9.00	16.36

Assessment of measurement model is construct validity analysis. The construct validity consists of convergent and discriminant validity. The result of convergent validity has shown in Table 1. All constructs have the outer loading more than 0.700 and it can conclude that the indicator reliability is adequate (Hulland, 1999). Cronbach's alpha (CA) and composite reliability (CR) used to see the internal consistency reliability and the result show that all constructs have CA and CR more than 0.7 and it reached the cut off value (Bagozzi & Yi, 1988). In addition, last convergent validity analysis apply AVE and all construct have the value of AVE more than 0.5 (Bagozzi & Yi, 1988). Based on the property above, it can be concluded that convergent legality of measurement model is valid.

Table 2. Measurement Model Assessment Convergent Legality

Construct	Items	Outer Loading	Cronbach's Alpha	Composite Reliability	AVE
Attitude	att1	0.940	0.942	0.956	0.813
	att2	0.910			

	att3	0.830			
	att4	0.930			
	att5	0.900			
	icf1	0.990			
IntCons	icf2	0.990	0.988	0.992	0.976
	icf3	0.990			
PerBevCon	pbc1	0.980	0.651	0.812	0.692
	pbc3	0.700			
	sn1	0.900			
SubNorm	sn2	0.730	0.858	0.905	0.705
	sn3	0.900			
	sn4	0.820			
ConsBeha	fcb	1.000	1.000	1.000	1.000

The result of discriminant validity can be seen in Table 3. There are two assessments in this kind of validity: cross loading and Fornel-Lacker criterion, the loadings of an indicator on its assignment unobserved variable should be higher than its loadings on all other unobserved variables (Hair et al., 2017). Fail to indicate a lack of discriminants legality when 2 constructs are perfectly correlated, which renders this criterion ineffective for empirical research (Henseler, Ringle, & Sarstedt, 2015). The result show that all indicators on its assignment of latent variables is higher than its loadings on all other unobserved variable and the construct, therefore, has a good discriminant legality.

Table 3. Measurement Model Assessment Discriminant Validity-Cross Loading

Items	Attitude	ConsBeha	IntCon	PerBevCon	SubNorm
att1	**0.9380**	0.7180	0.5330	-0.0360	0.4980
att2	**0.9110**	0.6970	0.4840	-0.0320	0.4120
att3	**0.8280**	0.5550	0.3560	0.0880	0.4800
att4	**0.9260**	0.6210	0.4610	0.0250	0.6130
att5	**0.8990**	0.6250	0.4270	-0.0520	0.5650
icf1	0.5240	0.4130	**0.9870**	0.1310	0.2440
icf2	0.4900	0.4240	**0.9900**	0.1740	0.2100
icf3	0.4930	0.4240	**0.9870**	0.1700	0.2110
pbc1	0.0020	-0.0490	0.1720	**0.9780**	-0.1260
pbc3	-0.0360	-0.1000	0.0470	**0.6520**	0.2020
sn1	0.5310	0.3420	0.2090	-0.1020	**0.9030**
sn2	0.4530	0.3840	0.1620	0.0050	**0.7290**
sn3	0.5120	0.3980	0.1750	-0.0920	**0.8990**
sn4	0.4080	0.2800	0.2020	-0.0100	**0.8150**

fcb	0.7190	**1.0000**	0.4260	-0.0660	0.4130

The result of Fornel-Lacker criterion has demonstrated in Table 4. The AVE of unobserved variable should be higher than the squared correlation between the unoberved variable and all other variables (Chin, 1998; Fornell & Larcker, 1981). Fornel-Lacker criterion result support the cross-loading result and it can be concluded that the construct is valid. The measurement model has shown in Figure 1. The next analysis is assessment of structural model.

Table 4. Measurement Model Assessment Discriminant Validity-Fornel-Lacker Criterion

Variables	Attitude	ConsBeha	IntCon	PerBevCon	SubNorm
Attitude	**0.902**				
ConsBeha	0.718	**1.000**			
IntCon	0.507	0.426	**0.988**		
PerBevCon	-0.011	-0.075	0.149	**0.850**	
SubNorm	0.566	0.413	0.225	-0.020	**0.840**

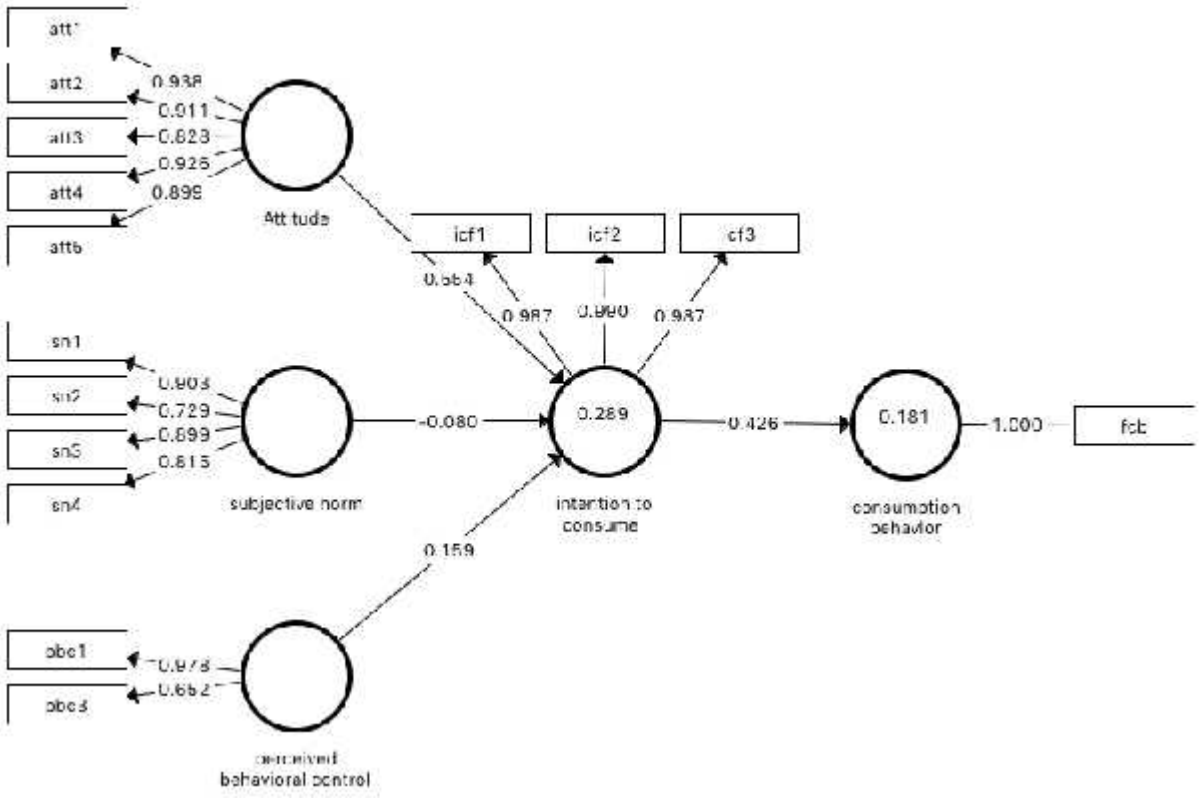

Figure 1. Measurement Model

Assessment of structural model use for hypothesis testing. It deals with the relationship between undiscover variables. there are two assessments for structural model: predictive relevance (Q square) and predictive power (R square). The relative effect of the structural model on the observed measures for latent dependent variable that evaluated by using Q square (Henseler et al., 2015). The Q square must be higher than 0 and the value of Q square is 0.02, 0.15, and 0.35 signify small, medium, and large predictive relevance of certain undiscover variable (Henseler, 2010). The value of Q square in this model is more than 0 or signify small for fish consuming behaviour and medium for intention to consume.

Table 5. Assessment of Structural Model

Endogenous Construct	Q^2	Decision	R^2	Decision
IntCon	0.259	Medium	0.289	Moderate
ConsBeh	0.106	Small	0.181	Weak
Relationship	Path Coef	T Stat	P Values	Decision
Attitude -> intCon	0.543	3.689	0.000***	Supported
IntCon -> ConsBeh	0.445	3.129	0.002***	Supported
PerBehCon -> IntCon	0.142	1.063	0.288	Not-supported
SubNorm -> IntCon	-0.036	0.694	0.488	Not-supported

The value of R square is 0.289 and 0.181 for endogenous construct of intention to consume and consumption behaviour respectively. These values are categorised as moderate and weak(Chin, 1998). PLS-SEM aims at maximising R square of endogenous variable in path model. Further, two hypotheses are supported, and the rest are not supported. The supported hypothesis is the effect of attitudes toward behaviour on intention to consume fish (p-value=0.000) and the effect of intention to consume on consumption behaviour (p-value=0.002). Therefore, intention to consume fish has good relationship with attitude to behave (path coefficient=0.543). In addition, there is positive impact in intentionto consume fish on consume behaviour which means that the higher the intentionto consume fish, the higher fish to consume. The structural model demonstrated in Figure 2.

