



### Riwayat Penelitian

Riwayat Penelitian Dosen.

#### 1 STRATEGI PENGUATAN PANGAN LOKAL BERDASARKAN PREFERENSI DAN MOTIVASI KONSUMER

Tahun: 2016  
Didanai

#### 2 STRENGTHENING LOCAL FOOD SYSTEM: UNDERSTANDING OF CONSUMER ATTITUDES AND PURCHASING BEHAVIOUR TOWARD LOCAL FOOD CONSUMPTION

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INTERNATIONAL RESEARCH COLLABORATION  
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**STRENGTHENING LOCAL FOOD SYSTEM:  
UNDERSTANDING OF CONSUMER ATTITUDES AND  
PURCHASING BEHAVIOUR TOWARD LOCAL FOOD  
CONSUMPTION**

**Tahun ke 1 dari rencana 3 tahun**

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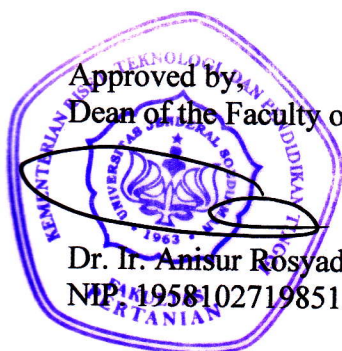
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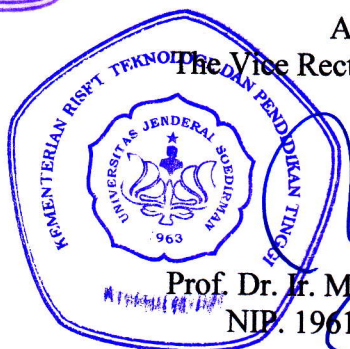
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## ABSTRACT

The knowledge of attitudes and behavioural intentions of local food consumers is still unclear and a model of local food consumption is also lacking. Therefore, the aims of this study are: 1) to build a model of local food consumption and 2) to apply the model on local food products such as rice and vegetables, and (3) to examine local food consumer behaviour based on consumption model between Malaysia and Indonesia. By understanding consumers' attitudes, behavioural intentions and segmentations, the central messages for local food policy in Indonesia can be delivered well.

The combination of qualitative and quantitative methods of investigation is the strength of this study. The qualitative study provides an insight in terms of phenomenological and in-depth understanding of consumers' needs, barriers, motivation, the level of knowledge and information, as well as behavioural control toward local food consumption. Focus group discussion is a qualitative approach that will be employed in this study. The quantitative study will be used to build the local food consumption model. A total of 600 respondents has been interviewed in urban and rural areas of banyumas and Yogyakarta. Three main traditional markets and supermarkets has been selected for each area.

This study consists of three years of research. The aim of the first year research is to develop a valid conceptual framework by conducting a qualitative study involving 4 focus group discussions in relation to consuming local food in urban and rural areas both at traditional markets and supermarkets. Semantic content analysis using NVIVO program will be used to analyse the data. The pilot study involving 600 respondents have been interviewed in order to identify the constructs of the model for the main study and to test the questionnaire for a better version. The progress of this research that a paper regarding a model of local food consumption among shoppers in traditional markets has been accepted for international conference indexed by scopus. Second paper that will send to journal has been writing (60%) and monograph entitle "Introduction to local food: Defenition, local food system and consumer motivation (Series 1) has been written (80%).

In the second year, we will examine the valid model to a large population in Indonesia covering three ethnic groups who are living in urban and rural areas.

Key words; local food, model of food consumption, Indonesia



# 1. INTRODUCTION

## 1.1 Background

The importance of local food in Indonesia is supported by Arsil et al., (2014a) and as stated by Hsien (2013) that food and beverages were spending as the major part (41,7%) of total expenditure of the Indonesian household. In addition, Indonesia is also the fourth most populous country in the world. More than 250 million people resided in Indonesia in 2014 with approximately 59 percent concentrated in Java island, making it the densest population island in the world (BPS, 2015). It is expected that the total population will reach 295 million by 2030. According to Molyneaux and Rosner (2004), food consumption in Indonesia from 1996 to 2002 increased by 7.5 percent annually. This creates an enormous food markets. Although Indonesia has a potential market for food products, but the knowledge of the attitudes and behavior of local food consumers is lacking.

The concept of local food has been developed over the last five decade and it is now defined as unprocessed food with a short food chain, produced near consumers (Wilkins et al., 2000; Roinenan et al., 2006). In Indonesia, the term local food has a broad meaning. It is explained by The Agricultural Department as foods, including carbohydrates, proteins, vitamins and minerals, which are produced and developed based on local potential resources and local culture (Agricultural Department, 2010 p.6). It is generally believed, that rice, corns, cassava, sago palms and peanuts are local food for Indonesian people. In addition, the definition of "local" in Indonesia could be explained as fresh and unprocessed food produced and sold within a village or regency (Arsil et al., 2014a).

