

**Sustainable Food Consumption: Theory of Planned Behavior – The Case of  
Low Income Group in Penang, Malaysia.**

**By**

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## **ABSTRAK**

Kemiskinan dan kemerosotan quality alam sekitar sangat berkait rapat. Walaupun kemiskinan adalah salah satu penyebab kemerosotan alam sekitar tetapi masalah utama adalah disebabkan oleh pembelian dan penggunaan secara tidak lestari, terutama di negara perindustrian. Ia merupakan sesuatu yang sangat membimbangkan. Pengguna berpendapatan rendah merangkumi dua pertiga daripada populasi dunia dan mempunyai kuasa membeli kira-kira sebanyak USD 5 trillion.

Kajian ini cuba untuk mengenalpasti factor yang memupuk cara pembelian makanan lestari dikalangan penduduk berpendapatan rendah di Pulau Pinang. Banyak kajian telah dijalankan berkaitan pembelian mesra alam tetapi setakat ini belum ada focus terhadap cara pembelian produk makanan lestari dikalangan golongan berpendapatan rendah. Kajian ini akan menyingkap factor tingkah laku, halangan, kebiasaan dan pengetahuan kelestarian alam sekitar dalam menentukan niat untuk membeli barangan makanan lestari atau sihat.

Kajian ini telah membuktikan bahawa tingkah laku positif dan pengetahuan dalam makanan lestari mempunyai hubungan positif terhadap niat untuk membeli barangan makanan lestari dan seperti yang dijangkakan, halangan mempunyai hubungan secara negative. Ini mungkin disebabkan jumlah pendapatan yang rendah dan kuasa membeli yang rendah. Faktor kebiasaan tidak menunjukkan sebarang hubungan dengan niat golongan berpendapatan rendah untuk membeli barang makanan lestari.

## **ABSTRACT**

Poverty and environmental degradation are closely interrelated. While poverty results in certain kinds of environmental stress, the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and imbalances. Low-income consumers account for almost two-thirds of the world's population and have a combined spending power of approximately US\$ 5 trillion.

This research attempts to uncover the factors that cultivate the behavior of low income group in Penang Malaysia towards purchasing sustainable food product. Numerous researches have been conducted to understand green purchasing behavior but non focus on low income group food consumption behavior. The research is understand the consumption behavior of this group and factors that influence food consumption behavior of the low income group in Penang, Malaysia by looking at the attitude, perceive barriers, knowledge in sustainable consumption and personal norm of the group towards sustainable food consumption.

The study has proved that positive attitude and knowledgeable society in sustainable food consumption have significant positive relationship towards intention to purchase sustainable food product and as expected with limited income of the low income group, perceive barrier have negative relation with intention to purchase sustainable food. On the other hand, personal norm have no significant relationship toward sustainable food consumption.



# CHAPTER ONE

## INTRODUCTION.

### 1.1 Introduction

This chapter reviews the background of the sustainable consumption behavior among low income group, and to clearly see the problem occurs due to the sustainable food consumption. It will then review the purpose of the study and objective to be fulfilled. The significance of the study is addressed to provide the purpose of conducting the study.

### 1.2 Background

The Commission on Sustainable Development - also known as CSD - was created in December 1992 to ensure effective follow-up of the 1992 United Nations Conference on Environment and Development (UNCED - also known as the Earth Summit), in Rio de Janeiro, Brazil, where world leaders signed the Framework Convention on Climate Change and the Convention on Biological Diversity; endorsed the Rio Declaration and the Forest Principles; and adopted Agenda 21, a 300-page plan for achieving sustainable development in the 21st century (United Nation Department of Economic and Social Affairs, 2009).

The focus of the Commission on Sustainable Development is on how to preserve the earth for future generation. Considering the consequences of Globalization, earth sustainability is at stake therefore numerous steps in being taken to ensure the sustainability of the planet earth. Waste generating is one of the most common issues discussed and most likely it will get even worse when the developing country become the largest retail market.

United Nation has taken numerous steps to overcome sustainable development issues for example the Marrakech process. The Marrakech process is a global process to support the elaboration of a 10 years Framework of Programs (10FYP) on sustainable consumption and production as called by the WSSD Johannesburg plan of Action. The goal of the process is to assist countries in their effort to green their economies, to help corporation develop greener business models and to encourage consumer to adopt more sustainable lifestyles. (The Marrakech Process)

United Nations Commission on Sustainable Development (UNCSD) defined sustainable consumption and production as the use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations (WBCS, 2008). When talk about sustainable consumption, it involves not only businesses but also other stake holders such as government, communities and or consumers through the use all scarce natural resources efficiently and minimizing wastes. Looking at this, it takes two to tango, first is the business and second is the consumer. The business will create sustainable product through the use of natural resources efficiently and low waste generating and consumer willingness to consume such product plus minimizing waste after using such products.