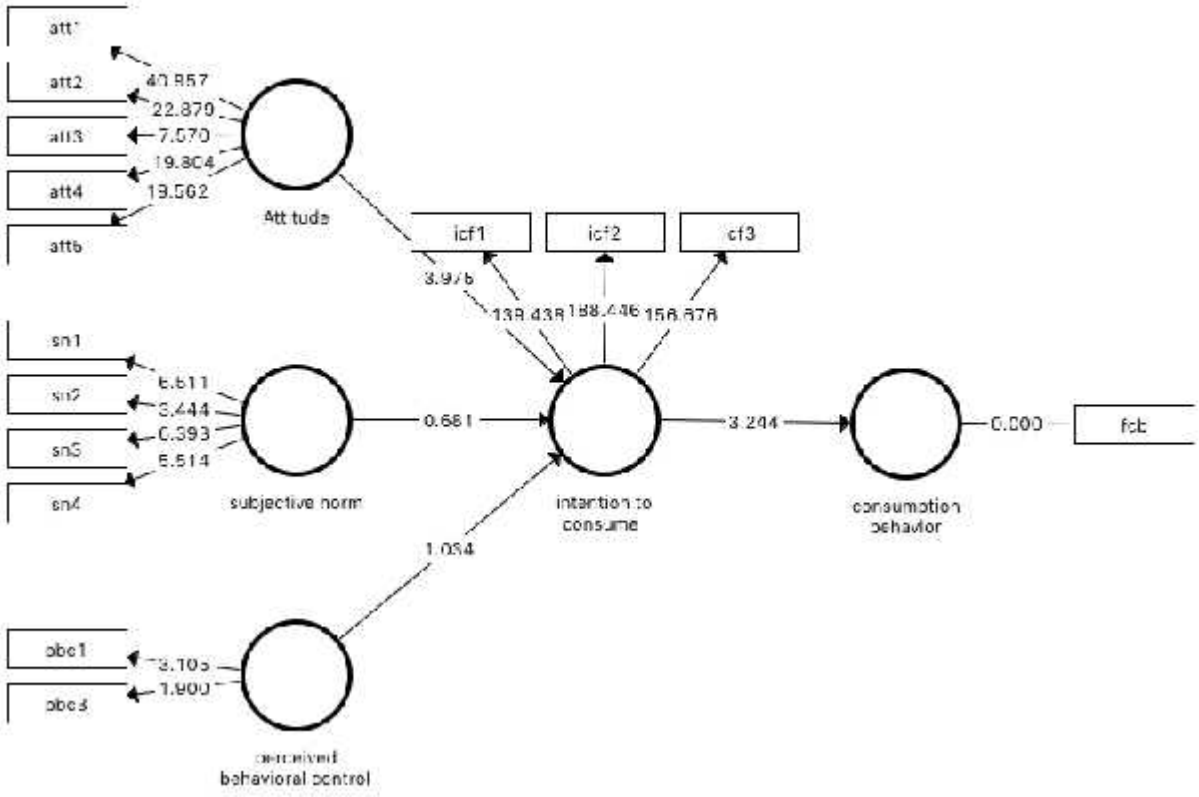

Figure 2. Structural Model

The effect of attitudes toward behaviour on intention to consume fish confirm the theory of plan behaviour which state that the attitude toward behaviour is one of intention to consume predictors (Ajzen, 1991). In addition, attitude toward fish consumption behaviour is important factor to choose the fresh fish among lecturer in private higher education institution. The factors from attitudes could be taste, negative affect, and nutrition (Olsen, 2004). In fact, (Olsen, 2004) add that condition and freshness of seafood is related to taste, and condition of seafood generally determined by quality of freshness. Therefore, research object of this study builds a positive attitude due to fishes in Padang are fresh and good quality. Further, most of lecturer are from west area Sumatra island which fish is very familiar from their family. They have knowledge of nutrition embedded in fish. This finding is supported by several previous studies (Honkanen et al., 2005; Robinson & Smith, 2002; Tomic et al., 2016; Tuu et al., 2008).

The effect of intention to consume fish on consumption behaviour is also to confirm the theory of plan behaviour (Ajzen, 1991). An intention to consume fish as the primary effort of consume behaviour (Olsen, 2004). In addition, the previous studies supported this findings, such as (Thong & Olsen, 2008), who conclude that intention to consume fish is positively related to consume behaviour in Vietnam. Findings of other scholars (Tomic et al.,

2016; Tuu et al., 2008) are also consistent with this finding. The result of the effect of subjective norm and perceived behaviour control on intention to consume are consistent with previous studies done by (Robinson & Smith, 2002; Thong & Olsen, 2008; Tomic et al., 2016; Tuu et al., 2008).

CONCLUSION AND SUGGESTION

Consume behaviour is an important topic among marketers to understand the customers. However, this topic is also being discussed by fisheries economists. Theory of plan behaviour predicts that intention to behave is factor affecting the behaviour. In addition, intention to behave is influenced by attitudes, subjective norm and perceived behaviour control. Using an Indonesia's case, there is lack of studies investigated in this subject matter. Therefore, this study is investigating the predictor of fish consume behaviour among lecturers. This study concludes that an attitude toward behaviour has a positively significant relationship with fish consume behaviour. In addition, second finding also demonstrate that the significant association between intention to consume and fish consume behaviour. The practical implication of this study is that related parties can use this finding to understand the fish consume behaviour by considering the attitudes and intention behaviour. Theoretically, this finding partially confirms the theory of plan behaviour. In addition, the current findings also add to a growing body of literature of fish consume behaviour. Finally, a number of important limitations need to be considered. First, this study uses respondents from a private university. Besides, the study uses limited number of respondents. In addition, this study does not test the role of an intention to consume fish as mediator between consume behaviour predictors and consume behaviour. A number of possible future studies using the same empirical research are apparent. The future researcher can expand the research object. In addition, testing the role of an intention to consume as mediating variable between predictors of an intention to consume and consume behaviour.

6.1 Conclusions

1. Based on analysis of respondents' answers conducted on fish consumption behaviour by people in Padang City, it show that: The people of Padang City very often consume fish (63.64%), often (29.09), and quite often (7.29%).
2. A significant factor influencing intention to behave is the attitude to fish consumption. These factors have a positive effect which means the higher the attitude, the higher the intention to behave.
3. While the intention of behaviour factor has a significant impact on fish consumption behaviour. The positive impact is that the higher the intention to consume fish, the higher the behaviour to consume fish.

4. This intention was also driven by government's role in encouraging fish consumption behaviour by built hyginies fish market facilities in coastal area. So, many people of Padang City can buy fish in the morning, afternoon and evening.
5. Fish consumption behaviour in Padang community has become habit and motive to consume fish every day. This can be seen that there are no restaurants that do not provide fish menu with various varieties such as: grilled fish, curry fish head, *tauco* fish, spicy sour fish, *kalio* fish, and rendang fish, *pepes* fish, etc.
6. Another impact of this study is that the Mayor of Padang City in 2019 launched Padang City as a Culinary center with Halal certificate. Therefore Mayor of Padang built culinary centers at night in every region in Padang City.

6.2 Suggestions

1. The government needs to improve fish consumption behaviour by building an intention to consume fish through a fish-eating program, diversification of fishery products, and socialization of positive aspects of consuming fishery products
2. It is hoped that government will jointly create a fish-eating program through an all-round cooking program for women by spouse grup, women Islamic forum and national anniversary events. Building a fishery product processing industry to create fast food fishery products, and promoting that fish are the main source of protein for intelligence because they contain amino acids and omega 3 and 5.
3. The government needs to make a policy regarding the standard of fish prices, therefore when the fish season is not in season the price of fish is still affordable for the community to buy and during the fish season fishermen do not feel disadvantaged. So that the community is affordable in fulfilling family nutrition. The role of universities is also expected to promote that consuming fish is important for brain intelligence, and healthy body growth. The freshness of fish must be maintained by the existence of an ice factory near the market area.

Increasing the development of fish market infrastructure still continues to be done so that

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FRESH FISH CONSUMPTION BEHAVIOUR IN PADANG CITY, INDONESIA

Abstract

The fresh fish consumption behaviour has been attracting the previous researchers. However, there is lack of study using the Indonesia's data. Therefore, this study aims to investigate the effect on attitudes, subjective norm, and perceived behaviour control on intention to consume fish. Besides, this study also investigates the relationship between intention to consume fish and consume behaviour. The theory of plan behaviour is applied to understand the raised phenomena in this research. The number of respondents participated in this study is fifty-five. SEM-PLS is applied to analysis the research data by using the smart-pls. Assessment of measurement and structural model is conducted to complete the smart-pls procedure. The result show that there is a positive significant effect of attitude toward behaviour on intention to consume fish. Besides, the intention to consume fish also has a significant association with consume behaviour. However, the effect of subjective norm and perceived behavioural control on intention to consume fish are not significant. This finding confirms the theory of plan behaviour. Practically, this finding implies that to increase the fish consume behaviour, it should increase the intention to consume fish and attitude toward fish consume behaviour.

Keyword: consumption behaviour; intention to behave; attitude, subjective norm; perceived behaviour control

INTRODUCTION

Fresh fish consuming behaviour and seafood products has been becoming an interest of principal researchers in the world due to the important aspect of fish, such as business of the fish industry, sustainability, food safety, nutrition and diet (Carlucci et al., 2015). Due to increasing the consumption of fresh fish, health authorities have a common interest (Badr, Salwa, & Ahmed, 2015). In fact, issues about health, ethic, money value and food safety become more important and consumer behaviour have changed significantly in recent decades. Tomic, Matulic, and Jelic (2016). In addition, Tomic et al. (2016) add that fish consumption behaviour is influenced by healthiness and welfare, fish also has primacy in this aspect. In addition, fish is generally perceived as a source of nutritious and salubrious food (Badr et al., 2015). According to Oken et al. (2012), fish is the primary food source of n-3 long chain polyunsaturated fatty acids, including docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA). Eating fresh fish minimum twice a week under normal diets would positively affect human health (Sioen et al., 2008).

