

EXPENDITURE PATTERNS OF THAI ADOLESCENT

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ผู้อนุญาตและผู้รับอนุญาตไม่สามารถโอนสิทธิและหรือหน้าที่ ความรับผิดชอบของตนตามสัญญาฉบับนี้ให้แก่บุคคลภายนอกได้ เว้นแต่จะได้รับความยินยอมเป็นลายลักษณ์อักษรจากอีกฝ่ายก่อน

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ABSTRACT

Title of Dissertation	Expenditure Patterns of Thai Adolescent
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This study covered the expenditure patterns of Thai adolescents in relation to their gender, age-range (early and late adolescents), and source of income. Furthermore, the study also aimed to research factors influencing Thai adolescents' expenditure by considering associated family, social or cultural criteria, coupled with the personal characteristics of the target group.

The targeted population segment of the study was adolescents aged from 14 – 22 years who were studying in metropolitan Bangkok (excluding surrounding areas). The sampling frame was based on data from 2005 supplied by the Ministry of Education. By using a two-stage stratified sampling method it resulted in 800 samples, 400 of which were male adolescents (150 early adolescents and 250 late adolescents) and 400 female adolescents (193 early adolescents and 207 late adolescents). They liked purchasing 19 different types of products or consumer items which were categorized by means of factor analysis and resulted in the classification into six components: (1) grooming supplies; (2) recreational goods; (3) gift-giving and donation; (4) luxury goods; (5) goods deemed as daily necessities; (6) education-related products.

The adolescents' expenditure was significantly different between genders, age-ranges, and income sources. Male adolescents' expenditures were averaging

approximately 5,867 baht per month, which was higher than those of their female counterparts who were averaging approximately 4,788 baht per month, based on spending on recreational, luxury and daily necessity goods. When considering each type of item it was found that male adolescents spent more than females on visits to the cinema, sporting equipment, multimedia equipment, entertainment centers, tourist attractions, residential rent and daily food. On the other hand, female adolescents spent more than males on cosmetics, cosmetic treatment in beauty salons, and gift-giving to friends. The products where both of them did not show significantly different expenditure were clothing and personal ornamental items, shoes, concert attendance, gift-giving to parents, donations, mobile phones, the internet service, books for entertainment, transport to educational institutes, textbooks and educational equipment. These goods reflected the Thai adolescents' interests and preferences.

Early adolescents had average total expenditures of 3,529 baht per month, less than the group of late adolescents which averaged 5,328 baht per month. The former spent less on each item category, except recreational goods. When considering each type of product it was found that early adolescents spent more than late adolescents on concert attendances, watching movies, sports, multi-media, gift-giving to parents, mobile phones, the internet and books for recreational reading.

Regarding the monetary allocation for purchases, it was found that Thai adolescents allocated the highest amount for goods considered daily necessities, followed by school supplies, grooming items, luxury goods, gift-giving and donations, and recreational goods respectively.

Factors influencing adolescents' total expenditure were the adolescent's personal characteristics, educational criteria, their incomes, the money available from credit card(s) (if available) and the individual's family income. Other factors did not have any significant influence on their total expenditure.

In the future there will exist a proportionally more dependent population. Therefore today's adolescents should be prepared in advance for those conditions. In order to achieve this aim it is absolutely necessary that family and educational institutions, along with state agencies, cooperate to teach, train, and develop the adolescents' awareness of how to spend and create savings properly and in accordance with their incomes and to display proper purchasing behavior.

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CHAPTER 1

INTRODUCTION

1.1 Statement of the Problem

At present, adolescents are exposed to many risky situations from social and economic structural change, rapid scientific and technological development, natural resource depletion and environmental deterioration, global warming, natural disasters etc. All these will lead to a decrease in food production for the human population, leading to an increase in cost of living expenses at a greater rate in the future than at present. If adolescents know how to adequately and appropriately manage their financial and – diminishing - natural resources, know how to properly allocate the income received from family, work or other sources, then it will be a good basis for the future management of a wider range of issues - including their families and society as a whole.

Adolescent development is important and absolutely necessary. Aristotle pointed out that adolescent development should commence before childhood. Factors influencing adolescent development consist of four aspects, namely history, economics, society and culture, which should all be viewed and treated as inter-related (Santrock, 1998: 17). This study on adolescent expenses is an economic issue which is related to the other three issues mentioned above.

The third National Economic and Social Development Plan (1972-1976) was the first to mention social planning and pronounce a population policy, but it was only a quantitative consideration concerning the intention to decrease the rate of population growth. The period of the fourth Plan (1977-1981) to the sixth Plan (1987-1991) stressed only economic development due to the economic crisis prevailing at the time. The subsequent seventh Plan (1992-1996) began to recognize the significance of the Sustainable Development planning by emphasizing the balance between economic growth, income distribution, human resource development, quality of life and the

environment. The eighth Plan (1997-2001) and the ninth Plan (2002-2006) began to adjust the development concept from the previous emphasis on economic growth to emphasizing human-centered development. It used economic development as a tool to develop the population to leading a content and happy life and to an overall better quality of life. More importantly, though, the ninth Plan still pursued the philosophy of economic sufficiency which aimed to create sustainable development and the happiness of all Thai people.

The current tenth Plan (2007-2011) emphasizes practices based on the philosophy of economic sufficiency – similar to the ninth Plan which emphasized humans as the centre of development. The tenth Plan, however, has adjusted the context of development and the direction of the country's development by setting a strategic framework for adjusting the economic and social structure within five years, involving changes in economic development in five different aspects (National Economic and Social Development Board, 2006: 47-51):

1. The polarization and block consolidation of the world's economic and financial structures cause fiercer commercial competition through the emergence of the so-called "Asian century" in which China and India are new important drivers of the world economy. Thailand must therefore place increasing emphasis on investment in human resources as well as scientific and technological development.

2. Technological Progress. Since Thailand is still weak in this aspect, the advancement in nanotechnology and biotechnology will contribute to a reduction in natural resource consumption.

3. Social and Population Structure Change. The population structure - which is moving towards an ageing society – will result in high dependency levels of the elderly population so that all age ranges of the Thai population need to be prepared.

4. Environmental Change. Global warming and highly variable climatic conditions result in droughts and floods, causing higher rates of species extinction and an increase in the demand of energy in the country, which leads to negative outcomes for the environment.

5. The behavioral change in consumption, health care trends, and naturalism all help people to increasingly become aware of the importance of natural resource and environmental protection.

The tenth Plan aims to develop human resources and Thai society, and covers three aspects: to develop the Thai population's awareness to use knowledge, enhance both their physical and mental well-being, and encourage them to live together in a peaceful, harmonious society.

At present Thai people are facing values, moral standards, as well as a behavioral crisis as consequence of the influx of foreign culture into the country, whilst Thai people - especially children and adolescents - are incapable of filtering and choosing appropriate culture. Social institutions such as the family unit, religion and educational institutions, have decreasing roles in cultivating moral standards and ethics, and developing the full potential of the Thai people. The divorce rate of married Thai couples rose from 4.4 couples per one thousand families in 2001 to 5.0 couples per one thousand families in 2000 (National Economic and Social Development Board, 2006: 47-50). This study has linked population and social development tendencies to consumption behavior. Since the population is moving towards an ageing society, it signifies that today's adolescents, who will be adults and suppliers of manpower in the future, will have to shoulder the burden of a growing number of dependants (children and elderly). When studying the quantitative proportions of the population, it was found that all over the kingdom the child population has been decreasing, which will, as a result, lead to a decreasing proportion of productive manpower. In 2025 productive manpower will represent only 62.1% of the total population (Kua Wongboonsin, 2004b: 1-2) in addition to a projected change in consumer behavior due to the influence of free trade agreements and the emergence of increasing cultural diversity.

Adolescents are fundamental to family building. Families, in turn, are fundamental units of nation-based societies as a whole. Consumption is fundamental in building sustainable economic growth and the development of a country because consumption is related to investment, employment, and the state's taxation base. In the future the proportion of the child population (0-14 years old) is likely to decrease from 23.0% in 2005 to 16.0% in 2025. The projected scenario of the population of Thailand between 2005-2025 indicates that the total fertility rate (average number of children a woman has during her entire fertility period) of a woman in Bangkok is bound to decrease from 1.42 in 2005 to 1.24 in 2025 (Institute for Population and

Social Research, 2006: 4-8). As the family structure begins to change, as mentioned above, the study on “Expenditure Patterns of Thai Adolescents” becomes important and relevant because adolescents’ spending is certain to be an indicator of Thai adolescents’ consumer behavior, both now and in the future. Furthermore, it is also a mirror reflecting the expenses, socialization and the parents’ resource management within the family unit and will have an effect on planning and managing adolescent consumer product manufacturing.

National Statistics office classifies a child as 14 years old or younger, and an adolescent as a person between 15-24 years of age. But in psychological research on physical change of adolescents since the time of Aristotle, adolescence can be divided into three periods (Pantip Pekanunt Siriwanbus, 2002: 118) as follows:

1. Puberty from 11-14 years of age
2. Early adolescence from 13-17 years of age
3. Late adolescence from 17-20 years of age.

This study is focused only on adolescents between 14-22 years of age who are studying in educational institutions in metropolitan Bangkok. They are divided into two groups: early adolescents between 14-17 years old and late adolescents between 18-22 years old. Psychological studies have found that the spending-related decision-making of adolescents of different age ranges has different characteristics due to physical changes affecting their mentality (Santrock, 1998: 22, 2007: 15-16). This, in turn, determines decision-making as to spending choices. Marketing research has found that adolescents often decide to buy products according to personal satisfaction criteria rather than rational consideration. They also have, it was found, a very strong influence on families’ decision in buying products, especially in their parents’ purchasing decisions. A study by Stipp (1993: 54), Ying (2003: 375-376) and McDougall and Chantrey (2004: 14-15) has found that when buying merchandise for children parents are less reasonable and rational in making decisions, which means that adolescents, in effect, have even stronger buying power than the actual direct financial means they earn or are given access to.

Apart from the age factor resulting in different spending patterns (McNeal, 1990: 36-39), family and social factors as well as rapid technological change probably also have an effect on adolescents’ spending behavior. Careful spending is an

important basis for financial management and solid financial responsibility in the future when an adolescent earns a living on his or her own (Danes, 1993 and Danes and Dunrud, 1993 quoted in Alhabeeb, 1996: 123-132). Adolescents set trends in production and manufacturing which influence all others of any age range (Zollo, 1995: 24-25). An important aspect of adolescent spending is that it is an important cost to, and responsibility of, the family unit. For example, children's and adolescents' spending in China during the past ten years (1990-1999) caused 85% of urban families to have a higher spending proportion because children had a higher average consumption by 1/3 or more than the family's income (Ying, 2003: 373-379).

The study on expenditure patterns of adolescents - which is a social and economic phenomenon - has become an interesting subject in every society (Ying, 2003: 379). Even though studies in this field are not new in western societies, they have not been widely conducted either in western or eastern societies. Especially in Thai society data collection on adolescent spending has not been done systematically and continuously so that it is impossible to conduct a comparative study with previous data. This stands in contrast to western societies where data has been collected systematically and continuously. Only very few studies in this area have been conducted within Thai society. Most research on adolescents is concerned with adolescent problems such as drug abuse, juvenile delinquency, sexual issues etc.

The study on expenditure patterns of Thai adolescents (in metropolitan Bangkok) is therefore an interesting and highly relevant issue. Projected structural change in the family unit is evident already with the number of single child families on the rise. Increasingly children tend to be the focus of interest and targeted as highly relevant within most families' spending pattern (Meeks, 1998: 135; Ying, 2003: 373-379). Studies on this phenomenon are still something new to Thai society; they are different and distinct from the decrease in the number of studies on fertility, children as cost factors within a household, or the children's future role in the supply of productive manpower within society, etc.

Research on the spending habits of the elderly is an interesting subject both in Thailand and abroad because it relates to state financial and budgetary planning. Whereas the study on adolescents' spending does not attract sufficient interest and is not much debated despite adolescents being a population group which is still unable

to act responsibly by themselves and are dependent on an income from their family (especially in Thai society), most adolescents are dependent on money from their families. The author believes that a study on the “Expenditure Patterns of Thai adolescents” is both necessary and important as a preparation to deal with a projected ageing population and society and future family structural change. Furthermore, research on this issue is relevant to the tenth Plan concerning behavioral change in consumption for the country’s sustainable development. If adolescents spend money improperly, it may lead to other social problems such as crime at all levels, prostitution or improper sexual conduct, etc. Because adolescent spending behavior exerts an influence on the whole family, society and country - as mentioned above - the study’s findings might well be employed as important guidelines and references in assessing the development of adolescents in the context of economic parameters, especially when adolescents progress to adulthood and develop a more complex understanding of the value of monetary means and spending choices and decisions.

1.2 Research Objectives

The objectives of the study on “Expenditure Patterns of Thai Adolescents” can be divided into four categories as follows:

1.2.1 Study on the characteristics of Thai adolescents

1.2.2 Comparative study on expenditure patterns of male and female adolescents by grouping them into early adolescence (14-17 years old) and late adolescence (18-22 years old)

1.2.3 Analyze the adolescents’ income management/allocation for their spending

1.2.4 Study-related factors influencing Thai adolescents’ spending and the effect of their spending on themselves, their families and society as a whole.

1.3 Area of Research

The study has selected a population group of Thai adolescents aged between 14-22 years who study in metropolitan Bangkok (excluding all peripheral areas).

This population group is divided according to their educational level into three strata: secondary school, vocational school and higher education.

The reason to select only adolescents in metropolitan Bangkok as being representative of the Thai adolescent population segment is that they are subject to the influence of environmental and technological change more rapidly and intensively than adolescents in other provinces. The selected age range of between 14-22 years is based on psychologists specializing in adolescent psychology classifying the beginning of an adolescent, so-called “adolescence”, at the age of 10-13 years up to the age of 18-22 years. The author then determined the adolescent group - referred to as “adolescence” - for this study as being between 14 -22 years old.

Secondary data about adolescents has been collated from statistical data from the Ministry of Education (2005a, 2005b). Data to determine relevant characteristics relating to size, structure, age and gender as well as future projections (nationwide) are sourced from the Institute for Population and Social Research, Mahidol University (2005), including projections covering the next twenty years. Further information was sourced from other available research papers, scholarly works, seminars from different agencies, as well as published theses.

1.4 Core Questions Integral to This Research

In this study three essential and integral questions have been formulated as follows:

1.4.1 What are the main characteristics currently defining Thai adolescents, e.g. size, age and gender structure, including their projected change – if any – in future development?

1.4.2 How, and if at all, do expenditure patterns of male and female adolescents, early adolescents and late adolescents differ?

1.4.3 How, and if at all, does the income management related to spending patterns differ between gender, age range and income source in Thai adolescents?

1.4.4 How, and if at all, do factors like family, social and cultural environment and the adolescent's personal characteristics influence their spending patterns?

1.5 The Research's Hypotheses

The hypotheses of the study on "Expenditure Patterns of Thai adolescents" (limited to the metropolitan Bangkok area) are as follows:

1. The spending pattern of adolescents differs considerably with variances in gender, age range and income source.
2. Expenditure patterns of male and female adolescents are significantly different.
3. Expenditure patterns of early and late adolescents are significantly different.
4. Family, social and cultural factors as well as individual characteristics significantly influence their spending in different ways.

On the basis of hypotheses tests, null hypotheses are as follows:

1. The spending pattern of adolescents does not differ considerably with variances in gender, age range and income source.
2. Expenditure patterns of male and female adolescents are not significantly different.
3. Expenditure patterns of early and late adolescents are not significantly different.
4. Family, social and cultural factors as well as individual characteristics do not significantly influence their spending in different ways.

1.6 Anticipated Benefits

1.6.1 To know and understand the expenditure patterns of Thai adolescents and all underlying influencing factors, and, based on the study's findings, to enable future planning of adolescent development in the context of economic parameters, enabling adolescents to develop financial management skills and introduce the aspect of planning for projected expenditures along criteria such as income and responsibility.

1.6.2 For family units with adolescents to understand current adolescent expenditure patterns and to assist in positively influencing and modifying adolescent behavior, leading to the adolescent taking into consideration the overall family expenditure commitments, avoiding unnecessary spending and consumption, and thereby alleviating and reducing any potential financial burden on the family unit, especially during periods of economic hardship (e.g. global recessions).

1.6.3 For educational and social institutions to be aware of trends and future projections in adolescents' spending behavior in order to find ways of preparing educational curricula and to instruct adolescents to realize the pros and cons of spending money; furthermore, to be able to give young people a solid basis to be valued and responsible members of society in the future when they reach adulthood and to - at that stage - display a sound capability of managing their personal financial affairs.

CHAPTER 2

CONCEPTS, THEORIES, AND RELATED RESEARCH

In this chapter, concepts, theories, and research concerning the expenditure patterns of Thai adolescents are divided into four parts: first, concepts and demand function, Herrin's and colleagues' theory, as well as consumer behavior theory; second, the conceptual framework of the study; third, results of related research; fourth, Thai adolescents' consumption behavior and expenditure.

2.1 Concepts and Theories

2.1.1 Demand Function

According to the demand function - based on neoclassical demand theory - determinants of demand consist of incomes, tastes, prices of substitutes and complements, expectations of income or future price levels, and demography. Population growth, for example, tends to cause an increase in the demand for goods and services (Frank, 2000: 49).

In this study the expenditure function (E) is refers to the demand function resulting from adolescents' incomes (I), tastes and preferences (T) and other factors, whilst the market value of goods and services (P), expectations of incomes and future prices (Exp), and population (Pop) are static.

$$E = f(I, T / P, \text{Exp}, \text{Pop})$$

The conceptual framework of consumer demand concerning consumers' decision-making is divided into two concepts: budget constraint and indifference curve. Budget constraint is the item price per unit, and consumers' incomes which enable them to buy goods at a given period of time. While a consumer's preference

between two items, item x and item y, is on indifference curve (IC_1 , IC_2). The consumer's equilibrium occurs when he or she is the most satisfied within the budget constraint, which is a point on consumer demand line, or, in fact, the consumer's purchasing decision. Either there are changes in the prices of goods while incomes remain static, and vice versa, or changes in both factors will result in changes in consumers' expenditure patterns. For example, if the price of item x rises, the buying quantity of the product declines as a result (Schultz, 1981: 65-67) as shown in figure 2.1.

Quantity of Y Demanded per Unit of Time

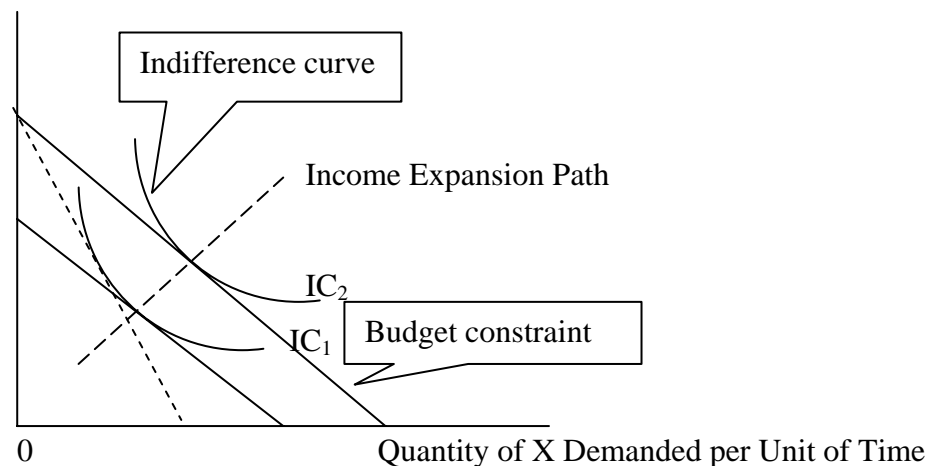


Figure 2.1 Adjustment of Demand to Income and Price Changes

Source: Schultz, 1981: 65-67.

The study on expenditure patterns of Thai adolescents in this research relies on the demand function between utility function - or adolescents' satisfaction with goods and services- and static incomes received from parents or from part-time work, or money given as gifts by parents on special occasions etc., while prices of desired goods and services, as well as factors influencing adolescents' buying decision-making, remain unchanged.

2.1.2 Herrin and Colleagues' Model

Herrin and colleagues' theory on behavioral model (1986) is designed to study the relationship between socio-economics and demography at macro level by means of demographic processes that consist of fertility, mortality and migration, all of which have impacts on demographic outcomes concerning size, age and gender structure, as well as population distribution. The demographic outcomes, in turn, have effects on socio-economic processes in terms of savings, investment, manpower and land uses, consumption of goods and services, public expenditure, as well as international trade and finance. The socio-economic processes determine the socio-economic outcomes in terms of output, income and employment which, in turn, affect demographic outcomes, as shown in figure 2.2.

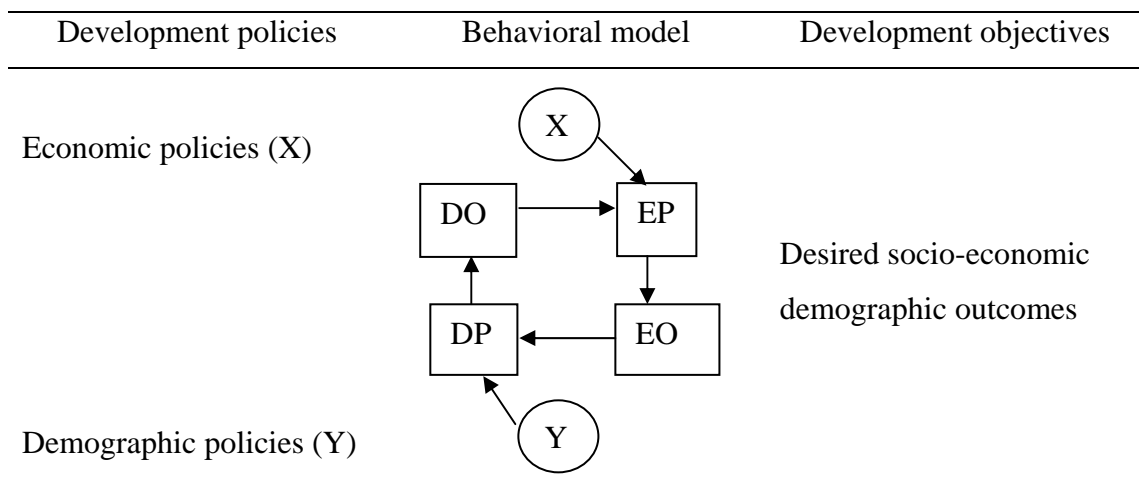


Figure 2.2 Framework for Viewing the Integration of Population and Development Planning at the Macro Level

Source: Herrin et al. 1982: 52.

DO means demographic outcomes consisting of size, age-sex structure and spatial distribution.

EP means socio-economic processes consist of savings or investment, land and labor utilization, consumption of goods and services (e.g. food, housing, health and educational services), public expenditures, and international trade or finance.

EO means socio-economic outcomes consist of income, employment, education status, health or nutrition status, housing or sanitation, and environmental quality.

DP means demographic processes consisting of fertility, mortality and migration.

The author is using this behavioral model as a concept in this study. Expenditure is a socio-economic process resulting from demographic outcomes, which result in socio-economic outcomes, and eventually reflect back to demographic processes. Changes in a population's size, age-sex structure, and population distribution all have effects on Thailand's consumption-related socio-economics. Adolescents' expenditure and savings affect their socio-economic outcomes, their families and Thai society in the future in terms of income, employment and education, including other socio-economic aspects. On the other hand, socio-economic outcomes, in turn, result in demographic processes concerning fertility, mortality, and migration. For example, the decline in the fertility rate due to the population's longer educational period results in later marriage; also, the case of a stronger labor market in urban areas compared to rural areas causes more city-bound migration; and better sanitary conditions and improvements result in a declining mortality rate etc. Expenditure is a socio-economic processes aspect which has effects on other socio-economic outcomes aspects such as income, employment, educational status, and health etc. The socio-economic outcomes can partly develop adolescents to be a qualitative better population segment, which will further affect demographic processes and outcomes.

2.1.3 Consumer Behavior Theory

Consumer behavior theory focuses on the study of consumer activities. Historically, it was a study concerning the behavioral aspect of the consumption of goods and services, i.e. "Why people buy?" More recently, researchers and practitioners have focused on consumption analysis, which refers to why and how people use products in addition to why and how they buy. The consumers' pleasures are similar to the exchange of money: consumers spend money to buy once they are

satisfied with the goods or services on offer. However, it is not exactly similar to money changing hands because there are factors influencing the consumers' decision-making, such as culture, personality, life cycle stages, incomes, attitudes, motivations, feelings, knowledge, ethnicity, family, values, available resources, opinions, past experiences, as well as peer groups (Blackwell, Miniard and Engel, 2006: 4-5). The consumers' decision-making to buy goods and services consists of seven stages:

1. need recognition
2. search for information
3. pre-purchase evaluation of alternatives
4. purchase
5. consumption
6. post-consumption evaluation
7. divestment

The seven stages are shown in figure 2.3

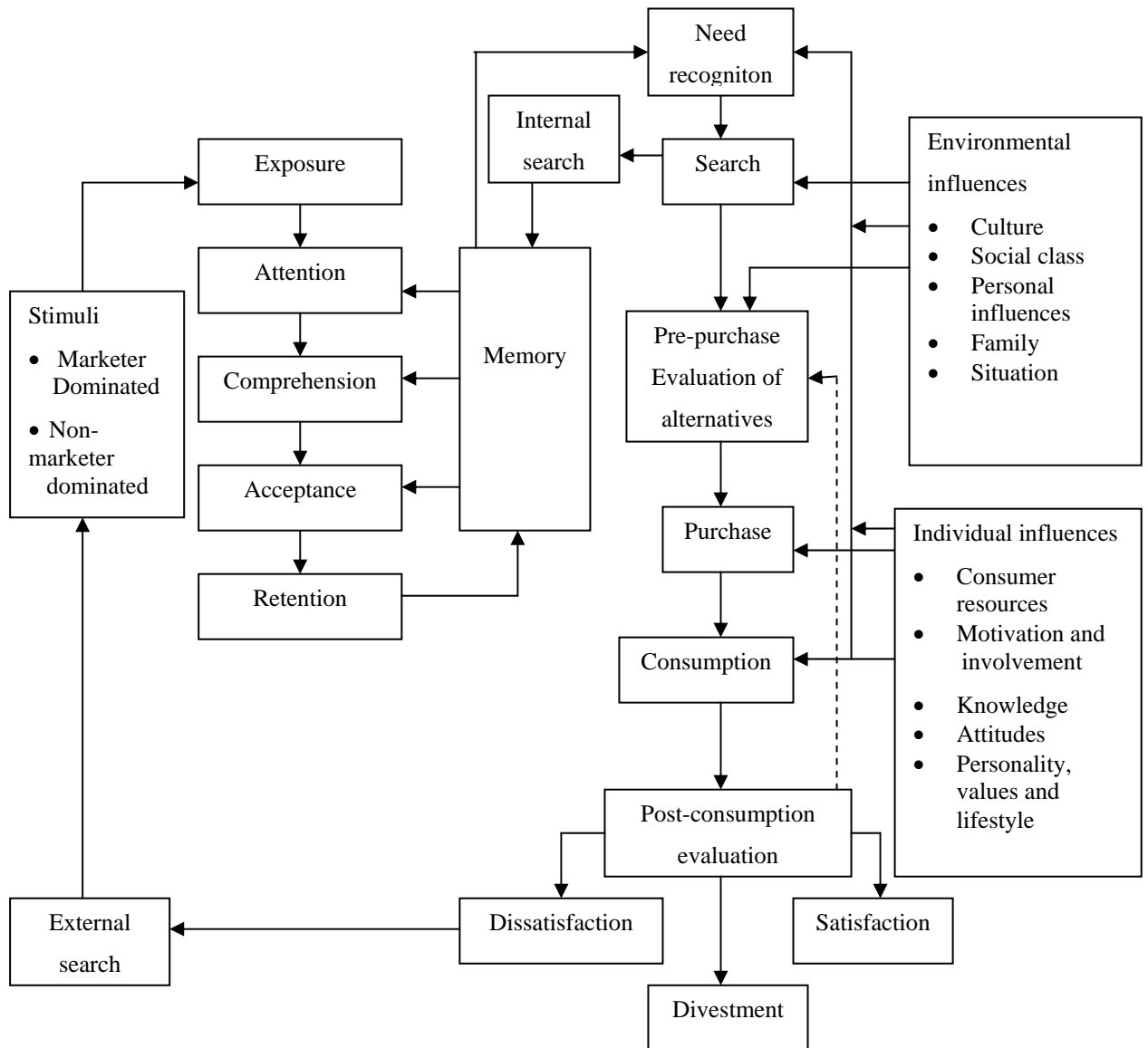


Figure 2.3 How Consumers Make Decisions for Goods and Services

Source: Blackwell et al., 2006: 85.

Apart from these seven stages, before a consumer makes decision to purchase goods or services, there are other influential environmental factors that consist of culture, social class, family, personal influence, and situation behaviors. Personal factors include consumers' resources, motivations, knowledge, attitudes, personality, values, and life style (Blackwell et al., 2006: 85).

There are five person-related differences influencing purchasing behavior patterns (Blackwell et al., 2006: 234-423):

1. Demographics, Psychographics, Values and Personality. This study focuses specifically on demographics and psychographics.

1.1 Demographics means the examination of population growth, changes in consumer age structure, number of immigrants, and population forecasts such as birth rate, natural growth rate, total fertility rate (TFR), and life expectancy. They are studied along with the capacity to purchase goods and services which is an economic aspect (GDP) that has an impact on income-earning capacity.

An increasing number of adolescent consumers will result in increasing consumption, particularly for the first child for whom first quality goods and services such as toys are purchased. In addition, they often result in higher families' expenses.

1.2 Psychographic factors mean id, ego, and superego. Id is an immediate demand to fulfill basic needs. Superego is social or personal norms. Ego is intermediate demand between id and superego. Psychological factors capable to be measured qualitatively consist of: (1) activity, such as shopping in department stores etc., (2) interest, meaning level of excitement, (3) opinions, meaning talking, writing to answering questions, opinions explanations, evaluations, and predictions of what will happen in the future.

2. Consumer resources. Each individual uses three primary resources in making decisions: time, money and data received.

3. Motivation. It may lead to single needs or to multiple needs which are multidirectional, such as the prices of goods, brands etc.

4. Knowledge is information about products, brands, prices, when and where to buy, etc.

5. Attitudes have influence on consumption behavior (shown in figure 2.4)

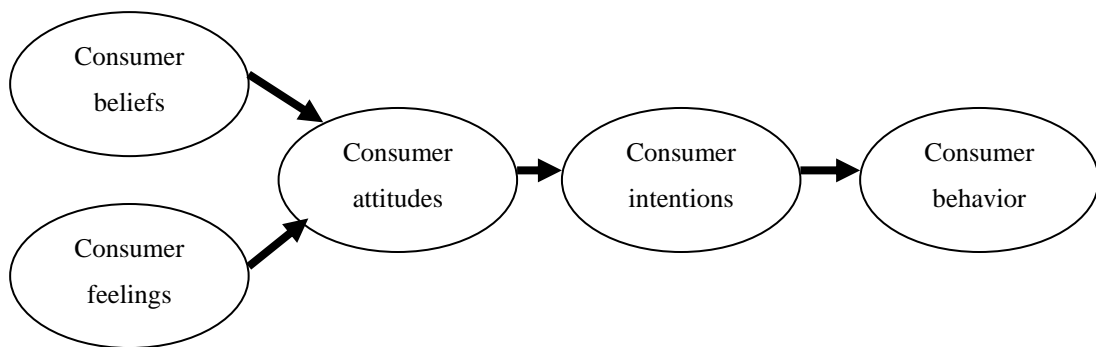


Figure 2.4 The Relationships between Consumer Beliefs, Consumer Feelings, Consumer Attitudes, Consumer Intentions, and Consumer Behavior

Source: Blackwell et al., 2006: 375.

Environmental differences influencing purchase decision-making consist of five factors (Blackwell et al., 2006: 424-565):

1. Culture. Influential cultural factors consist of ethnicity, race, religion and regional or national identity.
2. Social class. The six factors used in analyzing consumers involving social class are occupation, personal performance, interactions, possessions, value orientation, and class consciousness.
3. Family or household has an influence on consumers' buying behavior because the family is the basic unit of consumers' buying and using goods. Children learn about consumption and buying behavior from parents. Consequently, families have influence on children's buying behavior patterns.
4. Group and personal influences consist of three factors: the expectation to be member of the group, or normative influence; the need to be accepted, or value expressive influence; and the inability to individually conduct a valuation of goods, or informational influence.
5. Situational behavior means the situation is subject to potential change. Sometimes it is hard to predict and sometimes research is needed in order to predict.

2.2 Conceptual Framework of the Study

This research uses economic theories concerning adolescents' demand for goods and services. Whether or not adolescents make purchasing decisions depends on satisfaction, willingness to spend and spending capabilities. Variables influencing consumption decision-making, that result in spending decision-making, consist of the adolescents' criteria as well as family and social characteristics. These three group variables are interrelated and result in attitudes and expectation in consumption, and eventually lead to purchasing decision-making as conceptual framework of the study, shown in figure 2.5.