Many developed nation has actively involved in implementing the sustainable consumption and production (SCP) idea through creation of policies that promote SCP within nations. European Union has developed a strategy in the European Council in June 2006, including task of developing action plan for sustainable production and consumption in Europe. This plan includes

leveraging innovation through leadership and networking; using dynamic performance requirements, sustainability label, eco-design instruments and standardization to result in the production of better products; measures to encourage leaner and cleaner production processes; fostering smarter consumption by means of retailer agreements, market based instrument, value added tax rate, the EU eco label, advertising and green procurement; and working with global market that rewards first mover and provide a level the playing field for producers of sustainable technologies and products. (WBCS, 2008)

Agenda 21, section 1 item 4.1 stated that “Poverty and environmental degradation are closely interrelated. While poverty results in certain kinds of environmental stress, the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and imbalances” (United Nation Department of Economic and Social Affairs, 2009).

Sustainable product normally associated with high quality and expensive product. Price is one of the factor that contribute to the purchasing of sustainable products and for low level income group it may be the most important factor. 52% of consumers were interested in purchasing “earth-sustainable” foods, but did not purchase those foods owing to the perceived barriers of lack of availability, inconvenience, price, habit and trust (Robinson and Smith, 2002). Unskilled workers or normally term as industrial operator comprise a significant number which falls under low level income earner. The market size for this group is significantly large. No doubt, the consumption behavior of this group somehow will have effect of the success of Sustainable

Consumption effort. The behavioral of this group and the factors that influence the demand for such product is important. It will determine the growth and success of sustainability consumption as a whole.

### **1.2.1 The relationship between consumption and developing nation**

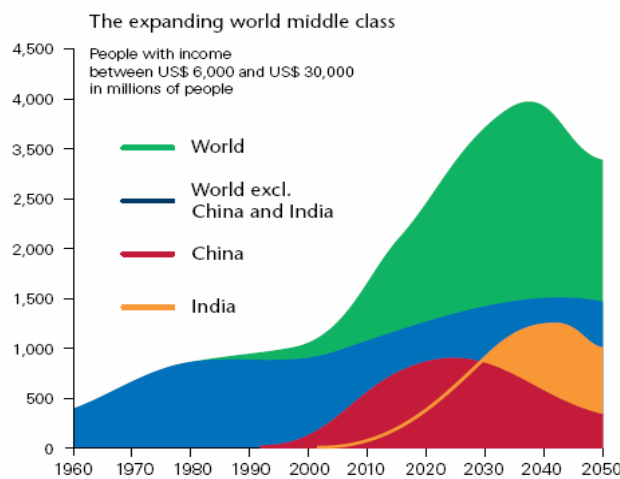
Sustainable consumption patterns in individual consumers are in society's best interest. But for most people in most circumstances, sustainability will conflict with self-interest. Unsustainable products are cheaper, unsustainable means of disposal are less effortful; driving ones' own car is more comfortable than using public transportation, etc. Each of these choices confronts the individual consumer with a social dilemma: the choice between an easy solution that hurts society at large, and a sustainable alternative for which the individual pays a price (Liégeois & Gert, 2004).

Population growth and economic development are driving consumption around the world and will continue to do so as billions of consumers – especially in China, India and other emerging economies – add to the demand for goods and services. The market pressure created by competitive spending and conspicuous consumption turn the affluence of some into the exclusion of many. (WBCS, 2008).

World population is projected to reach 9 billion by 2050, driven largely by growth in developing countries and countries with lower per-capita incomes. Recent studies show that we are already exceeding the Earth's ability to support our lifestyles, and have been doing so for approximately twenty years. (WBCS, 2008)

Low-income consumers account for almost two-thirds of the world's population and have a combined spending power of approximately US\$ 5 trillion. (WBCS, 2008). According to a report

prepares by World Business Counsel of Sustainable Development, world GDP is projected to grow by 325% from 2007 to 2050 and on the average, approximately 60% of world GDP is accounted for by consumer spending on goods and services. As the world GDP improving significantly, the number of middle class consumers worldwide will increase and expected to triple by 2030. The low income group of consumers will become middle class group.