Most local and unprocessed food are supplied by local farmers and their distribution systems. There are very limited data with respect to local food production and their supply chain. However, small farmers sold their horticultural products through farms collector (65%) and seventy percent of them were sold directly to traditional markets (Natawidjaja, 2005). According to Razdan, Das and Sahoni (2013), it was approximately 71 percent of Indonesian consumers bought their food and beverage through traditional market channels. In other word,



traditional markets still remain dominant for food marketing distribution. Existing studies on local food in Indonesia is at an early stage (e.g. Arsil et al., 2014a,b) that focus on consumer perceptions and motivation and as such, is still underpinning its basic tenets. In addition, identification of consumers' attitude and purchasing behaviour particularly the model of local food consumption is even younger, and the integration of the two aspects of food choice research and the channel markets such as traditional markets and supermarkets is hardly seen.

A varies research topics linking to consumer perceptions and motivation as well as farmer opinion toward local food have been conducted in Indonesia. The definition of 'local' has been unpacked as the food produced and sold within a regency (Arsil et al., 2014a). The motives behind purchasing local food and personal values involved have also been explored (Arsil et al., 2014b). The lists of previous studies are summarized in Table 1 while the whole road map of the research can be seen in Figure 1. Outcome of research can be seen in Table 2.

Table 1. Previous publication with respect to local food and food system.

Year	Authors	Title of publication	Jurnal or seminar name	Other information
2009	Poppy Arsil, Agus Margiwiyatno, Ropiudin, Tetsuya Araki	The shortest route for strawberry distribution from Serang Village, Karangreja District, Purbalingga Regency	Journal of Logistics and Supply Chain Management, 2(2), 61-67	
2014a	Poppy Arsil, Elton Li and Johan Bruwer	Perspectives on consumer perceptions of local food: A view from Indonesia	Journal of International Food and Agribusiness Marketing, 26 (2), 107-124	-Social science most read article for Routledge social science journals in 2014 and 2015 -Altmetric Score 5 -In the top of 25% papers scored by Altmetric
2014b	Poppy Arsil, Elton Li, Johan Bruwer, and Graham Lyons	Exploring - consumer motivations towards buying local fresh food products: A Means-End Chain approach	British Food Journal, 116(10): 533-1549	Publisher: Emerald IF: 0,72 Indexed in Scopus Have been cited 4 times by other scopus journals
2014c	Poppy Arsil	Indonesian consumers' perceptions of locally	The International Conference of Food for a Quality	Jakarta, 15-16 <sup>th</sup> October 2014.