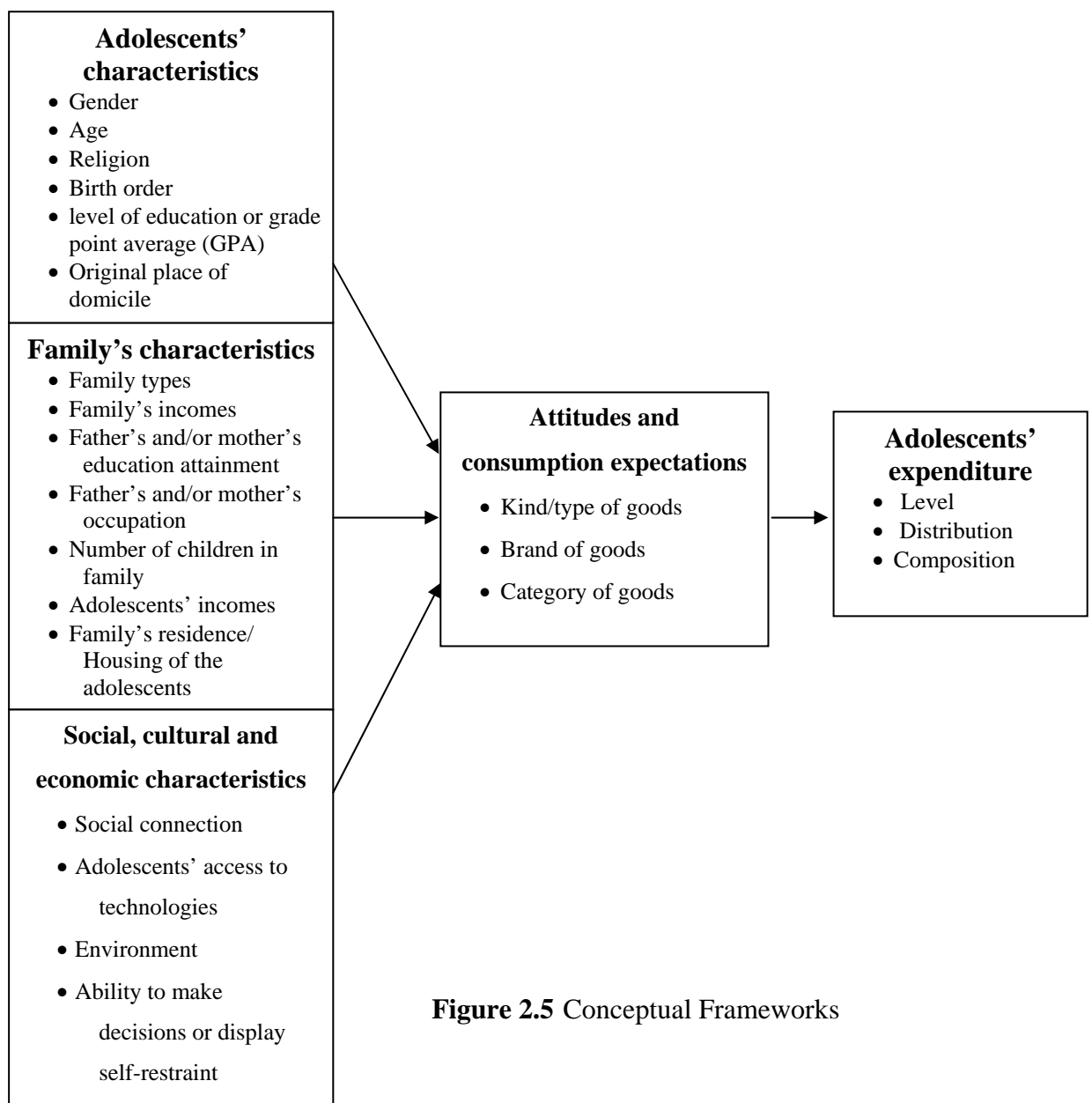


Figure 2.5 Conceptual Frameworks

The conceptual framework in this study can be described as follows:

1. Adolescent' characteristics consisting of gender, age, birth order, educational level or grade point average (GPA), and domicile, which are defined for the study in chapter 3.
2. Family's characteristics consisting of variables defined as follows:
 - 2.1 Family status, meaning adolescent's family with parents living together, separated or other statuses, such as having neither a father nor a mother, etc.
 - 2.2 Family's income, meaning parents' aggregate incomes.
 - 2.3 Father's and/or mother's educational level of achievement, meaning the highest educational level of the father and/or the mother.
 - 2.4 Father's and/or mother's occupation means the occupation of the father and/or mother on the day of interviewing the adolescent by means of a questionnaire. The occupation is categorized into permanent income, liberal occupation with inconsistent income, or others, such as jobless etc.
 - 2.5 Number of children, meaning the number of adolescents' siblings in the families.
 - 2.6 Adolescents' income, meaning the money the adolescents receive from their families or part-time job, whether daily, weekly, monthly, or otherwise.
 - 2.7 Housing of the family means ownership criteria.
 - 2.8 Housing of adolescents, meaning accommodation for which adolescents are not in charge in terms of expenses, such as living with the families, and housing that adolescents have to pay by themselves such as rented housing, apartment/dormitories etc.
3. Social, cultural and economic characteristics
 - 3.1 Social connection means the collective gathering or network contact among adolescents, such as friends around their living quarters, in educational institutions, at the workplace, through the internet, etc.
 - 3.2 Adolescents' access to technologies, meaning the capability to acquire technologies such as television, multimedia, mobile phones, wireless laptops, internet access, other communication apparatuses, etc. How difficult or easy they are able to use those technologies has an effect on adolescents' expenditure patterns.

3.3 Environment, meaning the surrounding environment. In this case, comparative studies on different environments such as the environment in families, schools, workplaces, department stores etc. have been conducted to establish how they influence adolescents, including preferences in each community, race, religion, culture and other environmental aspects.

3.4 Ability to make decisions or display self-restraint. Marketing research has found that most adolescents make their spending decisions according to their satisfaction more than rationality (McDougall and Chantrey, 2004: 15). Therefore factors relating to decision-making or self-restraint could affect adolescents' expenditure patterns.

Adolescents are members of families, and families are parts of society. Consequently, this research studies the relationship between adolescents and families and societies, including other previous research results (to be discussed in topic 2.4). Research studies on adolescents in developed countries have found that at present, social variables have played an increasing role with adolescents, in contrast to the past when families played more important roles with adolescents than society. The author believes that Thai society has social, cultural and economic characteristics that differ from other countries, so the Thai society's individual factors could have an effect on Thai adolescents making spending decisions different from those in other societies. Similarly, factors that influence attitudes and consumption expectations, which lead to adolescents' expenditure decision-making, could be different from other societies as well.

2.3 Related Research

Population projection for Thailand by the Institute for Population and Social Research, Mahidol University, 2005 (1st July), shows that the school-age population aged between 6 to 21 years accounts for 25.26% of the total population. This population group is the country's most important human resource for the future, and one which also has influence over other population groups. Studies in the past on important adolescents' characteristics are as follows:

2.3.1 Adolescence Characteristics

Similar to Aristotle and Plato, Rousseau believed that child and adolescent development was divided into four stages (Santrock, 1998: 8-9):

1. **Infancy.** This age range covers the years from birth to 4 or 5 years old. This is the children's happy period where both physical and emotional development should occur. Hall (1844-1924) also referred to this stage as "infancy".

2. The age range between 5 to 12 years is referred to as "savage". This stage is the most important for a child's development, especially for logical experiences such as playing, sports and games. There should be an emphasis on learning development because it will cease after this stage. Hall (1844-1924) called this stage "childhood".

3. The age bracket called "stage 3" is from 12 to 15 years. During this stage there should be development in rationality and to know how to think. The children's education should be emphasized because it is also the stage of curiosity. In this stage there are developments in aspects of rationality, self-responsibility, and physical maturity. Hall (1844-1924) called this stage "youth".

4. The age range labeled "Stage 4" is between 15 to 20 years. It is the beginning of emotional development when entering into adulthood. Hall (1844-1924) called this stage "adolescence".

This research study focuses on young people in the "adolescence" stage which is the transitional period from childhood to adulthood. Their development during adolescence must be monitored with great care because an adolescent's characteristics as a whole cannot be explained through a single development model (Feldman and Elliott, 1990 quoted in Santrock, 1998: 17). Nowadays, historical, economic, social and cultural factors have a strong influence on adolescent development. The adolescent development processes must therefore consist of three aspects: biological, cognitive and socio-emotional. The three changes are interrelated, as shown in figure 2.6 (Santrock, 1998: 22, 2007: 15-16).

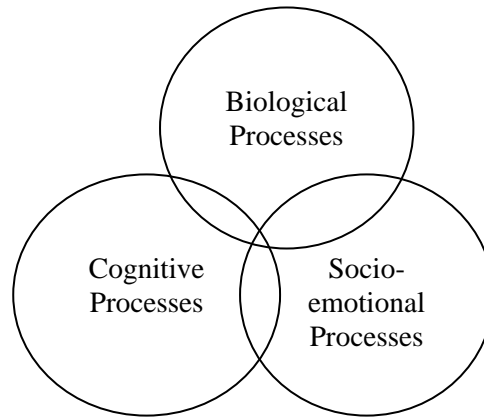


Figure 2.6 Processes in Development of Adolescence

Source: Santrock, 1998: 22.

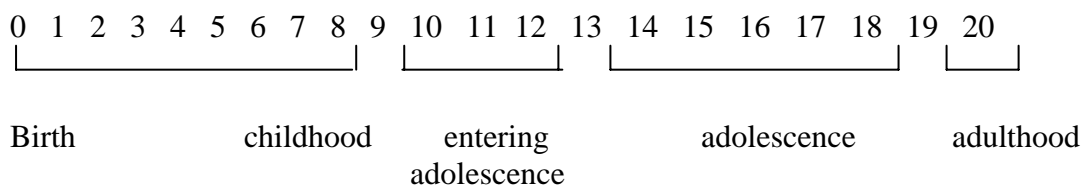
Biological processes incorporate physical change such as genes, height, weight, physical structure etc. which all have effects on cognitive processes. The individuals' changes in thinking, intelligence, language skill, memory and imagination, and ability to solve mathematical problems have effects on adolescents' cognitive development. On the other hand, socio-emotional processes consist of an individual's emotional change, self-independence, and relations with other people or the ability to socially interact and relate (figure 2.6). The study on adolescents' expenditure is to study the behavior leading to adolescent development of economic consciousness, their ability to allocate a received income properly, to recognize the value of money and to be capable of analysis before spending. It is a complex study because it involves various domains, i.e. the adolescents' characteristics, families, society, culture and economics. Studies in the U.S.A. have found that many adolescents nowadays have not attained their full effective development; they are taken care of the least because the government usually emphasizes on older age group which shows the generational inequality.

Hall (1844-1924), the father of adolescence science, said that factors related to adolescent development were genetically controlled which determined physiological factors. During infancy and childhood periods environmental factors did not have

much influence on them. But at present, environmental conditions change rapidly and influence adolescent development more than in the past. Hall divided childhood to adolescence into four stages: infancy, childhood, youth and adolescence as mentioned above. Adolescence in the U.S.A. is between 12 to 23 years of age during which the first age range is between 10 to 13 years and ends at about 18 to 22 years of age. Prominent characteristics of adolescence are unstable thinking, feeling and behavior, for example occasionally displayed conceit, humility, good-temptation, happiness-sadness, alone-companionship etc (Santrock,1998: 9-10). Mead(1928), an anthropologist, said that adolescents’ fundamental nature was not biological but socio-cultural. Some scientists such as Elder (1975), Fasick (1994), Lapsley, Ennigh and Serlin (1985) said that important dimensions of adolescence were schools, work and economics (Santrock, 1998: 10-11). Therefore, research concerning adolescents has to study the influence of ethical, cultural, gender, socio-economic, and age influences as well as lifestyle differences (Santrock, 1998: 16). Adolescent development, therefore, must comprise three processes: physical, mental and social.

When physical changes are considered, adolescence can be divided into three stages: 1. Puberty between 11 to 14 years; 2. Early adolescence between 13 to 17 years; 3. Late adolescence between 17 to 20 years (Panthip Peganant Siriwanbut, 2545: 118-121) as shown in 2.7

Female



Male

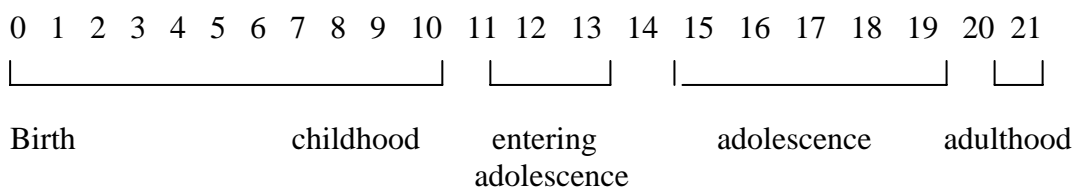


Figure 2.7 Overlap between Childhood, Adolescence, and Age Entering into Adulthood

Source: Panthip Peganant Siriwanbut, 2545: 119.

1. Pubescence is the period the children leave childhood to enter into adolescence which can be divided into three stages: (1) Prepubescent stage. It is the beginning of physical changes on adolescents' bodies. Secondary sex characteristics begin to be visible but the reproductive system is not yet developed; (2) Pubescent stage. During this stage the reproductive cells develop in both males and females but their physical body has not yet fully changed; (3) Post pubescent stage. During this stage the reproductive system can completely perform its function. Sexual characteristics are explicitly different.

2. Early adolescence is the stage between 13 to 17 years which is the development period succeeding the post pubescent period. Females' height increases at a different pace depending on environmental and genetic conditions. Generally, females attain their full height during this period and they usually weigh more than males. Their bodies are nearly fully grown to an adult stage. Even though the reproductive system can perform its functions, it is not yet fully developed. The rapid changes in their bodies result in self-awareness, and acceptance of other people, which are important problems of adolescents' aged between 12 to 17 years (Panthip Peganant Siriwanbut, 2545: 165).

3. Late adolescence is the stage from 16 to 20 years during which physical development of both genders reaches its full development. Adolescents aged between 17 to 21 years begin to take part in society as fully responsible members and begin to operate with a clear commitment (Panthip Peganant Siriwanbut, 2545: 166).

An appropriate model concerning adolescents' influences on consumption has divided adolescents into three groups as follows (Young, 2004: 22-24):

1. Middle childhood. This stage begins at 6 years of age. Adolescents at this stage begin to survey their environment. They begin to be logical. This is the early stage of social intelligence, being socialized by mothers. At 7 years of age their behavior begins to change from having a humorous temperament to comprehending sarcasm and satire. At 9 years of age they begin to have a sense of justice and righteousness as well as develop an explanatory ability (Young, 2004: 24-26).

The differences in age have an effect on adolescents' purchasing decision-making. Middle childhood is the stage during which there are mental and thinking

developments: they begin to understand and perceive advertising information. They pay attention to the concept of the bargain and display bargaining behavior. An important factor for buying decision-making is language skill. Adolescents aged between 6 to 7 years old can have a vocabulary base of as much as 10,000 words. Male adolescents at this age have social relationships, while the females have relational aggression (Simmons, 2002 quoted in Young, 2004: 26).

2. Tweens are between 8 to 13 years old. It is the emotional development stage during which adolescents are less independent and are likely to follow their peers, which may cause trouble if their behavior is misunderstood. For example, an adolescent wants to buy brand clothes in order to avoid being regarded as coming from a poor family. Their entering adolescence is evident from physical changes taking place (menstruation for females) which affect changes in behavior. Adolescents at this stage are sensitive to these changes (Young, 2004: 26-28).

3. Late adolescence, so-called “Youth”, is from 12 to 23 years old. This is the stage during which adolescents begin to think: “How am I doing? Who am I really? What do I want from my life?” These three questions reveal that during this period adolescents are confused within themselves which makes them think, feel and do things in an unsteady manner (Young, 2004: 28)

Age stages have effects on different buying behaviors (Alhabeeb, 1996: 123-132). For example, the expenditures of adolescents aged between 7 to 15 years in England (1998-1999) had an average expenditure of 11.14 pounds/week, totaling about 651 million pounds/week nation-wide, accounting for 0.5% of GDP. Adolescents between 7 to 9 years old and 13 to 15 years old had an average expenditure of 7.28 pounds and 16.06 pounds/week respectively. Girls had an average expenditure 12% higher than boys. In short, adolescents buy more goods as they get older, with the exception of sweets where different age brackets do not have a significant impact on this type of expenditure. At the same time the allocation of money for the purchase of toys decreases accordingly with increasing age (Ferrell and Shield, 2005: 1-23).

In the U.S.A. (1989) adolescents’ expenditure accounted for more than 6,000 million dollars; a child at 5 years old, 6 years old and 12 years old spent about 83 cents, 2.59 dollars and 6.90 dollars/week respectively (McNeal, 1990: 36-39).

Adolescents aged between 12 to 14 years old often buy entertainment items: movies and videos, music, electronics, cassettes, CDs, portable music items with their own money. While other goods, such as sports equipment, are disproportionately represented compared to the received income, they are still important expenditures even though the economic power does not come from the financial resources of adolescents but rather from their influence on parental purchases (Stipp, 1993: 50-56).

Apart from different age ranges gender roles also influence adolescents' expenditure behavior (Belk, 1984: 42-46; Meeks, 1998: 131-150). For example, girls in the U.S.A. buy clothes and personal care items more than boys (Alhabeeb, 1996: 128-129). Male adolescents in Finland have more rational buying decision-making than female adolescents; for example, while both genders spend nearly the same amounts of money on buying clothes, male adolescents' clothing purchase are often sports-motivated and recreational in type. In the past, males were not interested in clothing, beauty and personal ornamental items but nowadays their tastes have changed and they have become increasingly interested in these kinds of goods (Wilska, 2005: 2). However, female American adolescents still buy clothes at twice the rate than males (NOP World, 2003: 8; Kooreman, 2007: 9-33). Finnish male adolescents, however, are often more interested in brand-name goods compared to than their female counterparts, whilst the males initiate the purchase of information technology and computer items within families (Wilska, 2005: 3). American female adolescents are often advised by their parents to buy brand goods (Zollo, 1995: 26). Finnish male adolescents portray a more focused approach to their own available financial resources, for example, a weekly income from parents, pocket-money earned from jobs / incomes etc. than the females (Wilska, 2005: 3). In contrast, in the U.S.A.(1998) female adolescents often earned money from extra jobs to a larger extent than the males (Meeks, 1998: 141). The expenditure of Finnish female adolescents is often more under control than those of males because they have less money of their own. The differences between males and females concerning their own money begin at about 12 years of age, with males earning about 30% more than females. When they are 18 years old, female adolescents play a bigger role than the males in decision-making within families to purchase goods because most females like to go shopping - as a recreational activity - in department stores. Both male and

female adolescents have different consumption patterns depending on age stages (Wilska, 2005: 3). In the Netherlands, female adolescents receive less money from work and have lower savings than male adolescents, but the females spend more on clothing than males, while the males incur expenses for alcohol at twice the rate of females (Koonreman, 2007: 9-33).

People influencing adolescents' consumption are fathers and mothers. Nowadays, marketing planning has begun to play a more important role in consumption decision-making, and adolescents are its most important targets. Females' consumption demand is associated with female magazines and adolescent magazines (Finland) (Wilska, 2005: 4). In the U.S.A., from 1980 to 1990, adolescents were important targets for the world's merchandise market. Though they are not a novel population group for marketing, merchandise markets often present more goods for purchase to female adolescents than to males. Adolescent goods are clothes, toys, games, music and books etc (Stipp, 1988: 26-32). Marketing planning nowadays often focuses on adolescents by displaying goods to them separately from adult goods because the adolescent consumption rate and volume is higher than those of adults within the families. For example, children and adolescents in China's urban areas cause their families to pay one third or more of the families' incomes (Ying, 2003: 373-379). At present, as society is impacted on increasingly by technology and has turned into an information-based society, this has an effect on the different attitudes of males and females, and at the same time enables adolescents to manage their money spending more proficiently. For example, in the U.S.A. 12 % of the 1,000 American-teen samples aged between 13 to 18 years old, are able to invest their money in the stock market which is a distinctly different behavioral pattern compared to previous times. (Schwab, 2007: 4)

Girls aged between 7 to 15 years old allocate money for buying leisure products and electrical goods to a lesser extent than boys of the same age range. Girls of this age bracket allocate more money to buy clothes and personal products than boys of the same age (Alhabeeb, 1996: 128-129; Farrell and Shields, 2005: 18).

Research in the past - as described above – focused and examined the adolescents' genders and ages as influential factors on expenditure. The effects of factors such as birth order, educational outcomes and place of residence will be

discussed in the next topic concerning family characteristics and characteristics of adolescents' society.

2.3.2 Family Characteristics

The study on differences of family characteristics which affect adolescents' expenditures in American society has found four types as follows: cohabiting parents; married parents; divorced single-parent and never-married / single-parent (Deleire and Kalil, 2005: 286-295) as shown in table 2.1.

Table 2.1 Comparison of Family Spending Characteristics of Family Units with Children (aged 0 to 17 years)

Cohabiting Parent Compared to Married-Parent	Cohabiting Parent Compared to Divorced-Parent	Cohabiting Parent Compared to never-married/single-parent
More alcohol/tobacco	More clothes	More reading
Less health care	More reading	More alcohol/tobacco
Less education	More alcohol/tobacco	Less education
Less housing	Less education	More child care
	More food	More housing
	More entertainment	More food
		More entertainment

Source: Deleire and Kelil, 2005: 286-295.

Cohabiting-parent families tend to spend money mainly on adult goods such as alcohol, cigarettes, food and recreation, but spending on child-competency-enhancement goods associated with health, education and housing is less compared with married parents. The cohabiting-parent families have a budget allocation significantly different from other family units, namely married parents, divorced single-parent and never-married single-parent (Deleire and Kalil, 2005: 289-294).

Adolescents from single-parent families have a higher expenditure than those from two-parent families. Living in single-parent families adolescents strongly tend towards owning their own mobile phones. Adolescents receiving money from their mothers' earnings are likely to spend more than those receiving money from their fathers (Kooreman, 2007: 9-33). Children and adolescents from families whose parents both work, or from single-parent families, are more responsible in buying goods for home use because their fathers or mothers are occupied with work (Doss, Marlowe and Godwin, 1995: 219-241).

Apart from family characteristics the family structure also has an effect on adolescents' expenditures. The trend of the Thai urban-family structure is changing towards increasingly only having one child. The total fertility rate (average number of children a woman has during her entire fertility period) of Thai women was 1.7 in 2005 and its trend projection is a decline to only 1.5 in 2025 (Institute for Population and Social Research, 2008: 3). Especially in metropolitan Bangkok the total fertility rate was only 1.42 in 2005, and the rate is likely to decline to only 1.24 in 2025 (Institute for Population and Social Research, 2006: 4). As families have only one child, the child will consequently become the center of attention of the family, which will result in the increase of the child-expense ratio in the family.

Fathers and mothers influence adolescents' buying behaviors from birth when babies are still unable to walk and up until they grow up into childhood, through learning with sound, size or form, color of items from their mothers' shopping: the parents are therefore the main template for the children's expenditure (McNeal, 1993: 34-39). They are more strongly influential on the children's consumption behavioral changes than their siblings who have only a moderate influence. The later born children are likely to change their behavior to a larger extent than the first-born children. In the past, parents influenced their children's buying behavior through direct instructions and tutoring and the children learned and imitated their parents' behaviors by observation and communication. Parents are influential to children's behavior in two ways: directly from parents to children and indirectly from parents to relatives. Younger children imitate elder siblings. But siblings are different not only because of genetic effect, but also because the parents create a difference on the basis of differing circumstances (Cotte and Wood, 2004: 78-86). The differences in age,

genes, and external experience encountered by children make the siblings different. Similarly, the differences in each child's experiences and each child's birth order also result in their differing behavior (Dunn and Plomin, 1990 quoted in Cotte and Wood, 2004: 80).

A study of English children aged between 7 to 15 years in 1998-1999 on the allocation of money for the purchase of particular goods, found that children and adolescents having single fathers or mothers, allocated a small sum of money for buying soft drinks, leisure products, personal goods, books or magazines, but allocated more for sweets, vice products such as alcoholic drinks, cigarettes and gambling. They also spend more for food products and toys. If their mothers earned more money, the children were given more money which they spent by using their parent's expenditure patterns as models (Farrell and Shields, 2005: 12-28)

A study on item categories based on income influencing children's expenditure (by calculating the income elasticity of demand (E_I) in relation to each category of goods) uses an economic theory of income elasticity of demand, which means the formal measure of the responsiveness of the purchase decision to variations in the market income. The income elasticity is averaged into the percentage of quantity of goods or items demanded in relation to an income change of 1%. If the change in income proportionate is smaller than the change in demand of each item price, that item is classified as an item of necessity, with the value of income elasticity of demand between $0 < E_I < 1$; but if the income change proportionate is more than the change in demand $E_I > 1$, the item of this $E_I > 1$ value is classified as a luxury item; but if the income change proportionate is smaller than the change in demand with the value at $E_I < 0$, the item of this $E_I < 0$ value is classified as an inferior item, as clearly demonstrated in figure 2.8 (Frank, 2000: 134-136).

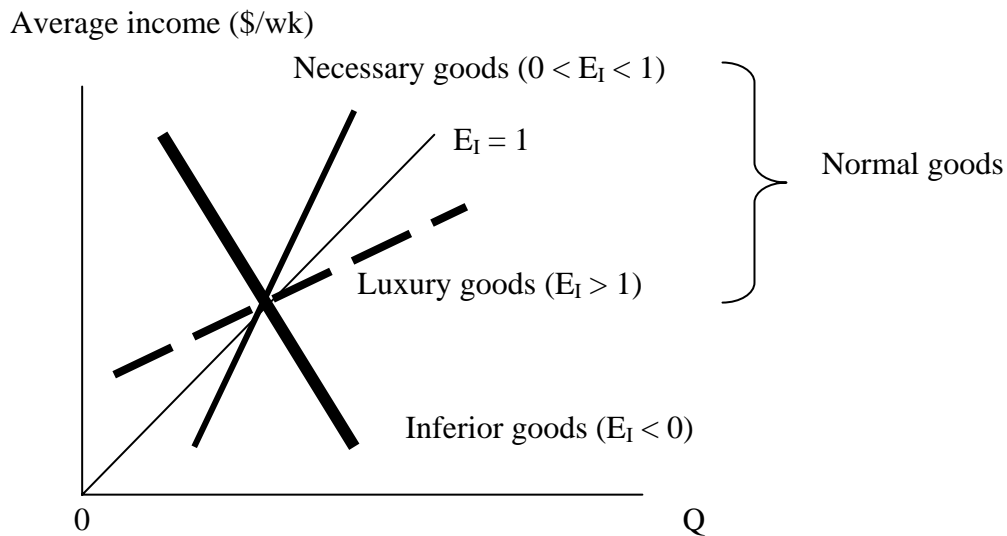


Figure 2.8 Engel Curves for Different Types of Goods

Source: Frank, 2000: 134-136.

When there were changes in adolescents' incomes, their expenditure decision-making might change accordingly which could also be different from other age-ranges. That study resulted in grouping goods into three categories (Farrell and Shields, 2005: 17).

1. Normal Goods have a value of income elasticity demand of more than 0 ($E_i > 0$) and can be divided into two categories: (1) necessary goods (income elasticity of demand value smaller than 1: $E_i < 1$) are vice products such as alcohol, cigarettes, gambling etc., leisure, personal goods, electrical products, books or magazines. (2) luxury goods (income elasticity of demand value more than 1 : $E_i > 1$), such as sweets, toys etc.

2. Inferior Goods (income elasticity of demand value smaller than 0: $E_i < 0$) are expenses relating to travel.

Although, the research outcomes are not statistically significant, they are similar to those of Warnaar and Praag (1997: 367-397).

The relation between families' incomes and goods categories is such that high income families allocate money for luxury good such as electrical items, leisure

activities, personal items and vice commodities, while low-income families or poor families allocate the money for necessities such as clothes (Farrell and Shields, 2005: 17).

In 1992 children influenced families to purchase goods exceeding 132,000 million dollars in value, and these purchases were done almost without any due consideration prior to buying despite parents being the ones forming the next buyer generation. Therefore it can be said that the parents' expenditure patterns are handed down to their children. Parents usually provided money to adolescents to the tune of about 14,400 million dollars per year for their own expenses to use as they chose (McNeal, 1993: 34-39).

If the fathers had a higher level of education, the children allocated less money for soft drinks, leisure products and travel, but allocated more money for vice goods and activities such as drinking alcohol, gambling and smoking. And when the fathers got older, the children spent more on travel and vice products, while allocating less for books or magazines.

If the mothers had a higher educational level of achievement, the children allocated less money for books or magazines. However, once the mothers got older, money allocation for books or magazines increased, while the allocation of money for leisure goods decreased.

In families with more male siblings, families were obliged to pay more for food/snacks but in the case of more female siblings in the families, expenses for food/snacks and soft drink decreased. However, in case of single-child families, expenses for travel and books/magazines decreased but expenses for electrical goods, CDs and computer games, were higher than for families with more than one child (Farrell and Shields, 2005: 1-28). In families whose parents worked extra-time, children were more likely to be employed but not for economic reasons. Children of low income families could earn less money from work than children of non low-income families (Johnson and Lino, 2000: 15-25).

If both parents worked, they had less time to look after their children, with the latter assuming more responsibility for themselves than children of families where only one parent worked. Children in American society were more responsible for themselves than those in other societies (Stipp, 1988: 26-32). Differences in their

parents' occupations, from unskilled to professional, create differences in social class and family incomes. The education of parents, in turn, results in different teaching of their children, however the children still learned their overall consumption roles in a similar manner (McNeal, 1993: 37).

In China, over a ten year period (1990-1999), it was found that the consumption by children living in 85% of families in urban areas has increased. Their consumption represented 1/3 or more of families' incomes for expenses of dietary supplements, toys, travel, computers and other electronic equipment, and educational resources. Children realized that they were influential in decision-making concerning money they received because they were the only child of the families. Parents therefore bought goods for their children motivated by generosity and therefore putting too high an emphasis on material things during the upbringing of their children (Ying, 2003: 373-379).

The income adolescents receive from either parents or work has an influence on their expenditures. An increasing number of high school adolescents - about 75% - in the U.S.A. have part-time jobs by working during their study (on average more than 20 hours per week). Their work makes them responsible on issues such as punctuality, becoming trustworthy of people, and realizing the value of money, but it also has negative effects: the more money they earn, the more money they spend (Bachman, 1983: 64-67).

A study in 1984 found that incomes had significant influence on expenditures. Adolescent income resources consisted of parental allowances (13.3%), earnings from their own work (26.2%) and monies /items received as gifts and from work (60.7%). Amongst the goods that adolescents liked to buy the most were food, entertainment, clothing and major durables. Income from work enabled them to have higher savings but they received fewer gifts. If given money as a gift, they gave more gifts to other people but their savings declined. If their incomes increased, it also caused an increase in their expenditures (Belk, Rice and Harvey, 1984: 42-46).

In 1987 American children aged between 6 to 11 years had incomes from different sources, with more than 60% of income being received in the form of birthday gifts, 58% received from allowances, 37% received from holiday gifts, 30% received from doing home chores, 12% received from odd jobs, 10% from mowing

lawns and 8% received from babysitting (Stipp, 1988: 26-32). In 1989, children from 4 to 12 years old received more money (53%) compared to those in 1984 (49%), but most of the money (83%) came from the families and 17% from external work (McNeal, 1990: 36-39). The adolescents' employment was significantly related to the high expenditures on certain items, such as the type of housing/rental, dining out and entertainment (Johnson and Lino, 2000: 15-25).

A study by Deaton (1989) conducting a discrimination test on the allocation of goods for children aged between 5 to 14 years old in Thai families found that there were no significant differences between sons' and girls' allocations, and there was no significant relevance to a son's preference compared to a daughter's preference. Comparative studies on family influence on consumption decision-making in Thailand and in the U.S.A. within the same generation found that influences responsible for consumption decision-making in these two societies were different from each other. Being extended families, there were warm relationships among members of the families with respect to the elderly, and without influence of colonization. Education relating to the allocation of money took place in the families which, consequently, influenced purchasing decision-making. In American society, in contrast, there were nuclear families in an urbanized society and without the same respect towards the elderly as was the case in Thai society. Being a relatively free society, purchasing decision-making was influenced by peers (Childers and Rao, 1992: 206-208). Thai adolescent consumption behavior and expenditure patterns will be discussed in topic 2.5.

2.3.3 Social Characteristics

The culture of a society helps to understand consumption behavior and the consumption society from a cultural perspective. Culture and consumption behavior are interrelated and cannot easily be separated. In order to understand consumption behavior, it is necessary to understand the motivation that drives consumption decision-making. Abraham Maslow, a psychologist (Schulle and Ciarlante, 1998: 90), defined human need by dividing it into five stages: physiological, safety, belonging,

prestige and self-fulfillment/self-realization. The order of human needs ranges from the lowest fundamental necessities to the highest – mental - needs as shown in 2.9.