**Figure 1: The Expanding World Middle Class Group ( WBS, 2008)**

Projected rises in the GDP of developing countries are expected to accompany a three-fold increase in the number of middle-income consumers. By 2025 there are expected to be 220 million middle-income consumer households in China alone – approximately four times as many as there were in 2004. 70 million people each year are entering an income bracket equivalent to between US\$ 6,000 and US\$ 30,000 in purchasing power parity terms. This phenomenon may continue for the next twenty years, accelerating to 90 million new middle-income consumers per year by 2030. If this proves to be the case, then 2 billion people will have joined the ranks of the middle class by that date, bringing almost 80% of the world population into the middle-income

bracket. Low-income consumers account for almost two-thirds of the world's population and have a combined spending power of approximately US\$ 5 trillion. (WBCS, 2008)

Four billion people earn less than US\$ 3,000 per year (the equivalent of US\$ 3.35 per day). Low-income consumers have a combined spending power of approximately US\$ 5 trillion. Food tends to dominate low-income household budgets. In Africa, 71% of expenditure comes from low-income consumers, who make up 95% of the population. (WBCS, 2008)

	<b>Population</b>	<b>Market size of the low income segment</b>	<b>Percentage of the region's population</b>	<b>Percentage of the region's purchasing power</b>
<b>Asia including Middle East</b>	2.86 billion	US\$ 3.47 trillion	83%	42%
<b>Eastern Europe</b>	254 million	US\$ 458 billion	64%	36%
<b>Latin America</b>	360 million	US\$ 509 billion	70%	28%
<b>Africa</b>	486 million	US\$ 429 billion	95%	71%

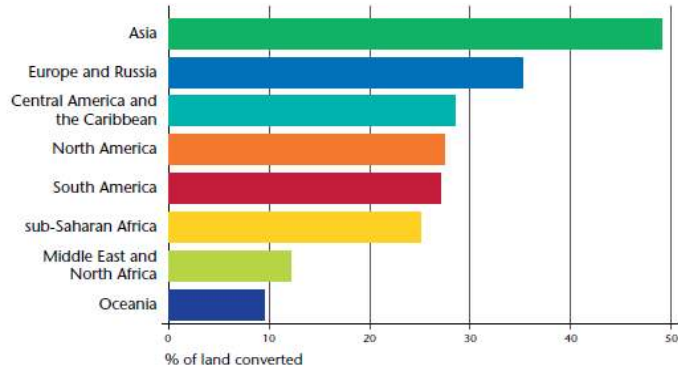
**Table 1: Estimated Low Income Market By Region by WBCSD 2008**

### 1.3 **Research Problem.**

Consumption pattern will determine ecological balance. Consumption just not about purchasing finishes products such as foods or vehicles but it also includes raw materials. According to Trott, (1997) sustainable consummation is ‘the use of goods and services that respond to basic needs and bring a better quality of life while minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations. Therefore un-sustainable consumption impact is not limited to only waste generating but it will affect the whole ecosystem starting from raw material harvesting.

Un-sustainable consumption has caused two-thirds of the Earth’s ecosystem services are in decline. According to the Millennium Ecosystem Assessment (Millennium Assessment, 2005), 60% are being degraded or used unsustainably, including 70% of provisioning and regulating ecosystem services.<sup>13</sup> Ecosystem services enhancements over the past 50 years have primarily involved food production: crops, livestock, and aquaculture (Millennium Assessment, 2005).

10-30% of mammal, bird and amphibian species are currently threatened with extinction. Almost 30% of the Earth’s terrestrial area, comprising 2 billion hectares of forest and 1.5 billion hectares of grassland, has been converted to urban areas or cropland (Figure 2). According to estimates, almost a third of the Earth’s plants and animals have been lost since 1970.<sup>16</sup> Current extinction rates are approximately one hundred times higher than the fossil record. The MA predicts that extinctions could increase further by a factor of ten. (WBCS, 2008)



**Figure 2: Conversion of natural ecosystem to urban areas or cropland by region, 2005. Almost half of Asia’s land area has already been converted. (Earth Trend, 2005)**

According to WWF, humanity’s “ecological footprint” (a measure of the pressure on Earth from human consumption of natural resources) has increased to 125% of global carrying capacity and could rise to 170% by 2040.<sup>19</sup> The most important direct drivers of biodiversity loss and ecosystem service changes are: habitat change (such as land-use changes, physical modification of rivers or water withdrawal from rivers, loss of coral reefs, and damage to sea floors due to trawling), climate change, invasive alien species, overexploitation and pollution. For this reason, economic activity and population density tend to be correlated with the size of the ecological footprint. Figure 7 shows that North America, the EU and the Asia-Pacific region currently consume at rates well beyond their nation.