Fish consumption has varied from one country to another country. In 2011, fish was consumed about 20 kg per capita in each year by European. Fish consumption in Indonesia increased by 12.9 kg from 21 kg in 2003 to 33.9 kg in 2012 (Tran et al., 2017). Understanding what factor affecting fish consumption among people is therefore an important research priority (Thorsdottir et al., 2012). Study on fish consumption behaviour is not only important for government and policy makers to formulate the food policy, but also

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Commented [law3]: Fresh fish consumption behavior has been attracting previous researchers. However, there is a lack of study using Indonesia's data. Therefore, this study aims to investigate the effect on attitudes, subjective norms, and perceived behavior control on the intention to consume fish. Besides, this study also investigates the relationship between intention to consume fish and consume behavior. The theory of plan behavior is applied to understand the raised phenomena in this research. The number of respondents participated in this study is fifty-five. SEM-PLS is applied to analyze the research data by using the smart-pls. Assessment of measurement and structural model is conducted to complete the smart-pls procedure. The result shows that there is a positive significant effect of attitude toward behavior on an intention to consume fish. Besides, the intention to consume fish also has a significant association with consume behavior. However, the effect of subjective norm and perceived behavioral control on an intention to consume fish are not significant. This finding confirms the theory of plan behavior. Practically, this finding implies that to increase fish consumption behavior, it should increase the intention to consume fish and attitude toward fish consumption behavior.

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for economists for marketing planning (Zhou et al., 2015). There are bundle of studies on this subject has been done (Badr et al., 2015; Birch & Lawley, 2012; Cardoso, Lourenço, Costa, Gonçalves, & Nunes, 2013; Grieger, Miller, & Cobiac, 2012; Khan, Aldosari, & Hussain, 2018; Leek, Maddock, & Foxall, 2000; Miloševic, Zezelj, Gorton, & Barjolle, 2012; Murray, Wolff, & Patterson, 2017; Myrland, Trondsen, Johnston, & Lund, 2000; Olsen, 2003; Pieniak, Verbeke, Scholderer, Brunsø, & Olsen, 2008; Thong & Olsen, 2008; Thorsdottir et al., 2012; Tomic et al., 2016; Trondsen, Scholderer, Lund, & Eggen, 2003). Badr et al. (2015) examine the barriers freshwater fish consumption in Morocco and conclude that three barriers link to the low fish consumption: quality, sensory and convenience barriers. In addition, Birch and Lawley (2012) explain and identify risks in consuming seafood by Australian consumers, including social, physical, functional, psychological and financial risks. Further, Cardoso et al. (2013) carried out survey into seafood consumption preference, such as consumption frequency, average meal portion, and usual culinary treatment amongst Portuguese consumers. Thus, Grieger et al. (2012) investigate the knowledge and barriers regarding to fish consumptions among older Australians. Beside, Khan et al. (2018) also explore fish consumption behaviour and fish farming attitudes among households in Kingdom of Saudi Arabia and found the important factors, such as fish price and nutritional value of fish. Other authors, Leek et al. (2000) study the determinants of fish consumption in UK and conclude that there are several determinants: situational relevance, negative properties, economy, versatility and convenience. Miloševic et al. (2012) describe the key factors in determining the foods in six Western Balkan countries (WBC): shopping amenities, sensory appeal, health and natural content.

Murray et al. (2017) investigate the important factor why consume the seafood and conclude that taste, smell and appearance are the most important factor affecting the fish consume. Myrland et al. (2000) determine the seafood consume in Norway and found that there are several factors affecting fish consuming behaviour: lifestyle, reveal preference and barriers to consume. Olsen (2004) said that the habit of consuming seafood was due to moral necessity for health reasons rather than self-desire and the taste of seafood. Pieniak et al. (2008) survey the factor affecting the fish consumption behaviour in five European countries and identified that factors: health involvement, risk perception and health beliefs. Thong and Olsen (2008) test the theory of plan behaviour to understand the fish consuming behaviour among Vietnam and found that subjective norm and attitudes are the most important variables determining the fish consuming behaviour. Thorsdottir et al. (2012) investigate the fish consume behaviour and found that fish preparation, social pressure and cooking skills are the most important factors. Tomic et al. (2016) expanded the theory of plan behaviour to understand fish consumption behaviour in Croatia and found that instinctive norms, behavioural control, attitudes, moral necessity, health, availability and intentions had

a relationship with the behaviour of consuming fish. Myrland et al. (2000) investigate the barriers to consume fish and recommended about how to increase the fish consumption through satisfying: convenient-oriented consumers, health-oriented family members and children's wishes.

Based on previous studies on fish consuming behaviour, there are no study using the Indonesia data. Fish consumption behaviour is a part of food demand and it is an important subject since it reflect the preferences of consumers or households (Zhou et al., 2015). Indonesia is the largest fish producer in Southeast Asia and had second positioned in the world after China (Tran et al., 2017), but research on fish consumption at the household level in Indonesia is still very low. Especially, study apply the theory of plan behaviour (Ajzan, 1991). Therefore, there is desire need to understand why people consume fish by using the theory of plan behaviour. Thus, this study aims to investigate the effect of attitudes, subjective norm and behavioural control on desire to consume the fresh fish and determine the relationship between desire to consume and fish consuming behaviour. With the uniqueness of Indonesia social economic system, this study has purposes to add literature in consuming behaviour, especially the theory of plan behaviour. This paper is organised as follow. Second session is discussed about the theory and hypotheses development. Following by research method and result section which highlight the antecedents and consequence of intention to consume. The conclusions section draws conclusions in the main finding and insight for future research.

Consumption behaviour relate to choose or not a product based on several reasons. Consumption behaviour is important for several stakeholders, such as economist, policy makers and etc. The positive effect of fish consumption has been documented by previous researchers (Oken et al., 2012; Sioen et al., 2008). However, the negative effect of fish consumption also has been identified in the literature (e.g. Connelly, Lauber, McCann, Niederdeppe, & Knuth, 2019; Liu et al., 2018). Consume behaviour is derived from behavioural theory. Sheth, Newman, and Gross (1991) propose the theory of consumption value and suggest that there are five values influencing the consumer choices: functional, conditional, social, emotional and epistemic values. In addition, there are several theories to explain and predict the human behaviour, such as theory of reasoned action (Fishbein & Ajzen, 1975) and theory of planed attitude (Ajzen, 1991). However, theory of plan behavior that dominated and commonly used from (Tomic et al., 2016; Verbeke & Vackier, 2005). According to the theory of plan behaviour, consuming behaviour is determined by intention to consume behavior (Tomic et al., 2016; Verbeke & Vackier, 2005). In addition, attitudes, instinctive norm and perceived behaviour control are predictors of intention to consume

behaviour (Honkanen, Olsen, & Verplanken, 2005; Lee & Yun, 2015; Robinson & Smith, 2002; Thong & Olsen, 2008, 2012; Tomic et al., 2016; Verbeke & Vackier, 2005).

Intention refers to individual's willing and effort to performance the behaviour and it is assumed as factors of intention affecting the behaviour (Fishbein & Ajzen, 1975). In addition, Thong and Olsen (2008) state that behavioural intention is something like a plan to achieve the behaviour. Thus, Intention to consume behaviour is good predictor of consume behaviour (Honkanen et al., 2005). Theory of planned behaviour (Ajzen, 1991) suggest that intention to behave is predictor of behaviour. According to theory of reason action (TRA), Intention to behave is determined by attitude and subjective norm (Fishbein & Ajzen, 1975) and (Ajzen, 1991) add other variable (perceived behaviour control) as other predictor of intentionto behave. Olsen (2004) propose that intention to consume the fish is predictor of consume behaviour. Previous research of the effect of behavioural intention on behaviour has been done largely in many disciplines, such as human resources management, and marketing management. In marketing management, there is a limited study on fresh fish consumption behaviour. Thong and Olsen (2008) conclude that the intention to consume (motives) is positively related to consuming behaviour. In addition, Tuu, Olsen, Thao, and Anh (2008) also documented the positive influence of intention to manage on consume behaviour. Finally, Tomic et al. (2016) suggest that intentionto eat the fish encourage the consuming behaviour. Based on the theory and previous researches, we develop the first hypothesis as follow

H1. Intention to consume fresh fish is positively related to consume behaviour.

Eagly and Chaiken (1993) define attitudes as a psychological tendency that expressed by evaluating a particular entity with some degree. The degree could be polarity of like-dislike, good-bad, satisfaction-dissatisfaction, and favour -disfavour. Attitudes toward behaviour depend on self factor that describe positive or negative of personal in relation to behavioural consequences (Thong & Olsen, 2008). Attitude toward behaviour could be built from constructs, such as fish preference, acceptability, and perceived quality of fish (Olsen, 1999). Previous studies investigated the relationship between attitudes toward fish consume behaviour are many. Robinson and Smith (2002) documented the attitude is a significant prediction of intention to eat fish in Minnesota. Honkanen et al. (2005) conclude that attitudes has a positive association with intention to consume fish among Norwegian adult. Tuu et al. (2008) found that there is a positive relationship between attitudes and intention to consume fish in Vietnam. Finally, Tomic et al. (2016) state there is positive result in research the relationship behaviour and intention to consume fish. Based on the theory and previous research, we offer the second hypothesis as follow.

H2: Attitude toward behaviour has a positive effect on intention to consume fresh fish

Subjective norm come from neighbourhood factors that describe someone perception of social force on him/her to performance or not performance the behaviour (Fishbein & Ajzen, 1975). In food choice, social elements shown more significant than genetic factor for development of personal distinction (Svein Ottar Olsen, 2004). This factors could be from family and friends (Verbeke & Vackier, 2005). For example, family that reject the certain product will not be chosen by that family. Olsen (2001) found that there is a significant result of personal norm on intentionto consume fish. Further, Robinson and Smith (2002) also documented a clear relationship between personal norm and motovation to consume fish. Moreover, Tuu et al. (2008) also investigate the intention to consume fish and subjective norm as one of significant predictors. Thong and Olsen (2008) also found that the personal norm has a clear association with intentionto consume fish. Finally, Tomic et al. (2016) conclude that there is a clear relationship between spersonal norm and intentionto consume fish. Hence, the proposed hypothesis is.