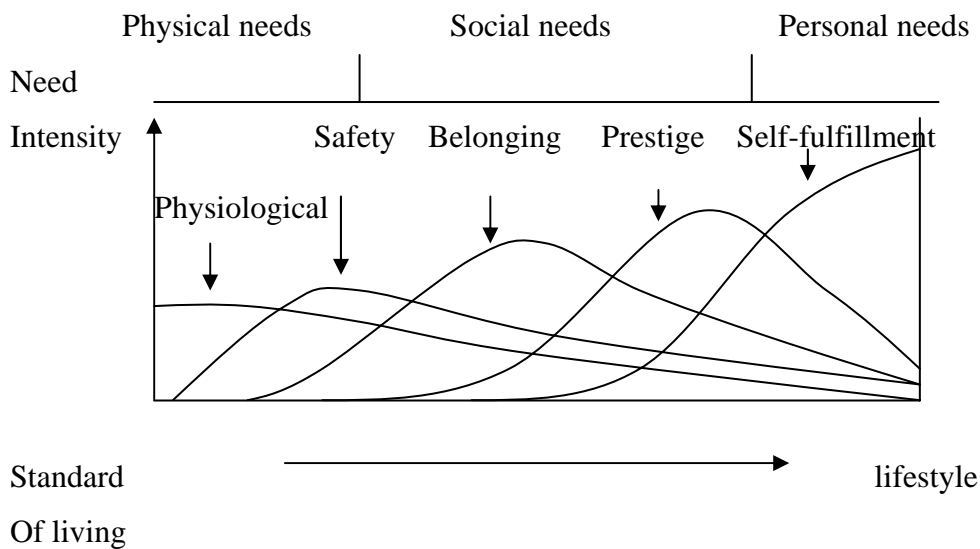


Figure 2.9 Maslow's Hierarchy of Needs

Source: Schutte and Ciarlante, 1998: 91.

Maslow's theory is suitable to western societies and cultures, especially American society, but not to Asian countries such as, for example, China. However, Maslow's theory is nevertheless useful for a study on consumption behavior and the five stages of different needs depending on time. The difference of Maslow's stages of needs between Asia and the West is that the supreme needs of western societies are self- fulfillment and liberty, whilst the supreme needs of Asian or eastern societies are associated with social relationships, as shown n figure 2.10 (Schutte and Ciarlante, 1998: 90-94)

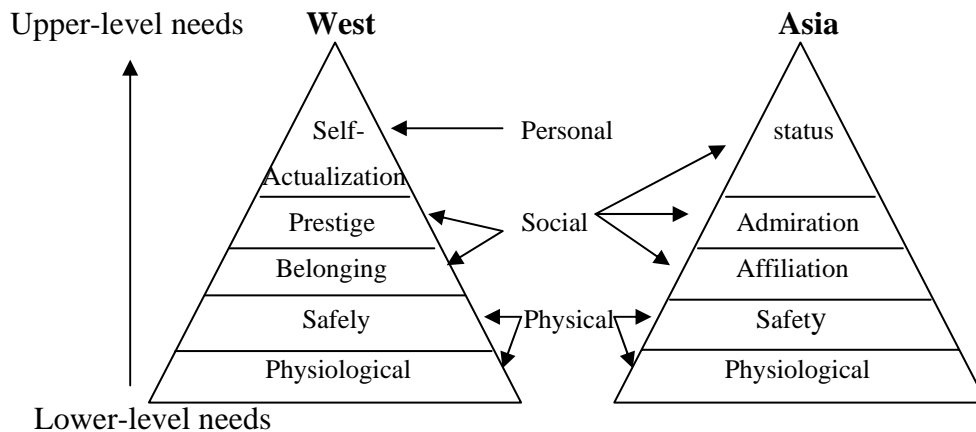


Figure 2.10 Maslow's Hierarchy of Needs and the Asian Equivalent

Source: Schutte and Ciarlante, 1998: 93.

The five-stage needs of people in Asian societies, arranged in order from the lowest to the highest needs, are as follows: physiological, safety, belonging, prestige and status in society, while in western societies the supreme need is self-actualization. Therefore, differences in societies and cultures also have effects on different consumption behaviors which lead to different expenditure decision-making as a result. Other influential factors on consumption decision-making are: the individual person, the group or society, social class, family, culture and economics (Hanna and Wozniak, 2001: 28-29).

Research in many areas has found that social networks play an essential role in adolescents, especially in a negative aspect. For example, problem or troubled behavior or health risk behaviors (such as smoking etc.) are more related to female adolescents than male adolescents. Peers are important among adolescents for their behavior but activities with peers are not necessarily in the society's interest (Voorhees et al., 2005: 183-190).

It must be accepted that, nowadays, factors relating to advertising have an effect on adolescents. Research conducted in order to improve advertising aims to change adolescents' ideas, perceptions and behavior. There are two issues of related concepts: first, changes of adolescents' concepts depend on their biological bodies which influence their mind; and second, cultures are influential on decision-making and the level of language knowledge. The study on adolescent behavior is like making

notes based on the natures of animals that behave according to their physical changes. But because humans have cultures and societies different from other beings, so, apart from physical aspects, it also involves social factors such as society within families and society outside of families (Santrock, 1998: 22). For instance, department stores make research results profitable and can more easily classify the rates of satisfaction etc on the part of adolescents compared to families and schools (Young, 2004: 22-23). Each country has a different environment which results in different behavior on the part of adolescents. In Zimbabwe, for example, children can perform and solve mathematical calculations mentally well because they do not have calculators, while children in England do not have to do it mentally because there are calculators available (Young, 2004: 23).

Advertising leading to adolescent expenditure worldwide shows that the media accessible to adolescents is under transition. Even though television has always played an important role, marketing campaigners are trying to promote other media more accessible to adolescents, such as the internet, mobile phones etc. (McDougall and Chantrey, 2004: 15-17), as shown in figure 2.11.

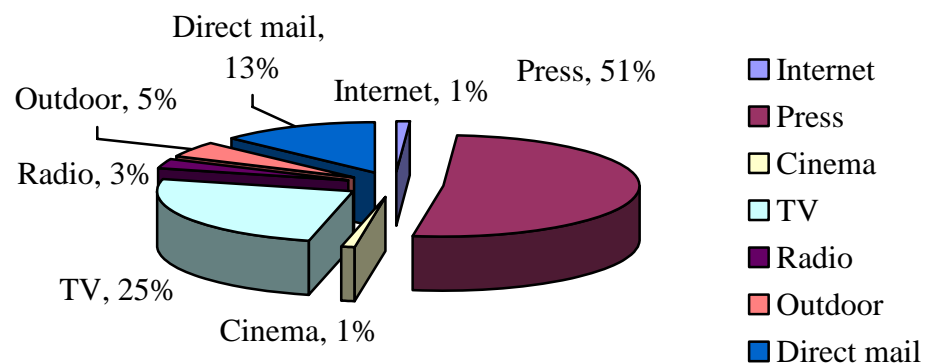


Figure 2.11 Advertising Expenditure by Media Contrast with Teen Media Consumption

Source: Brown, 2002 quoted in McDougall and Chantrey, 2004: 15-17.

Comparative studies around the world about the relationship between media consumption by adolescents with the cost of advertising have found that advertising costs in the print media account for as much as 51% of the total, but reaches only 27% of adolescents interested in print media publications such as magazines. The cost of

advertising on television accounts for about 25% but can reach 85% of adolescents interested in love stories (soap operas) shown on TV. About 37% of adolescents in urban areas all over the world have television sets in their own bed rooms. About 90% of them have TV reception in private cars and on mobile phones. On the other hand, cost of advertisement only 1% in advertising through the Internet can access to 46% of adolescents living in urban areas all over the world, who often use the internet, and 12% of them have the internet on their own mobile phones.

At present, children have purchasing power and exert influence on brand selection, especially their favorite goods. Eight-year-old children begin to be able to answer questions concerning brand names. At 10 years of age they begin to understand and are able to distinguish between and make out the difference in brand names. The feeling of brand name attachment grows more strongly when they get older from 10 to 30 years old. Adolescents aged between 8 to 14 years display a distinct brand name related behavior because they want to have new experiences of using new brand goods. There is less loyalty to brand names due to less experience with the brands. Therefore adolescents often like many different brand names and can easily change their preference from one brand to another (McDougall and Chantry, 2004: 11-12) as show in 2.12 (loyalty to brand names according to different stages).

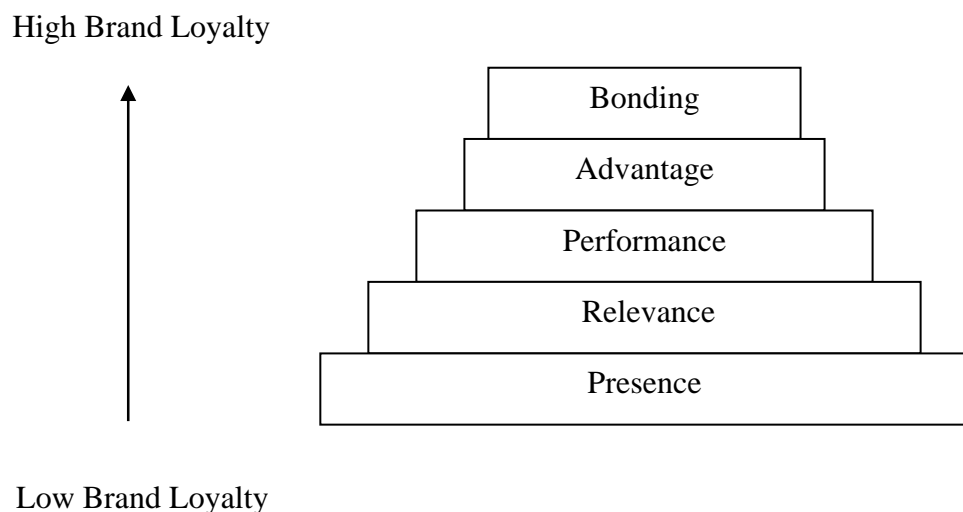


Figure 2.12 The Brandynamics Pyramid

Source: Brown, 2002 quoted in Young Consumers, 2004: 12.

About 40% of children aged between 8 to 14 years are less loyal to brand goods than adults, and 50% of them change brand-name goods every two years as a result of a migration of attitudes.

Technological factors such as multimedia, the internet, wireless laptops, mobile phones and skateboard shoes have nowadays become symbols of adolescents; for example, studying geography by using a world map on a computer, conversations via the internet (chatting online with friends) and using a mouse instead of their hands etc. shows that adolescents today are more exposed to technological influences than their peers in the past and prefer to choose brand goods and put an emphasis on the quality of goods as opposed the simple quantity (Lindstrom, 2003: 1-23). Adolescents' accessibility to modern equipment such as TVs, computers etc. provides them with more opportunities to acquire brand name goods, and the likelihood of changing brands more often. The faster communication becomes, the bigger the impact on adolescents' changes in expenditure, purchases, savings, income allocation in families and consumption (McDougall and Chantrey, 2004: 8). In addition, the differences in social and economic status inevitably influence different expenditure patterns.

Male and female adolescents have different attitudes toward modern technology. Male adolescents are interested in technology and are more skillful than females, especially in digital entertainment technology and computer games. Society at present is at the early stage of an intelligence-based society that encourages children aged between 6 to 7 years to become interested in computer games, and adolescents aged from 15 to 19 years enthusiastic for and strongly interested in new technology. But mobile-phone use is not significantly different between male and female adolescents (Wilska, 2005: 6). Adolescents often make decisions to buy goods in order to go along with their peers on the basis of their feelings such as fear, incoherent thinking, desire to be important, humor, desire for knowledge and consistency (McDougall and Chantrey, 2004: 15). Communication within the families, such as the parents' communication, also has an impact on adolescent behavior, and, in contrast, adolescent societies also have an effect on communication patterns in the families (Saphir and Chaffee, 2002: 102).

The rapid socio-economic development of western countries has different results for different countries as to the changes in adolescent expenditure. For example, a study outcome in 2002 found that American children aged between 4 to 12 years had a collective buying power of about 40 billion dollars, compared to a figure of 9,000 million dollars and 4,700 million dollars in 1989 and 1984 respectively (McNeal, 1990: 36). Adolescents aged 12 to 19 years in different countries ask their parents for different goods such as movie tickets, cars and fashion (for example, 63% of American children, 59% of Brazilian, 53% of Japanese, 51% of German and 40% of Spanish (McDougall and Chantry, 2004: 14) as shown in figure 2.13.).

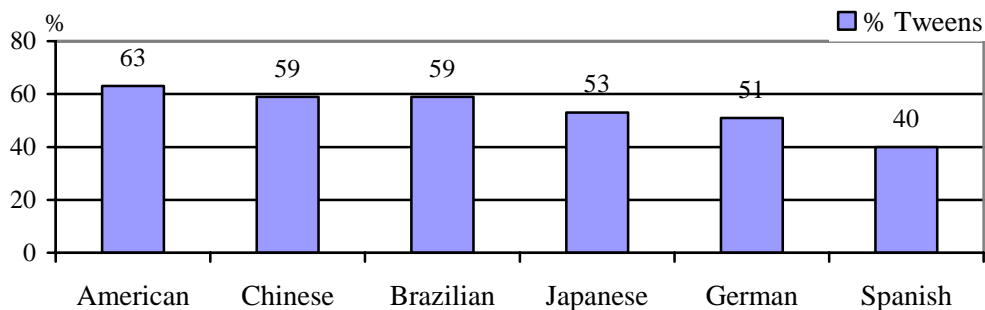


Figure 2.13 Percentage of Global Tweens Asking Their Parents to Buy Movie Tickets, Cars, Fashion

Source: McDougall and Chantry, 2004: 14-15.

English children aged between 8 to 14 years use more than 2,700 million dollars annually on sweets, gifts and special occasions, while American children spend about 20,000 million dollars on the same items (Lindstrom, 2005: 73). Dr. James McNeal has evaluated the spending cost resulting from the insistent demands of American children, and has found that direct influence costs about 188,000 million dollars. And still about 300,000 million dollars of spending results from indirect influence that causes the parents to buy goods to respond to their children's needs and desires, such as cable TV, telephone access or restaurant patronage (Lindstrom, 2005: 74-75). About 8% of American adolescents invest their money in stocks or speculative markets, 20% have their own saving accounts, 70% want to have credit cards if their parents permit them, and their total expenses are more than 150,000 million dollars per year (Lindstrom, 2005: 2).

White children aged between 7 to 15 years allocate more money for buying sweets, electrical goods and vice products such as whisky, cigarettes or gambling compared to non-white children of the same age range. The living quarters of children of this age bracket have an effect on the allocation of money to buy goods. Children living in rented homes provided by the government buy fewer soft drinks, food/snacks, electrical goods and toys than children living in mortgage-owned or outright-owned homes, with the former buying more clothing than the latter. Children of this age range, who live with parents in their own home, or those in wealthy families, spend more money for vice products than children living in other types of accommodation. Children of families living in their own home - either mortgaged or mortgage free - spend a large sum of money for sweets, whilst children living in expensive accommodation spend more money on leisure and personal goods (Farrell and Shields, 2005: 18).

Evidently, the more a country is economically developed, the higher the effect on adolescent expenditure. Income is an essential factor for expenditure. Studies on expenditure according to occupational groups, for example, have found that factors influencing expenditure are population indicators such as consumers' tastes/preferences, age, etc, as well as cultural factors, locality factors, educational levels of achievement, and occupation / unstable incomes in the future (Salim, 2004: 79-112). Family factors, especially communication with parents, have an effect on adolescent behavior (Saphir and Chaffee, 2002: 102). Different family characteristics have different impacts on adolescent expenditure (Deleire and Kalil, 2005: 293-294). Spending behavior is different in different locations: adolescents living in urban areas tend to spend money on clothing and shoes to a larger extent than adolescents living in rural areas (Koorenman, 2007: 9-33).

The study of Doss and colleagues (1995: 219-241) has found that the expenditure of children aged between 10 to 15 years is relevant to the source of the money provided, but not relevant to age range, gender or family status. Family types do not affect variations in expenditure, which contradicts the study of Stipp (1988: 26-32). It has also been found that personal characteristics and family status do not have a different influence on adolescent expenditure. A study of patterns of child expenditure divides influence factors into 3 categories: (1) amount and source of the

money; (2) child characteristics i.e. age, gender; (3) family characteristics, i.e. number of parents and their occupational characteristics. It also divides child expenditure into four characteristics as follows: (1) required spending; (2) discretionary spending; (3) savings; (4) giving/donating to others. The study finds that child expenditure differs according to money sources. Children receiving money from parents use it for necessities such as food, grooming items, groceries/cleaning supplies, transportation, school supplier, and discretionary spending such as books/magazines, sports/recreation, music, videos/movies, club fees, hobbies, vacations etc. They do so to a larger extent than using it for savings or donating to others. However, if the income results from their own paid labor, children keep it increasingly for savings. This study outcome is similar to that of Belk, Rice and Harvey (1984: 42-46). Monies received as gifts are used by the children for donations to others, including their own earnings, which are relevant to spending as well as giving to others. Reflecting a similar outcome recorded by the study of Belk, Rice and Harvey (1984: 42-46).

Regarding studies on expenditures of Thai adolescents, they are different from the studies described above in terms of society and culture and source of money given to adolescents. Only a small number of Thai adolescents have their own earnings from work, particularly from working for the families such as, for example, pay received from parents for housework. This study is therefore different from the previously mentioned research because Thai society has different characteristics from western societies and cultures.

2.4 Consumption Behavior and Thai Adolescent Expenditure

The study by the Ministry of Public Health on adolescents aged between 12 to 18 years in metropolitan Bangkok has found that 55.7% of them like western fast food such as pizza, fried chicken and hamburger, 35% usually drink soft-drink, only 20% like Thai sweets and 44.2% are influenced by television (Business Thai, 2003: 1-2).

The “BrandAge” magazine - with the cooperation of a research team of Chuo Senko (Thailand) Public Co., Ltd. - conducted a study on behavior and attitudes of “Tweens”, aged between 9 to 16 years, who are neither “children” nor “adolescents”, but in the stage of development into adolescence, which is the stage which causes

them to have simultaneous deviating thinking and behavior distinct from childhood and adolescence. Girls undergo more rapid development than boys. They begin to be interested in clothing, placing more importance on physical appearance, are afraid of being unattractive, are fond of talking on the telephone, chatting via the internet, desiring to be center of interest, are interested in the opposite sex etc., while the boys are interested in games, amusement - sports in particular - but not interested in clothing to the extent that girls are.

The study specifically selected samples using the Internet or mobile phones and was conducted in June 2003. It was found that 30.4% of them were males and 69.6% were females; 95.7% of them liked playing the internet; 62.4% had mobile phones; and about half of them were the only child of the family and were studying in secondary schools. The study categorizes their incomes into three patterns: daily, weekly and monthly, with an average income of 1,823 baht per month. If issued on a daily basis, the average income is 85 baht and 392 baht on average on a weekly basis. The highest income per day is 1,000 baht. The Tweens' money allocation is divided into two categories: food and amusement/entertainment. If M-Tweens eat alone, they can eat any kind of food. But when eating with girlfriends, they prefer to pay for them, while F-Tweens are likely to prefer atmosphere to the taste of the food. Regarding entertainment, the F-Tweens like buying popular music CDs, going to concerts, playing online games and playing the internet, while the M-Tweens spend most of the money for their preferences such as playing Ragnarok - an online game -, collecting cards etc.

When comparing Thai adolescent expenditure to that of foreign Tweens, it is found that the foreign Tweens use the money to buy goods in three categories; food, amusement/entertainment, and clothing. Thai Tweens, however, are bought their clothes – preferably brand-name ones – by their parents. Martin Lindstrom (2003), a brand name specialist, conducted research in 11 countries and found that, on average, Tweens have a personal spending power of about 500,000 million dollars annually. The Tweens' behavior in Thailand is relatively similar to those of foreign Tweens. They both have direct and indirect influence on their parents' goods consumption behavior, especially in selecting certain kinds of products and services such as computers, restaurants, mobile phones, clothes, internet, and computers for surfing the

internet, playing games and sending e-mail. Food selection in restaurants is done according to preferences while dining outside - whether it is Japanese, Italian or Chinese – is regarded by adolescents as experiencing and learning about foreign cultures. When purchasing mobile phones adolescents choose the brand they prefer within the budget limited by their parents. The research concludes with naming six core values of the Tweens groups (similar to Lindstrom: 2003) into: (1) Fear; fear of many surrounding things or phenomena such as being afraid of going outside, being abandoned by peers, wars, being injured, death etc.; (2) Mastery; it is the feeling that generates the capacity to successfully play the game of Ragnarok successful; (3) Fantasy; for example, surfing the internet, playing online games, etc.; (4) Love; meaning to be loved which is a feeling Tweens continuously desire. (BrandAge, 2003: 6-7)

Another study of Brand Age with cooperation of the research team of Chuo Senko (Thailand) Public Co., Ltd. examined consumers who were divided into four groups according to internationally accepted principles: (1) Gen-B (Boomer Generation) means consumers aged 40 to 63 years old; (2) Gen-X, meaning consumers aged between 34 to 39 years; (3) Gen-Y, meaning consumers aged between 25 to 33 years; (4) Gen-M (Millennial Generation), meaning consumers aged between 18 to 24 years.

This study, however, discusses only Gen-M (the group closest to the target population covered by this study) which is mostly schoolchildren or students. Their average income is 3,037 baht per month, with an average family income of 21,876 baht per month. They are students or graduates with a bachelor's degree; 44.3% of them do not use the internet, 3.3% do not use mobile phones. According to their attitudes toward countries of origin of the products, countries producing good quality products are Japan, United States and Europe, while the countries doing business as “striking once with a club and for all” are China, Thailand and South Korea respectively, with countries producing high technological products being Japan, United States and Europe.

Gen-M feels increasingly amused when taking part in different events. They are the only group feeling uncertain whether or not having they have done their best for the day. They accept change and receive and process a lot of information from

different sources. Reading, listening and seeing a lot helps them know more about disasters and failures of technology, making their thinking more rooted and based on reality. They believe that women should work outside rather than staying at home and raise children, thinking that men and women are not different in their ideas and potential, and that success is the outcome of effort rather than a predetermined gender. They are the group of people who believe that Thai women are more daring than other female population segments, and disagree with the concept that women are more compliant than men, and females are very determined.

The Gen-M group is consumers living a content life because they were born when technology and family wealth were both readily available. They think that they are experts in technology and regarded by other groups as the best technological experts. For them, it is unacceptable to live without mobile phones, SMS, e-mail and the internet. They like to consume media that presents a light content such as humor, music, variety, crime, etc. Many of them are addicted to radio. They tend not to look after themselves much. When having financial problems, they can turn to their parents, feeling there is neither hardship nor responsibility. The money earned from work or simply provided is paid daily, mostly for food and transportation, the rest being for mobile phones and entertainment such as bowling, watching movies, buying trendy clothes/bags/shoes, etc. Their troubles are superficial, for example unable to finishing text books in time for examinations, being late for classes, waking up too late for appointments with girlfriends/boyfriends etc. Gen-B sees Gen-M as being aggressive, lacking humility, being disrespectful, bumping into somebody without apologizing, being enthusiastic towards foreign cultures, being fond of embracing in public places, etc.. They believe Gen-M becomes like this because of the environment, media, and that they are the only consumers who do not know how to live life without air-conditioners, mobile phones, escalators, the internet etc., and that they live with technology and information originating from all directions, are well-educated, are able to use different languages, are intelligent, fast thinking and decisive (BrandAge, 2005: 1-3).

Some segments of Gen-M are called “aligned children”, classified as “Generation of Hope” whom the adults hope will survive and correct the mistakes they committed in the past (BrandAge, 2005: 3).

Regarding the study on expenditure of Thai children aged 8 to 14 years, it was found that 58% of expenditure is for clothing, 52% for CDs and 19% for electronic games. Research in 2001 on Thai adolescents - so-called “Youth” - has found that adolescents help their mothers choose items such as clothes (86%), fast food restaurants (75%), snacks (73%), cereals (74%), rental movies and videos (67%), visits to the cinema (64%), toys (56%), CDs and audio cassettes (56%) (BrandAge, 2005: 1-3).

The review of the research literature, as presented above, shows that most studies have been conducted in developed countries. Since there is only limited research in this field in developing countries, especially in Thailand, the literature review of Thailand is – as a consequence - relatively limited as a result.

CHAPTER 3

METHODOLOGY

3.1 Data Collection Method

Both primary and secondary data was collected by means of a cross-sectional method. The primary data is basically used in both qualitative and quantitative studies. For the purposes of quantitative studies, data was collected by using a questionnaire. For qualitative studies, the data was collected by means of in-depth interviewing of the adolescents and involved teachers, supported by additional observation.

3.1.1 Secondary Data Collection from Different Sources

3.1.1.1 Statistical data from the Ministry of Education: Academic Year 2005

3.1.1.2 Data from Mahidol University Population Projections for Thailand, 2005-2525 March 2006 Revision.

3.1.1.3 Report of The Children and Youth Survey 2002 of the National Statistical Office, Ministry of information and communication technology.

3.1.1.4 Report of The 2006 Households Socio-Economic Survey by the National Statistical Office, Ministry of information and communication technology.

3.1.2 Method of Primary Data Collection

3.1.2.1 Population means only young people aged between 14 to 22 years who were studying in educational institutions in metropolitan Bangkok (surrounding areas not included) according to the data of the Ministry of Education: academic year 2005 as shown in table 3.1 and 3.2

3.1.2.2 Random Sampling and the Sample Size

The samples are grouped into two age brackets: early adolescents aged from 14 to 17 years, and late adolescents aged from 18 to 22 years. They are divided into three strata according to their educational levels, i.e. secondary school, vocational school, and higher education and sampling was conducted by means of two-stage stratified sampling as follows:

Stage 1: Educational institutions at each level are grouped into two categories: public institutions and private institutions. Institutions were randomized, as shown in table 3.3.

Stage 2: Schoolchildren and students, both male and female, were randomly selected by means of quota sampling in institutions picked from the random process in stage 1.

To study expenditure patterns means studying continuous data. Therefore, as the variant value of the study (e) was set at less than 5% and with the reliability at 95%, it was found that the sample size had to be at least 800 persons. To gather the data the sample group was equally distributed into different age ranges and genders, as shown in table 3.2. The sample size evaluation method is shown in Appendix A.

Table 3.1 Number of Students at Each Educational Level in Bangkok

Level of education	Age (year)	male		total	female		total	total
		public	private		public	private		
High school								
Grade 9	14	31,306	6,832	38,138	30,531	7,943	38,474	76,612
Grade 10	15	17,243	3,284	20,527	20,749	4,133	24,882	45,409
Grade 11	16	16,638	2,850	19,488	19,540	3,705	23,245	42,733
Grade 12	17	15,377	2,492	17,869	18,253	3,176	21,429	39,298
Vocational education								
Certificate								
1 st year	**	7,961	16,767	24,728	6,138	17,158	23,296	48,024
2 nd year	**	4,448	11,987	16,435	4,455	12,396	16,851	33,286
3 rd year	**	2,865	9,450	12,315	3,546	9,812	13,358	25,673
Diploma								
1 st year	***	2,969	8,157	11,126	3,331	11,406	14,737	25,863
2 nd year	***	1,560	7,225	8,785	2,558	10,057	12,615	21,400
3 rd year	***	152	168	320	52	146	198	518
Higher education								
1 st year	18	91,929	21,174	113,103	106,030	26,589	132,619	245,722
2 nd -6 th year	19	230,773	47,993	278,766	279,265	65,338	344,603	623,369
Graduate diploma	19-21	2,521	6	2,527	792	7	799	3,326
Total	14-22	425,742	138,385	564,127	495,240	171,866	667,106	1,231,233

Source: Ministry of Education, 2005a.

Note: ** Age group 14-17 years.

*** Age group 18-22 years.

Table 3.2 Population Size and Sample Size

Age group (years)	Type of educational institution	Population size			Sample size		
		male	female	total	male	female	total
14-17	Public	95,838	103,212	199,050	84	80	164
	Private	53,662	58,323	111,985	66	113	179
	Total	149,500	161,535	311,035	150	193	343
18-22	Public	329,904	392,028	721,932	133	118	251
	Private	84,723	113,543	198,266	117	89	206
	Total	414,627	505,571	920,198	250	207	457
14-22	Total	564,127	667,106	1,231,233	400	400	800

Source: Ministry of Education, 2005b.

The randomized educational institution samples are shown in table 3.3 as follows:

Table 3.3 Name of Institution Do Random Sampling

Level	Educational institution	
	Public	Private
School	1. Debsirin School	1. Sarasasektra School
	2. Rittiyawannalai School	2. Nongjokpittayanusorn School
	3. Suksanari School	3. Kemasirianusorn School
Vocational Education	1. Dhonburi Rajabhat University	1. Kulsiri Technology and Business School
	2. Donmuang Technical College	2. Chamnong Commercial College
	3. Rajamangala University of Technology Rattanakosin (Borhitpimuk Compus)	3. Bangkok Thonburi College
University	1. Mahidol University	1. Assumption University
	2. Srinakharinwirot University (Prasarnmit)	2. Mahanakorn University of Technology
	3. King Mongkut's Institute of Technology Ladkrabang	3. Rattana Bundit University

3.1.2.3 Tools used in the study. The research tools are questionnaires developed from literature review to cover different variables existing in conceptual frameworks of the study. Also, the tools had been tested for the validity of questions which were divided into four sections;

Section 1: Income Data consists of the incomes adolescents receive, whether from families and special income, savings and the credit amount available from credit cards.

Section 2: Expenditure Data

1) Influences from three factors: adolescents, family, and society/ cultures/economics.

(1) Adolescent characteristics consist of an adolescent's monthly expenditure, the sum of money they spend for each category of goods in each month, and their satisfaction and liberty toward their expenditure.

(2) Family characteristics consist of the people responsible for adolescents' expenditure and the families' influences on spending planning.

(3) Socio-cultural-economic characteristics consist of sources of information about goods (family, friends, television, the internet, etc.), individuals exerting influence on the adolescents' merchandise purchasing, and the instructions they learn in educational institutions about spending planning.

2) Measurements regarding adolescents' attitudes and expectations toward their consumption consist of the decision-making to buy the goods based on brand, category/type, characteristic of the goods etc., as well as the accessibility to the goods such as the sales location of goods, etc.

Section 3: Personal Data

Adolescent characteristics consist of gender, age, religion, original place of domicile, birth order, number of male and female siblings, level of education, category of his/her educational institution, grade point average of study, responsibility for the financial upkeep of their residence, private accommodation as well as the appliances/furnishings/facilities contained in the room, ownerships of technology, etc.

Family characteristics consist of adolescent's reliable persons for financial consultation.

Social characteristics consist of social relationships, for example close friends, internet access locations / shops, adolescent's habitation characteristics (if living separately from the parents).

Section 4: Parents' data consists of the type of family, the person taking care of the adolescent, the person with whom the adolescent lives, the ownership status of the occupied residence, characteristics of the residence, and the educational level of achievement, occupations, and the monthly income of the parents.

3.1.2.4 The Tool Validity Test

Many renowned scholars of the School of Applied Statistics, the National Institute of Development Administration, who are consultants for the thesis, have provided valuable suggestions and advice for the questionnaire validity. A subsequent sampling randomly selected 50 adolescents aged between 14 to 22 years who were studying in educational institutions in metropolitan Bangkok. This sample group, which was not identical to the targeted group of the study, was divided into

three educational levels: secondary schools, vocational schools and higher education in order to further refine the questionnaires.

3.1.2.5 Data Collection

The data gathered specifically involves the income and expenses of adolescents aged from 14 to 22 years who were studying in educational institutions in metropolitan Bangkok (surrounding areas not included) from May to September, i.e. during the first semester of the 2007 academic year. These months of data collection coincided with the beginning of the first semester, therefore the adolescents might not incur a lot of expenses, or probably had already spent a large amount of money on certain kinds of goods such as mobile-phones, school suppliers, etc.

Because the data collection was conducted on the basis of enquiring about the expenses from the previous month, the respondents could still recall certain details but could not remember any exact amount of money spent. The responses are therefore only approximates as to the expenditures.

The expenditures considered from the samples were limited to those where the adolescents' spending was within their own scope of responsibility, i.e. using any monies received from their families and other income sources, but did not include any expenses paid by their families on their behalf, apart from the amount provided as the adolescents' main incomes.

3.1.2.6 Definition of the Study

1) Adolescents mean persons aged between 14 to 22 years. They were divided into two age brackets: early adolescents aged from 14 years but not older than 18 years, and late adolescents aged from 18 years on but not older than 22 years.

2) Age of the adolescent means the number of years from birth to the questionnaire answering date.

3) Birth order means the sequential order counted from the first child, all born to the same parents.

4) Level of education means the academic institutional level of education the respondent was enrolled in during the year of this study. The population group is from three levels: (4.1) secondary school, both first and second stage; (4.2) vocational school, meaning professional education including certificate and higher

certificate, including diploma, bachelor's degree from Technology Rajmongkol Universities, Rajbhat Universities, and colleges; (4.3) higher education means high educational study for bachelor's degree in universities.

5) Original domicile means place of birth, and the place the respondent had departed from to study in Bangkok.

6) Residence means the place of abode where an individual resides, regardless of the characteristics or state of the facility, which can be either a house, apartment, mansion, condominium, or student dormitory, etc. The residence criteria is grouped into two categories: (6.1) the single person (live alone) residence, which means the residence that the adolescent is entirely responsible for and funded out of their living expenses by using the money received; (6.2) the joint adolescent / parent residence means the adolescents do not have any responsibility for the financial upkeep of the residence.

7) The metropolitan Bangkok area means the administrative area called Bangkok Metropolitan, excluding the peripheral areas.