Low-income consumers account for almost two-thirds of the world’s population and have a combined spending power of approximately US\$ 5 trillion. (WBCS, 2008). Malaysia is considered as developing countries and industrialized with total population of 27.73 million (Department of Statistic Malaysia, 2009). Penang is one of the industrialized states with total population of 1.5 million (Department of Statistic Malaysia, 2009). 2005 data from Penang State



Government shows that 32% of total Penang population is working in manufacturing sector (Penang State Government, 2005). The poverty level in Penang is very small which only comprise of 1.4% (Penang State Government, 2005) but the cost of living in big city increased exponentially. According to Department of Statistic Malaysia 2004 survey, the household expenditure in urban area of Malaysia is approximately RM2280 with foods, utilities and transportation being the highest expenses (Year Book Of Statistic Malaysia 2007, 2008).

Looking at the critical environment situation and the number of low income group through out the globe in general and Malaysia in particular, it is very crucial to tackle the unsustainable consumption behavior of the mentioned low income group. Producing and providing the sustainable product alone is not enough to encourage sustainable consumption but we must understand how such group behaves towards sustainable consumption effort. This research is to understand such behavior and determine the factors that promote such behavior.

#### **1.4 Research Objectives.**

This research attempts to uncover the factors that cultivate the behavior of low income group towards purchasing sustainable food product. Numerous researches have been conducted to understand green purchasing behavior but non focus on low income group food consumption behavior. The objectives of the research are as the following:

- a) The research is interested in the consumption behavior of this group.
- b) The research is trying to understand the factors that influence food consumption behavior of the low income group in Penang, Malaysia by looking at the attitude of the group towards sustainable food consumption.

- c) The research trying to see how perceive barriers, knowledge of sustainable consumption and personal norm in sustainability influences the food consumption behavior.

## 1.5 **Research Questions**

Based on Theory of Planned Behavior, the research is trying to understand the consumption behavior of low income group by addressing the following question

- a. Does attitude, perceive barriers, knowledge of sustainable consumption and personal norm have any relationship toward the sustainable food purchasing behavior?
- b. Does perceived barriers influence sustainable food consumption behavior among the low income group?
- c. Does knowledge in sustainable development and environmental issue influence sustainable food consumption behavior among low income group?
- d. Does a personal norm influence sustainable food consumption behavior among low income group?

## 1.6 **Definition of Key Terms.**

### 1.6.1 **Sustainable consumption**

In 1994, the Oslo Symposium defined sustainable consumption as “The use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of further generations (Ministry of Environment, 1994). United Nations Commission on Sustainable Development (UNCSD) defined sustainable consumption and production as the use of goods and

services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations (WBCS, 2008).

### **1.6.2 Sustainable Food Consumption.**

According to UK Government commission of sustainable development , sustainable food consumption are foods that is safe, healthy and nutritious, for consumers in shops, restaurants, schools, hospitals etc, it can meet the needs of the less well off people (Therivel, 2005). It provides a viable livelihood for farmers, processors and retailers, whose employees enjoy a safe and hygienic working environment whether in the UK or overseas (Therivel, 2005). Respects biophysical and environmental limits in its production and processing, while reducing energy consumption and improving the wider environment; it also respects the highest standards of animal health and welfare, compatible with the production of affordable food for all sectors of society (Therivel, 2005)

### **1.6.3 Low Income Group in Malaysian context**

Low-income Households (LIH) are households that have a total income less than or equal to RM 2,000 per month, which represents 75% of the median income in Malaysia. It is a uniform national number. While some may perceive a monthly household income of RM 2,000 as relatively comfortable, the reality is that the rising cost of living is increasingly squeezing this group's spending power and thereby causing increasing hardship. (PEMANDU, 2010).

According to Department of Statistic Malaysia 2004 survey published by Department of Statistic Malaysia in 2008 publication, the household expenditure in urban area of Malaysia is

approximately RM2280 with foods, utilities and transportation being the highest expenses (Year Book Of Statistic Malaysia 2007, 2008). Therefore, those living in big cities like Penang will need minimum of RM2280 a month to survive. This can be categorized as urban low income group.