H3: subjective Norm has a positive association with motvation to consume fish

Perceived behaviour control is defined as an individual's belief in how easy or difficult that behaviour action will occur (Ajzen, 1991). The perceived control over behaviour is higher if a person has more resources and opportunities (Olsen, 2004). People tends to engage in behaviour they intend to performance. in other word, people are more likely to do the things they want and they can control, but they tend not to do things they can't control (Thong & Olsen, 2008). Olsen (2004) divide the perceived control to be internal or external to the person. The internal factor could will power, compulsion, skills, knowledge, and lack abilities. Meanwhile, the external factors are time, opportunities, situation and dependence on other). There are few preceding studies research about the impact of perceived behaviour control on intention to consume fish. Robinson and Smith (2002) examine the relationship between perceived behavioural control and intentionto consume fish in Minnesota and conclude that there is positive effect of perceived behavioural control on intention to consume fish. Tuu et al. (2008) documented that undertand behavioural control has a good result on intentionto consume fish. Thong and Olsen (2008) also determine the result of perceived behavior control on intention to consume fish and conclude that there is a significant relationship between perceived behavior control and intentionto consume fish. Next, Tomic et al. (2016) documented the good relationship between perceived understand attitude control and intentionto consume fish. As a consequence, the following hypothesis offered.

H4: Perceived behaviour control has a positive association with intention to consume fish

RESEARCH METHOD

The research object from lecturers who work at private university in Padang city, Indonesia. 55 lecturers have participated in this study. The data used in this study is primary data gathered through online survey. There are two kinds of variables: latent dependent variable and latent independent variables. In an other word, there are two endogenous construct (consume behaviour and intention to consume) and three exogenous constructs (attitudes toward behaviour, subjective norms and perceived behaviour control). Attitude is measured by five items taken three items from (Verbeke & Vackier, 2005) and two items are from Tomic et al. (2016). Subjective norm is developed by Verbeke and Vackier (2005) which consists of four items. In addition, perceived behaviour control has three items developed by Verbeke and Vackier (2005). Further, intention to consume fish is adopted from (Ajzen, 1991). The consume behaviour was assessed by asking "how often have you consume fresh fish the past month". All variables measured by 5-point scale likert with respond ranging from strongly disagree to strongly agree, except for consume behaviour. Fresh fish consume behaviour use scale: not very often to very often. Smart-pls is applied to analyse research data. Since this study based on the strong prior study (TPB) and further testing is the goal, covariance based-full-information estimation method is more appropriate (Chin & Newsted, 1999). There are two assessments in smart-pls: measurement model and structural model (Hair, Hult, Ringle, & Sarstedt, 2017). Assessment of measurement model use the construct validity which consists of convergent validity and discriminant validity (Vinzi, Chin, Henseler, & Wang, 2010). In addition, the assessment of structural model utilize the predictive relevance and predicitve power (Hair et al., 2017). Supported or not supported hypotheses are based on path coefficient and p value (Hair, Ringle, & Sarstedt, 2011).

RESULT AND DISCUSSION

This study was using 55 respondents as final sample. Analysis of demographic variable demonstrated in Table 1. According to respondent's age, there are three respondents (5.45%) between 26 to 30 years old, eleven respondents from 31 to 36 years old (20%) and followed by three respondents (5.45%) with age of 36 to 40 years old. Finally, nineteenth respondents (35.55%) in 41 to 50 years old and more than 50 years old. Regarding to gender, twenty-eight respondents (50.91%) is male and the rest is female (49.09%). Further, respondent with education of bachelor, master and doctor degree are 1.82%, 58.18%, and 40.00% respectively. Moreover, the position as lecturer, senior lecturer, Assoc. Prof, and professor is 23.64%, 38.18%, 30.91% and 7.27% respectively. Thus, income level is < Rp. 3 million, Rp. 3.1 million to Rp. 6 million, Rp. 6.1 million to Rp. 9 million, and > Rp. 9.1 million are 16.36%, 32.73%, 34.55%, and 16.36% respectively.

Table 1. Demographic Variable

Demographic	Category	Number	%
Age	26 – 30 year	3.00	5.45
	31 – 36 year	11.00	20.00
	36 – 40 year	3.00	5.45
	41 – 50 year	19.00	34.55
	Greater than 50 years	19.00	34.55
Gender	Male	28.00	50.91
	Female	27.00	49.09
Education	Bachelor	1.00	1.82
	Master	32.00	58.18
	Doctor	22.00	40.00
Position	Lecturer	13.00	23.64
	Senior lecture	21.00	38.18
	Assoc. Prof	17.00	30.91
	Prof	4.00	7.27
Income	Less than Rp. 3 Million	9.00	16.36
	Rp 3.1 to Rp. 6 Million	18.00	32.73
	Rp. 6.1 to Rp. 9 Million	19.00	34.55
	Greater than Rp. 9 Million	9.00	16.36

Assessment of measurement model is construct validity analysis. The construct validity consists of convergent and discriminant validity. The result of convergent validity has shown in Table 1. All constructs have the outer loading more than 0.700 and it can conclude that the indicator reliability is adequate (Hulland, 1999). Cronbach's alpha (CA) and composite reliability (CR) used to see the internal consistency reliability and the result show that all constructs have CA and CR more than 0.7 and it reached the cut off value (Bagozzi & Yi, 1988). In addition, last convergent validity analysis apply AVE and all construct have the value of AVE more than 0.5 (Bagozzi & Yi, 1988). Based on the property above, it can be concluded that convergent legality of measurement model is valid.

Table 2. Measurement Model Assessment Convergent Legality

Construct	Items	Outer Loading	Cronbach's Alpha	Composite Reliability	AVE
Attitude	att1	0.940	0.942	0.956	0.813
	att2	0.910			
	att3	0.830			
	att4	0.930			

	att5	0.900			
	icf1	0.990			
IntCons	icf2	0.990	0.988	0.992	0.976
	icf3	0.990			
PerBevCon	pbc1	0.980	0.651	0.812	0.692
	pbc3	0.700			
	sn1	0.900			
SubNorm	sn2	0.730	0.858	0.905	0.705
	sn3	0.900			
	sn4	0.820			
ConsBeha	fcb	1.000	1.000	1.000	1.000

The result of discriminant validity can be seen in Table 3. There are two assessments in this kind of validity: cross loading and Fornel-Lacker criterion, the loadings of an indicator on its assignment unobserved variable should be higher than its loadings on all other unobserved variables (Hair et al., 2017). Fail to indicate a lack of discriminants legality when 2 constructs are perfectly correlated, which renders this criterion ineffective for empirical research (Henseler, Ringle, & Sarstedt, 2015). The result show that all indicators on its assignment of latent variables is higher than its loadings on all other unobserved variable and the construct, therefore, has a good discriminant legality.

Table 3. Measurement Model Assessment Discriminant Validity-Cross Loading

Items	Attitude	ConsBeha	IntCon	PerBevCon	SubNorm
att1	**0.9380**	0.7180	0.5330	-0.0360	0.4980
att2	**0.9110**	0.6970	0.4840	-0.0320	0.4120
att3	**0.8280**	0.5550	0.3560	0.0880	0.4800
att4	**0.9260**	0.6210	0.4610	0.0250	0.6130
att5	**0.8990**	0.6250	0.4270	-0.0520	0.5650
icf1	0.5240	0.4130	**0.9870**	0.1310	0.2440
icf2	0.4900	0.4240	**0.9900**	0.1740	0.2100
icf3	0.4930	0.4240	**0.9870**	0.1700	0.2110
pbc1	0.0020	-0.0490	0.1720	**0.9780**	-0.1260
pbc3	-0.0360	-0.1000	0.0470	**0.6520**	0.2020
sn1	0.5310	0.3420	0.2090	-0.1020	**0.9030**
sn2	0.4530	0.3840	0.1620	0.0050	**0.7290**
sn3	0.5120	0.3980	0.1750	-0.0920	**0.8990**
sn4	0.4080	0.2800	0.2020	-0.0100	**0.8150**
fcb	0.7190	**1.0000**	0.4260	-0.0660	0.4130

The result of Fornel-Lacker criterion has demonstrated in Table 4. The AVE of unobserved variable should be higher than the squared correlation between the unoberved variable and all other variables (Chin, 1998; Fornell & Larcker, 1981). Fornel-Lacker criterion result support the cross-loading result and it can be concluded that the construct is valid. The measurement model has shown in Figure 1. The next analysis is assessment of structural model.