8) The caretaker(s) means the person(s) other than father and/or mother who is/are responsible for the adolescent's expenses.

9) The adolescent's received income means the money he/she receives periodically from the father/mother, or parent(s), either on a daily, weekly, or monthly basis, or occasionally according to festivities or holidays. These incomes are considered primary ones, including those they earn from work or any special incomes other than the main sum received from the family.

10) Expenditure patterns mean patterns or characteristics of the expenditures that consist of level of expenses, the expenses for each group of goods, and the expenses for each type or category of goods, including factors influencing adolescents' patterns or characteristics of expenditures, and other details of the expenditure patterns and characteristics.

3.1.2.7 Method of Data Analysis

The secondary data used in the analysis is overall data for the entire country as well as the date of metropolitan Bangkok in 2005. It also includes data projections for the next 10 or 20 years ahead.

Before being used in the analysis as primary data, all returned questionnaires were examined for correctness and accuracy by means of the ready-to-use statistical application program. The analysis methodology in this study is:

1) Descriptive statistics that describe adolescent's; the adolescent's family and social characteristics, and the adolescent's attitudes toward consumption, as well as their incomes and expenditures.

2) Inferential statistics:

(1) Categorization of the goods which the adolescents purchased by using factor analysis.

(2) Comparison of the adolescents' expenditures on the basis of differences in gender, age groups and income sources by using independent sample t-tests.

(3) Building a model of Thai adolescents' expenditures by using the Tobit regression analysis. This is due to the assumption that with regard to the expenses respondents might not buy certain kinds of goods during the data collection period which renders some data non-existent or apparently missing. The appropriate method to evaluate this type of data was created by Tobin (1958). In this study the variables influencing the expenditures are divided by factor analysis before being analyzed by Tobit's regression analysis.

CHAPTER 4

THE POPULATION CHARACTERISTICS OF THAI ADOLESCENTS

4.1 The National Children and Youth Development Plans

The fifth to seventh National Children and Youth Development Plans (1982-1996) aim to respond to fundamental needs by expanding the services and problem resolution aspects for children and youths (the same period as the fifth to eighth National Economic and Social Development Plans from 1982-2001). The eighth National Children and Youth Development Plan (1997-2001) focuses on children and youths as a whole, and views their situation in the context of globalization and economic effects. Development is divided according to age range: children younger than 5 years, between 6 to 14 years, and youths aged from 15 to 25 years old. The problems encountered by the children within each age range are as follows (Ministry of Social Development and Human Security, 2004: 12-14):

1. Children younger than 5 years old. Their problems result from the parents' lack of preparedness before having the child, lack of health care before and during pregnancy and after birth, including the lack of appropriate child care commensurate with the stage of child development, the children being neglected, the lack of appropriate care, deprivation of love, accessibility of services, and the children having become victims of violence in families.

2. Children from 6 to 14 years old. There are problems with 0.37 million, or 3.8%, of the 6-to-14-year-age-range child population, for example ceasing their education abruptly and not being interested in continuing any further study (National Statistical Office, 1997 quoted in the Ministry of Social Development and Human Security, 2004: 14). The problems originated from the families' particular situations,

children's disabilities, distance between home and schools, and obligations to enter the work force before the appropriate age.

3. Young people between 15 to 25 years of age. The problems of this age range are that 1.0 million - representing 79.1% of the population of the 18-to-24- year age range - abort their education at the half-way stage, (National Statistical Office, 1997 quoted in the Ministry of Social Development and Human Security, 2004: 14). The report of the Office of the National Education Commission (ONEC) reveals that youths studying in senior high schools or equivalent represent 42.5% of the 15-to-17- year age range, but the youth component in higher educational levels accounts for only 16.5% of the same-age-range population group, with most of the rest entering the labor market.

At present, in order to develop the country, Thailand has long-term the National Children and Youth Development (2002-2011) plans that focus on the well-being of Thai people as well as sustainable development. It is the guideline to developing children and the youth to acquire desired characteristics and be able to adapt to a rapidly changing society.

4.2 Population Structure of Thai Children and Youth

The Institute for Population and Social Research, Mahidol University published a population census of Thailand in mid 2005 (1st July), stating that there were 5,113,000 youths aged between 10 to 14 years, 5,011,000 persons between 15-19 years old, and 5,100,000 persons between 20-24 years old. There were 13,912,000 children aged younger than 15 years (0-15 years old), representing 22.4% of the total population (figure 4.1). There were 15,705,000 school-aged children within the 6-to-21 year-old age range, representing 25.3% of the total population (figure 4.2). The figure indicates clearly that the child and young population segment accounts for as much as 1/4 of the total population, indicating their importance of their expenditure component that inevitably affects their families' expenditure.

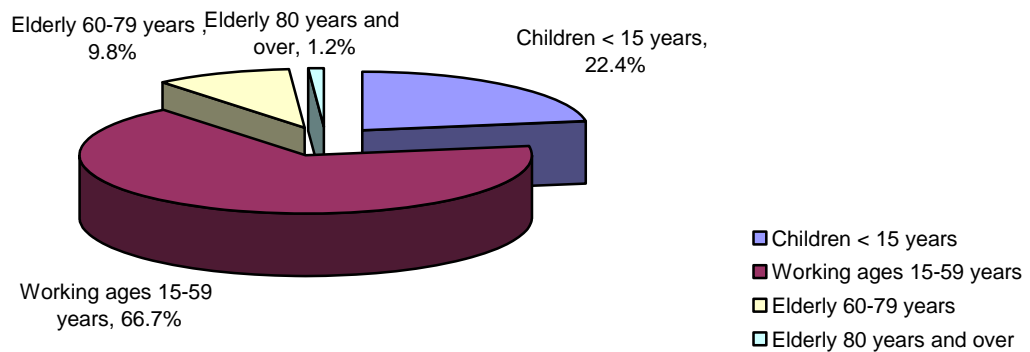


Figure 4.1 Percentage of Population by Age Group at Mid-year 2005

Source: Institute for Population and Social Research, 2005: 1.

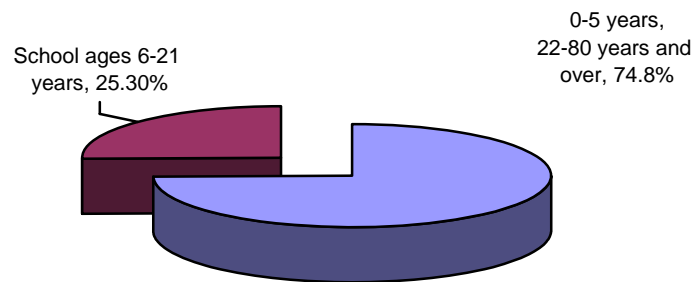


Figure 4.2 Percentage of Population by School Age at Mid-year 2005

Source: Institute for Population and Social Research, 2005: 1.

The child and youth survey conducted in 2002 by the National Statistical Office (completed every 5 years) found that 66.1% of the population aged between 3 to 24 years was continuing their studies, while the other 33.9% had ceased their studies. For the studying group, there were 18.2% and 16.1% studying in junior high school and senior high school respectively, while 8.4% were studying in a higher educational level. When considering age range, it was found that the youth aged between 15 to 19 years represented 30.1%, and those between 20-24 years old represented 31.2%, as shown in figure 4.3-4.4.

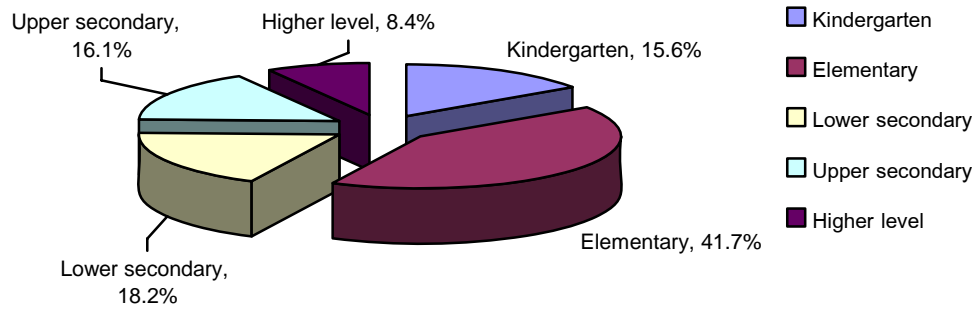


Figure 4.3 Percentage by Level of Educational / School Attendance of Children and Youth 3-24 Years of Age Attending School by Level of Educational Attendance

Source: Ministry of Information and Communication Technology. National Statistical Office, 2003: 29.

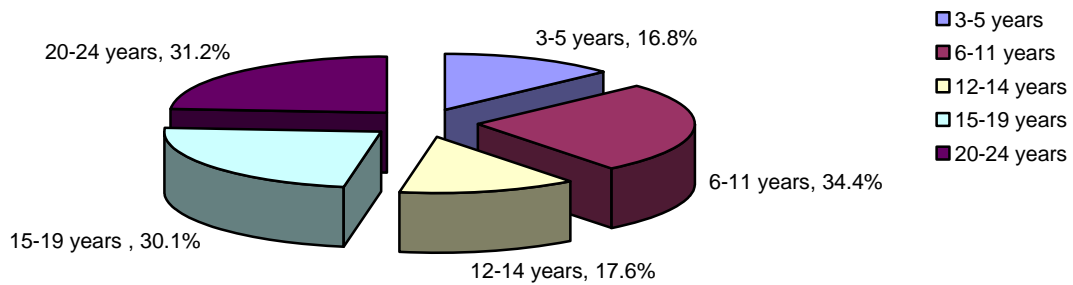


Figure 4.4 Percentage of Children and Youth 3-24 Years of Age by School Attendance and Age Group

Source: Ministry of Information and Communication Technology. National Statistical Office, 2003: 23.

Furthermore, the compilation of important statistics of Thailand in 2005 by the National Statistical Office found that in the 2003 academic year most of the Thai population had a primary school education (6-to-11-year-old age range). The targeted population segments within this study are youths studying in grade 9 of high school

and up to a higher education level (14-22 years old). The overall population figures are stratified according to education level and shown in figure 4.5.

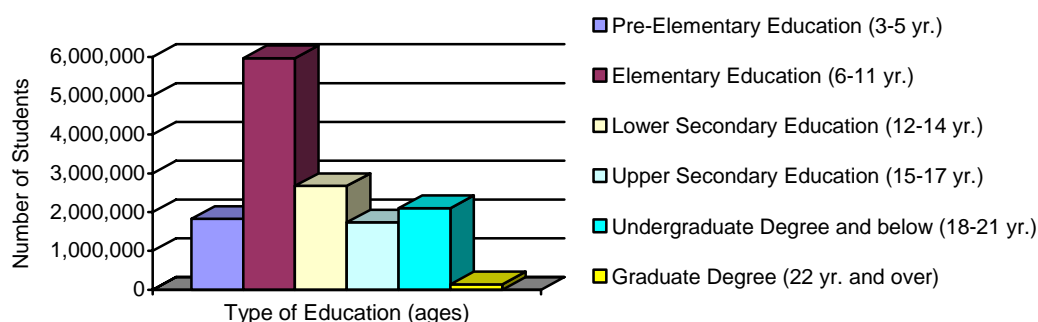


Figure 4.5 Number of Students by Level, Grade and Type of Education: Academic Year 2004

Source: Ministry of Information and Communication Technology. National Statistical Office, 2005: 31.

The National Youth Policy and the long-term National Children and Youth Development Plans between 2002-2011 aims to reduce population growth from 2.0% to an expected and projected rate of only 1.1% in 2011, so that the children and youth population segment will decline to 24.42 million, and 24.06 million in 2014, or 36.9% and 34.8% respectively of the total population which is similar to the result of Thailand's population projection compiled by the College of Population Studies, Chulalongkorn University (Kua Wongboonsin, 2004a: 1-2). When studying population components, it is found that the trend of the child population ratio all over the Kingdom will decline from 24.7% in 2000 to 18.0% in 2025 so that after 2009 its gradual decrease will have an effect on the population of working age whose numbers will decline to 62.1% by 2025. Changes in the family structure result in a decreased proportion of the working-age population segment which causes a rapid decrease in the supporting ratio of the elderly population. In other words, in 2000 the ratio between working-age population and the supported elderly was 7:1, but this ratio has been decreasing steadily so that in 2020 each older Thai person will have only four supporting working-age persons, with the number decreasing further to two persons by 2050 (Kua Wongboonsin, 2007: 7).

The projection by the Institute for Population and Social Research, Mahidol University (2006: 3) for Thailand's population from 2005-2025, on the basis of the assumption of a moderate fertility rate, is that the Thai women's total fertility rate of 1.65 in 2005 will fall to 1.45 over the 20 years from 2005 to 2025. The total fertility trend from 2005 to 2025 appears as a declining straight line, resulting in a decrease in the number of the children and youths, as shown in figure 4.6-4.7.

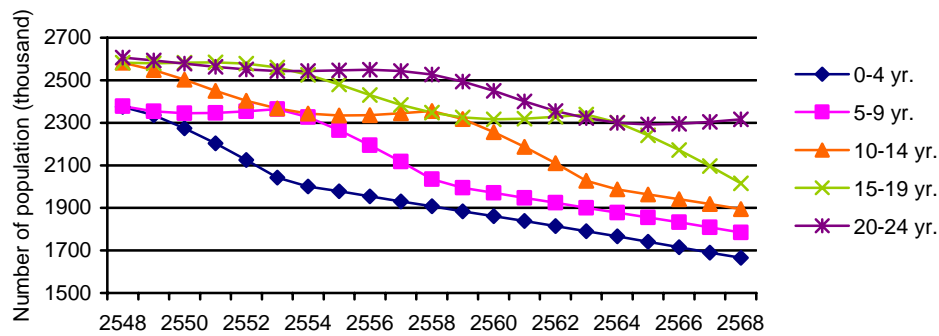


Figure 4.6 Population Projections for Children and Youth (Male) of Thailand by 5-Year Age Group, 2005-2025 (1st July): Medium Fertility Assumption

Source: Institute for Population and Social Research, 2006: 24-26.

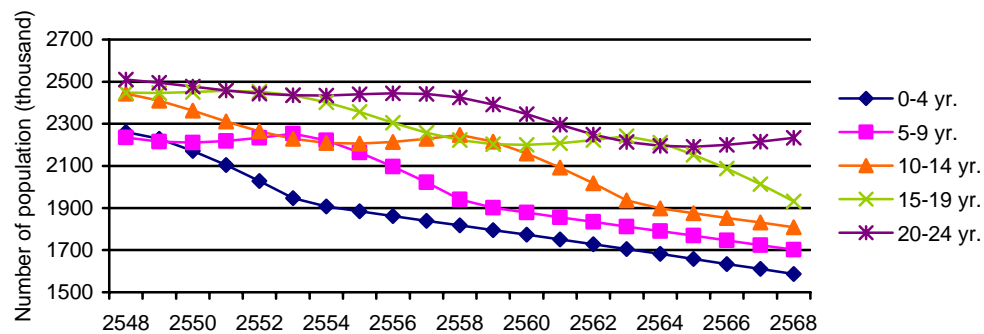


Figure 4.7 Population Projection for Children and Youth (Female) of Thailand by 5-Year Age Group, 2005-2025 (1st July): Medium Fertility Assumption

Source: Institute for Population and Social Research, 2006: 25-27.

The total of the nation's child population, both male and female, tends to decline. A steep decline in the population aged 0 to 4 years old has been projected for 2006-2010, and the population aged 5 to 9 years will consequently decrease similarly during 2011-2015. As a result, from 2016-2020 the population from 10 to 14 years of age will be the same, and, following a similar trend, also for the population aged between 15 to 19 years during 2021-2025.

In order to better assess the overall picture of all age ranges, Thailand's population structure is presented by using the data from Thailand's population projection (Institute for Population and Social Research, 2006) to demonstrate how it used to be and how it will be changing from 2005 to 2025. The population is stratified according to 5-year-age-range groups by using the mid-year (1 July) population data based on the assumption of a moderate fertility rate (figure 4.8-4-10).

During the next 10-20 years the number of children and youths, both male and female, will begin to decline, so it is necessarily important to have development planning focus on developing children and youths to a qualitative better generation. As mentioned earlier, child development should begin from early childhood. At present, factors influencing child and youth development are history, economics, society and culture. But the development processes also includes biology, cognition, and social relations. The Ministry of Social Development and Human Security has issued long-term (during 2002-2011) policies on National Children and Youth Development plans concerning the qualitative development of young people. It is based on the notion that the quality of children and youth depends not only on genetic heritage but also on environmental conditions. Children and youths are grouped into different age-ranges as follows:

Children under 5 years old have a trend towards a higher survival rate due to progress in public health, which helps to reduce infant mortality rates from 7.2 persons (from 1,000 newly born infants in 1995) to 5.8 persons in 1997. Children living in urban areas have better access to health services than those living in rural areas (National Institute for Child and Family Development, 1996 quoted in the Ministry of Social Development and Human Security, 2004: 26).

Generally, young people aged between 15 to 25 years old are healthy, but there are health problems caused by drug abuse. There is also a trend to a higher

mortality rate on account of accidents which occur more frequently in rural areas. As to sexual behavior it was found that young girls from 16 to 18 years of age unintentionally getting pregnant (21.4%), with 1/4 of them having an abortion (Mahidol University, 1992 quoted in the Ministry of Social Development and Human Security, 2004: 27). In addition there are about 6.3 million young people in this group who do not continue their studies and are jobless. They represent 84.2% of the children and young people between 13 to 24 years old (National Statistical Office, 1997 quoted in the Ministry of Social Development and Human Security, 2004: 28).

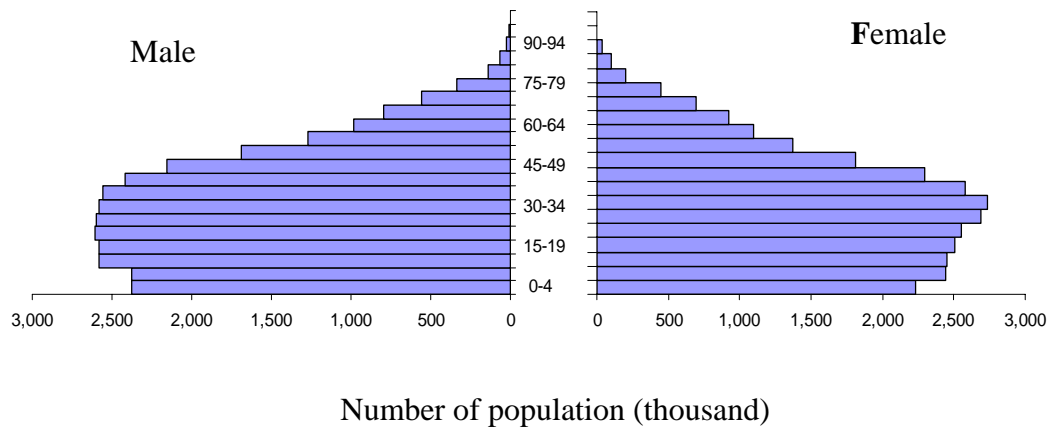


Figure 4.8 Population Pyramid for Thailand in the Base Year (2005)

Source: Institute for Population and Social Research, 2006: 24-25.

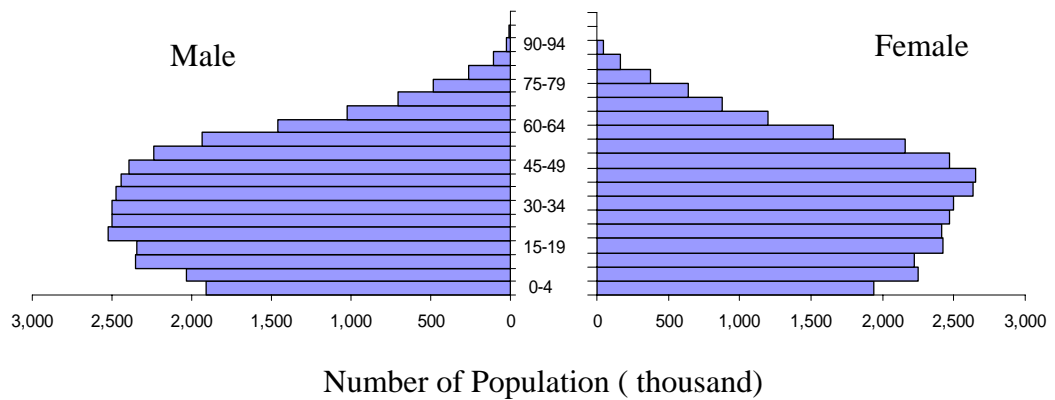


Figure 4.9 Population Pyramid for Thailand in the Base Year (2015)

Source: Institute for Population and Social Research, 2006: 24-25.

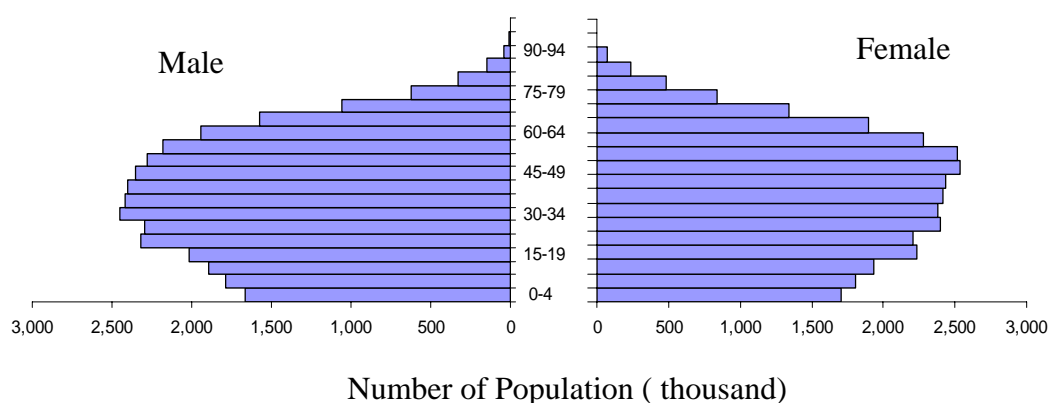


Figure 4.10 Population Pyramid for Thailand in the Base Year (2025)

Source: Institute for Population and Social Research, 2006: 26-27.

The National Youth Policy and The Long-Term National Children and Youth Development Plans (2002-2011) state that the development of children and young people must be an integrated development concept of physical development, mind, emotion, and social ethics. At present, as families are likely to be nuclear families with higher divorce rates, a larger number of children are therefore abandoned as a result of the families' economically worsening situations. Women tend to work increasingly outside the home, resulting in a lack of warmth and cohesion within families, with the number of abandoned children and elderly also rising. Environmental changes internationally have an effect on young people's concepts, beliefs and behavior as follows:

1. Conflicts arise amongst children and youths between universal norms and Thai identities.
2. There are conflicts arising between the families' child-raising methods and the schools' socialization, which focuses on molding Thai children and young people to portray democratic principles and characters, rather than teaching compliance.
3. An unlimited availability of knowledge and information hinder the children and youths from using them understandingly.
4. Aggressive commercial competition stimulates the demand of quality and a skilled workforce.
5. Democratic society supports the right reclamation.

6. Children and youths are economically exploited.

4.3 Population Structure of Children and Youths in Metropolitan Bangkok

Children and youths in the 0 to 4 age range, both male and female, in metropolitan Bangkok, tend to decrease in number from 2010-2025, resulting in the beginning of the decline of the 10-to-14 year-old population in 2020 (figure 4.11-4.12) as well. The decrease in the number of children as projected will determine the future population figure. The next important thing to do is the continuous development of the population's quality. The lower the overall population, the more need for a society to have a better qualified and more educated population. This is relevant to the behavioral model which demonstrates the relationships between economic, social and population factors (as discussed in chapter 2).

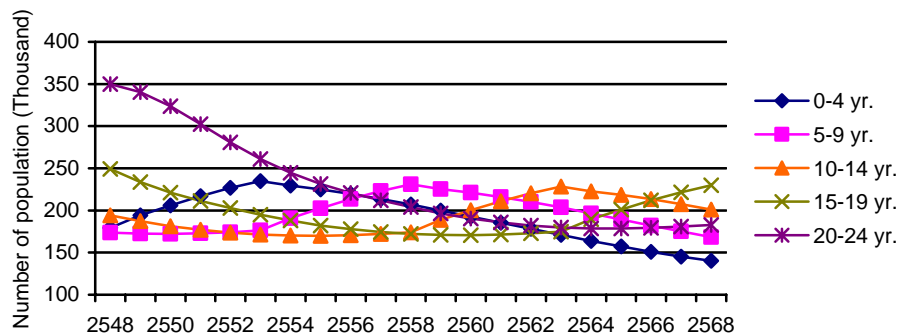


Figure 4.11 Population Projection for Children and Youths (Male) of Thailand by 5-Year Age Group, 2005-2025 (1st July): Bangkok Metropolitan

Source: Institute for Population and Social Research, 2006: 52-54.

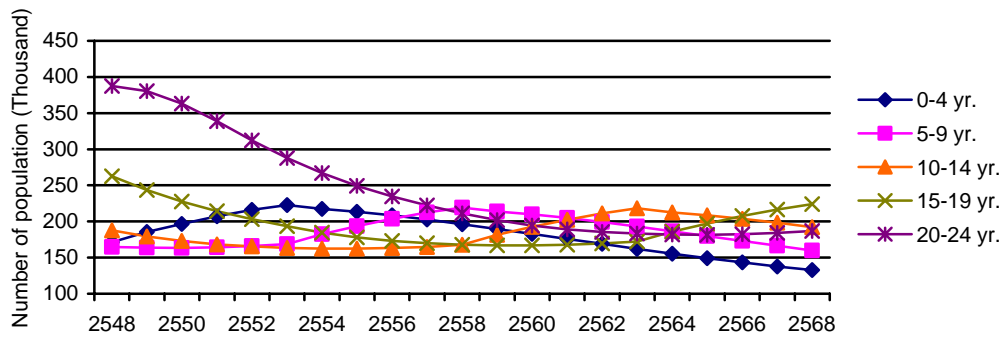


Figure 4.12 Population Projection for Children and Youths (Female) of Thailand by 5-Year Age Group, 2005-2025 (1st July): Bangkok Metropolitan

Source: Institute for Population and Social Research, 2006: 53-55.

In order to see the overall picture of all age ranges within the metropolitan Bangkok population, the graph presents population by age and gender structure from 2005 and projected for the next 10 and 20 years (in 2015 and 2025), employing a stratification of the 5-year age range by using the mid-year (1st July) based on an assumption of moderate fertility, as shown in figure 4.13-4.15

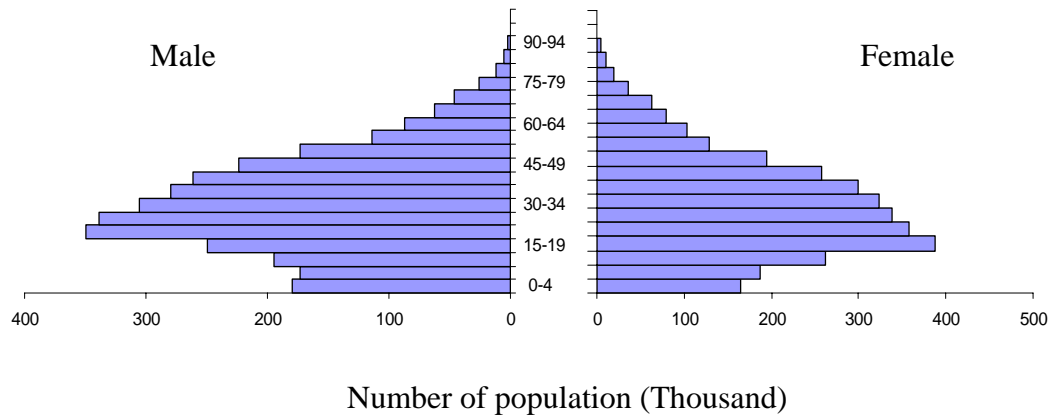


Figure 4.13 Population Pyramid for Thailand in the Base Year (2005): Bangkok Metropolitan

Source: Institute for Population and Social Research, 2006: 52-53.

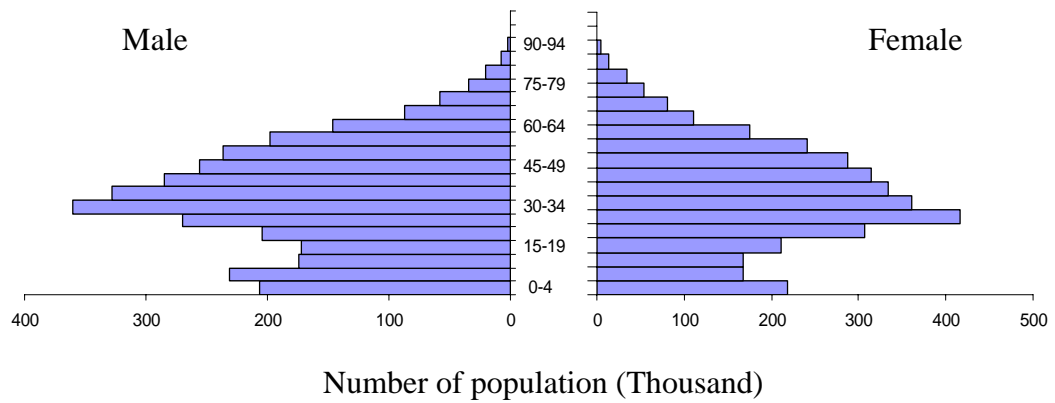


Figure 4.14 Population Pyramid for Thailand in the Base Year (2015): Bangkok Metropolitan

Source: Institute for Population and Social Research, 2006: 52-53.

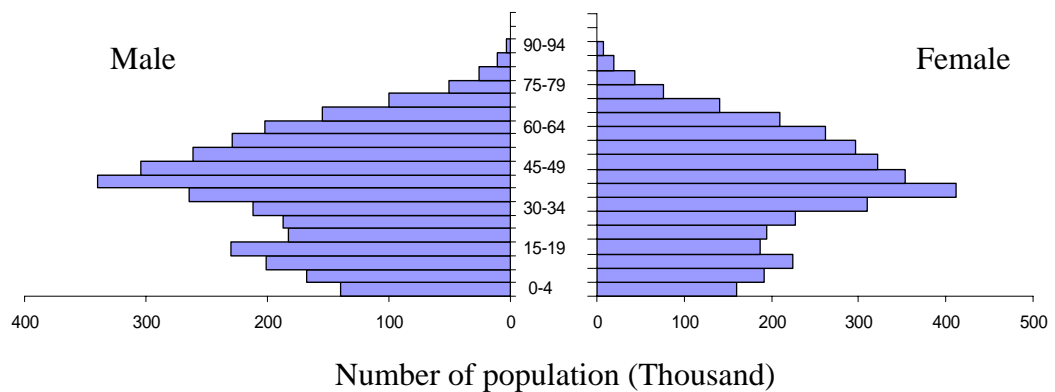


Figure 4.15 Population Pyramid for Thailand in the Base Year (2025): Bangkok Metropolitan

Source: Institute for Population and Social Research, 2006: 54-55.

The changes in the population structure in metropolitan Bangkok during a period of 10 years from 2005 to 2015 results in the highest number of young people aged between 20 to 24 years old in 2005, who will move to the 30-to-34-year age range by 2015, so that this age-range population will be the largest by 2015.

However, when considering the population between 15 to 24 years old in 2015, it is found that the male population between 15 to 19-years old will outnumber the same-age-range female population (172,100 males to 168,000 females), whereas amongst the population bracket of 20 to 24 years olds there will be more females than males (203,900 males to 211,400 females)

Regarding the year 2025, the population between 15 to 19 years old will outnumber the population between 20 to 24 years old; the male population will number 229,800, the females 223,900, whereas the population between 20 to 24 years old will number 182,900 males and 187,000 females.

In order to see the overall picture and the trends of male and female population segments from 15 to 24 years old in metropolitan Bangkok, i.e. what it was and how it will change, it is presented through the data of a population projection for Thailand during 2005-2025 based on the assumption of a moderate fertility rate, compiled by the Institute for Population and Social Research, Mahidol University. It demonstrates that the population between 15 to 24 years old, both male and female, tends to decline. The male population between 15 to 19 years old will be outnumbered by females during 2005-2008, but during 2010-2025, the male population tends to outnumber the female, whereas both the male and female populations between 20 to 24 years old tend to decline, with the male population outnumbering by females, as shown in figure 4.16-4.17.

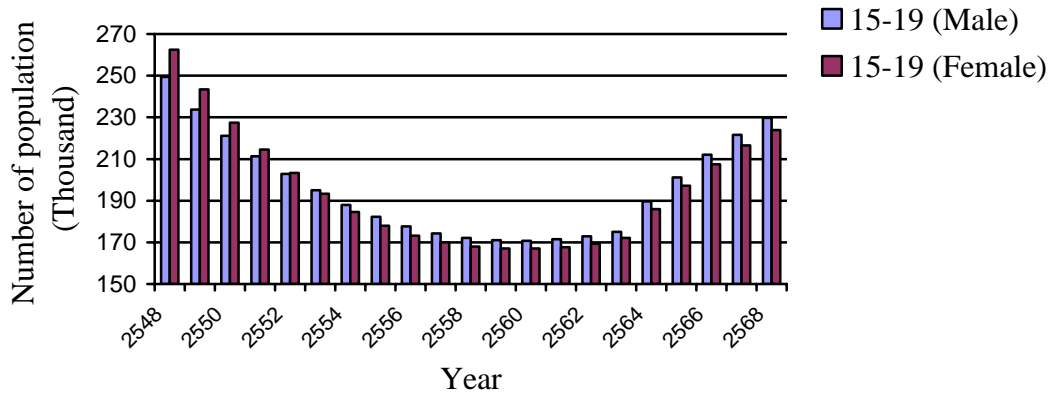


Figure 4.16 Tendency of Population for Thailand by 5-Year Age Group (15-19 years) and Sex, 2005-2025 (1st July): Bangkok Metropolitan

Source: Institute for Population and Social Research, 2006: 52-55.