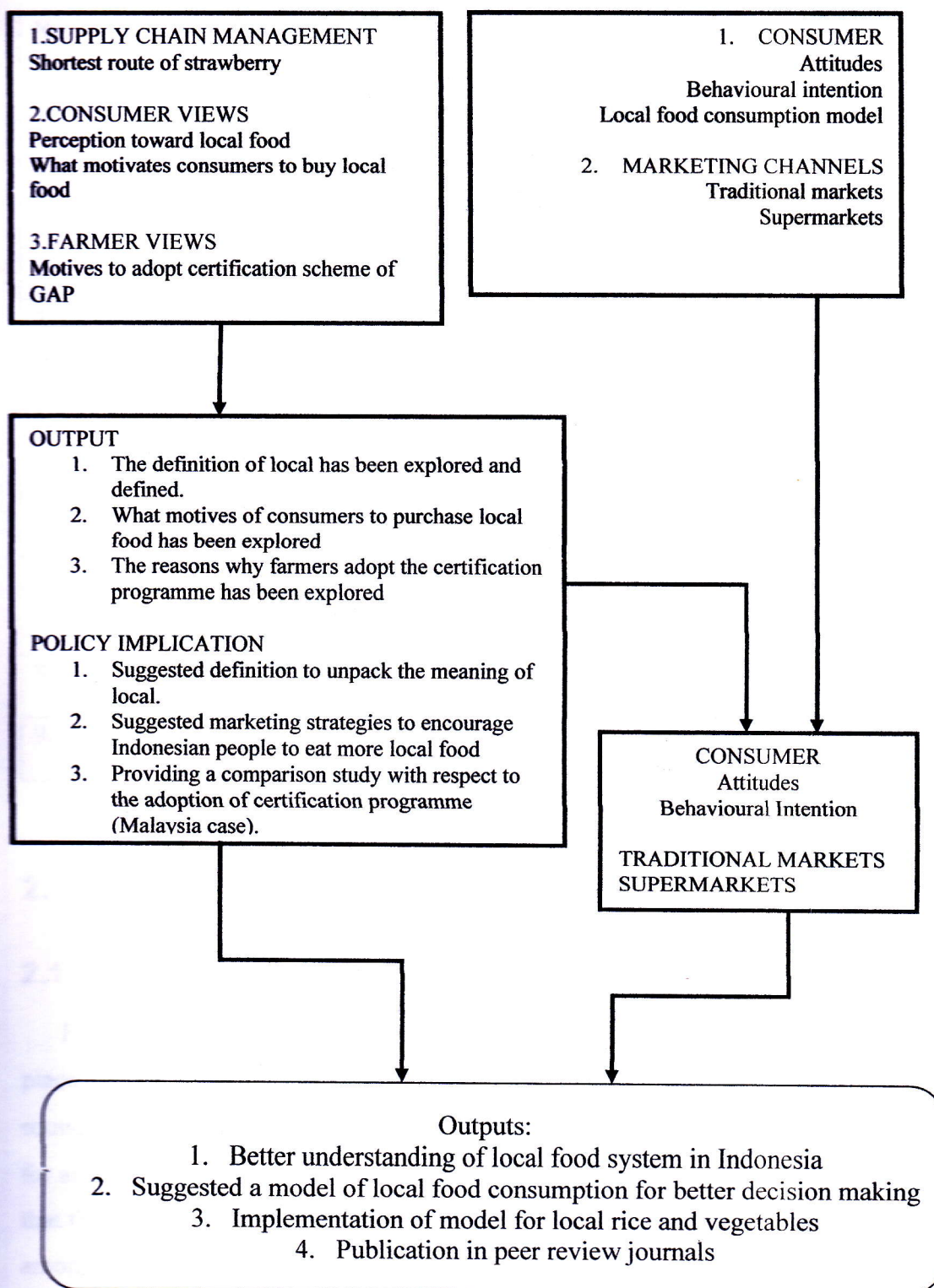


		grown produce: A case study	Life	
<b>2015a</b>	<b>Poppy Arsil</b>	What motivates consumers when eating local foods at restaurants? A means-end chain analysis	The International Symposium on Food and Nutrition (ISFAN)	Balai Kartini, Jakarta, 3-5 <sup>th</sup> June 2015
<b>2015b</b>	<b>Poppy Arsil</b>	Understanding local food consumers and their motivation: A case study in Padang city	The 3rd International Conference on Adaptive and Intelligent Agroindustry (ICAIA), in Bogor, August 2015	The paper has been selected to be submitted to IEEE Xplore (an online database indexed by Scopus) by the conference committee.
<b>2015c</b>	Tey Yeong Sheng, <b>Poppy Arsil</b> , Mark Brindal, Mad Nasir Shamsudin, Alias radam, Ahmad hanis Izani Abdul hadi, Natasha Rajendran, Ching Ding Lim	A Means-End Chain Approach to Explaining the Adoption of Good Agricultural Practices Certification Schemes: The Case of Malaysian Vegetable Farmers	Journal of Agricultural and environmental ethics, 28(5): 977-990	Publisher: Springer Indexed in Thomson Reuters IF: 0,93
<b>2016</b>	<b>Poppy Arsil</b> , Elton Li, Johan Bruwer, and Graham Lyons	A motivation-based segmentation study of local food in urban Indonesia	Food Quality and Preference Journal	Publisher: Elsevier Indexed in Scopus Under review
<b>2016</b>	<b>Poppy Arsil</b> , Elton Li, Johan Bruwer,	Using means-end chain analysis to reveal consumers' motivation for buying local foods: An exploratory study	Gadjah mada International Journal of Business	Indexed in Scopus



## HAVE BEEN CONDUCTED

## BEING PROPOSED



## STRENGTHENING LOCAL FOOD SYSTEM

Figure 1. The research road map.



**Table 2. Outcomes of the Research**

No	Type of outcome		Indicator		
			CY	CY + 1	CY + 2
1.	Scientific Publication	International	Draft/submitted	Submitted/reviewed	Reviewed or published
		National-Accredited	N	N	N
2.	Invited speaker in scientific forum	International	N	N	N
		National	N	N	N
3.	Keynote speaker in scientific forum	International	N	N	N
		National	N	N	N
4.	Visiting lecturer	International	N	N	Has been conducting
5.	Intellectual Property Right		N	N	N
6.	Intermediate Technology		N	N	N
7.	Model/Prototype/Design/Art/Social Engineering		Draft	product	application
8.	Book (ISBN)		draft	Editing process	Published
9.	Technological Readiness Level (TRL)		3	6	6