Table 4. Measurement Model Assessment Discriminant Validity-Fornel-Lacker Criterion

Variables	Attitude	ConsBeha	IntCon	PerBevCon	SubNorm
Attitude	**0.902**				
ConsBeha	0.718	**1.000**			
IntCon	0.507	0.426	**0.988**		
PerBevCon	-0.011	-0.075	0.149	**0.850**	
SubNorm	0.566	0.413	0.225	-0.020	**0.840**

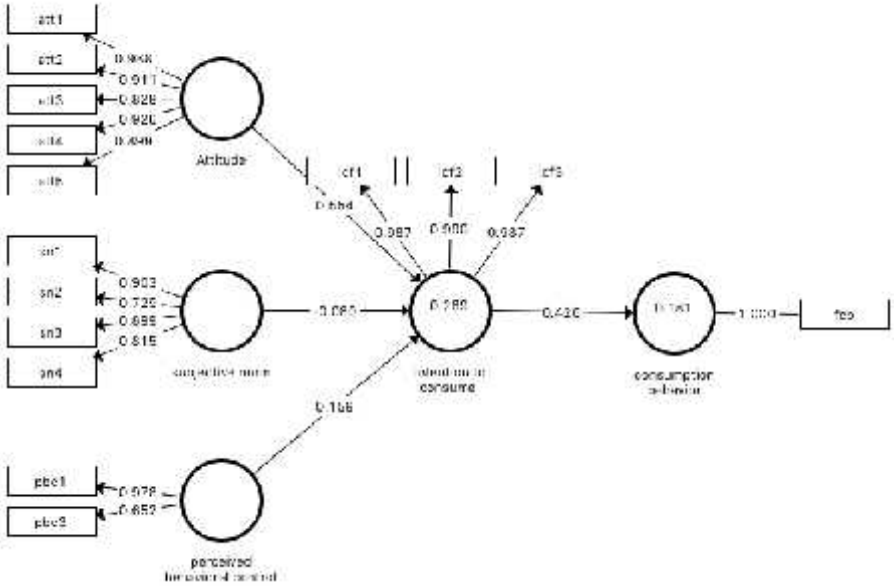

Figure 1. Measurement Model

Assessment of structural model use for hypothesis testing. It deals with the relationship between undiscover variables. there are two assessments for structural model: predictive relevance (Q square) and predictive power (R square). The relative effect of the structural model on the observed measures for latent dependent variable that evaluated by using Q square (Henseler et al., 2015). The Q square must be higher than 0 and the value of Q square is 0.02, 0.15, and 0.35 signify small, medium, and large predictive relevance of certain undiscover variable (Henseler, 2010). The value of Q square in this model is more than 0 or signify small for fish consuming behaviour and medium for intention to consume.

Table 5. Assessment of Structural Model

Endogenous Construct	Q^2	Decision	R^2	Decision
IntCon	0.259	Medium	0.289	Moderate
ConsBeh	0.106	Small	0.181	Weak
Relationship	Path Coef	T Stat	P Values	Decision
Attitude -> intCon	0.543	3.689	0.000***	Supported
IntCon -> ConsBeh	0.445	3.129	0.002***	Supported
PerBehCon -> IntCon	0.142	1.063	0.288	Not-supported
SubNorm -> IntCon	-0.036	0.694	0.488	Not-supported

The value of R square is 0.289 and 0.181 for endogenous construct of intention to consume and consumption behaviour respectively. These values are categorised as moderate and weak(Chin, 1998). PLS-SEM aims at maximising R square of endogenous variable in path model. Further, two hypotheses are supported, and the rest are not supported. The supported hypothesis is the effect of attitudes toward behaviour on intention to consume fish (p-value=0.000) and the effect of intention to consume on consumption behaviour (p-value=0.002). Therefore, intention to consume fish has good relationship with attitude to behave (path coefficient=0.543). In addition, there is positive impact in intentionto consume fish on consume behaviour which means that the higher the intentionto consume fish, the higher fish to consume. The structural model demonstrated in Figure 2.

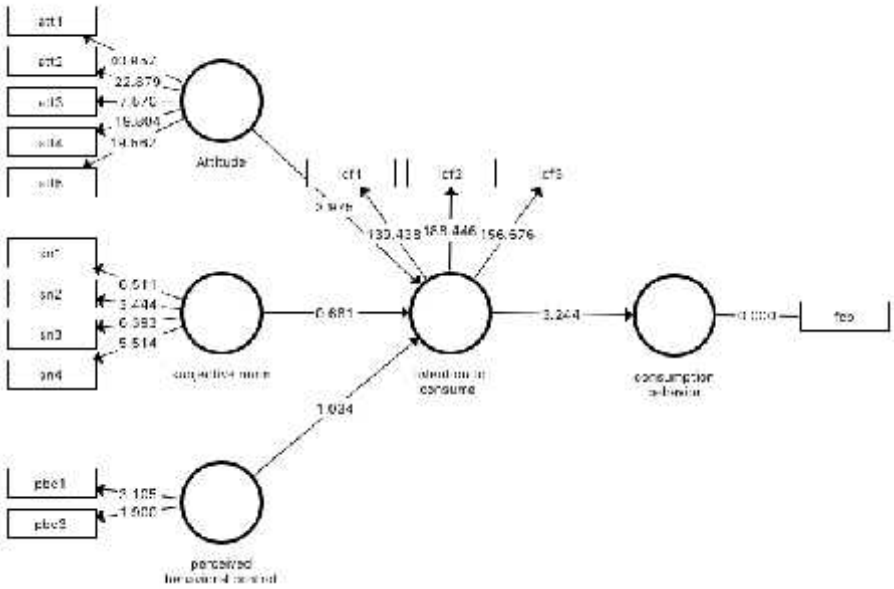

Figure 2. Structural Model

The effect of attitudes toward behaviour on intention to consume fish confirm the theory of plan behaviour which state that the attitude toward behaviour is one of intention to consume predictors (Ajzen, 1991). In addition, attitude toward fish consumption behaviour is important factor to choose the fresh fish among lecturer in private higher education institution. The factors from attitudes could be taste, negative affect, and nutrition (Olsen, 2004). In fact, (Olsen, 2004) add that condition and freshness of seafood is related to taste, and condition of seafood generally determined by quality of freshness. Therefore, research object of this study builds a positive attitude due to fishes in Padang are fresh and good quality. Further, most of lecturer are from west area Sumatra island which fish is very familiar from their family. They have knowledge of nutrition embedded in fish. This finding is supported by several previous studies (Honkanen et al., 2005; Robinson & Smith, 2002; Tomic et al., 2016; Tuu et al., 2008).

The effect of intention to consume fish on consumption behaviour is also to confirm the theory of plan behaviour (Ajzen, 1991). An intention to consume fish as the primary effort of consume behaviour (Olsen, 2004). In addition, the previous studies supported this findings, such as (Thong & Olsen, 2008), who conclude that intention to consume fish is positively related to consume behaviour in Vietnam. Findings of other scholars (Tomic et al.,

2016; Tuu et al., 2008) are also consistent with this finding. The result of the effect of subjective norm and perceived behaviour control on intention to consume are consistent with previous studies done by (Robinson & Smith, 2002; Thong & Olsen, 2008; Tomic et al., 2016; Tuu et al., 2008).

CONCLUSION AND SUGGESTION

Consume behaviour is an important topic among marketers to understand the customers. However, this topic is also being discussed by fisheries economists. Theory of plan behaviour predicts that intention to behave is factor affecting the behaviour. In addition, intention to behave is influenced by attitudes, subjective norm and perceived behaviour control. Using an Indonesia's case, there is lack of studies investigated in this subject matter. Therefore, this study is investigating the predictor of fish consume behaviour among lecturers. This study concludes that an attitude toward behaviour has a positively significant relationship with fish consume behaviour. In addition, second finding also demonstrate that the significant association between intention to consume and fish consume behaviour. The practical implication of this study is that related parties can use this finding to understand the fish consume behaviour by considering the attitudes and intention behaviour. Theoretically, this finding partially confirms the theory of plan behaviour. In addition, the current findings also add to a growing body of literature of fish consume behaviour. Finally, a number of important limitations need to be considered. First, this study uses respondents from a private university. Besides, the study uses limited number of respondents. In addition, this study does not test the role of an intention to consume fish as mediator between consume behaviour predictors and consume behaviour. A number of possible future studies using the same empirical research are apparent. The future researcher can expand the research object. In addition, testing the role of an intention to consume as mediating variable between predictors of an intention to consume and consume behaviour.

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Editor

FRESH FISH CONSUMPTION BEHAVIOUR IN PADANG CITY, INDONESIA

Abstract

The fresh fish consumption behaviour has been attracting the previous researchers. However, there is lack of study using the Indonesia's data. Therefore, this study aims to investigate the effect on attitudes, subjective norm, and perceived behaviour control on intention to consume fish. Besides, this study also investigates the relationship between intention to consume fish and consume behaviour. The theory of plan behaviour is applied to understand the raised phenomena in this research. The number of respondents participated in this study is fifty-five. SEM-PLS is applied to analysis the research data by using the smart-pls. Assessment of measurement and structural model is conducted to complete the smart-pls procedure. The result show that there is a positive significant effect of attitude toward behaviour on intention to consume fish. Besides, the intention to consume fish also has a significant association with consume behaviour. However, the effect of subjective norm and perceived behavioural control on intention to consume fish are not significant. This finding confirms the theory of plan behaviour. Practically, this finding implies that to increase the fish consume behaviour, it should increase the intention to consume fish and attitude toward fish consume behaviour.

Keyword: consumption behaviour; intention to behave; attitude, subjective norm; perceived behaviour control

INTRODUCTION

Fresh fish consuming behaviour and seafood products has been becoming an interest of principal researchers in the world due to the important aspect of fish, such as business of the fish industry, sustainability, food safety, nutrition and diet (Carlucci et al., 2015). Due to increasing the consumption of fresh fish, health authorities have a common interest (Badr, Salwa, & Ahmed, 2015). In fact, issues about health, ethic, money value and food safety become more important and consumer behaviour have changed significantly in recent decades. Tomic, Matulic, and Jelic (2016). In addition, Tomic et al. (2016) add that fish consumption behaviour is influenced by healthiness and welfare, fish also has primacy in this aspect. In addition, fish is generally perceived as a source of nutritious and salubrious food (Badr et al., 2015). According to Oken et al. (2012), fish is the primary food source of

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n-3 long chain polyunsaturated fatty acids, including docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA). Eating fresh fish minimum twice a week under normal diets would positively affect human health (Sioen et al., 2008).