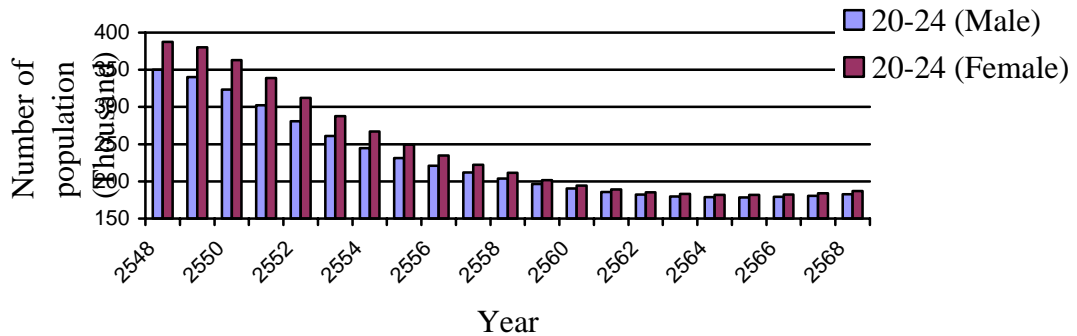


Figure 4.17 Tendency of Population for Thailand by 5-Year Age Group (20-24 years) and Sex, 2005-2025 (1st July): Bangkok Metropolitan

Source: Institute for Population and Social Research, 2006: 52-55.

4.4 Summary

The population structure, which has been changing as a result of the demographic policy of the Third National Economic and Social Development Plan (1972-1976), has resulted in the decline of Thailand's fertility rate from 6.3 persons (in 1964-1965) to 1.6 persons (2005-2006) (Kua Wongboonsin, 2007: 7). The national

total fertility rate of Thai women in 2005 was 1.65 and will be 1.45 in the next 20 years after 2005 (or in 2025). For the metropolitan Bangkok area the fertility rate of 1.42 in 2005 is likely to decrease to 1.24 by 2025 (Institute for Population and Social Research, 2006: 3-4). This means that number of single-child families will increase in the future. The children will consequently be the families' center of attention, leading to the parents' deliberate or unnecessary increase in spending for their children, which, on the other hand, encourages the children to become accustomed to over spending and leading them to become the highest spenders within most families.

The obligation is therefore on the parents to begin to introduce their children to the concept of spending and partake in their family's spending, spending decisions and financial planning in order to learn responsible conduct, reduce unnecessary spending and thereby alleviate the family's financial burden. Discipline in financial matters and awareness of its importance will make adolescents spend money more appropriately and help to reduce a variety of problems that arise within society due to excessive adolescent expenditure.

CHAPTER 5

EXPENDITURE PATTERNS OF THAI ADOLESCENT

The study outcome presented in this chapter is divided into three parts: first, general characteristics of the samples; second, the expenditure patterns of adolescents, comparing spending of male and female adolescents, who are grouped into early adolescents (14-17 years old) and late adolescents (18-22 years old), together with the analysis of the income allocations; third, conclusion and suggestions.

5.1 General Characteristics of the Samples

According to the conceptual framework, variables affecting adolescents are divided into three groups: adolescent's characteristics, family, and society / cultures / economics.

Adolescent's characteristics consist of gender, age, level of education, GPA (education grade point average), type of educational institute, birth order, and place of residence.

The family's characteristics consist of type of family, family's incomes, parent's educational attainment and occupations, characteristics of the family's residence and the status of ownership as well as number of children in the family.

Social and cultural characteristics consist of the adolescent's residence, responsibility for any payment towards the upkeep of the residence, private bed room, close friends, the product awareness, accessibility of technology, and the ability for decision-making or self-restraint regarding spending. Finally, economic characteristics consist of incomes and expenses of the adolescent.

Details are shown in table 5.1-5.2

Table 5.1 Percent of Male and Female Adolescent in Each Age Group by Adolescent, Family and Social Characteristics

Characteristics	Male (n=400)			Female (n=400)			Total (n=800)		
	Early (n=150)	Late (n=250)	Total (n=400)	Early (n=193)	Late (n=207)	Total (n=400)	Early (n=343)	Late (n=457)	Total (n=800)
1. Adolescent's characteristics									
1.1 Level of educational									
- Secondary school	72.0	3.6	29.3	79.8	4.3	40.7	76.4	3.9	35.0
- Vocational school	26.7	40.4	35.3	19.7	39.6	30.0	22.7	40.0	32.6
- Higher education	1.3	56.0	35.4	0.5	56.1	29.3	0.9	56.1	32.4
1.2 GPA									
Lower 2.00-2.49	29.4	36.4	33.7	13.5	18.8	16.3	20.4	28.4	25.0
2.5 – 2.99	23.3	34.0	30.0	17.1	35.3	26.5	19.8	34.6	28.3
3.00 – 3.49	19.3	24.4	22.5	36.2	32.9	34.4	28.9	28.2	28.4
3.50 – 4.00	28.0	5.2	13.8	33.2	13.0	22.8	30.9	8.8	18.3
1.3 Type of educational institute									
- Public	56.0	53.2	54.3	41.5	57.0	49.5	47.8	54.9	51.9
- Private	44.0	46.8	45.7	58.5	43.0	50.5	52.2	45.1	48.1
1.4 Birth order									
1 st	53.4	55.6	54.7	51.9	48.3	50.0	52.5	52.3	52.4
2 nd	33.3	26.8	29.3	32.6	31.9	32.3	32.9	29.1	30.7
>= 3 rd	13.3	17.6	16.0	15.5	19.8	17.7	14.6	18.6	16.9
1.5 Place of domicile									
- Bangkok and surrounding areas	80.0	40.0	55.0	78.8	50.7	64.2	79.3	44.9	59.6
- Else	20.0	60.0	45.0	21.2	49.3	35.8	20.7	55.1	40.4
2. Family's characteristics									
2.1 Type of family									
- The father and mother live together.	76.0	79.2	78.0	81.9	76.8	79.3	79.3	78.1	78.6
- The father and mother live separately.	11.3	11.2	11.2	13.5	13.5	13.5	12.5	12.3	12.4
- one father/mother or Neither father nor mother	12.7	9.6	10.8	4.6	9.7	7.2	8.2	9.6	9.0
2.2 Household incomes (per month)									
Less than or equal 10,000 baht	12.7	14.8	14.0	16.6	16.4	16.5	14.9	15.5	15.3
10,001 – 50,000 baht	58.0	50.8	53.5	47.7	54.1	51.0	52.2	52.3	52.3
More than 50,000 baht	29.3	34.4	32.5	35.7	29.5	32.5	32.9	32.2	32.4

Table 5.1 (Continued)

Characteristics	Male (n=400)			Female (n=400)			Total (n=800)		
	Early (n=150)	Late (n=250)	Total (n=400)	Early (n=193)	Late (n=207)	Total (n=400)	Early (n=343)	Late (n=457)	Total (n=800)
2.3 Educational attainment of the father									
- Lower than primary school and primary school	19.3	26.0	23.5	18.7	32.9	26.0	19.0	29.1	24.8
- Secondary school or vocational school (Certification and Diploma)	34.0	40.0	37.8	41.5	33.8	37.5	38.2	37.2	37.6
- Higher education	27.3	26.8	27.0	28.0	21.3	24.5	27.7	24.3	25.8
- No father	9.3	5.6	7.0	3.6	10.6	7.3	6.1	7.9	7.1
- Don't know	10.1	1.6	4.7	8.2	1.4	4.7	9.0	1.5	4.7
2.4 Educational attainment of the mother									
- Lower than primary school and primary school	22.7	42.8	35.3	28.0	41.1	34.8	25.7	42.0	35.0
- Secondary school or vocational school (Certification and Diploma)	33.3	28.4	30.3	39.4	37.7	38.4	36.7	32.6	34.4
- Higher education	26.0	27.2	26.8	24.4	17.9	21.0	25.1	23.0	23.9
- No mother	5.3	0.4	2.2	1.6	1.9	1.8	3.2	1.1	1.9
- Don't know	12.7	1.2	5.4	6.6	1.4	4.0	9.3	1.3	4.8
2.5 Father's occupations									
- Civil-servants, state or private sector employees	24.0	29.2	27.3	25.9	26.1	26.0	25.1	27.8	26.6
- Non-fixed occupations	33.3	41.2	38.3	35.8	38.2	36.9	34.7	39.7	37.6
- Others	30.0	23.2	25.7	33.2	24.6	28.8	31.8	23.9	27.3
- No father	9.3	5.6	7.0	3.6	10.6	7.3	6.1	7.9	7.1
- Don't known	3.4	0.8	1.7	1.5	0.5	1.0	2.3	0.7	1.4

Table 5.1 (Continued)

Characteristics	Male (n=400)			Female (n=400)			Total (n=800)		
	Early (n=150)	Late (n=250)	Total (n=400)	Early (n=193)	Late (n=207)	Total (n=400)	Early (n=343)	Late (n=457)	Total (n=800)
2.6 Mother's occupations									
- Civil-servants or state and private sector employees	20.0	23.6	22.3	18.7	20.8	19.8	19.2	22.3	21.0
- Non-fixed occupations	23.3	41.2	34.5	30.1	35.7	33.0	27.1	38.8	33.8
- Others	50.7	34.0	40.3	49.2	41.6	45.2	49.9	37.4	42.8
- No mother	5.3	0.4	2.2	1.6	1.9	1.8	3.2	1.1	1.9
- Don't known	0.7	0.8	0.7	0.4	-	0.2	0.6	0.4	0.5
2.7 The parent's ownership of the residence									
- Own residence	79.4	78.0	78.5	78.8	81.6	80.3	79.0	79.6	79.4
- Rented/mortgaged ownership	15.3	19.2	17.8	17.6	15.0	16.3	16.6	17.3	17.0
- Other	5.3	2.8	3.7	3.6	3.4	3.4	4.4	3.1	3.6
2.8 Number of children in the family									
- only child	13.3	16.8	15.5	16.1	12.1	14.0	14.9	14.7	14.8
- two children	46.7	43.6	44.7	38.3	44.4	41.5	42.0	44.0	43.1
- More than two children	40.0	39.6	39.8	45.6	43.5	44.5	43.1	41.3	42.1
3. Social characteristics									
3.1 Lived with parents									
- In a single house/town house/ commercial building of their own	81.3	44.0	58.0	82.9	58.9	70.5	82.2	50.8	64.2
- In a rented apartment / condominium/ rented house	18.7	56.0	42.0	17.1	41.1	29.5	17.8	49.2	35.8
3.2 Live-alone adolescents									
- Responsible for the residence payment	7.1	66.4	56.5	12.1	58.8	45.8	9.8	63.6	52.1
- Not responsible for the residence payment	92.9	33.6	43.5	87.9	41.2	54.2	90.2	36.4	47.9
3.3 Private bed room									
Have their own room	58.7	52.0	54.5	61.1	58.0	59.5	60.1	54.7	57.0
Don't have their own room	41.3	48.0	45.5	38.9	42.0	40.5	39.9	45.3	43.0

Table 5.1 (Continued)

Characteristics	Male (n=400)			Female (n=400)			Total (n=800)		
	Early (n=150)	Late (n=250)	Total (n=400)	Early (n=193)	Late (n=207)	Total (n=400)	Early (n=343)	Late (n=457)	Total (n=800)
3.4 Close friends									
-In the same educational institutes	78.7	86.0	83.3	95.9	94.2	95.0	88.4	89.7	89.1
- Near their living quarters	18.7	12.4	14.7	3.1	3.9	3.5	9.9	8.5	9.1
- Others	2.6	1.6	2.0	1.0	1.9	1.5	1.7	1.8	1.8
3.5 Adolescents' product awareness (multiple choice)									
- Journal / newspaper/magazines	21.1	26.5	24.7	23.9	24.9	24.4	22.8	25.8	24.6
- Friends	24.5	22.1	22.9	24.8	24.9	24.9	24.7	23.3	23.9
- Television & radio	19.7	20.9	20.5	20.3	22.0	21.2	20.1	21.4	20.9
- The internet	13.6	15.5	14.9	11.9	12.5	12.2	12.5	14.2	13.5
- Family	16.6	11.6	13.3	16.2	11.1	13.6	16.4	11.4	13.4
- Others	4.5	3.4	3.7	2.9	4.6	3.7	3.5	3.9	3.7
3.6 Adolescents' accessibility to technology (multiple choice)									
1. Something in their bed room									
- Television	24.4	23.0	23.5	25.1	23.7	24.3	24.8	23.3	23.9
- DVD / VCD	22.7	15.7	18.1	20.0	16.3	18.0	21.2	16.0	18.0
- Computer	16.5	17.0	16.8	15.2	16.5	16.0	15.8	16.8	16.4
- Telephone	11.2	11.4	11.3	14.0	12.6	13.2	12.7	11.9	12.3
- The internet	10.3	11.8	11.3	10.1	11.2	10.7	10.2	11.5	11.0
- Others	14.9	21.1	19.0	15.6	19.7	17.8	15.3	20.5	18.4
2. Adolescent's possession									
- Mobile phones	33.9	36.2	35.4	38.2	40.0	39.1	36.3	37.8	37.2
- MP3 / MP4	18.5	18.3	18.3	19.6	20.6	20.2	19.1	19.3	19.2
- Laptop / Notebook	18.2	18.2	18.9	17.9	16.4	17.1	18.1	18.0	18.0
- Game play	17.7	9.9	12.7	8.9	6.2	7.4	12.8	8.3	10.1
- Digital camera	6.6	9.0	8.1	12.1	11.8	12.0	9.6	10.2	10.0
- Others	5.1	7.4	6.6	3.3	5.0	4.2	4.1	6.4	5.5

Table 5.1 (Continued)

Characteristics	Male (n=400)			Female (n=400)			Total (n=800)		
	Early (n=150)	Late (n=250)	Total (n=400)	Early (n=193)	Late (n=207)	Total (n=400)	Early (n=343)	Late (n=457)	Total (n=800)
3. Places use the internet mostly									
- At Home	45.6	32.0	36.9	51.2	35.0	42.2	48.6	33.3	39.5
- At educational institute	22.6	28.5	26.4	25.8	35.0	30.9	24.3	31.5	28.6
- At the internet shop	29.5	24.1	26.0	17.3	21.0	19.4	22.9	22.7	22.8
- Other	1.4	14.1	9.5	4.2	8.7	6.7	2.9	11.6	8.1
- No use	0.9	1.3	1.2	1.5	0.3	0.8	1.3	0.9	1.0
3.7 Decided to buy goods by using saving									
- Bought immediately without waiting	10.0	9.8	9.9	14.0	10.1	12.3	9.9	12.3	11.3
- Rarely waiting	30.0	47.2	39.7	46.0	46.4	46.2	39.7	46.1	43.4
- Moderately waiting	30.0	24.9	27.1	22.4	24.6	23.4	27.1	23.4	25.0
- Habitually waiting	19.3	13.4	16.0	13.2	12.1	12.6	16.0	12.7	14.0
- Always waiting	10.7	4.7	7.3	4.4	6.8	5.5	7.3	5.5	6.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Of the samples 35.0% were schoolchildren at secondary schools, 32.6% and 32.4 % were students at vocational schools and universities respectively.

Education outcomes of the schoolchildren/students were measured by means of 4-level GPAs. It was found that 25.0% of them had a GPA lower than 2.00-2.49, 28.3% had a GPA between 2.50-2.99, 28.4% had a GPA between 3.00-3.49, and 18.3% had a GPA between 3.50-4.00. About 51.9% of them were schoolchildren / students in public educational institutes and 52.4% of them represented the first child in the family, with 59.6% having their place of domicile in Bangkok and surrounding areas.

Family type was found that 78.6% of the samples' parents lived together, and 55.8% of the samples lived with them, and 83.9% of adolescents' financial support

and other personal issues were taken care of by their parents. There were 23.3% of adolescents living with relatives, siblings and friends, whilst more male adolescents lived with relatives and friends than female adolescents did.

Regarding the household incomes per month, it was found that 52.3% of families earned about 10,001-50,000 baht, with 32.4% earning more than 50,000 baht. As to the education of the male parents, 37.6% of them finished their studies at secondary school or lower than bachelor's degree, and 35.0% of the mothers did either not complete or completed their education at the conclusion of primary school.

With regard to the fathers' occupations, it was found that 37.6% of them had non-fixed occupations (such as, and including, business and jobs in the agricultural sector, or occupations with an uncertain income). 26.6% were civil-servants, state or private sector employees (with a reliable fixed monthly income), and 33.8% of the mothers had non-fixed occupations such as business or jobs in the agricultural sector, and 21.0% were civil-servants, or state and private sector employees.

Residence characteristics: it was found that 61.9% of their homes were single houses, 24.0% were townhouses or commercial buildings, and 12.9% were apartments, mansions or condominiums, and 79.4% had their own residence. With regard to sibling numbers (including the adolescent), 43.1% of them had two siblings, 42.1% had more than two, and only 14.8% of them were an only child of the family.

Concerning adolescent social characteristics it was found that 64.2% lived with families (single house, town house or commercial building) - or 70.5% of female adolescents and 58.0% of male adolescents - while there were 42.0% of male and 29.5% of female adolescents living in a rented apartment, a mansion, a condominium or a rented house, but when a comparison is drawn between early and late adolescents, it was found that 49.2% of late adolescents and 17.8% of early adolescents lived in apartments, mansions condominiums or rented housing, and 47.9% of the live-alone adolescents were not responsible for the financial upkeep of the residence, 52.1% were responsible for the payment, with male adolescents having more responsibility for a financial contribution than female adolescents. Moreover, as the late adolescents were more mature and had more responsibilities, they had to be more responsible for the financial support of the residence than the

early adolescent segment, representing 63.6% of the late adolescents compared to only 9.8% of the early adolescents.

In the case of private bed rooms it was found that 57.0% of adolescents had their own room, representing 59.5% of female adolescents and 54.5% of males, or 60.1% of early adolescents and 54.7% of late adolescents. Among the sample adolescents, 89.1% had close friends in the same educational institutes, which represented 95.0% of female and 83.3% of male adolescents. And 14.7% of male adolescents had close friends near their living quarters.

As to the adolescents' product awareness, it was found that 24.6% knew a product from magazines, 23.9% from friends, and 20.9% from television and radio. Those who knew an item from magazines made up 24.7% of male adolescents and 24.9% of the females. Those who knew from friends represented 22.9% of male adolescents and 24.9% of female adolescents. The figures show that male adolescents knew about goods and products from magazines to a larger extent than female adolescents, but the females knew about products from friends to a larger extent than from magazines. When comparing early and late adolescents, it was found that 24.7% of the early adolescents knew from friends and 25.8% of late adolescents knew from magazines. Those who had product knowledge from internet accounted for only 13.5% of the samples. Access to the internet was most frequent from home – representing 39.5% - , followed by access in educational institutes at 28.6%.

With regard to accessibility of technology, it was found that 23.9% of them had a television set in their bed room, and 11.0% had the internet in the bed room as well, 37.2% had mobile phones, and 19.2% had MP3 or MP4 of their own. About 43.4% of them decided to buy goods by using savings; 9.9% of male and 12.3% of female adolescents bought the goods immediately without waiting for saving money.

Other details are shown in table 5.1

Table 5.2 Percent of Male and Female Adolescent in Each Age Group by Economic Characteristics

Economic characteristics	Male (n=400)			Female (n=400)			Total (n=800)		
	Early (n=150)	Late (n=250)	Total (n=400)	Early (n=193)	Late (n=207)	Total (n=400)	Early (n=343)	Late (n=457)	Total (n=800)
1. Adolescents' incomes									
1.1 Received from their family									
- Daily	64.4	26.8	40.9	59.2	36.4	47.5	61.5	31.1	44.1
- Weekly	29.5	25.2	26.8	31.9	20.2	25.9	30.9	23.0	26.4
- Monthly	6.1	44.4	30.1	8.4	41.9	25.6	7.3	43.3	27.9
- Others (1)	-	3.6	2.2	0.5	1.5	1.0	0.3	2.6	1.6
1.2 Part-time jobs									
- No have	82.7	75.2	78.0	88.6	80.7	84.5	86.0	77.7	81.3
- Have	17.3	24.8	22.0	11.4	19.3	15.5	14.0	22.3	18.7
1.3 Received from families on special occasions (more than 1 choice)									
- Birthday	33.1	26.7	29.5	31.0	31.9	31.5	31.9	29.2	30.5
- New year / Christmas	16.6	19.6	18.3	18.5	18.3	18.4	17.7	19.0	18.4
- Chinese New Year / muslim New Year	45.1	45.3	45.2	45.7	42.3	44.0	45.5	43.8	44.6
- Others (2)	5.2	8.4	7.0	4.8	7.5	6.1	4.9	8.0	6.5
1.4 Enough money for expenses									
- Have enough and saving	60.7	36.4	45.5	61.6	43.5	52.3	61.2	39.6	48.9
- Have enough and no saving	36.0	51.2	45.5	33.2	45.4	39.5	34.4	48.6	42.5
-Not have enough and ask for additional	3.3	12.4	9.0	5.2	11.1	8.2	4.4	11.8	8.6
1.5 Solve a problem (If incomes were insufficient) (more than 1 choice)									
- Ask for additional money from their family	32.7	32.6	32.7	36.0	40.2	38.2	34.6	35.9	35.4
- used saving	30.3	21.0	24.3	36.9	26.3	31.4	34.1	23.3	27.7
- Borrowed from friends	14.0	20.4	18.1	11.9	11.5	11.7	12.8	16.5	15.0
- Worked more extra-jobs	15.6	15.2	15.3	7.6	15.3	11.6	11.0	15.2	13.5
- Others (3)	7.4	10.8	9.6	7.6	6.7	7.1	7.5	9.1	8.4

Table 5.2 (Continued)

Economic characteristics	Male (n=400)			Female (n=400)			Total (n=800)		
	Early (n=150)	Late (n=250)	Total (n=400)	Early (n=193)	Late (n=207)	Total (n=400)	Early (n=343)	Late (n=457)	Total (n=800)
1.6 The reason for saving (more than 1 choice)									
- Emergency	27.0	26.3	26.6	37.9	27.1	32.5	33.8	26.7	29.8
- Education	23.0	13.9	17.2	22.2	17.6	19.9	22.5	15.7	18.7
- For use in the future	18.0	15.3	16.3	18.2	20.6	19.4	18.1	17.9	18.0
- Buy goods for themselves	19.7	16.3	17.5	17.7	13.1	15.4	18.4	14.7	16.3
- Others (4)	12.3	28.2	22.4	4.0	21.6	12.8	7.2	25.0	17.2
1.7 Financial Planning (taught in educational institutions)									
- Be not taught (N=191)	18.7	30.4	26.0	16.1	27.1	21.8	17.2	28.9	23.9
- Be taught (N=609)	81.3	69.6	74.0	83.9	72.9	78.2	82.8	71.1	76.1
1.8 Level of educational (financial planning were taught) (N=609)									
- Kindergarten	0.8	-	0.3	0.6	-	0.3	0.7	-	0.3
- Primary school	54.2	44.2	48.3	67.9	50.4	59.4	61.8	46.9	54.1
- Junior secondary school	39.3	35.6	37.2	24.7	23.8	24.3	31.2	30.3	30.6
- Senior secondary school	4.9	16.1	11.5	2.5	18.5	10.2	3.5	17.4	10.8
- Vocational school	0.8	0.6	0.7	4.3	4.6	4.5	2.8	2.4	2.6
- Diploma-level institute	-	0.6	0.3	-	0.7	0.3	-	0.6	0.3
- Higher education	-	2.9	1.7	-	2.0	1.0	-	2.4	1.3
2. expenditure characteristics									
2.1 expense satisfaction									
- Satisfied the most	16.0	10.0	12.3	6.2	10.1	8.3	10.5	10.1	10.2
- Very satisfied	20.0	15.6	17.3	14.0	15.0	14.5	16.7	15.3	15.9
- Satisfied	44.7	42.8	43.4	51.3	45.0	47.9	48.2	43.7	45.7
- Relatively satisfied	17.3	26.0	22.7	23.3	24.6	24.0	20.8	25.4	23.4
- Not satisfied at all	2.0	5.6	4.3	5.2	5.3	5.3	3.8	5.5	4.8

Table 5.2 (Continued)

Economic characteristics	Male (n=400)			Female (n=400)			Total (n=800)		
	Early (n=150)	Late (n=250)	Total (n=400)	Early (n=193)	Late (n=207)	Total (n=400)	Early (n=343)	Late (n=457)	Total (n=800)
2.2 Self-restraint									
- Most freely	15.3	13.6	14.2	13.0	9.2	11.0	14.0	11.6	12.6
- Relative freely	28.0	20.0	23.0	23.3	28.5	26.0	25.4	23.9	24.5
- Moderate freely	42.0	45.6	44.3	48.2	46.9	47.5	45.4	46.1	45.9
- Relatively Economical	12.7	18.0	16.0	15.0	13.0	14.0	14.0	15.8	15.0
- Very economical	2.0	2.8	2.5	0.5	2.4	1.5	1.2	2.6	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Remarks:

(1) Income by semester, ability to ask for money all the time (not including those who were never given money)

In cases where money was received daily and monthly, per week and semester, and where money was received daily, weekly and monthly are divided accordingly.

(2) Children's day, family reunion day, Water festival, rewards for good performance in exams, the parents' lottery winnings, the parents' bonuses from work, scholarships, Father's day, preference to do nothing.

(3) Borrowed money from parents, from siblings, requests from boy friend/girl friend, use of credit cards, purchases on credit, do not use it

(4) For marriage, savings without particular purpose, for doing business, car/motorcycle reparation, playing games, car purchases, house purchases, for parent giving

About 98.5% of the samples received money from their family; 44.1% on a daily and 27.9% on a monthly basis. Late adolescents, both male and female (more than 40%), were given money on a monthly basis because they had become adults and knew how to spend money correctly and manage the savings by themselves. About 26.4% of them were given money on a weekly basis. With regarding to money received from families on special occasions, 44.6% received it on Chinese New Year or Muslim New Year, 30.5% on their birthday, and 18.4% on New Year or Christmas, with adolescents earning their incomes from part-time jobs representing only 18.7% of them.

Amongst adolescents receiving money from their family and part-time jobs, 48.9% of them had enough money for expenses and had a surplus for savings; only 8.6% did not have enough money for the expenses and had to ask for additional money from their family. In regard to the reason for savings, 29.8% accrued savings for expenditure when needed, 18.7% for education. Concerning the adolescents' solution in case of not having enough money for the expenses, 35.4% asked for more from their family, and 27.7% used savings. If incomes were insufficient, 15.0% borrowed from friends, and 13.5% worked more extra-jobs. Concerning financial planning, 76.1% of the adolescents were taught in educational institutions, 54.1% of which in primary schools.

Other details are shown in table 5.2

5.2 Expenditure Patterns of Thai Adolescents

The study on the expenditure patterns of Thai adolescents is divided into two parts: part 1 is a comparative study on the expenditure patterns of male and female adolescents, who were grouped into early and late adolescents, and the analysis of income allocation for their spending; part 2 covers building of the expenditure models which result from factors affecting the patterns or characteristics of the expenditure by using Tobit's regression analysis, which will be further discussed in chapter 6.

The comparative study of the adolescents' expenditure between gender, age range and income sources (extra-jobs and credit-card use) uses independent sample t-tests with a significance level at 0.05 in order to test the differences in the adolescents' average expenses in each group, and to answer the research's hypothesis that the expenditures of adolescents of different gender, age range, income sources are not significantly different, and also that the expenditure patterns of male and female adolescents, who are divided into early and late adolescents, are not significantly different either.

5.2.1 Level of the Adolescents' Expenditure

The level of income and expenditure means the average value of income and expenditure. The comparison of the differences between average income and expenditure by independent sample t-test at the significance level 0.05 is shown in table 5.3

Table 5.3 Average Income and Average Expenditure by Various

Classification		Average income per month	Average expenditure per month
Gender :	Male (n=400)	5,107.43	5,866.98
	Female (n=400)	4,472.89	4,787.87
	Total (n=800)	4,790.16	5,327.42
	t-statistic	2.543*	3.093**
Age groups :	Early (n=343)	3,122.74	3,529.04
	Late (n=457)	6,041.63	5,327.56
	Total (n=800)	4,790.16	5,327.42
	t-statistic	-13.838***	-11.297***
Part-time jobs :	Unearned (n=650)	4,169.73	5,039.27
	Earnings (n=150)	7,478.67	6,576.07
	Total (n=800)	4,790.16	5,327.42
	t-statistic	-7.946***	-3.140**
Credit card holder:	No. (n=762)	4,582.53	5,016.14
	Yes. (n=38)	8,953.64	11,569.39
	Total (n=800)	4,790.16	5,327.42
	t-statistic	-4.514***	-3.732**

* Significance at 0.05 ** Significance at 0.01 *** Significance at 0.001

The comparison of the incomes from family and from extra-jobs found that male and female adolescents had significant differences in incomes. Male adolescents had an average income of 5,107.43 baht per month, while female adolescents' average income was 4,472.89 baht per month. In regard to the expenses per month, the male and female adolescents' expenditures were significantly different; male adolescents had an average spending of 5,866.98 baht per month, while female adolescents spent an average of 4,787.87 baht per month. As the average income is considered only the definite income or the main income without counting the sum of money available on valid credit cards, savings, money received from families on special occasions, irregularly received money from parents such as an irrational desire to give or their winning of lottery etc., so that the average total expenditure was more than the total incomes.

When comparing early and late adolescents, they had significant differences in incomes and expenditures; the early adolescents had an average income of 3,122.74 baht per month while the late adolescents had an average of 6,041.63 baht per month, and the early adolescents spent an average of 3,529.04 baht per month while the late adolescent spent an average of 5,327.56 baht per month.

When considering the income resources (extra-jobs and credit-card uses), 81.3% of them did not have extra income (4.0% of this group used credit cards and 96.0% did not use them) and 18.7% had extra income (8.0% and 92.0% of this group used and did not use credit cards respectively). About 8.0% of adolescents having extra income never received money from their family, and 25.0% of adolescents, who never received money from their family, used credit cards, while 75.0% did not use them.

The analysis by using an independent sample t-test with the significance level at 0.05, found that adolescents without extra income and those with extra income had significant differences in income and expenditures; adolescents without extra income had an average total income of 4,169.73 baht and an average total expenditure of 5,039.27 baht per month; adolescents with extra income had an average total income of 7,478.67 baht per month and an average total expenditure of 6,576.07 baht per month. Among the group with extra income were early adolescents 32.0% (an average monthly expenditure of 3,949.90 baht); 60.4% of them studying in

secondary schools (an average monthly expenditure of 4322.93 baht), and 39.6% studying in vocational schools (an average monthly expenditure of 3,380.53 baht). And 68.0% of these extra income groups were late adolescents (an average monthly income of 7,811.91 baht), 2.9% of them studying in secondary schools (an average monthly expenditure of 5,179.67 baht), 45.1% studying in vocational schools (an average monthly expenditure of 5,924.09 baht), 52.0% studying in higher educational level (an average monthly expenditure of 9,599.40 baht). In summary, the group with extra income was studying in secondary schools totaled 21.3% (an average monthly expenditure of 4,403.25 baht), vocational schools were 43.3% (an average monthly expenditure of 5,180.58 baht) and higher educational level was 35.3% (an average monthly expenditure of 9,599.40 baht).

When comparing the group using credit cards with the group without credit cards, both had significant differences in average income and expenditure. When studying their incomes, the group without credit cards had an average income of 4,582.53 baht per month, while the group using credit cards had an average income of 8,953.64 baht per month. But when considering their spending, the group without credit cards had an average expenditure of 5,016.14 baht per month, whereas the group with credit cards had an average expenditure of 11,569.39 baht. The group using credit cards consisted of early adolescents at 23.7% (an average monthly expenditure of 9,383.11 baht), and 18.4% of them studying in secondary schools (an average monthly expenditure of 9,871.29 baht), and 5.3 % studying in vocational schools (an average monthly expenditure of 7,674.50 baht). 76.3% of the group using credit cards were late adolescents (an average monthly expenditure of 12,247.90 baht), 21.1% of them studying in vocational schools (an average monthly expenditure of 7,459.88 baht), and 55.3% in higher educational level (an average monthly expenditure of 14,071.90 baht). In summary, the group using credit cards were students in secondary schools at 18.4% with an average monthly expenditure of 9,871.29 baht, in vocational schools 26.3% with an average monthly expenditure of 7,502.80 baht, and at higher educational level at 55.3% with an average monthly expenditure of 14,071.90 baht.

In conclusion, adolescents had an average income of 4,790.16 baht per month, and an average expenditure of 5,327.42 baht per month; male adolescents had

more average income and expenditures than female adolescents; early adolescents had less average income and expenditures than late adolescents; adolescents with extra income had more average income and expenditures than those without extra income; and adolescents having credit cards had more incomes and expenditures than those without credit cards.