### **1.7 Significance of the Study**

Often businesses focus selling their sustainable product exclusively and often the price is not competitive. Most of the sustainable product consumers represent only small number of population. Sustainable product should no longer be specialty products. The study is to investigate the determinant of sustainable retail consumption among low level income group in Penang. This study may represent how this group behaves and what kind of strategy that businesses can use in order to promote sustainable consumption. This research may also become an indicator for Government to react and to construct policy so that sustainable consumption is adopted at every level of society. The findings may yield public policy and marketing recommendations for stimulating sustainable retail consumption among low level income group.

### **1.8 Organization of Remaining Chapters**

Chapter 1: The first chapter being the introduction. It reviews the purpose of the study and the research objectives as a guide for the whole study. The significance of the study is addressed to provide readers the purpose of conducting the study.

Chapter 2: This chapter reviews past literatures which are relative to the study currently undertaken.

Chapter 3: This chapter illustrates the methodology used in the present study. It discusses the design, variables, sample, procedure, measures and data analysis.

## **CHAPTER TWO**

### **Literature Review**

#### **2.1 Introduction**

This chapter will review the past research done on subject matters. It will correlate the facts and finding of previous research and to identify the important variables that are likely to influence this research findings. This chapter comprises of the literature review section, theoretical framework development and finally the hypothesis.

At the end of the chapter, a complete theoretical framework of the research will be constructed and a set of hypothesis for the research will be developed.

#### **2.2 Sustainable Consumption and low income group consumption pattern.**

Past research has been conducted in many aspects of sustainable development and consumption but few have focus on low income group. As mentioned earlier, low income group market is significantly large to be ignored. Low-income consumers have a combined spending power of approximately US\$ 5 trillion. Food tends to dominate low-income household budgets. In Africa, 71% of expenditure comes from low-income consumers, who make up 95% of the population. (WBCS, 2008). The group consumption behavior if not sustainable may cause serious damaged to the environment. Sustainable consumption is based on a decision-making process that takes the consumer's social responsibility into account in addition to individual needs like taste, price, convenience and health (Vermeira & Wim, 2007)

Sustainability is defined as a combination of economic (profit), ecological (planet) and social (people) aspects. The economic aspect has to do with a fair price for both agricultural

entrepreneurs and consumers. The ecological component involves care for the natural environment, including plant and animal production factors, the living environment in general and the quality of life for human beings. The social component finally concerns the matching of production processes with the priorities and needs of the society/citizens (in other words what is social acceptable), as well as an appreciation and support for the primary production sector from the society but also from the government (a sustainability supporting policy). (Vermeira & Wim, 2007)

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts. First is the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and second is the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs. (United Nation, 1987). Later the definition was simplified to development that meets the needs of the present without compromising the ability of future generations to meet their own needs by Sustainable Development Commission (SDCN, 2009).

Consumption starts from the very basic raw material harvesting to finish product. The production of goods and services can be seen as the production of satisfiers, which are consumed by individuals to extract satisfaction (Tania & Sigrid, 2006). Production of goods does not end there, next stage is the consumption. Consumption is a key concept in Economics where Utilitarian ethics provides the philosophical structure for defining its theoretical nature. Consumption is seen as an enjoyable and enabling experience pursued by rational actors. (Flavio, Rie, & Angels, 2007). However over consumed or unsustainable consumption will lead to an

environment catastrophe. The Oxford Commission on Sustainable Consumption argues that increasing material consumption in industrialised countries does not enhance citizens' quality of life and even that the cycle of 'work and spend' results in stress and dissatisfaction. It further argues that current consumption is inequitable, with large and growing differences in income and standard of living both within and between countries. Increasing material consumption is resulting in growing environmental impacts globally, especially associated with energy use and climate change, water consumption and waste, material use and solid waste, and land use. (Michaelis, 2003). The production, trade, and consumption of food products have been identified as crucial contributors to numerous environmental problems (Stern, Dietz, Ruttan, Socolow, & Sweeney, 1997). Current consumption patterns are a principal cause of environmental problems. Yet the assumption that more consumption is necessary for increasing quality of life has, to some extent, limited policy designed to alter consumption patterns (Tania & Sigrid, 2006).

The environmental degradation processes involved throughout the entire life cycle of food products, from production to consumption, contribute to emissions of greenhouse gases, farmland erosion, excess sewage, avoidable waste, and loss of species, to name only a few of the negative consequences (Jungbluth, Tietje, & Scholz, 2000). Understanding consumers is crucial, as there is some evidence that 30–40 percent of environmental degradation has been brought about by the consumption activities of private households (Grunet & Grunet, 1993).