N=Nothing

## 2. LITERATURE REVIEW

### 2.1 Local food systems

Feenstra (1997, p.28) stated that “local food systems are rooted in particular places, aim to be economically viable for farmers and consumers, use ecologically sound production and distribution practices and enhance social equity and democracy for all members of the community”. This is echoed by many researchers who believe that the capacity at local food systems can enhance both economic and social values among farms and farmer families as producers and consumers as users especially in the local area (Hinrichs, 2003). The economic gain of local food systems is the economic viability for the small and medium-sized family farm, local food industries, local distributor and local retailers to support local economic growth. For



farmers, transferring market risk and profit among them will give a larger portion of return for what they produce as there are fewer intermediate traders (Feenstra, 1997). By this means, farmers can increase their cash flow and reassert farm control. Then, due to this locally-based effort, opportunities for the growing of local agricultural business will open. It also creates jobs, provides more food choices for consumers, enhances the local tax base and reinvest the money into the local farms and the local food business (Feenstra, 1997). Both producers and consumers get social advantages from local food systems. For producers, the social advantage is the contribution of supplying basic needs and foods for their community. For consumers, it is the knowledge of the authenticity and origin of the foods (Hinrich, 2003). All benefits will not only promote an independent economy, but also enhance a local food security (Wilkins et al., 1996) and lead to sustainable food consumption.

There are some important factors driving consumers to buy or not to buy their local food. They can be food quality, cost, lifestyle, and supporting local economy growth. In term of food quality, local food is believed to be a fresh product due to the fact that it is grown nearby the consumer and distributed with shorter transportation distance. Therefore, it is consumed usually right after harvest (Arsil et al, 2014a; Wilkins et al., 1996; Feagan et al, 2004). In term of cost, the local food prices vary among regions, seasons and government subsidies. The government subsidies can be price support, a tax break, fertilizers and others. In Ontario Canada, although eleven percent customers said that the local food were more expensive than supermarket prices, it would not be a main barrier for them to buy their local food (Feagan et al., 2004). Next, lifestyle is also a leading factor that motivates buyers to purchase their local food such as seeing friends, chatting and enjoying the atmosphere in the farmers markets (Smithers et al., 2008). By being a part of this system, consumers believe that they can support their local farmer families and the development of small business to enhance local economy (Brun et al., 1992; Hinrichs, 2003).

## **2.2 Local food systems in Indonesia**

Food diversification policy began in the early 1960s and was formalised by The Presidential Instruction number 14 in 1974. This regulation focussed on



improving people's daily diet. It was continued by food diversification and nutrition programs sponsored by The Indonesian Agricultural Department (1993-1998). This program was strengthened in 1989 while the Forth development cabinet formed the Ministry of food. The minister launched the slogan "I love Indonesian food" in 1996. In 2001, The food security council was established to focus on the food security issues (Suyono, 2002). Despite the increase of energy and protein consumption on average, the implementation of previous policy was assessed by the Indonesian government as slow in progress (Agricultural Department, 2010, p.5). Previous policies regarding food diversification were unsuccessful because there were some institutional and management problems. The dominant role of government was assumed the main problem resulting in less accurate policy addressed to what the community needs (Agriculture Department, 2010).

It is undoubtedly proven that consumers are the central all marketing activities including food choice decisions. Understanding consumer behavior means understanding how consumers behave. Therefore, the policy can successful be delivered to consumers and to the real market place. In order to understand consumer behaviors, the policy makers must understand what are consumers' motives behind their consumption decisions. In other words, it is necessary to understand the consumer attitudes and behavioural intention to purchase local food (Schütte and Ciarlante, 1988). The Indonesian Government must learn from the lessons from the previous implementation of food diversification policy. At this point, the government must emphasize that consumers have a significant role for the successfull of the local food diversification. What are factors that drive them to purchase their local foods and understanding their behaviour and purchasing intention will be the crucial issues to give better opportunity understanding the core consumers' needs. This study will build a model of local food consumption based on the effect of consumers personal values, need and motives together with the level of consumer knowledge and information. To understand this, it will refer to the famous Theory of Planned Behaviour (TPB) and consumer behaviour towards food consumption (adopted from Vermeir and Verbeke, 2006).



## 2.3 Theoretical framework

The Theory of Planned Behaviour (TPB) is an established theory in relation to attitudes and behaviour that account a consumer decision making process regarding food choices (e.g. Vermeir and Verbeke, 2008). The assumption of TPB is based on "a person's intention to perform (or not to perform) a behaviour is that the most important immediate determinant of that action" (Ajzen 1991, p.117)

The intention has three determinants: 1) attitude towards behaviour, 2) subjective norms and 3) perceived behavioural control (PBC) as can be seen at Figure 2. The attitude represent individual positive or negative evaluation with respect to their behaviour. Subjective norms account the social pressure on individual that motivates him/her to perform or not the behaviour. PBC is perceived individual ability to perform the behaviour (Ajzen, 1991).