5.2.2 Money Allocation for Each Category of Goods

From the study it was found that the goods the adolescents liked to purchase numbered as many as 19 types. These goods were therefore categorized by factor analysis. The 19 kinds of items are listed as follows:

1. Clothing and personal ornamental items
2. Shoes
3. Concerts
4. Movies
5. The internet
6. Entertainment books such as cartoons, magazines etc.
7. Sports items such as playing equipment, membership fees etc.
8. Cosmetics, lotions, nail polish etc.
9. Cosmetic treatments in beauty salon such as hairdressing, manicure etc.
10. Spending at entertainment centers
11. Visiting tourist attractions.
12. Gift purchases for giving to mother/father/parents/relatives
13. Gift purchases for giving to friends
14. Merit-making/donation/support
15. Residential rent
16. Daily food expenses
17. Mobile phones (handset and the call charges)
18. Multimedia facilities such as CD/DVD/VCD(movies/music/games)
19. Transport to school/college (bus, private car), educational equipments and text books

The results of the factor analysis through the application of the principal components method for evaluating factor loading and Varimax rotation, shows that the variables can be reduced to 6 components. The analysis can explain 56.92% of the total variances of the data as shown in table 5.4

Table 5.4 Result of Factor Analysis

Type of Goods	Component						Communality
	1	2	3	4	5	6	
Clothing and personal ornamental items	.547						0.457
Shoes	.502						0.476
Concerts		.785					0.619
Movies		.346					0.352
The internet						.764	0.609
Entertainment books						.567	0.497
Sports items		.621					0.450
Cosmetics, lotion, nail polish etc.	.802						0.703
Cosmetic treatments in beauty salon	.845						0.730
Spending at entertainment centers				.599			0.530
Visiting tourist attractions.				.666			0.479
Gift purchase for giving to parents/relatives			.779				0.613
Gift purchase for giving to friends			.773				0.648
Merit-making/donation/supports			.730				0.556
Residential rent					.881		0.783
Daily food expenses					.840		0.777
Mobile phones				.410			0.268
Multimedia facilities		.820					0.721
Transport to school/college & educational equipments and text books						.525	0.548
Eigenvalues	2.168	2.067	1.963	1.758	1.573	1.288	
% of Variance	11.410	10.878	10.330	9.252	8.280	6.777	
Cumulative %	11.410	22.288	32.618	41.871	50.151	56.928	
Remark:							
Kaiser-Meyer-Olkin Measure of Sampling Adequary. (KMO Test)				= 0.717			
Bartlett's Test of Sphericity				Approx. Chi-Square			
				= 2898.446			
df				= 171			
Sig.				= 0.000			

Each component consists of different goods and each component is named as follows:

1. Grooming supplies consist of clothing, personal ornamental items, shoes, cosmetics/lotion/nail polish, cosmetic treatments in beauty salon such as hairdressing, manicure etc. which explain 11.41% of the total variance.

2. Recreational goods consist of concerts, movies, sports items, such as playing equipment, membership fees etc., and multimedia facilities such as CD/DVD/VCD (movies/music/games), which explain 10.88% of the total variance.

3. Gifts or money for giving to others consist of gift purchases for giving to father/mother/parents/relatives, or friends on different occasions/festivals, merit-making/donation/support, which explain 10.33% of the total variance.

4. Luxury goods consist of visiting entertainment centers and tourist attractions, mobile phones (handset and the call charges), which explain 9.25% of the total variance.

5. Daily living goods consist of residential rent, food expenses, which explain 8.28% of the total variance.

6. School supplies consist of internet access, purchase of entertainment books such as cartoons, magazines etc., transport to school/college (bus/private car), educational equipments and text books, which explain 6.78% of the total variance.

5.2.3 Comparison of Adolescents' Expenditure on Each Category of Items

From factor analysis goods can be categorized into 6 components for the comparative study in the differences in adolescent expenditure according to gender, age range, extra jobs, and credit card use.

5.2.3.1 Expenditure of Male and Female Adolescents

The comparative study between male and female adolescents on the differences in money allocation for purchasing each category of goods is shown in table 5.5

Table 5.5 Expenditure Comparison between Male and Female Adolescents

Goods Group	Male (n=400)		Female (n=400)		Total (n=800)	
	%	Mean	%	Mean	%	Mean
1. Grooming supplies	77.5	890.05	84.5	1,022.01	81.0	1,180.28
2. Recreational goods***	74.5	509.64	55.3	277.40	64.9	606.58
3. Gifts / money for giving to others	41.5	328.44	60.3	377.56	50.9	693.86
4. Luxury goods***	83.3	930.88	76.3	575.60	79.8	944.50
5. Daily living goods***	82.8	1,968.79	83.0	1,217.03	82.9	1,922.06
6. School supplies	92.5	1,223.06	92.8	1,187.66	92.6	1,301.33

*** Significance at 0.001

When considering the proportion of goods purchased, 92.6% of them bought mostly school supplies, 82.9% bought daily living goods, and 81.0% bought grooming supplies.

When comparing male and female adolescents, the goods both of them bought the most were school supplies (92.5% and 92.8% respectively), followed by luxury goods (83.3%) for male adolescents, and grooming supplies (84.5%) for female adolescents. As all the samples were schoolchildren/students, goods purchases therefore mostly related to education and reading.

When studying the money allocation, most of it was allocated to items of daily living, followed by school supplies and grooming supplies respectively. Male adolescents was the largest group allocating money for buying daily living goods, averaging 1,968.79 baht per month, followed by school supplies at an average of 1,223.06 baht per month, and luxurious goods at an average of 930.88 baht per month respectively. Female adolescents allocated money for buying daily living goods at an average of 1,217.03 baht per month, followed by school supplies at an average of 1,187.66 baht, and grooming supplies at an average of 1,022.01 baht per month respectively.

It was found that the goods where the allocation of money differed significantly between male and female adolescents were recreational, luxury and daily-living goods, whereas the spending for other good categories was not significantly different between the two genders (table 5.5).

5.2.3.2 Expenditure of Early and Late Adolescents

The comparative study between early and late adolescents' allocations for each of the 6 goods categories is shown in table 5.6

Table 5.6 Expenditure between Early and Late Adolescences

goods group	Early (n=343)		Late (n=457)		Total (n=800)	
	%	Mean	%	Mean	%	Mean
1. Grooming supplies***	73.2	670.01	86.9	1,170.70	81.0	1,180.28
2. Recreation goods	67.1	421.78	63.2	372.31	64.9	606.58
3. Gifts or money for giving others*	49.9	253.96	51.6	427.33	50.9	693.86
4. Luxury goods*	70.6	639.24	86.7	838.80	79.8	944.50
5. Daily living goods***	72.0	405.34	91.0	2,484.23	82.9	1,922.06
6. School supplies***	88.3	901.82	95.8	1,433.18	92.6	1,301.33

* Significance at 0.05 *** Significance at 0.001

A comparison of the purchasing proportions between early and late adolescents found that the goods they made a decision to buy most frequently or often were school supplies (88.3% and 95.8% respectively), and followed by - for early adolescents - buying grooming supplies (73.2%) and daily-living goods (72.0%) respectively. Late adolescents bought daily-living goods (91.0%) and grooming supplies (86.9%) respectively.

When considering the spending allocations, it was found that the goods the early adolescents directed their purchasing power to the most were school supplies (at an average of 901.82 baht per month), followed by grooming supplies (an average of 670.01 baht per month) and luxury items (an average of 639.24 baht per month). The goods the late adolescents allocated money to buy the most were daily-living

goods at an average of 2,484.23 baht per month, followed by school supplies (an average of 1,433.18 baht per month) and grooming supplies (an average of 1,170.70 baht per month)

Early and the late adolescents had significant differences in the allocation of money for spending in every category of items, except recreational goods.

5.2.3.3 Expenditure of Adolescents Having and not Having Extra Income

A comparative study between adolescents having an extra income and those without an extra income to find out whether there were significant differences in spending allocations for the 6 good categories is shown in table 5.7

Table 5.7 Expenditure between Unearned and Earnings of Adolescents

Goods Group	unearned (n=650)		earnings (n=150)		Total (n=800)	
	%	Mean	%	Mean	%	Mean
1. Grooming supplies*	79.9	907.43	86.0	1,166.61	81.0	1,180.28
2. Recreation goods	65.1	365.48	64.0	515.01	64.9	606.58
3. Gifts of money for giving others	50.6	300.06	52.0	582.40	50.9	693.86
4. Luxury goods	78.8	735.95	84.0	828.13	79.8	944.50
5. Daily living goods*	82.3	1,498.82	85.3	2,000.63	82.9	1,922.06
6. School supplies*	92.6	1,147.69	92.7	1,455.27	92.6	1,301.33

* Significance at 0.05

It was found that adolescents both with and without extra income proportionately bought school supplies the most (92.6% and 92.7% respectively). For adolescents without extra income, the successive proportions of goods purchased were daily-living goods (82.3%) and grooming supplies (79.9%), and the successive proportions of goods purchased by adolescents with extra incomes were grooming supplies (86.0%) and daily-living goods (85.3%)

When considering the spending allocations, it was found that the goods adolescents both with and without extra income allocated money to buy the most were daily living (at an average of 1,498.82 baht and 2,000.63 baht per month respectively), followed by school supplies (an average of 1,147.69 baht and 1,455.27 baht per month respectively) and grooming supplies (an average of 907.43 baht and 1,166.61 baht respectively).

Furthermore, it was also found that adolescents with and without extra income had significant differences in allocating money for grooming supplies, daily-living goods and school supplies, while there was no significant difference in spending for other goods.

5.2.3.4 Expenditures of Adolescents Having and not Having Credit Cards

A comparative study between adolescents having credit cards and those without credit cards to find out whether there were significant differences in spending allocations for the 6 good categories, is shown in table 5.8

Table 5.8 Expenditure of Credit Card Holding and Non-credit Card Holding Adolescents

Goods Group	Non-credit card holder (n=762)		Credit card-holder (n=38)		Total (n=800)	
	%	Mean	%	Mean	%	Mean
1. Grooming supplies**	80.6	906.20	89.5	1,955.21	81.0	1,180.28
2. Recreation goods	64.2	384.73	79.0	569.68	64.9	606.58
3. Gifts or money for giving others*	50.0	320.54	68.4	1,003.95	50.9	693.86
4. Luxury goods**	79.0	688.92	94.7	2,042.89	79.8	944.50
5. Daily living goods	82.7	1,555.74	86.8	2,338.16	82.9	1,922.06
6. School supplies**	92.7	1,147.28	92.1	2,370.03	92.6	1,301.33

* Significance at 0.05 ** Significance at 0.01

The goods the adolescents without credit cards proportionately bought the most were school supplies (92.7%), followed by daily-living goods (82.7%) and grooming supplies (80.6%), whereas the goods the adolescents with credit cards bought the most were luxury goods (94.7%), followed by school supplies (92.1%) and grooming supplies (89.5%).

For the spending allocations, it was found that the goods adolescents without credit cards allocated money to buy the most were daily-living goods at an average of 1,555.74 baht per month, followed by school supplies (an average of 1,147.28 baht per month) and grooming supplies (an average of 906.20 baht per month), and the goods the adolescents with credit cards allocated to buy the most were school supplies at an average of 2,370.03 baht per month, followed by daily-living goods (an average of 2,338.16 baht per month) and luxury goods (an average 2,042.89 baht per month).

When comparing both groups, it was found that the spending allocations were significantly different for grooming supplies, gift-giving or donation, luxury goods and school supplies, while there were not significant differences in spending for other kinds of goods.

5.2.4 Adolescent Expenditure on Each Type/Category of Goods

A comparative study between gender, age range, extra jobs and credit card uses to show more clearly how adolescents spend on each type/category of goods.

5.2.4.1 Expenditure of Male and Female Adolescents

Whether or not there were significant differences in male and female adolescents' purchasing for each type/category of goods, is shown in table 5.9

Table 5.9 Expenditure in Each Type of Goods by Gender

Type of goods	Male (n=400)		Female (n=400)		Total (n=800)	
	%	Mean	%	Mean	%	Mean
1. Grooming supplies						
- clothing and personal ornamental items	64.5	483.79	76.8	481.16	70.6	482.47
- shoes	45.3	255.89	59.3	207.30	52.3	231.59
- cosmetics/lotions/nail polish etc.***	28.8	111.65	48.5	228.80	38.6	170.22
-cosmetic treatments in beauty salon***	21.0	38.73	30.5	104.75	25.8	71.74
2. Recreation goods						
- concerts	8.8	42.73	6.5	43.55	7.6	43.14
- movies***	56.8	187.93	41.5	118.85	49.1	153.39
- sports items***	23.8	155.09	9.3	34.44	16.5	94.76
- multimedia facilities*	39.0	123.91	28.0	80.56	33.5	102.23
3. Gifts or money for giving others						
- gift purchases for giving to parent/relatives	19.3	149.73	33.3	157.30	26.3	153.51
- gift purchases for giving to friends**	22.3	88.02	41.5	137.65	31.9	112.83
- merit-making/donation/support	33.3	90.69	41.8	82.61	37.5	86.65
4. Luxury goods						
- entertainment centers***	22.8	221.63	8.8	59.83	15.8	140.73
- visiting tourist attractions***	31.5	259.68	25.5	157.05	28.5	208.36
- mobile phones (handset and the call charges)	71.5	449.58	69.5	358.72	70.5	404.15
5. Daily living goods						
- residential rent ***	25.3	625.50	13.0	267.63	19.1	446.56
- daily food expenses***	82.8	1,343.29	82.8	949.41	82.8	1,146.35
6. School supplies						
- the internet	36.0	152.62	29.8	126.93	32.9	139.77
- entertainment books	38.3	83.66	42.8	95.56	40.5	89.61
- transport to school	72.8	571.15	68.8	559.23	70.8	565.19
- textbook / education equipments	67.0	415.64	65.0	405.95	66.0	410.80

* Significance at 0.05 ** Significance at 0.01 *** Significance at 0.001

The comparison of adolescents' expenditure on each type of goods found that male and female adolescents' expenditures were significantly different in spending for cosmetics/lotions/nail polish etc., Cosmetic treatments in beauty-salon, movies, sporting goods, multimedia facilities, giving gifts to friends, entertainment centers, tourist attractions, residential rent, and daily food. Both male and female adolescents proportionately spent the most on daily food (82.8%) and also incurred the highest expense when compared to all other kinds of goods. Male adolescents spent an average of 1,343.29 baht per month, and female adolescents spent an average of 949.41 baht per month. But for other kinds of goods, there was no significant difference. It is remarkable that these goods, namely clothing and personal ornamental items, shoes, mobile-phones, the internet, magazines or cartoons, are both male and female adolescents' preferences similar to the previously conducted research by Stipp (1988: 26-32)

5.2.4.2 Expenditure of Early and Late Adolescents

The comparison of early and late adolescents' spending for each type/category of goods whether there are significant differences, is shown in table 5.10

Table 5.10 Expenditure in Each Type of Goods by Age Groups

Type of goods	Early (n=343)		Late (n=457)		Total (n=800)	
	%	Mean	%	Mean	%	Mean
1. Grooming supplies						
- clothing and personal ornamental items**	65.3	403.26	74.6	541.93	70.6	482.47
- shoes***	44.6	160.76	58.0	284.76	52.3	231.59
- cosmetics/lotions/nail polish etc. ***	23.9	76.34	49.7	240.69	38.6	170.22
- cosmetic treatments in beauty salon***	18.1	29.65	31.5	103.33	25.8	71.74
2. Recreation goods						
- concerts	8.2	62.07	7.2	28.93	7.6	43.14
- movies	46.9	137.64	50.8	165.21	49.1	153.39
- sports items	14.9	110.51	17.7	82.94	16.5	94.76
- Multimedia facilities	36.7	111.56	31.1	95.23	33.5	102.23
3. Gifts or money for giving others						
- gift purchases for giving to parent/relatives	25.7	100.09	26.7	193.61	26.3	153.51
- gift purchases for giving to friends*	32.1	88.62	31.7	131.00	31.9	112.83
- merit-making/donation/support*	35.6	65.25	38.9	102.72	37.5	86.65
4. Luxury goods						
- entertainment centers***	9.3	62.83	20.6	199.19	15.8	140.73
- visiting tourist attractions*	28.0	162.59	28.9	242.71	28.5	208.36
- mobile phones (handset and the call charges)	61.2	413.82	77.5	396.89	70.5	404.15
5. Daily living goods						
- residential rent***	0.6	13.41	33.0	771.66	19.1	446.56
- daily food expenses***	72.0	391.93	90.8	1,712.57	82.8	1,146.35
6. School supplies						
- the internet	30.6	137.94	34.6	141.15	32.9	139.77
- entertainment books	44.3	99.80	37.6	81.96	40.5	89.61
- transport to school***	63.6	343.26	76.1	731.75	70.8	565.19
- textbook / education equipments**	56.9	320.83	72.9	478.32	66.0	410.80

* Significance at 0.05 ** Significance at 0.01 *** Significance at 0.001

Early and late adolescents had significant differences in expenditure on clothing and personal ornamental items, shoes, cosmetics/lotions/nail polish, cosmetic treatments in beauty salon, and giving gifts to friends, merit-making/donation/support, entertainment centers, visiting tourist attractions, residential rent, daily food, and transport to school/college. However, there was no significant difference in other types of goods. The goods the early adolescents spent the most on were mobile-phones at an average of 413.82 baht per month, followed by cloth and personal ornamental items (an average of 403.26 baht per month), while the goods the late adolescents spent the most on was daily food at an average of 1,712.57 baht per month, followed by residence rental (an average of 771.66 baht per month). Evidently, the early adolescents' most frequent expenditure was on grooming supplies and mobile-phones, whereas most of the late adolescents' expenditure was on daily living goods, i.e. food and residential rent. With regard to the goods the adolescents pay for to a lesser extent when getting older, were concerts, sports items, multimedia facilities, mobile phones, magazines and cartoons.

5.2.4.3 Expenditure of Adolescents Having and not Having Extra Incomes

Whether or not adolescents with and without extra income had significant differences in expenditures on each type/category of goods is shown in table 5.11

Table 5.11 Expenditure in Each Type of Goods between Unearned and Earnings of Adolescents

Type of goods	unearned (n=650)		earnings (n=150)		Total (n=800)	
	%	Mean	%	Mean	%	Mean
1. Grooming supplies						
- clothing and personal ornamental items*	68.8	449.67	78.7	624.64	70.6	482.47
- shoes	50.5	229.06	60.0	242.57	52.3	231.59
- Cosmetics/lotions/nail polish etc.	38.3	159.69	40.0	215.87	38.6	170.22
- cosmetic treatments in beauty salon	24.9	69.02	29.3	83.53	25.8	71.74
2. Recreation goods						
- concerts	7.4	34.14	8.7	82.13	7.6	43.14
- movies*	48.2	144.34	53.3	192.60	49.1	153.39
- sports items	16.0	92.11	18.7	106.26	16.5	94.76
- multimedia facilities	32.9	94.90	36.0	134.02	33.5	102.23
3. Gifts or money for giving others						
- gift purchases for giving to parent/relatives	26.5	116.37	25.3	314.47	26.3	153.51
- gift purchases for giving to friends	32.2	109.81	30.7	125.93	31.9	112.83
- merit-making/donation/support	36.9	73.88	40.0	142.00	37.5	86.65
4. Luxury goods						
- entertainment centers*	14.2	117.46	22.7	241.53	15.8	140.73
- visiting tourist attractions	28.5	210.80	28.7	197.80	28.5	208.36
- mobile phones (handset and the call charges)	69.5	407.69	74.7	388.80	70.5	404.15
5. Daily living goods						
- residential rent	18.2	427.00	23.3	531.33	19.1	446.56
- daily food expenses**	82.3	1,071.82	84.7	1,469.30	82.8	1,146.35
6. School supplies						
- the internet	34.0	146.93	28.0	108.73	32.9	139.77
- entertainment books	40.8	89.02	39.3	92.13	40.5	89.61
- transport to school*	69.2	524.95	77.3	739.53	70.8	565.19
- textbook / education equipments	65.7	386.78	67.3	514.88	66.0	410.80

* Significance at 0.05 ** Significance at 0.01

A comparison of the differences in expenditure between adolescents with and without extra income on each type/category of goods found that there were significant differences in spending on certain types of goods such as clothing and personal ornamental items, movies, entertainment centers, daily food and transport to school/college. Both groups spent the most per month on food; adolescents without extra income spent an average of 1,071.82 baht per month, and adolescents with extra income spent an average of 1,469.30 per month. Evidently, adolescents with extra income had more average monthly expenditures on every type of item than those without extra jobs, except visits to tourist attraction, mobile phones and internet access. Adolescents with extra income probably began to become aware of their responsibility for their own expenditure so that the spending on those 3 types of goods was less than those of adolescents without extra jobs.

5.2.4.4 Expenditure of Adolescents Having and not Having Credit Cards

Whether or not adolescents with and without credit cards had significant differences in expenditure on each type/category of goods, is shown in table 5.12

Table 5.12 Expenditure in Each Type of Goods between Credit Card Holder and Non-credit Card Holder of Adolescent

Type of goods	Non-credit card holder (n=762)		Credit card holder (n=38)		Total (n=800)	
	%	Mean	%	Mean	%	Mean
1. Grooming supplies						
- clothing and personal ornamental items**	70.0	464.28	84.2	847.37	70.6	482.47
- shoes*	51.6	217.16	65.8	521.00	52.3	231.59
- cosmetics/lotions/nail polish etc.*	38.1	157.72	50.0	421.05	38.6	170.22
- cosmetic treatments in beauty salon	25.2	67.05	36.8	165.79	25.8	71.74
2. Recreation goods						
- concerts	7.6	41.35	7.9	78.95	7.6	43.14
- movies*	48.2	148.57	68.4	250.00	49.1	153.39
- sports items	16.7	95.09	13.2	88.16	16.5	94.76
- multimedia facilities	32.9	99.72	44.7	152.58	33.5	102.23
3. Gifts or money for giving others						
- gift purchases for giving to parent/relatives	24.9	139.97	52.6	425.00	26.3	153.51
- gift purchases for giving to friends*	30.8	102.87	52.6	312.63	31.9	112.83
- merit-making/donation/support	37.0	77.69	47.4	266.32	37.5	86.65
4. Luxury goods						
- entertainment centers*	14.6	127.63	39.5	403.42	15.8	140.73
- visiting tourist attractions	27.8	194.61	42.11	484.21	28.5	208.36
- mobile phones (handset and the call charges)*	69.8	366.69	84.2	1,155.26	70.5	404.15
5. Daily living goods						
- residential rent	18.9	429.20	23.7	794.74	19.1	446.56
- daily food expenses	82.6	1,126.54	86.8	1,543.42	82.8	1,146.35
6. School suppliers						
- the internet*	32.0	135.31	50.0	229.13	32.9	139.77
- entertainment books	40.7	90.59	36.8	69.86	40.5	89.61
- transport to school*	70.9	532.69	68.4	1,216.84	70.8	565.19
- textbook / education equipments*	65.4	388.69	79.0	854.18	66.0	410.80

* Significance at 0.05 ** Significance at 0.01

Adolescents with and without credit cards had significant differences in spending on clothing and personal ornamental items, shoes, cosmetics/lotions/nail polish etc., movies, giving gifts to friends, entertainment centers, mobile phone costs, internet access, transport to school/college and text books or educational equipments, but there was no significant difference in spending on other kinds of goods.

The goods the adolescents either with or without credit cards spent the most on were daily food at an average of 1,126.54 baht and 1,543.42 baht per month respectively, followed by transport to school/college and clothing and personal ornamental items. Adolescents with credit cards had an average monthly expenditure higher than those without credit cards in nearly all kinds of goods categories, except sports items, magazines or cartoons. In most cases parents took responsibility for paying off the credit card debt.

The comparison of adolescent expenditure with their family income found that adolescents from high-income families (over than 50,000 baht per month and the adolescent was the family's only child) allocated half their available spending money for the purchase of grooming supplies and luxury goods. If these adolescents reduced their expenditure on these kinds of goods, they would have helped their family reduce their original expenses by up to 30% or 1,000 baht per month, and if they changed their spending to savings, they would have had average savings of 12,000 baht per annum.

5.3 Discussion

The outcome of the study on adolescents' expenditure patterns is similar to preceding studies, with the exception of the differences in the received income and goods categories. For example, the study of Belk, Rice and Harvey (1984) on "Adolescents' reported saving, giving, and spending as a function of sources of income" found that adolescents had monthly expenditures of about 16.50 dollars which they received as gifts from father/mother (70.5%), working as baby-sitters (52.5%), allowances (41.8%), summer jobs (33.6%), gifts from relatives (23.0%), and current employment (14.8%). Their goods preferences were food, entertainment, clothing and major durables. Female adolescents liked spending on candy or gum,

shoes, school activities, while male adolescents liked spending on video games (either at home or in arcades), bicycles, skiing, camping equipment, walkman-type stereos, skateboards and motorcycles. Nearly all Thai adolescents received money from their family. Only a small number of them earned from extra jobs, and the goods they liked purchasing were different from those the American adolescents liked buying due to different environments such as skiing, for example. The outcome of the study on Thai adolescents' extra jobs is also different from the American adolescents as only 18% of the Thai adolescents had extra jobs, whereas the study by Alhabeeb (1996) found that a third of American adolescents had part-time jobs, 77% of them were hired to work 10 hours or less per week, 23% worked more than 10 hours per week, and they spent the most on entertainment, representing 29% of their incomes or 5.91 dollars per week, followed by clothing and personal care, drink and snacks of about 5.45 dollars and 4.49 dollars per week respectively. Adolescents allocated less money for food when getting older, and used the money to buy other goods categories such as clothing and entertainment. With advancing age they increasingly spent more on entertainment than clothes. Male adolescents spent less than female adolescents on clothes, personal care items (such as apparel, jewelry, make-up and hair related goods). However, this study outcome is different from Meek (1998) who found that late adolescents received less money from family than early adolescents, and earned more from work. In contrast, early Thai adolescents received less money from their family than late adolescents, with only 18.7% of them earning money from extra jobs. This study result is similar to Doss's research (1995) who found that money received was likely used on clothing, books and magazines, sports, recreation, music, with more than 80% being spent on food, particularly on lunch in educational institutions. Thai adolescents, both male and female, were not significantly different in their spending habits on clothing, an outcome that is different from that found by NOPWorld (2003) and Kooreman (2007). Moreover, this study found that Thai female adolescents had different expenditures from those of Thai male adolescents with regard to goods related to recreation, which is similar to the research result of Alhabeeb (1996) and Farrell and Shields (2005)

Although the comparative study between Thai adolescents and American adolescents shows some similarities and some differences in characteristics (due to

the upbringing, different society, culture, environment and climate, which result in the differences in research outcome), the types of goods both Thai and foreign adolescents preferred to buy are the same goods categories, for example clothing, personal ornamental items, food, and entertainment.

This study result is particularly useful at present as the American economic crisis has been affecting the well-being of people globally. Thailand is probably unable to escape from this problem, and if it infiltrates into family institutions, many problems will inevitably follow. One economically problematic aspect that adolescents can help alleviate within the family is to reduce his/her own unnecessary expenses. For example, this study has found that if Thai adolescents, both male and female, reduced their spending by only a small sum of money on each type of item, especially grooming supplies and luxury goods, and thereby generating savings of at least 30% on their total expenditure, adolescent would save about 1,000 baht per month.

At present, adolescents are born amid rapid economic growth and technological progress. Their parents can earn money without many of the difficulties encountered in the past, and they consequently give the money more readily to their children. Receiving money without working results in adolescents feeling less responsible for their spending than if spending the money they earn by themselves. Furthermore, it may make the adolescents think that such good economic situation will continue forever. But today economic problems are spreading across the world and a study on expenditure patterns of Thai adolescents is therefore necessary as a start to laying a solid foundation for appropriate spending behavior, and also as a preparation for an economic crisis without a foreseeable conclusion. In order to convince adolescents nowadays to realize the value of money, it is necessary to teach them from childhood and adolescence. Parents should allow their children to know about money and help in alleviating the spending burden on the family which, as a consequence, can reduce problems in the family and society as a whole. On the other hand, if adolescents do not know how to spend money appropriately, but display a behavior of over spending, different problems will occur accordingly, such as prostitution, peddling of drugs, etc.

Adolescence is an important role model age for the next generation. At this age these young people expect to have money to buy goods according to their desire rather than rational approach, with families being unable to adequately respond to the demands of their adolescent children by giving them money. The more the technology changes, the more new products are introduced to the market. To achieve the goal of teaching adolescents to know how to spend properly, appropriate education must originate from the cooperation between families and educational institutions, along with governmental agencies involved in child and youth development. Proper and appropriate spending behavior is a necessary basis for adolescents' future self-management, especially when they enter the work force and earn their own living.

The institution of the family is a very important fundamental unit for children and youths. The changing family structure to having only one child makes the parents yield increasingly to their child's wishes, particularly in spending money because he/she becomes the center of the family. Allowing their child/children to buy goods as they wish is encouraging the children to spend lavishly without clear intent. In order to teach the children to spend money carefully must begin before their schooling, and be continued so that, when they support themselves, children will be able to properly manage their financial resources. As the family is a fundamental institution which strongly influences children and adolescents, and if this family unit does not know how to spend wisely, it will lead to a situation of an insufficient income to cover all expenses, which, in turn, will result in inappropriate ways and means to earn money, with all associated problems. Therefore, agencies, both governmental and non-governmental, must work together to develop the children and the youth to know how to spend money properly, correctly and in accordance with their income capability. In other words, the sum of the money received is not as important as knowing how to spend it properly.

CHAPTER 6

TOBIT REGRESSIONS ANALYSIS

6.1 Grouping Variables Influencing Adolescents' Expenditures by Using Factor Analysis

Before finding the relationships of factors influencing Thai adolescents' expenditures, the variables were grouped by means of factor analysis in order to minimize the number of variables. The related variables were grouped together and those with no relationship were put in different groups in order to solve the variable of multicollinearity before conducting a Tobit Regression Analysis. The twenty independent variables to be grouped are the following:

1. Gender
2. Age
3. Level of education
4. Grade point average (GPA)
5. Type of educational institution
6. Birth order
7. Place of domicile
8. Religion
9. Type of family
10. Person taking care of adolescent (financial support and other aspects)
11. Person the adolescent lives with (at present) (co-resident).
12. Father's level of education
13. Mother's level of education
14. Father's occupation

15. Mother's occupation
16. Family's residential characteristics
17. Family's ownership status of the residence
18. Number of children in the family
19. Frequency of receiving money from the family
20. Adolescent's residential characteristics

The factor analysis - using the principal component method to evaluate factor loading - and Varimax rotation result in the reduction of the variables to seven components, thereby explaining 65.722% of the total variance of the data as shown in 6.1

After having been analyzed using factor analysis, the variables were grouped into seven components, which the author has named as follows:

1. Adolescent's characteristic factors (F_{ado}) consist of age, level of education, place of domicile, adolescent's co-resident (the person the adolescent lives with), frequency of receiving money from the family, and the adolescent's residential characteristics, which can explain 15.53% of the total variance.

2. Family factors (F_{fam}) consist of type of family, the person taking care of the adolescent (financial support and other aspects), level of the father's education and level of the mother's education, which can explain 12.11% of the total variance.

3. Family's residential factors (F_{home}) consist of the family's residential characteristics and the family's ownership status of the residence, which can explain 9.01% of the total variance.

4. Factors concerning children in the family (F_{numch}) consist of birth order of the adolescent and the number of children in the family, which can explain 8.18% of the total variance.

5. Parents' occupation factors (F_{occp}) consist of father's occupation and mother's occupation, which can explain 7.65% of the total variance.

6. Educational institute factors (F_{sedu}) consist of type of educational institute and religion, which can explain 6.75% of the total variance.

7. Educational factors (F_{edu}) consist of gender and GPA, which explain 6.54% of the total variance.

After the variables were grouped, the next step was to find the relationships of factors influencing Thai adolescents by employing the Tobit regression analysis.

6.2 Tobit Regression Analysis

The data used in the study includes expenditure on goods, some of which the respondent might not have bought during the time-frame covered by the interview, which therefore makes some data virtually zero or seemingly missing, but not really

missing. The Tobit regression analysis is therefore appropriate for the analysis of the data of such categories.

This technique was developed by Tobin (1958) from a model that combines the Probit analysis and the Multiple regression. The Multiple regression assumes that the dependent variable has a number of its values clustered at a limiting value, usually zero. For example, data on demand for consumption goods often have values clustered at zero; data on hours of work often have the same clustering. (McDonald and Moffitt, 1980: 318-321). It is the “Model how observed characteristics affect the share of spending and the incidence of zero expenditure.” (Athkinson, Gomulka and Stern, 1990: 808-827)

According to Bierens (2004), the Tobit model assumes that the observed dependent variables Y_j for observations $j = 1, \dots, n$ satisfy

$$Y_j = \max(Y_j^*, 0) \quad \dots\dots\dots (6.1)$$

where the Y_j^* 's are latent variables generated by the classical linear regression model

$$Y_j^* = \beta' X_j + U_j \quad \dots\dots\dots (6.2)$$

with X_j a vector of regressors, possibly including 1 for the intercept, and β the corresponding vector of parameters. The model errors U_j are assumed to be independent $N(0, \sigma^2)$ distributed, conditional on the X_j 's.