Although consumer interest in sustainable products may be growing; sustainable food markets remain niche markets, attracting consumers with a specific profile. In general, the ethical consumer is a middle-aged person with a higher income, who is above average educated, with a



prestigious occupation and who is well-informed (Iris & Wim, 2006) The low income group consumer consumption pattern has been identified by few researches. Low income group shoppers must consider a number of factors including quantity, price, quality and nutritional differences when selecting food products. Food purchase decisions by the poor often entail real or perceived to meet spending constraints. (Ephraim & Phil, 2003). Selecting less expensive foods can reduce the expenditures. (Ephraim & Phil, 2003). Spending pattern for food at home, housing, health, transportation, and other expenses were significantly different for those higher income, the lower income spend less on mentioned items. (Deanna & Mohamed, 1992). Sustainable product said to be priced at premium level. Recent research shows that 52% of consumers were interested in purchasing “earth-sustainable” foods, but did not purchase those foods owing to the perceived barriers of lack of availability, inconvenience, price, habit and trust. (Vermeira & Wim, 2007) However, personal values and attitudes can have a greater influence to buyers' behavior than the amount of income they have access to. (Mihic & Gordana, 2006). Robinson and Smith (2002) demonstrated that attitudes, perceived behavioral control and subjective norms independently predict purchase intention of sustainable products. Hence, income is one of the major predictor of sustainable consumption. The low income group may have different sustainable consumption pattern.

Past research shows that factors that influence purchasing behaviours of low income group are quantity relative to price, the price of the food itself, quality and nutritional differences. They tend to purchase lower priced products due to income constrain. Research also shows that time constraint is one of the influential factors in purchasing behaviour of low income group.

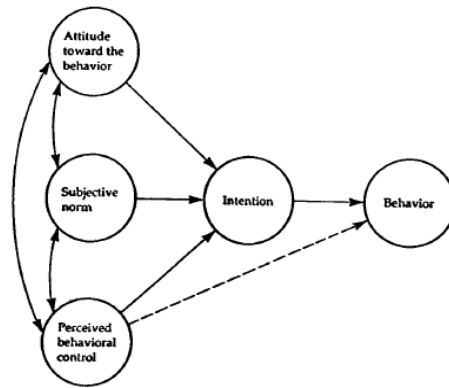
## **2.3 Theoretical Framework and Hypothesis**

Achieving sustainable development includes strategies to achieve economic (profit), social (people), and environmental (planet) goals (Bank, 2003). Roberts (1996) stresses the importance of variables such as relevant attitudes, behavioural, and personality characteristics to identify the possible ethical consumer. A recent study on purchase intentions towards sustainable foods also showed that psychosocial variables like attitudes, beliefs, and subjective norms, more than demographics, independently predict purchase intention for sustainable products (Robinson & Smith, 2002). The theory of planned behaviour model introduced by Azjen (1991) serves as the basis for a conceptual framework to investigate low income group consumer behavioural intention towards sustainable consumption.

### **2.3.1 The theory of planned behavior.**

A recent study on purchase intentions towards sustainable foods also showed that psychosocial variables like attitudes, beliefs, and subjective norms, more than demographics, independently predict purchase intention for sustainable products (Robinson & Smith, 2002). The theory of planned behaviour by Azjen explained the connection between attitudes, subjective norm and perceived behavioural towards the intention of performing behaviour and in this case is the intention to purchase sustainable product.

The theory of planned behaviour postulates three conceptually independent determinants of intention.



**Figure 3: Theory of Planned Behavior Model. (Ajzen, 1991)**

The first is the attitude toward the behaviour and refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question. The second predictor is a social factor termed subjective norm; it refers to the perceived social pressure to perform or not to perform the behaviour. The third antecedent of intention is the degree of perceived behavioural control which, refers to the perceived ease or difficulty of performing the behaviour and it is assumed to reflect past experience as well as anticipated impediments and obstacles. (Ajzen, 1991)

The stronger the intention to engage in behaviour, the more likely should be its performance. (Ajzen, 1991). According to these models, people’s evaluations of, or attitudes toward behavior are determined by their accessible beliefs about the behavior, where a belief is defined as the subjective probability that the behavior will produce a certain outcome. Specifically, the evaluation of each outcome contributes to the attitude in direct proportion to the person’s subjective possibility that the behavior produces the outcome in question (Ajzen, 1991). Individuals’ elaborative thoughts on subjective norms are perceptions on whether they are

expected by their friends, family and the society to perform the recommended behavior. Social influence is measured by evaluation of various social groups. (Ajzen, 1991)

The importance of actual behavioural control is self evident: The resources and opportunities available to a person must to some extent dictate the likelihood of behavioural achievement. Of greater psychological interest than actual control, however, is the perception of behavioural control and its impact on intentions and actions perceived behavioural control refers to people's perception of the ease or difficulty of performing the behaviour of interest (Ajzen, 1991)

## 2.4 Theoretical Framework

Figure 4 shows the theoretical framework for this research. The framework was adapted from Azjen's Theory of Planned Behavior.