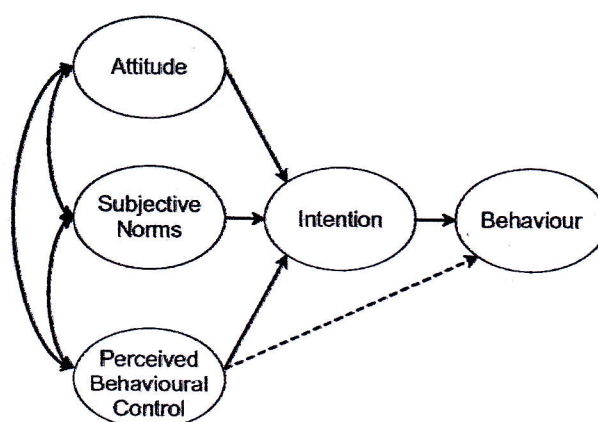


Figure 2. The Theory of Planned Behaviour (Ajzen, 1991).

However the TPB theory has been critically investigated that it is important to consider personal values to understand the purchasing behaviour (Vermeir and Verbeke; 2008, Aertsens et al., 2009). Personal values involved in the food choice involving local food have been summarized in Table 2.

Table 2. Values with respect to local food.

Values	Previous studies
Fun and enjoyment in life	Fun and enjoyment in life (Arsil et al, 2014b), enjoyment/quality of life (Baker et al., 2004), personal enjoyment (Reynolds, 2006), have fun and be happy (Russell et al., 2004), pleasure (Roininen et al., 2006)
Self-respect	Self respect (Russell et al., 2004b), I feel more respect by



	other, give me piece of mind, dignity and self respect (Barrena and Sanchez, 2010)
<b>Security</b>	Security (Baker et al., 2004, Krystallis et al., 2008), creates security (Roininen et al., 2006),
<b>Sense of accomplishment</b>	Sense of accomplishment (Arsil, et al, 2014b), being a better person, quality of life ( Krystallis et al., 2008, Roininen et al., 2006)
<b>Better family relationship</b>	Better family relationship (Arsil et al., 2013), warm relationship (Russell et al., 2004)
<b>Thank God</b>	<b>Thank God (Arsil et al., 2013)</b>
<b>Life satisfaction</b>	Psychological satisfaction (Krystallis et al., 2008)
<b>Health is the most valuable thing in life</b>	<b>Health is the most valuable thing in life (Arsil et al, 2013)</b>

c) Values in bold are unique for Indonesian consumers to their local foods.

An interesting consumer purchasing model has been proposed by Young et al. (2010) with respect to green consumer toward technology products. This model consists of five elements. The first element is consumers' values and knowledge that motivate consumer to purchase a product. The second one is choosing the particular criteria when purchasing a product while the third element is respect to the barriers and facilitators that may enhance or discard consumer during the whole process. The fourth element is the purchasing its self and the last one is the feedback from consumer that influence him/her for the next purchase (Figure 3).

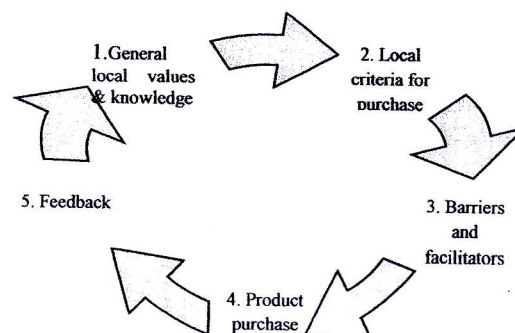


Figure 3. Local consumer purchasing model adopted from "green" consumer purchasing model by Young et al. (2010).

In this study we also employ the model developed by Vermier and Verbeke (2006) that consider TPB and consumer values, motivation and knowledge as stated



by Young et al. (2010). In this model, the personal values, needs and motivation affect the level of consumers' involvement. When consumer has lower involvement in the decision process of a product, this may be affected by low motivation or habitual behaviour. The lack of knowledge and information results the lower of uncertainty and trust of local food benefits attributes. Behavioural control applied through the availability of the product and perceived consumer's effectiveness (Vermeir and Verbeke, 2006).