Denoting by

$$f(z) = \exp(-z^2 / 2) / \sqrt{2\pi}$$

the density of the $N(0, 1)$ distribution, with corresponding cumulative distribution function (c.d.f.)

$$F(z) = \int_{-\infty}^z f(v)dv$$

the conditional c.d.f. of Y_j given $Y_j > 0$ and X_j is

$$\begin{aligned} H(y | Y_j > 0, X_j, \beta, \sigma) &= P(y_j \leq y | Y_j > 0, X_j) \\ &= \frac{P(0 < Y_j^* \leq y | X_j)}{P(Y_j^* > 0 | X_j)} \\ &= \frac{P(-\beta' X_j < U_j \leq y - \beta' X_j | X_j)}{P(U_j > -\beta' X_j | X_j)} \end{aligned}$$

$$= \frac{F((y - \beta' X_j) / \sigma) - F(-\beta' X_j / \sigma)}{F(\beta' X_j / \sigma)}$$

and the corresponding conditional density is

$$\begin{aligned} h(y | Y_j > 0, X_j, \beta, \sigma) &= \frac{dH(y | Y_j > 0, X_j, \beta, \sigma)}{dy} \\ &= \frac{f((y - \beta' X_j) / \sigma)}{\sigma F(\beta' X_j / \sigma)}, y > 0. \end{aligned}$$

Thus, the conditional distribution of Y_j given $Y_j > 0$ and X_j is continuous.

Define the dummy variable D_j by

$$\begin{aligned} D_j &= 1 \text{ if } Y_j > 0, \\ D_j &= 0 \text{ if } Y_j = 0. \end{aligned}$$

Then

$$\begin{aligned} P [D_j = 1 | X_j] &= F(\beta' X_j / \sigma), \\ P [D_j = 0 | X_j] &= 1 - F(\beta' X_j / \sigma), \end{aligned}$$

and

$$Y_j = D_j Y_j^* .$$

The Tobit regression analysis is a technique that can reduce the degree to which data might be skewed. It has fewer assumptions than the ordinary least square (OLS) method. Therefore, this study has chosen to utilize the Tobit regression analysis to find factors influencing Thai adolescents' expenditures. The models are as follows:

$$\begin{aligned} Y_j^* &= \beta_0 + \beta_1 F_{ado} + \beta_2 F_{fam} + \beta_3 F_{home} + \beta_4 F_{numch} + \beta_5 F_{occip} + \beta_6 F_{sedu} + \beta_7 F_{edu} + \beta_8 X_{tm} \\ &+ \beta_9 X_{sp} + \beta_{10} X_{credit} + \beta_{11} X_{fincome} + u_j \end{aligned} \quad \dots\dots\dots(1)$$

- Y_j = each person's total expenditure on all kinds of goods
- $\beta_0 - \beta_{11}$ = unknown coefficients
- F_{ado} = adolescent's characteristic factors
- F_{fam} = family factors

F_{home}	=	family's residential factors
F_{numch}	=	factors concerning children in the family
F_{occp}	=	parents' occupation factors
F_{sedu}	=	educational institute factors
F_{edu}	=	educational factors
X_{tm}	=	adolescent's income
X_{sp}	=	adolescent's savings
X_{credit}	=	money available on credit card
X_{hincome}	=	household incomes
U_j	=	error term

The outcome of the Tobit Regression analysis is shown in table 6.2 and 6.3

Table 6.2 The Result of Tobit Regression Analysis

	Total (R = 1,L = 1)	Dressing (R = 1,L = 152)	Leisure (R = 1,L = 281)	Gift/ sharing donation (R = 1,L = 393)	Luxury (R = 1,L = 162)	Daily (R = 1,L = 137)	Education/ Reading (R = 1,L = 59)
Independent variables							
Intercept	1,541.47***	-27.98	-641.72***	-780.02***	-108.71	-22.96	269.40*
Adolescent's characteristic factors (F_{adb})	1,196.92***				169.00**	1,332.01***	
Family factors (F_{fam})							
Family's residential factors (F_{home})							
Factors concerning children in the family (F_{numch})							97.66*
Parent's occupation factors (F_{occ})							
Educational institute factors (F_{secdu})							
Educational factors (F_{edu})	-483.62***	118.24*	115.38*	200.52**	-243.80***	-373.84***	162.91***
Adolescent's income (X_{in})	0.46***	0.17***	-207.58***	0.08***	0.05*	0.15***	-109.84*
Adolescent's savings (X_{sp})			0.03*		0.002*		0.10***
Money available on credit card (X_{credit})	0.08***			0.01**	0.006*	-0.01*	0.01***
Household incomes (X_{income})	213.07***		88.98***		50.34*	108.64***	55.65***
Scale	3,440.48	1,336.24	1,161.85	1,633.59	1,563.48	1,679.12	1,212.10
-Log likelihood	7,633.31	5,706.79	4,578.79	3,813.36	5,714.66	5,959.57	6,365.31

* Significance at 0.05 ** Significance at 0.01 *** Significance at 0.001
R = Right censoring point L = Left censoring point

Table 6.3 The Result of Tobit Regression Analysis of Expenditure Each Type of Goods on Various Independent Variables

Independent variables	Cloth& decorations (R = 6,L = 235)	Shoes (R = 1,L = 382)	Artistry (R = 1,L = 491)	Beauty shop (R = 1,L = 594)	Concert (R = 1,L = 739)	Movie (R = 1,L = 407)	Short (R = 1,L = 668)
Intercept	-186.04*	-316.95***	-460.79*** 201.61***	-607.99***	-2,352.29***	-319.87***	-1,595.86***
Adolescent's characteristic factors (F_{ado})							
Family factors (F_{fam})	100.90**						
Family's residential factors (F_{home})	76.68**	95.57***	90.14**		228.68*	-54.70***	262.42***
Factors concerning children in the family (F_{numch})	0.08***	0.06***	0.04***	0.04***		0.02***	-358.66***
Parent's occupation factors (F_{occ})							
Educational institute factors (F_{sedu})							
Educational Factors (F_{edu})							
Adolescent's income (X_{lm})							
Adolescent's savings (X_{sp})							
Money available on credit card (X_{credit})							
Household incomes ($X_{hincome}$)	22.40*					30.17***	
Scale	811.51	677.70	694.07	563.95	1,599.10	380.14	1,476.31
-Log likelihood	4,741.60	3,558.53	2,702.76	1,833.21	663.91	3,143.22	1,335.84

* Significance at 0.05 ** Significance at 0.01 *** Significance at 0.001
R = Right censoring point L = Left censoring point

Table 6.3 (Continued)

Independent variables	Multimedia	Gift for Parent (R = 1, L = 590)	Gift for Friend (R = 7, L = 545)	Donation (R = 1, L = 500)	Discotheque/ Pub / else (R = 1, L = 674)	Tour (R = 1, L = 572)	Mobile (R = 1, L = 236)
Intercept							
Adolescent's characteristic factors (F_{ado})	-404.03***	-1,713.85***	-450.95***	-334.90***	-2,435.63***	-834.12***	-263.67*
Family factors (F_{fam})	-79.30**						191.84***
Family's residential factors (F_{home})					196.36*	122.18*	
Factors concerning children in the family (F_{nunch})							
Parent's occupation factors (F_{occ})							
Educational institute factors (F_{sedu})	69.51**					119.63*	
Educational factors (F_{edu})	-84.25***	236.15**	88.84**		-490.68***	-138.07*	-105.14*
Adolescent's income (X_{im})	0.03***	0.07**	0.03***	0.02**	0.12***		
Adolescent's savings (X_{sp})							
Money available on credit card (X_{credit})		0.01*	0.003**	0.003***			0.006**
Household incomes ($X_{hincome}$)							56.10***
Scale	559.81	1,779.78	598.56	515.51	1,707.04	1,351.59	1,255.86
-Log likelihood	2,326.97	2,092.28	2,212.13	2,549.32	1,299.43	2,216.68	4,982.16

* Significance at 0.05 ** Significance at 0.01 *** Significance at 0.001
R = Right censoring point L = Left censoring point

Table 6.3 (Continued)

Independent variables	Home rental (R = 1, L = 647)	Daily Food (R = 1, L = 138)	Internet (R = 1, L = 537)	Cartoon / Journals / else (R = 1, L = 476)	Bus school (R = 1, L = 234)	Textbook/ Education aid (R = 1, L = 272)
Intercept						
Adolescent's characteristic factors (F_{ado})	-5,132.94***	273.30*	-557.82***	-293.95***	43.85	-22.16
Family factors (F_{fam})	3,519.14***	697.05***		-62.38***		87.36*
Family's residential factors (F_{home})					-71.07*	
Factors concerning children in the family (F_{numch})	619.78***	-140.09**				87.12*
Parent's occupation factors (F_{occ})						
Educational institute factors (F_{sedu})					108.27**	
Educational factors (F_{edu})					-195.94***	
Adolescent's income (X_{in})	-723.91***	-227.14***		37.21*		
Adolescent's savings (X_{sp})		0.11***		0.01**	0.06***	0.04***
Money available on credit card (X_{credit})		-0.004*			0.01***	0.01***
Household incomes (X_{income})	177.00***	37.70*	41.70***	16.83**		
Scale	2,097.42	1,121.51	645.69	373.95	936.50	909.83
-Log likelihood	1,468.77	5,691.11	2,341.28	2,637.27	4,859.99	4,543.51

* Significance at 0.05 ** Significance at 0.01 *** Significance at 0.001

R = Right censoring point L = Left censoring point

The Tobit regression analysis is used to find the factors influencing adolescent expenditure on each of the 6 models of goods, as shown in table 6.2, and each of the 20 item models as shown in table 6.3

6.2.1 Total Expenditures

Adolescents had significant differences in expenditure patterns due to their individual characteristic and factors related to education, income, the sum of money available on credit cards. At the same time other factors did not have a significant impact on their total expenditures.

6.2.2 Expenditures on Grooming Supplies

The spending on this category of goods was influenced by social factors in educational institutions and also the adolescents' income. However, when considering the expenditure on this category, which consists of clothes and personal ornamental items, shoes, cosmetics, and cosmetic treatments in beauty salon, it was found that expenditure on clothes and personal ornamental items was influenced by the parents' occupational criteria, social factors in educational institutions, and the adolescents' and overall family's income. The expenditure on shoes was influenced by social factors in educational institutions and the adolescents' income. Expenditure on cosmetics was influenced by adolescent's characteristic factors, educational factors and the adolescents' income. Moreover, expenditure on cosmetic treatments in beauty salon was influenced by only one factor, namely the adolescents' income. Other factors did not have any influence on the expenditure on this product category.

6.2.3 Expenditure on Recreational Goods

Spending on this good category was influenced by social factors in educational institutions, educational factors and the adolescents' and overall family's income. Various items in this category consist of concert attendance, watching movies, sports and multimedia equipment. Expenditure on concerts was influenced by the family's residential factors, while the expenditure on movies was influenced by educational factors, and the adolescent's and overall family's income. Any expenditure on sports was influenced by social factors in educational institutions and

educational factors. Expenditure on multimedia equipment was influenced by the adolescent's characteristics, social factors in educational institutions, educational factors, and the adolescent's income. Other factors did not have any influence on the expenditure in this good category.

6.2.4 Expenditure on Gift-giving and Donations

Spending on this category of goods was influenced by educational factors, the adolescent's income and the sum of money available on credit cards. Items in this category consist of gift-giving to father/mother/parent/relatives, gift-giving to friends, and merit-making/donation/support to certain activities. Gift-giving to father/mother/parent/relatives and gift-giving to friends was influenced by educational factors, the adolescent's income and the sum of money available on credit cards. Furthermore, merit-making/donation/support to certain activities was influenced by the adolescent's income and the sum of money available on credit cards. Other factors did not influence spending on this category of products.

6.2.5 Expenditure on Luxury Goods

Spending on this category was influenced by the adolescent's characteristics, educational factors, income, savings, the sum of money available on the adolescent's credit cards, as well as family income. Goods in this category consist of entertainment centers, visits to tourist attractions, mobile phones (handset and call charges). Expenditure for entertainment centers was influenced by the family's residential factors, educational factors, and the adolescents' income. The expenditure on visiting tourist attractions was influenced by the family's residential factors, social factors in educational institutions and educational factors. The expenditure on mobile phones was influenced by the adolescent's personal characteristics, educational factors, the amount of money available from credit cards, as well as the family's income. Other factors did not have any influence on expenditure in this good category.

6.2.6 Expenditure on Everyday Items

Spending on this product category was influenced by the adolescent's characteristics, educational factors, income, the amount of money available on the adolescent's credit card, and also the family's income. Items in this category consist of residential rent and daily food supplies. The residential rent was influenced by the adolescent's characteristics, the family's residential factors, educational factors and the family's income. Expenditure on food was influenced by the adolescent's characteristics, the family's residential factors, the parent's occupational factors, social factors in educational institutions, educational factors, income, the sum of money available on the adolescent's credit cards, as well as the family's income. Other factors did not have any influence on the expenditure on this product category.

6.2.7 Expenditure on School Supplies

Spending on this category was influenced by the family's residence, the parents' occupations, social factors in educational institutions, income, the sum of money available from the adolescent's credit cards, and the overall family income. The goods in this category consist of the internet access, books for entertainment purposes, transport to educational institutions, and educational equipment. Expenditure on the internet access was only influenced by the family's income. Expenditure on books for entertainment (non-educational) was influenced by the adolescent's personal characteristics, educational factors, the adolescent's and the family's income. Expenditure on transport to educational institutions was influenced by family factors, parental occupational factors, social factors in educational institutions, adolescent's income and the sum of money available from credit cards. Expenditure on educational equipment was influenced by the adolescent's individual characteristics, the family's residence, the adolescent's income, and the sum of money available on credit cards. Other factors did not have any influence on expenditure within this product category.

6.2.8 Conclusions Regarding Influencing Factors on Adolescent Expenditure

6.2.8.1 Adolescent Characteristics

Factors related to the adolescents had a significantly positive influence on their expenditure on luxury goods and items of daily necessity. Adolescents will spend significantly more on both product categories when adolescents from a provincial domicile are getting older, have a higher level of education, receive money on a monthly basis, and live with people other than their parents, with the type of residence being a dormitory, mansion or condominium.

Moreover, the goods that were significantly and positively influenced by the adolescent's personal characteristics were cosmetics, mobile phones, rented place of residence, daily food, and text books or educational requirements. Negatively influenced ones were multimedia equipment and books for recreational purposes (such as cartoons and magazines), indicating that when an adolescent gets older and becomes more educated, the expenditure on recreational reading (books) and multimedia equipment will decrease. This apart, these factors did not have any significant influence on other kinds of goods.

6.2.8.2 Family Characteristics

Family factors had neither a positive nor a negative influence on the adolescents' expenditures on any product category. However, when considering each kind of product, it was found that these factors had a significantly negative influence on transport to educational institutions.

The family's residential factors had a positive influence on the expenditure on the category of school supplies. When studying the spending on each kind of item, it was found that this factor had a positive influence on concert attendance, visits to entertainment centers, visiting tourist attractions, residential rent, and text books or educational equipment, whilst having a significantly negative influence on the expenditure on food. Factors relating to children in the family had, significantly, neither a positive nor a negative influence on the spending on any category of goods.

The father's/mother's occupation had a significantly positive influence on school supplies, as well as on clothes and personal ornamental items, and transport

costs to educational institutions, but had a significantly negative influence on the expenditure on the category of daily food necessities.

6.2.8.3 Social, Cultural and Economic Characteristics

Social factors in school/college had a positive influence on the expenditure on grooming supplies and the recreational category, but had a negative influence on the spending on school supplies. That is, these factors had a positive influence on spending on clothes and personal ornamental items, shoes, sporting goods, multimedia, visits to tourist attractions, while it had a negative influence on the spending on daily food items, and transport fees to educational institutions.

Educational factors positively influenced the spending on the gift-giving and donation category, while negatively influencing spending on recreational, luxury and goods of daily necessity. They had a positive influence on the spending on the following categories of goods: cosmetics, gift-giving to father/mother/parent/relatives, gift-giving to friends, and entertainment books. But had negative influence on the spending on the following categories of goods: movies, sporting goods, multimedia, entertainment center visits, tourist attraction visits, mobile phones, residential rent, and daily food supplies.

The adolescents' income had a significantly positive influence on the expenditure on every kind and category of goods, with the exception of concert attendance, sporting goods, tourist attraction visits, mobile phones, residential rent, and internet access.

Savings, so far, did not have any influence on expenditure of any kind or category of items, except luxury goods.

The amount of money available on the adolescents' credit cards had a positive influence on spending on gift-giving and donations, luxury goods, and school supplies, whilst having a negative influence on the spending on everyday items. It had a positive impact on the following item categories: gift-giving to parents and friends, donations, mobile phones, transport to educational institutions, and text books or educational items, while negatively influencing spending on daily food.

The family's income had a positive influence on every category of item, except grooming supplies, and gift-giving and donations. It therefore positively influenced spending on clothes and personal ornamental items, movies, mobile

phones, residential rent, daily food requirements, internet access, and books for recreational reading (such as cartoons and magazines), whilst not significantly influencing any other kind of product.

6.3 Qualitative Study

A qualitative study conducted by in-depth interviewing of some special character samples found that among the 800 samples there was only one person who earned her living by singing country songs, enabling her to take care of all the family's expenses, as well as buying a house on credit for her parents, and a car for herself. It was found in one case, from observation, that an adolescent whose parents were business people, had precise advance financial planning in place, for example, knowing to prioritize necessary payments and giving due considering to if goods were worth buying. During the conducting of the interviews, the author had 4-twin samples with remarkably different purchasing behavior, particularly in choosing each kind of item according to individual preferences. Adolescents from wealthy families were relatively cautious about answering the questionnaire, not willing to provide information about savings, income received from the family, nor the family's overall income details. As to boarding students, they had little responsibility for any financial expenditure because the money given by the family was forwarded directly to the school or college, with the teachers managing all the adolescents' expenditure, which may later have a consequential impact on the adolescents' sense of responsibility in spending money as well as their general future when they themselves earn their own money.

6.4 Summary

Income is the main factor that significantly influences children's and adolescents' expenditure, which is similar to the Neoclassical Demand theory. If the income increases, adolescents will have more expenses. The higher the adolescents' age and level of education, as well as cohabiting with persons other than their parents, they will have a higher expenditure as a result, especially on luxury goods and items

of daily necessity. Adolescents studying in private educational institutions tend to have higher expenditures in terms of clothing and recreation than those studying in public educational institutions. When having a better GPA, adolescents spend less on recreational and luxury goods, as well as daily necessities. On the other hand, adolescents with credit cards spend more on giving gifts/donations, luxury goods, and school supplies, but less on daily necessities. Adolescents from high-income families spend more than those from lower-income families, especially on recreational and luxury items, school supplies and daily necessities.

6.5 The Impact of Adolescent Expenditure on Themselves, Families and Society

It was found, as a result of this study, that adolescents had an average expenditure of 5,327.42 baht per person per month¹, or an average of 63,929.04 baht per person per annum². The population segment used for the study was a specific group of 1,264,134 school-age children aged between 14-22 years, who were studying in metropolitan Bangkok (2005).

As a result, it was estimated that Bangkok's population of this age-range would have spent an average of 80,814.87 million baht per annum³ or would have accounted for 0.95% of Thailand's GDP (GDP₂₀₀₇ = 8,485,200 million baht).

Compared with the private sector's consumption figure, it represents 1.78% thereof (private consumption expenditure = 4,538,390 million baht). Adolescent expenditure therefore has an impact on national income, particularly on the family's expenditure.

Regarding the impact on the family unit, it was found that adolescents from families with incomes of less than 10,000 baht per month used almost 50% of the family's income, especially for grooming supplies and luxury goods, which accounted for as much as 20 – 30% of the adolescent's incomes. Consequently, Thai

¹ Or an average of 153.35 dollars per month (exchange rate at 34.74 baht per dollar in May 2007)

² About 1,840.21 dollars per person per annum.

³ Or about 2,326.28 millions dollars per annum

adolescents' expenditure inevitably impacts on families because adolescents can't earn their own money but are dependent on family' incomes. If they don't know how to spend it properly, they are creating a heavy financial burden on their family. In contrast, if they are aware of how to reduce any unnecessary expenditure, they will help alleviate the family's burden in periods of global economic crisis, to which Thailand is not immune. As to adolescents themselves, if they do not know how to plan their financial management from early childhood and adolescence onwards, they will grow accustomed to the habit of increasing spending on luxuries. When commencing their working life, they will not know how to plan to manage their earnings, which might lead to future situations of debt and, furthermore, to attempts to earn money by dubious, potentially unethical means. Families, therefore, should begin to coach adolescents from childhood onwards to become disciplined in their spending for their own future benefit.

Furthermore, the demographic structure also has an effect on society's total expenditure. Particularly, by 2015 today's school-age population will constitute the 22-30 year-old-age bracket within the population and will become the numerically largest population segment. Teaching and training adolescents to be aware of the family unit's financial burden and to be cautious with their spending, and to take part in alleviating the family's burden, will be beneficial to themselves, their families and society as a whole. The tenth national economic and social development plan - which follows the policies of the eighth and ninth plan respectively - has adopted a philosophy of economic sufficiency as its guideline. Therefore, in order to achieve that goal, the family unit as well as educational institutions should act as good role models and guiding coaches to adolescents and help to encourage them to be careful with financial resources, spending money economically and for the benefits of themselves and the next generation.

CHAPTER 7

CONCLUSION, DISCUSSIONS AND RECOMMENDATIONS

7.1 Conclusion

The study on “Expenditure Patterns of Thai Adolescent” used cross-sectional data, both primary and secondary, with the primary data principally being used for both quantitative and qualitative research. The targeted population of the study was specifically adolescents aged from 14 to 22 years who were studying in metropolitan Bangkok (surrounding areas not included). The sampling frame was based on the data of the Ministry of Education in 2005, resulting in 800 sampling units. The analytical statistics used were descriptive statistics, factor analysis, independent sample T-test, and Tobit regression analysis

The study outcome can answer the main objectives of the study as follows:

1. Thailand’s population projection (2000-2025) – conducted by the College of Population Studies - has indicated that the proportion of the child population throughout the kingdom will decrease from 24.7% (2000) to 18.0% (2025), so that after 2009 it will result in a gradual decline in the proportion of the working-age population to only 62.1% by 2025. Regarding the change in population structure (only in the metropolitan Bangkok area) in the 10-year-period between 2005 to 2015, the numerically largest group – the youths aged between 20-24 years (2005) - are moving to the 30 to 34-year age range, and will be the most numerous population group by 2015.

The population proportion in metropolitan Bangkok - compared to the national population based on the data of the population projection by the Institute for Population and Social Research - is summarized in table 7.1

Table 7.1 Percentage of the Population in Metropolitan Bangkok Compared to the National Population

age-range (year)	gender	Percentage of metropolitan Bangkok's population compared to the national population		
		2005	2015	2025
15-19	male	9.7	7.3	11.4
	female	10.7	6.3	11.6
20-24	male	13.4	8.1	7.9
	female	15.4	8.7	8.4
All age-range		10.4	10.8	10.8

In metropolitan Bangkok, have 6,472,400 inhabitants in 2005, representing 10.4% of the national population. It is estimated that the population of Bangkok will increase to 6,973,100 people by 2015, and further grow to 7,042,100 people by 2025. Concerning the national population, there were 62,162,700 people in 2005, estimated to increase to 64,647,500 people by 2015, and 65,088,800 people in 2025. However, the population aged between 15 to 19 years and 20 to 24 years tends to decline (since 2005) in the next 10 and 20 years.

2. The comparative study of expenditure patterns between male and female adolescents, grouped into early adolescents and late adolescents, found that their expenditures were significantly different according to age, age-range and income resources. Male adolescents spent an average of 5,866.98 baht per month, and the females spent an average of 4,787.87 baht per month. The early adolescents spent an average of 3,529.04 baht per month and the late adolescents spent an average of 5,327.56 baht per month. Adolescents without extra income spent an average of 5,039.27 baht per month and those with extra incomes spent an average of 6,576.07 baht per month. Finally, adolescents with credit cards spent an average of 11,569.39 baht per month, while those without credit card spent an average of 5,016.14 baht per month.

2.1 Expenditure patterns of male and female adolescents were significant different. It was found that they spent differently in both the level of expenditure and categories or types of goods. Male adolescents spent more than their female

counterparts in three categories of goods: recreational, luxury and everyday items. When studying each type of product, it was found that male adolescents spent more than the females on the following: movies, sporting goods, multimedia equipment, entertainment centers, visiting tourist attractions, residential rent and daily food. However, the females spent more than males on the following items: cosmetics, cosmetic treatments in beauty salons and gift-giving to friends.

2.2 Expenditure patterns of early and late adolescents were significantly different. They spent differently in both levels of expenditure and categories or types of goods. Early adolescents spent less than late adolescents in nearly all categories, except the recreational item category. When studying each type of product, it was found that early adolescents spent less than the late adolescents in nearly all kinds of goods except concert attendance, movies, sport items, multimedia facilities, gift-giving to parents, mobile phones, internet access, and entertainment books.

3. Adolescents' allocations of the income received. It was found that adolescents allocated most money for everyday items, averaging 1,922.06 baht per month, followed by school supplies, grooming supplies, luxury items, gift-giving/donations, and recreational goods, respectively averaging 1,301.33 baht, 1,180.28 baht, 944.50 baht, 693.86 baht, and 606.58 baht per month.

4. Factors influencing Thai expenditure are as follows (shown in table 7.2):

4.1 Adolescent's characteristics factors consist of age, level of education, place of domicile, the person the adolescent lives with, frequency of receiving money from the family, characteristics of the residence where the adolescent lives.

4.2 Educational factors consisting of gender and grade point average (GPA).

4.3 Variables related to income consisting of the adolescent's total income, money available on credit cards (if having any), and family' incomes.

4.4 Factors not influencing Thai adolescents' total expenditure are:

4.4.1 Family factors consisting of type of family, the person taking care of the adolescent, the parents' educational attainment.

4.4.2 Family's residential factors consisting of family's residential characteristics, the family's ownership status of the residence.

4.4.3 Factors concerning children in the family consisting of birth order of the adolescent and the number of children in the family.

4.4.4 Parents' occupational factors consisting of father's and mother's occupation.

4.4.5 Educational institutions factors consisting of the type of educational institute and religion.

4.4.6 Adolescent's savings at present.

On the other hand, the goods where male and female adolescents did not have significant differences in expenditure were clothes and personal ornamental items, shoes, concert attendance, gift-giving to parents, merit-making/donations/support, mobile phones, internet access, entertainment books, transport to school/college, text books and educational equipment, as these goods constituted their preferences. The study also found that adolescents whose father/mother were business people or had their own business, had financial planning before spending, were cautious about buying each good, had savings, and knew to save money to buy the goods they desired.

Regarding adolescents having credit cards, they usually used credit cards to pay for special study courses, transport fees to educational institutes, such as train tickets, etc. Some did not have expenses for transport to school/college because their father/mother organized private transport. Furthermore, very few Thai adolescents had special jobs to earn their own money. Most of them received money from parents so that they had little responsibility for their own expenditure, and did not realize the value of money because they did not have to work to obtain it on their own. Furthermore, when their children got older, the parents gave them more money, in contrast to the age-progressing adolescents in western countries who are given less money by their parents, and have to work to earn more money by themselves. Financial planning is very important in western countries where there are systematic study courses for the young, starting in childhood and delivered by educational institutions. There are also agencies responsible in continuous data collecting of every age bracket, recording expenditure transacted on each kind of item, ultimately to be used for research to prepare different kinds of planning.

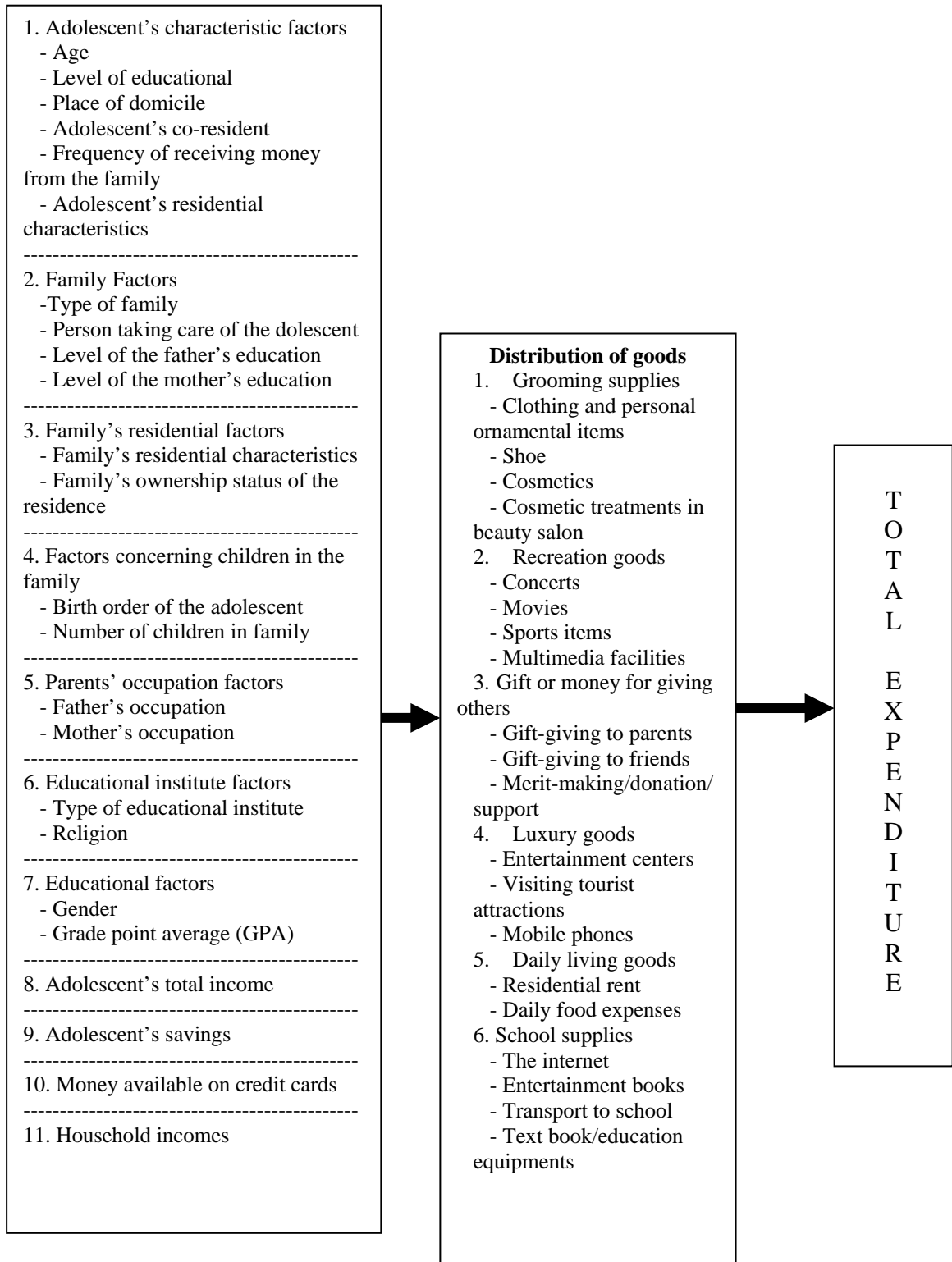


Figure 7.2 The Factor Affecting Expenditure of Adolescence

7.2 Discussions

Thai adolescents had an average expenditure of 5,327.42 baht per month. Adolescents from families, whose father/mother earned less than 10,000 baht per month, spent an average of 4,096 baht per month, which is considerably high because it accounted for as much as 41.0% of the family's income. Even though the expenditure of adolescents from families whose parents' earnings were between 10,000-50,000 baht and over 50,000 baht per month, accounted for only 18.3% and 14.0% of family's income (an average of 4,577 baht and 7,112 baht per month respectively). Their allocation for grooming supplies and luxury goods was, remarkably, over 30.0% of their income. If they had been able to reduce their spending on those types of goods, they would have cut down their expenses by 1,305 baht per month for low-income families (less than 10,000 baht per month), 1,436 baht per month for moderate-income families (between 10,000-50,000 baht per month), and 2,339 baht per month for high-income families (over than 50,000 baht per month).

The study found that male adolescents had higher expenditures than females, especially on everyday items, luxury goods, and recreational products. Even female adolescents' expenses on grooming supplies were higher than those of their male counterparts, but they were not significantly different. Alternatively, it can be said that male adolescents had an increasing interest in grooming supplies. In regard to early adolescents and late adolescents, their expenditure was different in every category of item, with the exception of recreational goods where there were no significant differences. It can be stated that recreational goods were of interest and favored by both early and late adolescents.