Fish consumption has varied from one country to another country. In 2011, fish was consumed about 20 kg per capita in each year by European. Fish consumption in Indonesia increased by 12.9 kg from 21 kg in 2003 to 33.9 kg in 2012 (Tran et al., 2017). Understanding what factor affecting fish consumption among people is therefore an important research priority (Thorsdottir et al., 2012). Study on fish consumption behaviour is not only important for government and policy makers to formulate the food policy, but also for economists for marketing planning (Zhou et al., 2015). There are bundle of studies on this subject has been done (Badr et al., 2015; Birch & Lawley, 2012; Cardoso, Lourenço, Costa, Gonçalves, & Nunes, 2013; Grieger, Miller, & Cobiac, 2012; Khan, Aldosari, & Hussain, 2018; Leek, Maddock, & Foxall, 2000; Miloševic, Zezelj, Gorton, & Barjolle, 2012; Murray, Wolff, & Patterson, 2017; Myrland, Trondsen, Johnston, & Lund, 2000; Olsen, 2003; Pieniak, Verbeke, Scholderer, Brunsø, & Olsen, 2008; Thong & Olsen, 2008; Thorsdottir et al., 2012; Tomic et al., 2016; Trondsen, Scholderer, Lund, & Eggen, 2003). Badr et al. (2015) examine the barriers freshwater fish consumption in Morocco and conclude that three barriers link to the low fish consumption: quality, sensory and convenience barriers. In addition, Birch and Lawley (2012) explain and identify risks in consuming seafood by Australian consumers, including social, physical, functional, psychological and financial risks. Further, Cardoso et al. (2013) carried out survey into seafood consumption preference, such as consumption frequency, average meal portion, and usual culinary treatment amongst Portuguese consumers. Thus, Grieger et al. (2012) investigate the knowledge and barriers regarding to fish consumptions among older Australians. Beside, Khan et al. (2018) also explore fish consumption behaviour and fish farming attitudes among households in Kingdom of Saudi Arabia and found the important factors, such as fish price and nutritional value of fish. Other authors, Leek et al. (2000) study the determinants of fish consumption in UK and conclude that there are several determinants: situational relevance, negative properties, economy, versatility and convenience. Miloševic et al. (2012) describe the key factors in determining the foods in six Western Balkan countries (WBC): shopping amenities, sensory appeal, health and natural content.

Murray et al. (2017) investigate the important factor why consume the seafood and conclude that taste, smell and appearance are the most important factor affecting the fish consume. Myrland et al. (2000) determine the seafood consume in Norway and found that there are several factors affecting fish consuming behaviour: lifestyle, reveal preference and barriers to consume. Olsen (2004) said that the habit of consuming seafood was due to moral necessity for health reasons rather than self-desire and the taste of seafood. Pieniak

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et al. (2008) survey the factor affecting the fish consumption behaviour in five European countries and identified that factors: health involvement, risk perception and health beliefs. Thong and Olsen (2008) test the theory of plan behaviour to understand the fish consuming behaviour among Vietnam and found that subjective norm and attitudes are the most important variables determining the fish consuming behaviour. Thorsdottir et al. (2012) investigate the fish consume behaviour and found that fish preparation, social pressure and cooking skills are the most important factors. Tomic et al. (2016) expanded the theory of plan behaviour to understand fish consumption behaviour in Croatia and found that instinctive norms, behavioural control, attitudes, moral necessity, health, availability and intentions had a relationship with the behaviour of consuming fish. Myrland et al. (2000) investigate the barriers to consume fish and recommended about how to increase the fish consumption through satisfying: convenient-oriented consumers, health-oriented family members and children's wishes.

Based on previous studies on fish consuming behaviour, there are no study using the Indonesia data. Fish consumption behaviour is a part of food demand and it is an important subject since it reflect the preferences of consumers or households (Zhou et al., 2015). Indonesia is the largest fish producer in Southeast Asia and had second positioned in the world after China (Tran et al., 2017), but research on fish consumption at the household level in Indonesia is still very low. Especially, study apply the theory of plan behaviour (Ajzan, 1991). Therefore, there is desire need to understand why people consume fish by using the theory of plan behaviour. Thus, this study aims to investigate the effect of attitudes, subjective norm and behavioural control on desire to consume the fresh fish and determine the relationship between desire to consume and fish consuming behaviour. With the uniqueness of Indonesia social economic system, this study has purposes to add literature in consuming behaviour, especially the theory of plan behaviour. This paper is organised as follow. Second session is discussed about the theory and hypotheses development. Following by research method and result section which highlight the antecedents and consequence of intention to consume. The conclusions section draws conclusions in the main finding and insight for future research.

Consumption behaviour relate to choose or not a product based on several reasons. Consumption behaviour is important for several stakeholders, such as economist, policy makers and etc. The positive effect of fish consumption has been documented by previous researchers (Oken et al., 2012; Sioen et al., 2008). However, the negative effect of fish consumption also has been identified in the literature (e.g. Connelly, Lauber, McCann, Niederdeppe, & Knuth, 2019; Liu et al., 2018). Consume behaviour is derived from behavioural theory. Sheth, Newman, and Gross (1991) propose the theory of consumption value and suggest that there are five values influencing the consumer choices: functional,

conditional, social, emotional and epistemic values. In addition, there are several theories to explain and predict the human behaviour, such as theory of reasoned action (Fishbein & Ajzen, 1975) and theory of planed attitude (Ajzen, 1991). However, theory of plan behavior that dominated and commonly used from (Tomic et al., 2016; Verbeke & Vackier, 2005). According to the theory of plan behaviour, consuming behaviour is determined by intention to consume behavior (Tomic et al., 2016; Verbeke & Vackier, 2005). In addition, attitudes, instinctive norm and perceived behaviour control are predictors of intention to consume behaviour (Honkanen, Olsen, & Verplanken, 2005; Lee & Yun, 2015; Robinson & Smith, 2002; Thong & Olsen, 2008, 2012; Tomic et al., 2016; Verbeke & Vackier, 2005).

Intention refers to individual's willing and effort to performance the behaviour and it is assumed as factors of intention affecting the behaviour (Fishbein & Ajzen, 1975). In addition, Thong and Olsen (2008) state that behavioural intention is something like a plan to achieve the behaviour. Thus, Intention to consume behaviour is good predictor of consume behaviour (Honkanen et al., 2005). Theory of planned behaviour (Ajzen, 1991) suggest that intention to behave is predictor of behaviour. According to theory of reason action (TRA), Intention to behave is determined by attitude and subjective norm (Fishbein & Ajzen, 1975) and (Ajzen, 1991) add other variable (perceived behaviour control) as other predictor of intentionto behave. Olsen (2004) propose that intention to consume the fish is predictor of consume behaviour. Previous research of the effect of behavioural intention on behaviour has been done largely in many disciplines, such as human resources management, and marketing management. In marketing management, there is a limited study on fresh fish consumption behaviour. Thong and Olsen (2008) conclude that the intention to consume (motives) is positively related to consuming behaviour. In addition, Tuu, Olsen, Thao, and Anh (2008) also documented the positive influence of intention to manage on consume behaviour. Finally, Tomic et al. (2016) suggest that intentionto eat the fish encourage the consuming behaviour. Based on the theory and previous researches, we develop the first hypothesis as follow

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H1. Intention to consume fresh fish is positively related to consume behaviour.

Eagly and Chaiken (1993) define attitudes as a psychological tendency that expressed by evaluating a particular entity with some degree. The degree could be polarity of like-dislike, good-bad, satisfaction-dissatisfaction, and favour -disfavour. Attitudes toward behaviour depend on self factor that describe positive or negative of personal in relation to behavioural consequences (Thong & Olsen, 2008). Attitude toward behaviour could be built from constructs, such as fish preference, acceptability, and perceived quality of fish (Olsen, 1999). Previous studies investigated the relationship between attitudes toward fish consume behaviour are many. Robinson and Smith (2002) documented the attitude is a significant

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prediction of intention to eat fish in Minnesota. Honkanen et al. (2005) conclude that attitudes has a positive association with intention to consume fish among Norwegian adult. Tuu et al. (2008) found that there is a positive relationship between attitudes and intention to consume fish in Vietnam. Finally, Tomic et al. (2016) state there is positive result in research the relationship behaviour and intention to consume fish. Based on the theory and previous research, we offer the second hypothesis as follow.

H2: Attitude toward behaviour has a positive effect on intention to consume fresh fish

Subjective norm come from neighbourhood factors that describe someone perception of social force on him/her to performance or not performance the behaviour (Fishbein & Ajzen, 1975). In food choice, social elements shown more significant than genetic factor for development of personal distinction (Svein Ottar Olsen, 2004). This factors could be from family and friends (Verbeke & Vackier, 2005). For example, family that reject the certain product will not be chosen by that family. Olsen (2001) found that there is a significant result of personal norm on intentionto consume fish. Further, Robinson and Smith (2002) also documented a clear relationship between personal norm and motovation to consume fish. Moreover, Tuu et al. (2008) also investigate the intention to consume fish and subjective norm as one of significant predictors. Thong and Olsen (2008) also found that the personal norm has a clear association with intentionto consume fish. Finally, Tomic et al. (2016) conclude that there is a clear relationship between spersonal norm and intentionto consume fish. Hence, the proposed hypothesis is.

H3: subjective Norm has a positive association with motvation to consume fish

Perceived behaviour control is defined as an individual's belief in how easy or difficult that behaviour action will occur (Ajzen, 1991). The perceived control over behaviour is higher if a person has more resources and opportunities (Olsen, 2004). People tends to engage in behaviour they intend to performance. in other word, people are more likely to do the things they want and they can control, but they tend not to do things they can't control (Thong & Olsen, 2008). Olsen (2004) divide the perceived control to be internal or external to the person. The internal factor could will power, compulsion, skills, knowledge, and lack abilities. Meanwhile, the external factors are time, opportunities, situation and dependence on other). There are few preceding studies research about the impact of perceived behaviour control on intention to consume fish. Robinson and Smith (2002) examine the relationship between perceived behavioural control and intentionto consume fish in Minnesota and conclude that there is positive effect of perceived behavioural control on intention to consume fish. Tuu et al. (2008) documented that undertand behavioural control has a good result on intentionto consume fish. Thong and Olsen (2008) also determine the result of perceived behavior

control on intention to consume fish and conclude that there is a significant relationship between perceived behavior control and intentionto consume fish. Next, Tomic et al. (2016) documented the good relationship between perceived understand attitude control and intentionto consume fish. As a consequence, the following hypothesis offered.