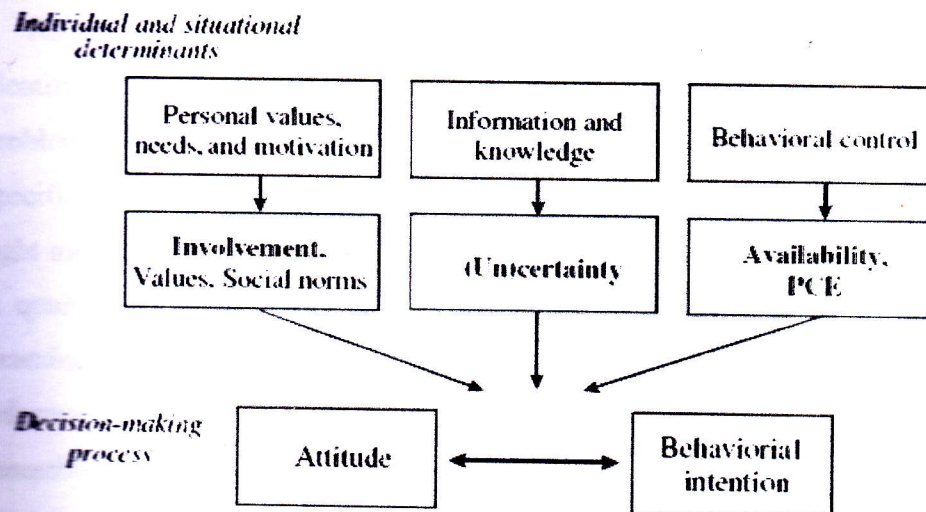


Figure 4. Conceptual framework of consumer behaviour towards food consumption (Vermeir and Verbeke, 2006)

### 3. The objectives of the study

The objectives of this study have been formulated:

1. To develop a conceptual framework of local food consumption.
2. To build a model of local food consumption both in traditional markets and supermarkets.
  - a. To examine the effect of personal values, needs and motivation to the involvement of local food product that lead to consumers' behavioural intention.
  - b. To investigate the level of knowledge and information to the uncertainty and trust of local food positive benefits.
  - c. To examine the consumer's behavioural control and consumers' effectiveness by availability of local food products.



3. To investigate the behavioural and purchasing intention of local rice and vegetables by using the developed model of local food consumption in Malaysia and Indonesia.

## **4. RESEARCH METHODS**

### **4.1 Qualitative and quantitative approaches**

As has been stressed by Daly et al. (1992) that when a particular problem is identified, the researcher must examine different approaches to investigate the problem, to explain different questions, to collect different sets of data and to select specific procedures for analysis. Weinreich (1996) stated that in order to find the right method, researchers had to consider the basic questions they sought to answer. A qualitative approach involves an inductive, exploratory and descriptive study to examine a social phenomenon using 'real' and 'deep' information that focused on information that was rich in words, sentences and symbols. The information was then assembled, semantically grouped, clustered and analyzed. The analyzed words allowed the researcher to compare, contrast and derive the best pattern from them (Wührer and Werani 2001). When very little was known about the topic and the intention of the study is to understand cultural patterns, motivations and attitudes, a qualitative study is a highly appropriate approach in order to explore the research topic and lead to decision making and policies. It is strongly recommended to conduct initially a qualitative phase of research in order to construct overall structure and content of the quantitative phase (Weinreich 1996).

However, when the research requires methodological rigour and accuracy, appropriate data have to be gathered at an appropriate time, and a quantitative approach is necessary in order to form a scientific foundation (Walle 1997). Neuman (2006) explained that a quantitative approach was concerned about issues of data, in the form of numbers. Thus, design, measurement and sampling became important issues since a deductive strategy emphasises the procedure of prior analysis and subsequent data collection. In this approach research participants were selected using a designed sample drawn from a larger population. A standardised questionnaire and statistical procedures are used to test hypotheses. This approach produces quantified



and reliable data in order to ensure the reliability, objectivity and generalizability of the findings (Weinreich 1996). However, the combination of qualitative and quantitative research approaches will allow researchers to employ a more flexible, integrative and holistic technique of data collection in order to answer a complex range of research questions (Powell et al. 2008) in order to gain all information necessary for decision making.

## **4.2 Qualitative research**

The purpose of qualitative research is to gain an understanding of how consumers think. Personal perspectives such as feelings, intentions and thoughts in the past are obtained through qualitative data collection methods. These methods allow researchers to get a rough idea of consumer activities, attitudes and concerns that can not be done by direct observations and measurements (Kumar et al, 2002). Qualitative methods generally generate personal perspectives involving a small sample of a target population by using in-depth interviews with local government and focus group discussions. The qualitative study will be conducted by employing Focus Group Discussion (FGD) involving 4 FGD. The FGD represent urban and rural residents who purchase local food at traditional markets and supermarkets.

FGD 1: urban consumers who shop at traditional markets

FGD 2: urban consumers who shop at supermarkets

FGD 3: rural consumers who shop at traditional markets

FGD 4: rural consumers who shop at supermarkets

The FGD involves five steps: 1). Design and preparation; 2). respondents recruitment; 3). Implementation; 4). Transcription; 5) data analysis. In-depth interview involving local government officers will be also conducted.