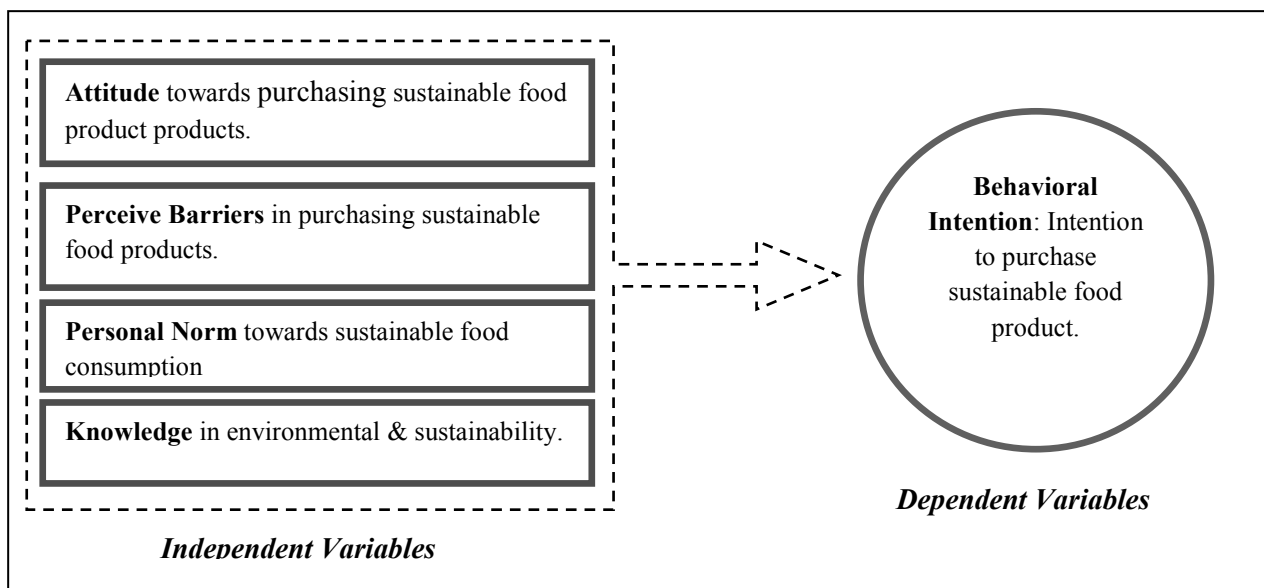


Figure 4: Theoretical Framework

There are four main determinants of behavioural intention with relevance to sustainable food consumption of low income group which are attitude towards purchasing sustainable food

products, perceive barriers in purchasing sustainable food products, knowledge in environmental and sustainability and personal norms towards sustainable food consumption.

#### **2.4.1 Attitude towards purchasing sustainable food product products.**

Attitudes are the most important predictor for all respondents, irrespective of their value levels (Vermeira & Wim, 2007). According to Tarner & Kast (2003), attitudes and beliefs are powerful predictors of sustainable consumption of mentioned in the research as green purchases.

They further argue that positive attitudes toward environmental protection, fair trade, and local production are major facilitators of sustainable consumption. (Grunert and Juhl 1995; Vermeira & Wim, 2007) reported a strong association between environmental attitudes and purchasing frequency in the sense that the more environmentally concerned an individual is, the more likely s/he is to buy organic food. As stated by McCarty and Shrum (2001), 'when a consumer acts pro-environmentally the cost for the individual is immediate, while the benefit is at best long-term or even not visible'. (Tilikidou I. , 2005). Consumers claim to pay attention to ecological packaging, the origin of the food products, or the absence of genetically modified organisms, and regularly buy sustainable organic food products. They perceive sustainable products to be better with respect to taste, quality, safety, and freshness, and to be more beneficial with respect to human health, the environment, and regional economies (Iris & Wim, 2006)

Ecological products are expensive and hard to find are rather strong; also that a consumer does not feel responsible to pay from his own pocket in order to protect the environment. (Tilikidou I. , 2005) However Tarner and Kast argue that cost does not play an integral role in green purchases. (Tarner & Kast, 2003)

Practice, however, shows that initiatives like sustainable organic food, products free from child labor, legally logged wood, and fair-trade products often have market shares of less than 1% (Iris & Wim, 2006). This is at least partly due to the attitude-behavior gap: attitudes alone are often a poor predictor of behavioral intention or marketplace behavior (Ajzen, 2001). Potential explanations are that price, quality, convenience, and brand familiarity are still the most important decision criteria (Iris & Wim, 2006). Therefore, the following hypothesis is formed.