H4: Perceived behaviour control has a positive association with intention to consume fish

RESEARCH METHOD

The research object from lecturers who work at private university in Padang city, Indonesia. 55 lecturers have participated in this study. The data used in this study is primary data gathered through online survey. There are two kinds of variables: latent dependent variable and latent independent variables. In an other word, there are two endogenous construct (consume behaviour and intention to consume) and three exogenous constructs (attitudes toward behaviour, subjective norms and perceived behaviour control). Attitude is measured by five items taken three items from (Verbeke & Vackier, 2005) and two items are from Tomic et al. (2016). Subjective norm is developed by Verbeke and Vackier (2005) which consists of four items. In addition, perceived behaviour control has three items developed by Verbeke and Vackier (2005). Further, intention to consume fish is adopted from (Ajzen, 1991). The consume behaviour was assessed by asking “how often have you consume fresh fish the past month”. All variables measured by 5-point scale likert with respond ranging from strongly disagree to strongly agree, except for consume behaviour. Fresh fish consume behaviour use scale: not very often to very often. Smart-pls is applied to analyse research data. Since this study based on the strong prior study (TPB) and further testing is the goal, covariance based-full-information estimation method is more appropriate (Chin & Newsted, 1999). There are two assessments in smart-pls: measurement model and structural model (Hair, Hult, Ringle, & Sarstedt, 2017). Assessment of measurement model use the construct validity which consists of convergent validity and discriminant validity (Vinzi, Chin, Henseler, & Wang, 2010). In addition, the assessment of structural model utilize the predictive relevance and predicitve power (Hair et al., 2017). Supported or not supported hypotheses are based on path coefficient and p value (Hair, Ringle, & Sarstedt, 2011).

RESULT AND DISCUSSION

This study was using 55 respondents as final sample. Analysis of demographic variable demonstrated in Table 1. According to respondent’s age, there are three respondents (5.45%) between 26 to 30 years old, eleven respondents from 31 to 36 years old (20%) and followed by three respondents (5.45%) with age of 36 to 40 years old. Finally, nineteenth respondents (35.55%) in 41 to 50 years old and more than 50 years old.

Regarding to gender, twenty-eight respondents (50.91%) is male and the rest is female (49.09%). Further, respondent with education of bachelor, master and doctor degree are 1.82%, 58.18%, and 40.00% respectively. Moreover, the position as lecturer, senior lecturer, Assoc. Prof, and professor is 23.64%, 38.18%, 30.91% and 7.27% respectively. Thus, income level is < Rp. 3 million, Rp. 3.1 million to Rp. 6 million, Rp. 6.1 million to Rp. 9 million, and > Rp. 9.1 million are 16.36%, 32.73%, 34.55%, and 16.36% respectively.

Table 1. Demographic Variable

Demographic	Category	Number	%
Age	26 – 30 year	3.00	5.45
	31 – 36 year	11.00	20.00
	36 – 40 year	3.00	5.45
	41 – 50 year	19.00	34.55
	Greater than 50 years	19.00	34.55
Gender	Male	28.00	50.91
	Female	27.00	49.09
Education	Bachelor	1.00	1.82
	Master	32.00	58.18
	Doctor	22.00	40.00
Position	Lecturer	13.00	23.64
	Senior lecture	21.00	38.18
	Assoc. Prof	17.00	30.91
	Prof	4.00	7.27
Income	Less than Rp. 3 Million	9.00	16.36
	Rp 3.1 to Rp. 6 Million	18.00	32.73
	Rp. 6.1 to Rp. 9 Million	19.00	34.55
	Greater than Rp. 9 Million	9.00	16.36

Assessment of measurement model is construct validity analysis. The construct validity consists of convergent and discriminant validity. The result of convergent validity has shown in Table 1. All constructs have the outer loading more than 0.700 and it can conclude that the indicator reliability is adequate (Hulland, 1999). Cronbach's alpha (CA) and composite reliability (CR) used to see the internal consistency reliability and the result show that all constructs have CA and CR more than 0.7 and it reached the cut off value (Bagozzi & Yi, 1988). In addition, last convergent validity analysis apply AVE and all construct have the value of AVE more than 0.5 (Bagozzi & Yi, 1988). Based on the property above, it can be concluded that convergent legality of measurement model is valid.

Table 2. Measurement Model Assessment Convergent Legality

Construct	Items	Outer Loading	Cronbach's Alpha	Composite Reliability	AVE
Attitude	att1	0.940	0.942	0.956	0.813
	att2	0.910			
	att3	0.830			
	att4	0.930			
	att5	0.900			
IntCons	icf1	0.990	0.988	0.992	0.976
	icf2	0.990			
	icf3	0.990			
PerBevCon	pbc1	0.980	0.651	0.812	0.692
	pbc3	0.700			
SubNorm	sn1	0.900	0.858	0.905	0.705
	sn2	0.730			
	sn3	0.900			
	sn4	0.820			
ConsBeha	fcb	1.000	1.000	1.000	1.000

The result of discriminant validity can be seen in Table 3. There are two assessments in this kind of validity: cross loading and Fornel-Lacker criterion, the loadings of an indicator on its assignment unobserved variable should be higher than its loadings on all other unobserved variables (Hair et al., 2017). Fail to indicate a lack of discriminants legality when 2 constructs are perfectly correlated, which renders this criterion ineffective for empirical research (Henseler, Ringle, & Sarstedt, 2015). The result show that all indicators on its assignment of latent variables is higher than its loadings on all other unobserved variable and the construct, therefore, has a good discriminant legality.

Table 3. Measurement Model Assessment Discriminant Validity-Cross Loading

Items	Attitude	ConsBeha	IntCon	PerBevCon	SubNorm
att1	**0.9380**	0.7180	0.5330	-0.0360	0.4980
att2	**0.9110**	0.6970	0.4840	-0.0320	0.4120
att3	**0.8280**	0.5550	0.3560	0.0880	0.4800
att4	**0.9260**	0.6210	0.4610	0.0250	0.6130
att5	**0.8990**	0.6250	0.4270	-0.0520	0.5650
icf1	0.5240	0.4130	**0.9870**	0.1310	0.2440
icf2	0.4900	0.4240	**0.9900**	0.1740	0.2100
icf3	0.4930	0.4240	**0.9870**	0.1700	0.2110
pbc1	0.0020	-0.0490	0.1720	**0.9780**	-0.1260
pbc3	-0.0360	-0.1000	0.0470	**0.6520**	0.2020

sn1	0.5310	0.3420	0.2090	-0.1020	**0.9030**
sn2	0.4530	0.3840	0.1620	0.0050	**0.7290**
sn3	0.5120	0.3980	0.1750	-0.0920	**0.8990**
sn4	0.4080	0.2800	0.2020	-0.0100	**0.8150**
fcb	0.7190	**1.0000**	0.4260	-0.0660	0.4130

The result of Fornel-Lacker criterion has demonstrated in Table 4. The AVE of unobserved variable should be higher than the squared correlation between the unoberved variable and all other variables (Chin, 1998; Fornell & Larcker, 1981). Fornel-Lacker criterion result support the cross-loading result and it can be concluded that the construct is valid. The measurement model has shown in Figure 1. The next analysis is assessment of structural model.

Table 4. Measurement Model Assessment Discriminant Validity-Fornel-Lacker Criterion

Variables	Attitude	ConsBeha	IntCon	PerBevCon	SubNorm
Attitude	**0.902**				
ConsBeha	0.718	**1.000**			
IntCon	0.507	0.426	**0.988**		
PerBevCon	-0.011	-0.075	0.149	**0.850**	
SubNorm	0.566	0.413	0.225	-0.020	**0.840**

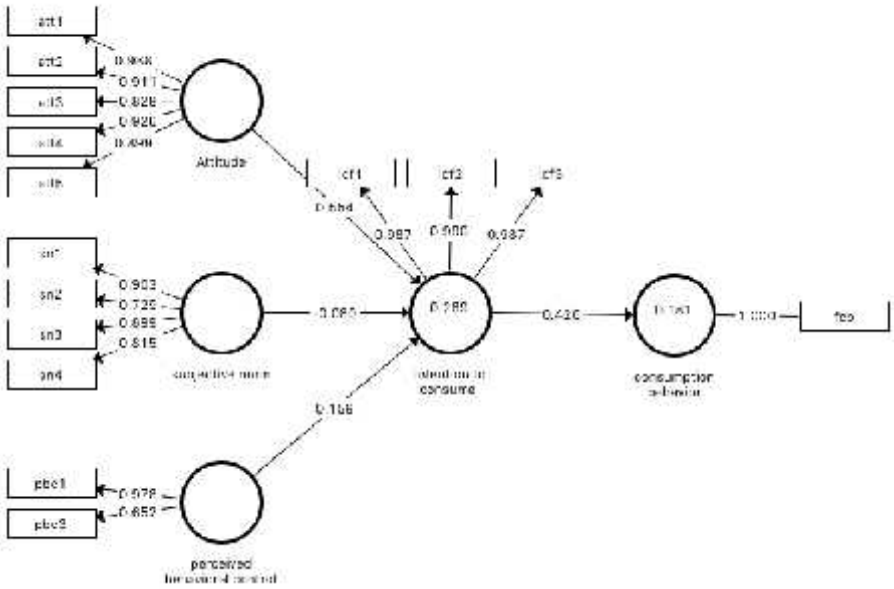

Figure 1. Measurement Model

Assessment of structural model use for hypothesis testing. It deals with the relationship between undiscover variables. there are two assessments for structural model: predictive relevance (Q square) and predictive power (R square). The relative effect of the structural model on the observed measures for latent dependent variable that evaluated by using Q square (Henseler et al., 2015). The Q square must be higher than 0 and the value of Q square is 0.02, 0.15, and 0.35 signify small, medium, and large predictive relevance of certain undiscover variable (Henseler, 2010). The value of Q square in this model is more than 0 or signify small for fish consuming behaviour and medium for intention to consume.