## **4.3 Quantitative Research**

The most common technique of the quantitative approach is face-to-face interviews (Wüthrich and Werani 2001). The advantages of face-to face interviews are powerful and flexible in terms of providing facts of respondents' understanding about the question interviewers asked. The target population in this research are local food consumers who live in Indonesia. Multistage purposive sampling will be employed to select respondents. Based on the fact that 59 percent of Indonesian



people live in Java Island, therefore two major ethnic groups will be selected purposively which are the Javanese and Sundanese people. Bandung is selected to represent the urban area for Sundanese people while Tasikmalaya regency is chosen to represent the rural area. Jogjakarta and Banyumas regency are also selected to represent urban and rural of Javenese ethnic group. West Sumatra province is then selected to represent local food consumers outside Java islands. Padang city and Tanah Datar regency are selected to represent urban and rural location for Minangkabau ethnic group. To conclude, this research framework follows our previous studies of local food in Indonesia (Arsil et al., 2014a).

#### **4.4 Key concepts**

In order to conduct the fieldwork, the following definition have been selected and defined:

**Local food**

Fresh food produce that is produced and sold within a regency (Arsil et al., 2014a).

**Local consumers**

Local consumers are the person who eat local food.

**Traditional markets**

Traditional market or wet market are traditionally place that sold fresh food produce.

**Supermarkets**

The large form of the traditional grocery store sold a wide variety of products including fresh food and household product which is self-service shop.

#### **4.5 Variables measured**

The variables measured in this study based on the conceptual frameworks of research includes: personal values, needs and motivation, information and knowledge, behavioral control, regulatory, lifestyle, the desire to buy (Vermeir and Verbeke, 2006) with the demography characteristic as the control variables.

#### **4.6 Data analysis**

This study design uses qualitative and quantitative method that consists of two phases, namely a study 1 and study 2 as can be seen in the figure 5 below.



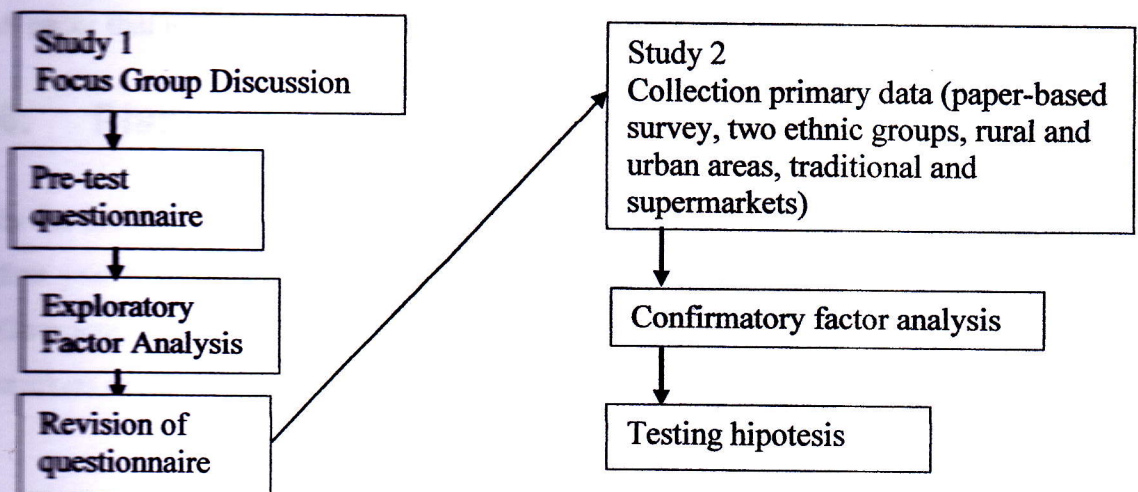


Figure 5. Data analysis for this study.

Exploratory Factor Analysis (EFA) will be used in the early stage to consolidate variables and to produce hypotheses (Tabachnick & Fidell 2007, p. 935). The main purpose is to ascertain the correlation of constructs and covariance amongst a larger set of data. A series of Confirmatory Factor Analyses (CFA) will be conducted on the data to create a structure and test the hypotheses. CFA is a sophisticated and advanced technique of Exploratory Factor Analysis (EFA) performed through Structured Equation Modelling (Pallant, 2007) using AMOS software. Covariance structure analysis will then be carried out to evaluate the measurement of each construct. The fit indexes used in the model are Chi-square value, Goodness-of-fit index (GFI) and adjusted goodness-of-fit index (AGFI), Tucker Lewis index (TLI), Comparative fit index (CFI), Root-mean-square error of approximation (RMSEA), and Standardised root-mean-square residual (SRMR).