***H1: There is significant positive relationship between attitudes of low income group and sustainable food consumption.***

#### **2.4.2 Perceive Barriers in purchasing sustainable food products**

Behavioral control refers to the ease or difficulty of obtaining or consuming a specific product. Although the motivation to consume sustainable products is high, it may be impossible to do so because of low availability. This problem is related to the scarcity of local food shops or farmers' markets, which often lack the regularity, and convenience demanded by consumers (Iris & Wim, 2006).

Perceived behavioral control reflects both inner control factors (e.g. self-efficacy) and external perceived difficulty factors (e.g. perceived barriers). ( Sparks et al. 1997; Vermeira & Wim, 2007) Several studies have posited that notions of perceived control or perceived behavioral barriers are additional significant predictors of environmental behavior (Axelrod & Lehman, 1993).

Perceived time barriers restrain one's motivation to buy green products (Turner & Kast, 2003). Organic products are perceived to be better with respect to taste, quality, safety, impact on health

and on the environment, while a more negative attitude is found for the aspects price, appearance, availability and conservation (Vermeira & Wim, 2007). A research shows that 52% of consumers were interested in purchasing “earth-sustainable” foods, but did not purchase those foods owing to the perceived barriers of lack of availability, inconvenience, price, habit and trust (Robinson and Smith, 2002; Vermeira & Wim, 2007). It would be a utopia to expect people who are not able to fulfill their basic needs to buy less and incorporate environmentally friendly criteria in their purchasing choices. (Tilikidou I. , 2005)

Personal (e.g. low perceived consumer effectiveness, or ignorance of sustainable products) as well as contextual or situational (e.g. lack of sustainable products in local retail outlets) factors may inhibit the purchase of sustainable foods (Diamantopoulos et al., 2003; Vermeir and Verbeke, 2006; Vermeira & Wim, 2007). In order to motivate behavioral changes, consumers must be convinced that their behavior has an impact on the environment or will be effective in fighting environmental degradation (Robert, 1996). Therefore, the following hypothesis is formed.

***H2: There is significant negative relationship between Perceive Barriers of low income group in purchasing sustainable food products and sustainable food consumption.***

### **2.4.3 Personal Norm towards sustainable food consumption**

Studies have revealed that a personal norm—a feeling of moral obligation—is a powerful motivator of environmental behavior (Hopper & Nielsen, 1991). Overall, a large body of studies asserts that personal factors are necessary and essential to foster behavioral changes, even though the correspondence between attitudinal variables and behavior is often moderate. Social, economic, or physical environment within which people act also matter and can keep pro-

environmental attitudes from being expressed in action (Black, Stern, & Elworth, 1985). Consumers who are concerned about the environment are more willing to pay a premium for green products (Tarnier & Kast, 2003). It is possible that consumers make an environmentally friendly choice more willingly when other motives such as finance and health are added to their environmental concerns. Arguments have been previously made that consumers are most likely to adopt any type of pro-environmental behaviors where cost and/or inconvenience are minimized (Tilikidou I. , 2005). A consumer survey by Mainieri et al. (1997) clearly supports the suggestion that specific consumer beliefs predict environmentally friendly consumer behavior more accurately than does general environmental concern. (Mainier, Barnett, Valdero, Unipan, & Oskamp, 1997).

Nevertheless, other findings provide little evidence that differences in social status and income account for behavioral differences. (Tarnier & Kast, 2003). No significant association between personal norms and green food purchases. (Tarnier & Kast, 2003).

Personal norm also most lightly influenced by the value a person carries which may come or developed by cultural or religious value. Human values are referred to as relatively stable beliefs about the personal or social desirability of certain behaviours and modes of existence. Values express the goals/needs that motivate people and appropriate ways to attain these goals/needs. Values can play an important role in the consumer decision process, like product choice and brand choice (Iris & Wim, 2006) numerous studies have linked ethical or sustainable behaviour to personal values. (Iris & Wim, 2006). Religious values for instance may influence the behavioural towards certain action for example the intention to purchase sustainable product. It