Table 5. Assessment of Structural Model

Endogenous Construct	Q^2	Decision	R^2	Decision
IntCon	0.259	Medium	0.289	Moderate
ConsBeh	0.106	Small	0.181	Weak
Relationship	Path Coef	T Stat	P Values	Decision
Attitude -> intCon	0.543	3.689	0.000***	Supported
IntCon -> ConsBeh	0.445	3.129	0.002***	Supported
PerBehCon -> IntCon	0.142	1.063	0.288	Not-supported
SubNorm -> IntCon	-0.036	0.694	0.488	Not-supported

The value of R square is 0.289 and 0.181 for endogenous construct of intention to consume and consumption behaviour respectively. These values are categorised as moderate and weak(Chin, 1998). PLS-SEM aims at maximising R square of endogenous variable in path model. Further, two hypotheses are supported, and the rest are not supported. The supported hypothesis is the effect of attitudes toward behaviour on intention to consume fish (p-value=0.000) and the effect of intention to consume on consumption behaviour (p-value=0.002). Therefore, intention to consume fish has good relationship with attitude to behave (path coefficient=0.543). In addition, there is positive impact in intentionto consume fish on consume behaviour which means that the higher the intentionto consume fish, the higher fish to consume. The structural model demonstrated in Figure 2.

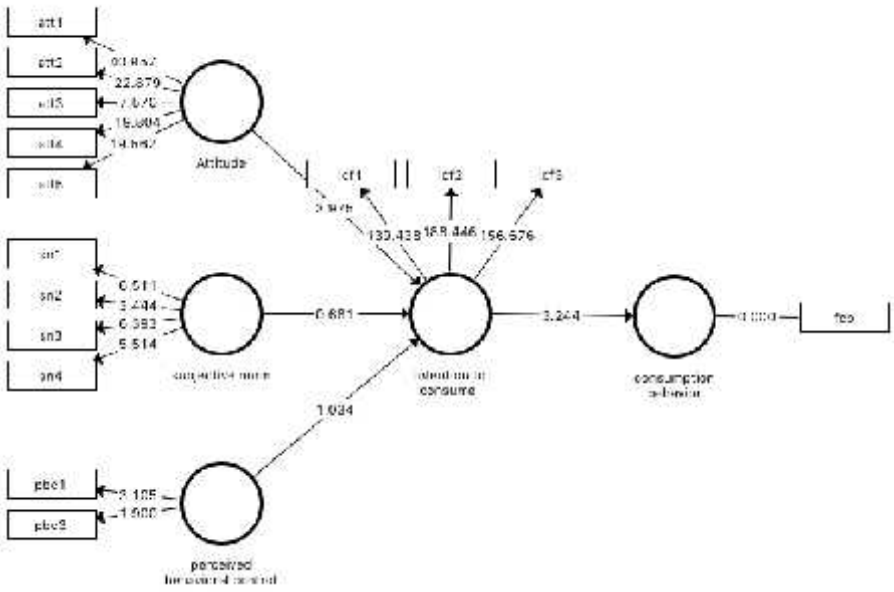

Figure 2. Structural Model

The effect of attitudes toward behaviour on intention to consume fish confirm the theory of plan behaviour which state that the attitude toward behaviour is one of intention to consume predictors (Ajzen, 1991). In addition, attitude toward fish consumption behaviour is important factor to choose the fresh fish among lecturer in private higher education institution. The factors from attitudes could be taste, negative affect, and nutrition (Olsen, 2004). In fact, (Olsen, 2004) add that condition and freshness of seafood is related to taste,

and condition of seafood generally determined by quality of freshness. Therefore, research object of this study builds a positive attitude due to fishes in Padang are fresh and good quality. Further, most of lecturer are from west area Sumatra island which fish is very familiar from their family. They have knowledge of nutrition embedded in fish. This finding is supported by several previous studies (Honkanen et al., 2005; Robinson & Smith, 2002; Tomic et al., 2016; Tuu et al., 2008).

The effect of intention to consume fish on consumption behaviour is also to confirm the theory of plan behaviour (Ajzen, 1991). An intention to consume fish as the primary effort of consume behaviour (Olsen, 2004). In addition, the previous studies supported this findings, such as (Thong & Olsen, 2008), who conclude that intention to consume fish is positively related to consume behaviour in Vietnam. Findings of other scholars (Tomic et al., 2016; Tuu et al., 2008) are also consistent with this finding. The result of the effect of subjective norm and perceived behaviour control on intention to consume are consistent with previous studies done by (Robinson & Smith, 2002; Thong & Olsen, 2008; Tomic et al., 2016; Tuu et al., 2008).

CONCLUSION AND SUGGESTION

Consume behaviour is an important topic among marketers to understand the customers. However, this topic is also being discussed by fisheries economists. Theory of plan behaviour predicts that intention to behave is factor affecting the behaviour. In addition, intention to behave is influenced by attitudes, subjective norm and perceived behaviour control. Using an Indonesia's case, there is lack of studies investigated in this subject matter. Therefore, this study is investigating the predictor of fish consume behaviour among lecturers. This study concludes that an attitude toward behaviour has a positively significant relationship with fish consume behaviour. In addition, second finding also demonstrate that the significant association between intention to consume and fish consume behaviour. The practical implication of this study is that related parties can use this finding to understand the fish consume behaviour by considering the attitudes and intention behaviour. Theoretically, this finding partially confirms the theory of plan behaviour. In addition, the current findings also add to a growing body of literature of fish consume behaviour. Finally, a number of important limitations need to be considered. First, this study uses respondents from a private university. Besides, the study uses limited number of respondents. In addition, this study does not test the role of an intention to consume fish as mediator between consume behaviour predictors and consume behaviour. A number of possible future studies using the same empirical research are apparent. The future researcher can expand the research

object. In addition, testing the role of an intention to consume as mediating variable between predictors of an intention to consume and consume behaviour.

ACKNOWLEDGEMENT

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Paper ID : 258-1100-1
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Authors : Junaidi, Desi Ilona, and Zaitul

Review 1

No	Review Comment	Revision	Page
1	Please complate author name, and address	It has been completed [1)] Junaidi, Fisheries Faculty Universitas Bung Hatta, Padang, Indonesia [2)] Desi Ilona, Faculty Economics and Business, Universitas Putra Indonesia, Padang, Indonesia [3)] Zaitul, Faculty Economics and Business, Universitas Bung Hatta, Padang, Indonesia	1
2	Abstract (and keywords) make 2 versions, in Bahasa and in English	It has been added "Penelitian topik prilaku konsumsi ikan telah menarik praktisi dan akademisi untuk mengkajinya. Namun, penelitian prilaku konsumsi ikan masih terbatas dengan menggunakan objek dari Indonesia. Untuk itu, penelitian ini bertujuan untuk menganalisis secara emprisi pengaruh sikap, kontrol prilaku yang dipersepsikan, dan norma subjektif terhadap niat untuk mengkonsumsi ikan. Selain itu, penelitian ini juga menganalisis secara empris dampak niat untuk mengkonsumsi ikan terhadap prilaku konsumsi ikan. Untuk menjelaskan fenomena konsumsi ikan, penelitian ini menggunakan teori perenanaan prilaku atau *theory of plan behaviour*. Jumlah sampel akhir adalah lima puluh lima responden. Analisa data menggunakan *structural equation model* (SEM) dengan *software smart* PLS. Dalam smart PLS, dua jenis penilaian dilakukan yaitu penilaian model pengukuran dan model struktural. Hasil penelitian menunjukan bahwa sikap berdampak positif terhadap niat untuk mengkonsumsi ikan. Selain itu, niat untuk mengkonsumsi ikan juga berdampak positif terhadap prilaku konsumsi ikan. Namun, norma subjektif dan kontrol prilaku yang dipersepsikan tidak berdampak terhadap niat untuk mengkonsumsi ikan. Hasil penelitian ini mengkonfirmasi *theory of plan behaviour* sebagian. Secara praktis, penelitian ini memberikan implikasi bahwa pihak pihak berkepentingan	1
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No	Review Comment	Revision	Page
1	Bagian pendahuluan terlalu panjang, bagi dua	Done	4
2	Hasil dan pembahasan dibagi dua	Done	11
3	Kesimpulan dan saran perlu ditambahkan	Based on analysis of respondents' answers conducted on fish consumption behaviour by people in Padang City, it shows that: The people of Padang City very often consume fish (63.64%), often (29.09), and quite often (7.29%). The government needs to improve fish consumption behaviour by building an intention to consume fish through a fish-eating program, diversification of fishery products, and socialization of positive aspects of consuming fishery products. It is hoped that government will jointly create a fish-eating program through an all-round cooking program for women by spouse grup, women Islamic forum and national anniversary events. Building a fishery product processing industry to create fast food fishery products, and promoting that fish are the main source of protein for intelligence because they contain amino acids and omega 3 and 5. The government needs to make a policy regarding the standard of fish prices, therefore when the fish season is not in season the price of fish is still affordable for the community to buy and during the fish season fishermen do not feel disadvantaged. So that the community is affordable in fulfilling family nutrition. The role of universities is also expected to promote that consuming fish is important for brain intelligence, and healthy body growth. The freshness of fish must be maintained by the existence of an ice	13