## 5. Output of the research

Outputs of the research consist of three products:

1. Monograph has been written entitled "Introduction to Local Food System" Series 1: Definition, Local Food System and Consumer Motivation (80%) (see appendix 1).
2. A paper entitled "DETERMINANTS OF LOCAL FOOD CONSUMPTION AMONG SHOPPERS IN TRADITIONAL MARKETS" has been accepted for International Conference on management, Accounting, Business and Entrepreneurship (ICMABE 2017). The full paper will be published on an SCOPUS/ISI indexed journal (see Appendix 2 for acceptance letter and draft paper). The conference will be held on 16-17 October 2017 in Jakarta.

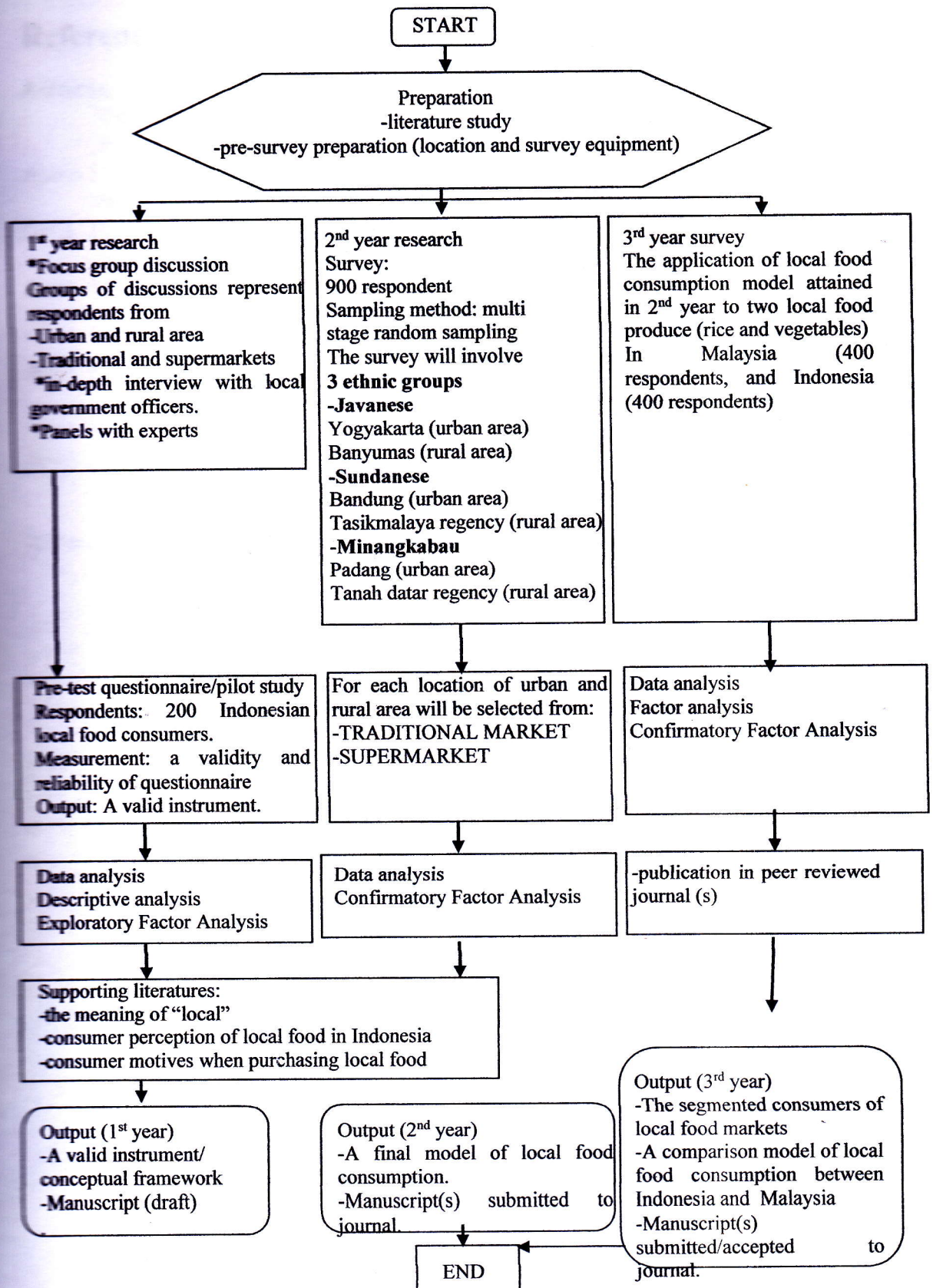


3. A paper that intends to submit to journal has been writing (50%) (see Appendix 3)

## **6. Planning of the second year of research**

In the second year of research we focus on examining the model we validate in the first year to a large population of Indonesia involving three different ethnic groups (Javanese, Sundanese and Minangkabau) who shop in traditional and modern markets as can be seen in Figure 7, the framework of research within 3 years.







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