Adolescents in schools/colleges nowadays will become the population of 20-to-30-year age range in 2015, and are projected to become the most numerous population group by that stage. The family structure, increasingly tending towards single child families, leads to child-rearing with compliance to children's wishes, or raising them too materialistically minded, which will result in adolescents' over spending in the future. Approximately 44.1% of Thai adolescents received money on a daily basis, some were not regularly provided with funds, some received an

indefinite amount from their father/mother, and 80.9% of them did not earn their own money from work. Consequently, Thai adolescents can hardly learn how to plan their financial management. In order to teach adolescents to know how to plan their finances, a learning process has to start early and within the family unit. The preliminary stage to teach them to be responsible for their spending should particularly begin with the way of providing them with financial funds and encouraging them to work to earn the money by themselves. Furthermore, they should be taught and trained to realize its importance and be careful with their spending. They should become aware of the potential financial burden on the family, and they should take part in alleviating the burden by reducing their unnecessary expenses, which will be greatly beneficial to themselves, their family, and society as a whole. The tenth national development plan - the successor to the eighth and ninth plans - has adopted the philosophy of economic sufficiency as a guideline for its planning. Therefore, families and educational institutions should be good models for adolescents, helping to encourage them to apply this philosophy by spending money wisely, appropriately and in accordance with the level of their income, a behavior pattern that will be beneficial to them and the next generations.

7.3 Recommendations

This study has found that income is the main factor influencing adolescents' expenditure. The adolescents' appropriate purchasing behavior - whether the realization of the value of money, financial planning, or capability to make his/her own financial management - are the outcome of teaching and training by father/mother or parents. For example, giving the money to children daily, weekly or monthly makes the children know how to manage the money in accordance with that time frame. But if the father/mother or parents give the money to their children each and every time when they ask for it, or the children can ask for it from other people in the family at any time, consequently, the children are not taught or encouraged to plan and manage the money correctly. On the other hand, adults are accustoming the children to the habit of spending money without waiting for savings to accrue. As a result children do not realize the value of money, and it may become a "good

intention but bad consequence” for the future of the children when they are at working-age, earning their own money, but unable to manage the money by themselves.

The study has found that adolescents spent nearly half of all expenditures, or an average of 1,709 baht per month, on grooming supplies and luxury goods. If they knew how to cut down the expense of such categories of goods, adolescents would be able to help the family by saving as high as 30% of their expenses, or if turning that money into savings, they would be able to save up to 12,000 baht per annum per adolescent. In regard to the entire adolescent population in metropolitan Bangkok, if they reduced their spending by 1,000 baht per month per person, the 19,900 families with members younger than 20 years old in metropolitan Bangkok would be able to reduce their expenses or have savings of about 19.9 million baht per month. The 278,420 families with members aged between 20 to 29 years would be able to reduce their expenses or have savings of about 278.4 million baht per month. And when compared to the national level, the population younger than 20 years old within 91,040 families would be able to reduce their expenses or have savings of up to 91.0 million baht per month, whilst the adolescent population aged between 20 to 29 years would be able to reduce their expenses or have savings of 1,470.0 million baht per month, or making 17,640 million baht per annum.

The family is the fundamental institution where the parents not only have to teach and train the children to display proper purchasing behavior, but also good role models for the children when it comes to spending money. Purchasing behavior is like a heritage handed from grandparents and parents down to children, beginning with making the children aware of the family’s expenditure, being partly responsible for the family unit’s expenditure by cutting back on unnecessary purchases, working part-time jobs to gain money to alleviate the family’s burden, all of which making the children feel more responsible.

Blaming society, educational institutions or advertising for having a large impact on adolescents’ expenditure is, in fact, something far from them when compared to their family. Problems occurring to children often originate within the family. Adolescents’ purchasing behavior is a reflection of the parents’ purchasing

behavior. If the father or/and mother want their children to have proper purchasing behavior, they have to, in the first instance, be good models for them.

Increasing numbers of Thai families tend to have only one child. A study conducted in 2006 by the Institute for Population and Social Research, Mahidol University, has found that the total fertility rate of Thai women throughout the country will decline from 1.65 in 2005 to 1.45 in 2025. And in metropolitan Bangkok alone, it will decline from 1.42 in 2005 to 1.24 in 2025. Obviously, the children will increasingly be the center of interest of the family, especially the middle-class and affluent families. Studies abroad, as well as this study, affirm that the one-child family tends to spend more lavishly than families with many children. This fact should be realized, and there should be campaigns for families not to overly comply with the children's wishes and demands.

On the other hand, educational institutions should devise additional study courses or activities for schoolchildren/students. An interesting example that should be promoted is the curriculum development project carried out by the Office of the Basic Education Commission, the Ministry of Education in collaboration with the Stock Exchange of Thailand (SET) since 2003, in devising a 4-handbook series for study courses "Money is valuable" which teach about financial management and economics, divided into four stages: first stage of junior primary school, second stage of senior primary school, third stage of junior secondary school, and fourth stage of senior secondary school. However, it still lacks a study course for higher education, so the Commission on Higher Education should consider expanding and continuing with the project.

Adolescents are in a phase of life which is highly important and relevant to society. They attract other age ranges to imitate their behavior. They are at the beginning of building families, and models for the following generations. Adolescents' expenditure behavior should be focused on with great importance and priority because the over expenditure is the origin of many social problems. Agencies related to adolescents should conduct continuous and systematic research in order to enhance their development, whether emotional, physical, or economic. In addition, the changing family structure - with an increasing number of families tending to have only one child in the future - will result in a heavier burden on the workforce in

supporting an increasingly dependent population. Children and adolescents must have economical purchasing behavior and know how to make savings and conduct financial planning in order to be prepared for a proportionately increasing dependent population segment in the future.

Research in the future should focus on these issues:

1. There should be continuous follow-up studies on the purchasing behavior of adolescents of the age ranges outlined above.
2. There should be comparative studies conducted on the following issues: a changing family structure towards the single child family unit; adolescents in rural areas and those in urban areas; adolescents in different regions of the country; expenditure of different age range segments of the population; adolescents enrolled in schools/colleges and those not enrolled in forms of education; adolescents receiving money exclusively from the family, and those working to earn money without asking for it from the family.
3. There should be studies on aspects and issues of unemployment and/or poverty amongst adolescents to find out how the government can assist them apart from helping the elderly.

BIBLIOGRAPHY

- Alhabeeb, M. J. 1996. Teenagers' Money, Discretionary Spending and Saving. **Financial Counseling and Planning Education**. 7: 123-132.
- Atkinson, A. B. ; Gomulka, J. and Stern, N. H.1990. Spending on Alcohol: Evidence from the Family Expenditure Survey 1970-1983. **The Economic Journal**. 100 (September): 808-827. Retrieved May 27, 2008 from <http://www.jstor.org/stable/2233660>.
- Bachman, Jerald G. 1983. Premature Affluence: Do High Schools Students Earn too Much?. **Economic Outlook USA**. 10 (Summer): 64-67.
- Becker, Gary S. 1981. **Treatise on the Family**. Cambridge, MA: Harvard University Press.
- Belk, Russell W.; Rice, Clifford and Harvey, Randall.1984. Adolescents' Reported Saving, Giving, and Spending as a Function of Sources of Income. **Advances in Consumer Research**. 12: 42-46. Retrieved April 21, 2008 from <http://library2.nida.ac.th>.
- Bierens, Herman J. 2004. **The Tobit Model**. Retrieved March 25, 2008 from http://econ.la.psu.edu/~hbierens/EasyRegtours/TOBIT_Tourfiles/TOBIT.PDF
- Blackwell,Roger D.; Miniard, Paul W. and Engel, James F. 2006. **Consumer Behavior**. 10th ed. Canada: Thomson South-Western.
- Blundell, Richard ; Pashardes, Panos and Weber, Guglielmo. 1993. What Do We Learn About Consumer Demand Patterns from Micro Data?. **The American Economic Review**. 83 (3): 570-597.
- Boonkong Hanjansit. 2000. **Human Resource Economics**. 2nd ed. Bangkok: O.S. Printing House. (In Thai)
- Browning, Martin. 1992. Children and Household Economic Behavior. **Journal of Economic Literature**. 30 (September): 1434-1475.

- Business Thai. 2003 (October 16). **New Generation Turning Away From Thai Food**. Retrieved November 18, 2006 from http://www.business thai.co.th/content.php?data=406262_VIP%20Varie (In Thai)
- Butrica, Barbara A.; Goldwyn, Joshua H. and Johnson, Richard W. 2005. **Understanding Expenditure Patterns in Retirement**. Washington, D.C.: The Urban Institute.
- Capps, Oral , Jr. and Love, John M. 1983. Determinants of Household Expenditure on Fresh Vegetables. **Southern Journal of Agricultural Economics**. (December): 127-132.
- Chandran, Ram. 2004. **A Tobit Analysis of WIC Children's Consumption of Pyramid Group Foods**. Paper prepared for presentatuion at the American Agricultural Economics Association Annual Meeting, Denver, CO, August 1-4.
- Childers, Terry L. and Rao, Akshay R. 1992. The Influence of Familial and Peer-Based Reference Groups on Consumer Decisions. **Journal of Consumer Research**. 19 (September): 198-211.
- Cotte, June and Wood, Stacy L. 2004. Families and Innovative Consumer Behavior: A Triadic Analysis of Sibling and Parental Influence. **Journal of Consumer Research**. 31(June): 198-211.
- Deaton, Angus. 1989. Looking for Boy-Girl Discrimination in Household Expenditure Data. **The World Bank Economic Review**. 3(1) (January): 1-15.
- Deleire, Thomas and Kelil, Ariel. 2005. How Do Cohabiting Couples with Children Spend Their Money? **Journal of Marriage and Family**. 67 (May): 286-295.
- Delva, Jorge; Kaylor, Andrew Grogan; Steninhoff, Emily; Shin, Dong-Eok; Siefert, Kristine. 2007. Using Tobit Regression Analysis to Further Understand the Association of Youth Alcohol Problems with Depression and Parental Factors among Korean Adolescent Females. **Journal of Preventive Medicine and Public Health**. 40(March): 145-149.

- Doss, Vonda S.; Marlowe, Julia and Godwin, Deborah D. 1995. Middle-School Children's Sources and Uses of Money. **The Journal of Consumer Affairs.** 29 (Summer): 219-241.
- Engel, Ernst. 1895. Quoted in Browning, Martin. 1992. Children and Household Economic Behavior. **Journal of Economic Literature.** 30 (September): 1434-1475.
- Erikson, E.H. 1978. Quoted in Panthip Siriwanbus. 2002. **Family Psychology.** 5th ed. Bangkok: Chulalongkorn University.
- Farrell, Lisa and Shields, Michael A. 2005. **An Economic Investigation into the Expenditure Patterns of Children.** Research reported. Melbourne: Department of Economics, University of Melbourne.
- Frank, Robert H. and Glass, Amy J. 2000. **Microeconomic and Behavior.** 4th ed. Ohio: Irwin McGraw-Hill.
- Generation Marketing Customize the Target. 2003. **BrandAge Magazine.** 2 Retrieved November 18, 2006 from http://www.brandage.com/issue/edn_detail.asp?id=1476 (In Thai)
- Greene, William H. 1981. On the Asymptotic Bias of the Ordinary Least Squares Estimator of the Tobit Model. **Econometrica.** 49 (March): 505-513. Retrieved May 27, 2008 from <http://www.jstor.org/stable/1913323>.
- Hanna, Nessim and Wozniak, Richard. 2001. **Consumer Behavior : An Applied Approach.** New Jersey: Prentice-Hall.
- Herrin, et al. 1986. Integrating Population and Development Planning. **Asia-Pacific Population Journal.** 1 (March): 49-74.
- Institute for Population and Social Research. 2005. **Gazette Mahidol University.** 15 (January): 1-3. (In Thai)
- Institute for Population and Social Research. 2006. **Population Projections for Thailand during 2005 – 2025.** Bangkok: Edison Press Products. (In Thai)
- Institute for Population and Social Research. 2008. **Gazette Mahidol University.** 17 (January): 1-2. (In Thai)

- Ioannatos, Petros E. 1995. Censored Regression Estimation under Unobserved Heterogeneity: A Stochastic Parameter Approach. **Journal of Business & Economic Statistics**. 13 (July): 327-335. Retrieved May 27, 2008 from <http://www.jstor.org/stable/1392197>
- Johnson, David S. and Lino, Mark. 2000. Teenagers: Employment and Contributions to Family Spending. **Monthly Labor Review**. 123 (September): 15-25. Retrieved April 21, 2008 from <http://www.bls.gov/opub/mlr/2000/09/art2full.pdf>
- Kanlaya Vanichbanha. 2003a. **Advance SPSS for Windows**. 5th ed. Bangkok: Thammasarn. (In Thai)
- Kanlaya Vanichbanha. 2003b. **How to Use SPSS for Windows for Data Analysis**. 6th ed. Bangkok: Thammasarn. (In Thai)
- Kidfluence. 2003. **BrandAge Magazine**. 2 Retrieved November 18, 2006 from http://www.brandage.com/issue/edn_detail.asp?id=1479 (In Thai)
- Kleijmen, Jack P.C.; Vonk Noordegraaf, Antonie and Nielen, Mirjam. 2001. Sensitivity Analysis of Censored Output Through Polynomial, Logistic, and Tobit Regression Meta-Models: Theory and Case Study. In **Proceeding of the 2001 Winter Simulation Conference**. Tilburg, Netherlands: Center for Economic Research. Pp. 486-491.
- Kooreman, Peter. 2007. Time, Money, Peers, and Parents; Some Data and Theories on Teenage Behavior. **Journal of Population Economics**. 20 (February): 9-33. Retrieved June 17, 2007 from Springer-Verlag 2006.
- Kua Wongboonsin. 2004a. **The Last 6 Golden Years of Economic Competitive Opportunity: Outcome of the Population Structure Change**. Bangkok: Chulalongkorn University. (In Thai)
- Kua Wongboonsin. 2004b. **Population Studies and Human Resource**. Bangkok: Chulalongkorn University. (In Thai)
- Kua Wongboonsin. 2007 (October 14). Thai Family Structure Is Being Reversed. **Matichon**: 7. (In Thai)

- Lee, Helen and Tan, Andrew. 2006. **Determinants of Malaysian Household Expenditures on Food-Away-From-Home**. 26th Conference of the International Association of Agricultural Economists (12-18 August). Retrieved May 27, 2008 from <http://www.iaae-agecon.org/AUSConf/images/documents/IAAE%20Handbook%20web.pdf>
- Lindstrom, Martin. 2003. **Brandchild**. Thai language translation from Brandchild by INNOV. Bangkok: Nation Books International.
- McDonald, John F. and Moffih, Robert A. 1980. The Uses of Tobit Analysis. **The Review of Economics and Statistics**. 62 (May): 318-321. Retrieved May 27, 2008 from <http://www.jstor.org/stable/1924766>
- McDougall, Jean and Chantrey, David. 2004. The Making of Tomorrow's Consumer. **Young Consumers**. Quarter 3: 8-18.
- McNeal, James U. 1990. Children as Customers. **American Demographics**. 12(9): 36-39. Retrieved December 6, 2006 from ABI/INFORM Global.
- McNeal, James U. 1993. Born to Shop. **American Demographics**. 15(6): 34-39 Retrieved December 6, 2006 from ABI/INFORM Global.
- Manitoba Centre for Health Policy (MCHP). 2003. **Tobit Regression**. Retrieved February 26, 2008 from https://umanitoba.ca/centres/mchp/concept/dict/Statistics/tobit_regression.htm
- Martin, Craig A. 2005. **Malls and Generation Y Consumers: A Consumption Motivation Perspective**. Research reported. Kentucky: Department of Economics and Marketing, Gordon Ford College of Business, Western Kentucky University.
- Masnah Mohd Zain; Norhasimah Abdul Aziz; Zuraidah Mohd Sanusi; Norhayati Mohamed; Nor' Aisah Ahmad and Norasibah Abdul Jalil. 1997. Expenditure Differences of University Degree Holders across Occupational Sectors in Malaysia. **Journal of Family and Economic Issues**. 18 (Summer): 163-178.
- Meeks, Carol B. 1998. Factors Influencing Adolescents' Income and Expenditures. **Journal of Family and Economic Issues**. 19 (Summer): 131-150. Retrieved November 1, 2006 from ABI/INFORM Global.

- Ministry of Education. 2005a. **Basic Statistic Data of Each Province, of the 2005 Scholar Year**. Retrieved October 12, 2006 from http://www.moe.go.th/data_stat/ (In Thai)
- Ministry of Education. 2005b. **Educational Statistics in Brief, of the 2005 Scholar Year**. Retrieved October 12, 2006 from http://www.moe.go.th/data_stat/Download_Excel/statistics2548.xls (In Thai)
- Ministry of Information and Communication Technology. National Statistical Office. 2002. **Report of the 2002 Household Socio-Economic Survey 2002**. Bangkok: NSO. (In Thai)
- Ministry of Information and Communication Technology. National Statistical Office. 2003. **Report of the Children and Youth Survey 2002**. Bangkok: NSO. (In Thai)
- Ministry of Information and Communication Technology. National Statistical Office. 2005. **Key Statistics of Thailand 2005**. Bangkok: NSO Retrieved October 7, 2008 from http://service.nso.go.th/nso/nsopublish/service/serv_downdata.html. (In Thai)
- Ministry of Social Development and Human Security. 2004. **The National Youth Policy, and the Long-term National Children and Youth Development Plans 2002 – 2011**. Retrieved December 7, 2006 from <http://www.m-societh.go.th/nso/doc/longplan.zip> (In Thai)
- National Economic and Social Development Board. 2003. **Summary of the Evolution of the First to the Eighth National Economic and Social Development Plans**. Bangkok: NESDB. Retrieved December 4, 2006 from http://www.nesdb.go.th/econSocial/devCom/bottombar_copy.htm (In Thai)
- National Economic and Social Development Board. 2006. **The Tenth National Economic and Social Development Plan**. Bangkok: NESDB. Retrieved December 4, 2006 from <http://www.nesdb.go.th/plan10/index.htm> (In Thai)

- National Economic and Social Development Board, 2008. **Gross Domestic Product: Q4/2007**. Bangkok: National Accounts Office.
- NOPWorld. 2003. Teen Market Profile. **Magazine Publishers of America**. Retrieved April 21, 2008 from <http://www.magazine.org/content/files/teenprofile04.pdf>
- Oladele, O.I. 2005. A Tobit Analysis of Propensity to Discontinue Adoption of Agricultural Technology among Farmers in Southwestern Nigeria. **Journal Central European Agriculture**. 6(3): 249-254.
- Osgood, D. Wayne; Finken, Laura L. and McMorris, Barbara J. 2002. Analyzing Multiple-item Measures of Crime and Deviance II: Tobit Regression Analysis of Transformed Scores. **Journal of Quantitative Criminology**. 18 (December): 319-347.
- Panthip Pekanant Siriwanbus. 2002. **Family Psychology**. 5th ed. Bangkok: Chulalongkorn University. (In Thai)
- Paulin, Geoffrey D. 2002. Planning Ahead: Consumer Expenditure Patterns in Retirement. **Monthly Labor Review**. 125 (July): 38-58.
- Russell, Stephen and Bakken, Rosalie J. 2002. **Development of Autonomy in Adolescence**. Nebraska: Family Life Adolescence and Youth, The Board of Regents of the University of Nebraska.
- Salim, Juma K. 2004. **Expenditure Patterns within an Occupational Group : Teachers and Non-teachers**. Doctoral dissertation, Texas Tech University.
- Santrock, John W. 1998. **Adolescence**. Texas: McGraw Hill.
- Santrock, John W. 2007. **Adolescence**. Texas: McGraw Hill.
- Saphir, Melissa Nichots and Chaffer, Steven H. 2002. Adolescents' Contribution to Family Communication Patterns. **Human Communication Research**. 28 (January): 86-108.
- Schultz, T. Paul. 1981. **Economics of Population**. Massachusetts: Addison-Wesley.
- Schutte, Hellmut and Ciarlante, Deanna. 1998. **An Alternative Consumer Behaviour Theory for Asia**. London: Creative Print & Design.

- Schwab, Charles. 2007. Charles Schweb Teens & Money 2007 Survey Findings, Insights into Money Attitudes. **Behaviors and Concerns of Teens**. Retrieved April 21, 2008 from <http://www.aboutschweb.com/teensurvey2007.pdf>
- Self-Marketing the New Episode. 2005. **BrandAge Magazine**. 2 Retrieved November 18, 2006 from http://www.brandage.com/issue/edn_detail.asp?id=1477 (In Thai)
- Simmons, R. 2002. Quoted in Young, Brian. 2004. The Growing Consumer. **Young Consumers World Advertising Research Center**. (Quarter 4): 22-28.
- Steinberg, Dan. 1988. Probit, Logit, Tobit, and 2SLS: Supplements for SYSTAT. **The American Statistician**. 42 (August): 234-235. Retrieved May 27, 2008 from <http://www.jstor.org/stable/2685030>
- Stipp, Horst H. 1988. Children as Consumers. **American Demographics**. 10 (February): 26-32. Retrieved December 6, 2006 from ABI/INFORM Global.
- Stipp, Horst H. 1993. New Ways to Reach Children. **American Demographics**. 15 (8): 50-56. Retrieved December 6, 2006 from ABI/INFORM Global.
- Suchart Prasithratsint. 1997. **Social Science Research Methodology**. 10th ed. Bangkok: Liangsiang. (In Thai)
- Suchart Prasithratsint. 2002. **The Use of Statistics for Research According to International Standard**. Bangkok: Feungfah Printing. (In Thai)
- Surin Niyamangkoon. 1998. **Sampling Techniques**. 3rd ed. Bangkok: Kasetsart University. (In Thai)
- Tobin, James. 1958. Estimation of Relationships for Limited Dependent Variables. **Econometrica**. 26(1): 24. Retrieved Jan, 1958 from ABI/INFORM Global.
- Tweens POWER the New Segment. 2003. **BrandAge Magazine**. 8 Retrieved November 18, 2006 from http://www.brandage.com/issue/edn_detail.asp?id=995 (In Thai)
- Utumporn Jamornmann. 1989. **Sampling in Education**. Bangkok: Funny Publishing. (In Thai)

- Voorhees, Carolyn C.; Murray, David; Welk, Greg; Birnbaum, Amanda; Ribisl, Kurt M.; Johnson, Carolyn C.; Pfeiffer, Karin Allor; Saksvig, Brit and Jobe, Jared B. 2005. The Role of Peer Social Network Factors and Physical Activity in Adolescent Girls. **American Journal of Health BehaviourTM** . 29(March/April): 183-190.
- Wanrak Mingmaneeakin. 2005. **Principle of Macro-Economics**. 13th ed. Bangkok: Thammasat University. (In Thai)
- Warnaar, Marcel and Praag, Bernard Van. 1997. How Dutch Teenagers Spend Their Money. **De Economist**. 145 (3): 367-397.
- Watchareeporn Chaimongkol. 2007. **Papers of the Study Course SP. 402: SAS Programming and SAS Enterprise Guide**. Bangkok: National Institute of Development Administration. (In Thai)
- Wilska, Terhi-Anna. 2005. **Gender Differences in the Consumption of Children and Young in Finland**. Paper presented at the 7th ESA conference: "Rethinking Inequalities" (9-12 September). Torun, Poland.
- Yamane, Taro. 1973. **Statistic: An Introductory Analysis**. New York: Harper and Row.
- Ying, Guan. 2003. Consumption Patterns of Chinese Children. **Journal of Family and Economic Issues**. 24 (Winter): 373-379.
- Young, Brian. 2004. The Growing Consumes. **Young Consumers World Advertising Research Center**. (Quarter 4): 22-29.
- Zollo, Peter. 1995. Talking to Teens. **American Demographics**. 17(11): 22-28. Retrieved December 6, 2006 from ABI/INFORM Global.

APPENDICES

APPENDIX A

Sample size:

The assessment of the sample size used Yamane's formula (Yamane, 1973: 729) as follows:

$$n = \frac{N}{1+Ne^2}$$

n	=	sample size
n ₁	=	male sample size
n ₂	=	female sample size
N	=	population size
N ₁	=	male population size
N ₂	=	female population size
e	=	level of precision

$$\begin{aligned} n_1 &= \frac{564,127}{1+564,127(0.05)^2} & n_2 &= \frac{667,106}{1+667,106(0.05)^2} \\ &= 399.72 & &= 399.76 \end{aligned}$$

APPENDIX B

QUESTIONNAIRE: EXPENDITURE PATTERNS OF THAI ADOLESCENT

SECTION 1 Adolescent's income

INSTRUCTION: Please mark up in () or fill in the blank that describe your qualification.

1. How do you receive the money from the family, and how much of it? (Choose only one answer)

- 1. Receive dailybaht/day.
- 2. Receive weekly.....baht/week.
- 3. Receive monthlybaht/month.
- 4. Others, please specify.....

2. Do you earn money from part-time jobs?

- 1. No
- 2. I earn money from part-time jobs, about.....baht/month.
What is your part-time job? (Specify).....

3. During the past year, on what occasion were you given money?

- 3.1 Birthdaybaht.
- 3.2 New Year or Christmas.....baht
- 3.3 Chinese New Year.....baht.
- 3.4 Others (specify).....an amount ofbaht.

4. Are all incomes (from parents + part-time earnings) enough for the expenditures?

- 1. Enough, but all spent, none remaining for savings.
- 2. Enough, and some remaining for savings at an amount of.....baht/month.
- 3. Not enough, and in need of more money at the amount of.....baht/month.

5. If you do not have enough income for expenses, how do you solve the problem?
- () 1. Borrow from friend(s). () 2. Borrow from relatives.
 () 3. Ask for more from father/mother. () 4. Use credit card(s).
 () 5. Buy on credit. () 6. Work more part-time jobs.
 () 7. Use the saving money. () 8. Others (specify).....
6. You began saving money when you were.....years old.
 So far, you have savings of approximately.....baht.
 For what purpose are your savings? (Specify).....

If you have credit card(s),

(If you do not have credit card(s), go over to topic 11.)

7. The amount of money available in your credit card(s) is about.....baht.
8. What kind of goods do you pay by credit card? (Possible to choose more than one answer)
- () 1. Food () 2. Clothes
 () 3. Tuition fees. () 4. Books/ Educational equipment.
 () 5. Expense on entertainment, () 6. Residential rent.
 () 7. Mobile-phone, call fees () 8. Others (specify).....
9. How much you pay on average, with credit card(s) in a month?.....baht
10. Who is responsible to clear the credit-card debt?
- () 1. Father/Mother. () 2. Myself.
 () 3. Relatives/Siblings () 4. Others (specify).....

SECTION 2 Adolescents' expenditures (in the previous month)

11. Your expenditures are approximately.....baht/month.

12. Your expenditures in detail

(Only those paid with your incomes, not paid by your parent(s))

Goods and Services	Sum of money (baht/month)
1. clothes, personal ornamental items	
2. shoes	
3. fast food such as pizza, KFC, or snacks	
4. concert attendance	
5. watching movies	
6. buying CD/DVD/VCD (movie, music)	
7. mobile phones (handset, call fees)	
8. internet service	
9. entertaining books such as cartoons, magazines etc.	
10. sports related, such as equipment, membership fees etc.	
11. cosmetics/lotion/nail polish	
12. cosmetic treatment in beauty salon such as hairdressing, manicure etc	
13. entertainment center	
14. visiting tourist attractions	
15. transport expenses to school/college (public bus/private car)	
16. educational equipment and textbook expenses	
17. others (specify)	
17.1 buying gifts for father/mother/parents/siblings	
17.2 buying gifts for friends in different occasions	
17.3 merit-making/donation/supports for activities in school/college	
17.4.....	
17.5.....	

13. Who is responsible for all your expenditure?
1. Father 2. Mother
3. Father and Mother 4. Relatives (specify).....
14. From which sources did you know about the goods you bought?
(you may choose more than one answer)
1. Family 2. Friend(s)
3. TV or radio 4. Newspapers
5. Magazines/Periodicals. 6. Internet
7. Mobile phone 8. Others (please specify).....
15. Which considerations did you use to a make decision to buy goods?
(Run in order of preference, the first consideration =1, second one = 2...
.....the last one = 8)
1. Brand 2. Beauty
3. Cheap price 4. Fashionable
5. Novelty 6. Quality
7. Necessity 8. Others (specify).....
16. Who has influence on your goods purchases?
(Run in preferential order 1 = most influential, 2 = second influential.....7 = the
least influential)
1. Myself 2. Father-Mother-Parent
3. Relatives/Sibling(s) 4. Teacher(s)
5. Friends 6. Boyfriend/girlfriend
7. Others (specify).....
17. Where did you mostly buy goods?
1. Shop near the residence.
2. Shop near school/college.
3. Department store near the residence.
4. Department store near school/college.
5. Weekly/Monthly market near the residence.
6. Order by telephone.
7. Buy via the internet.
8. Others (specify).....

18. Have you ever learned “expenditure planning” courses in school?

1. Never.

2. Yes.

The first course was in

1. Kindergarten

2. Primary school

3. Junior secondary school 4. Senior secondary school

5. Vocational school 6. Diploma-level institute.

7. University

19. Are you satisfied with you expenditures?

1. Satisfied the most 2. Very satisfied

3. Satisfied 4. Relatively satisfied

5. Not satisfied at all

20. To which extent is the freedom of your spending?

1. Most freely. 2. Relative freely.

3. Moderate freely. 4. Relatively economical.

5. Very economical.

SECTION III: Adolescent’s personal data

INSTRUCTION: Please cross () or fill in the blanks that describe your qualification.

21. Gender

1. Male

2. Female

22. Age:..... year old.

23. Religion

1. Buddhism

2. Christianity

3. Islam

4. Others.....

24. What is your original domicile?

1. Bangkok

2. Other province (specify).....province.

25. Which number are you in the sequence of children in the family?.....
- 25.1 How many female siblings do you have?.....sister(s) (excluding yourself and counting only the living(s))
- 25.2 How many male siblings do you have?.....sister(s) (excluding yourself and counting only the living(s))
26. At present, in which level you are studying?
- 1. Grade 3 in secondary school
 - 2. Grade 4 in secondary school
 - 3. Grade 5 in secondary school
 - 4. Grade 6 in secondary school
 - 5. First year of professional certificate.
 - 6. Second year of professional certificate.
 - 7. Third year of professional certificate.
 - 8. First year of high professional certificate.
 - 9. Second year of high professional certificate.
 - 10. First year in university.
 - 11. Second year in university
 - 12. Third year in university
 - 13. Fourth year in university
 - 14. Others.....
27. In which type of institute do you study?
- 1. Public
 - 2. Private
28. How is your GDP?
- 1. Lower than 2.00
 - 2. 2.00-2.49
 - 3. 2.50-2.99
 - 4. 2.00-3.49
 - 5. 3.50-4.00
29. What kind of residence are your living in at present?
- 1. Detached house/Town house/Commercial building
 - 2. Apartment/Mansion/Condominium/ Rented room
 - 3. Student dormitory in educational institute.
 - 4. Others (specify).....

30. Do you pay the rent by yourself?
 1. Yes. 2. No.
31. Do you have private bedroom?
 1. Yes. 2. No. (If you do not have private sleeping room, go
over to topic 33.)
32. In your bedroom, what do you have as facilities?
(Possible to choose more than one answer)
 1. TV. 2. Computer.
 3. DVD/VCD player. 4. The Internet
 5. Telephone 6. Refrigerator
 7. Private restroom 8. Others (specify).....
33. Where do most of your close friends come from?
 1. From the same school/college 2. From neighborhood
 3. From the Internet 4. Others (specify).....
34. What do you have in your possession? (Possible to choose more than 1 answer)
 1. Mobile phone 2. Laptop or Notebook
 3. MP3 or MP4 4. Game play
 5. Palmtop or PDA 6. Digital camera
 7. Private car 8. Others (specify).....
35. Where do you use the Internet mostly? (Possible to choose more than 1 answer)
 1. At home 2. At school/college
 3. At the Internet shop 4. At dormitory
 5. Others (specify).....
36. If you have financial problems, whom will you consult?
(Choose in order, the first person = 1, the second = 2.....the last one = 5)
 1. Father/Mother/Parent 2. Teacher(s)
 3. Friend(s) 4. Girlfriend/Boyfriend
 5. Others (specify).....

SECTION IV: Adolescent's parents' personal data

INSTRUCTION: Please cross () or fill in the blank that describe your qualification.

37. Your family status at present.

- 1. The father and mother live together.
- 2. The father and mother live separately.
- 3. I have only one father/mother.
- 4. I have neither father nor mother.
- 5. Others (specify).....

38. At present, whom do you live with?

- 1. Father
- 2. Mother
- 3. Father and mother
- 4. Relatives
- 5. Friend(s)
- 6. Other people (please specify)...

39. The father's/mother's/parent's ownership of the residence.

- 1. Owner-occupier
- 2. Rented/ Mortgaged ownership
- 3. Living with other people
- 4. Others (specify).....

40. Residential characteristics of the father/mother/parent.

- 1. Detached-house
- 2. Townhouse
- 3. Apartment/Mansion/Condominium/Rented room
- 4. Others (specify).....

41. Educational attainment of the father/mother/guardian (please check \checkmark)

Level of education	Lower than primary school (1)	Primary school (2)	Secondary school (3)	Vocational school (4)	Diploma (5)	Bachelor's degree (6)	Higher than bachelor's degree (7)	No information (8)
Father								
Mother								
Guardian*								

* The case of not living with father/mother

42. Occupation of the father/mother/guardian (Please check \checkmark)

Occupation	Position (specify)	Civil servant (1)	State enterprise (2)	Private sector (3)	Business (4)	Agriculture (5)	General employee (6)	Housewife /unemployed (7)	Other (specify) (8)
Father									
Mother									
Guardian*									

* The case of not living with father/mother

43. Income of the father/mother/guardian (Please check√)

Order	Income/month	Father	Mother	Guardian*
1	Lower than 5,000			
2	5,000 – 10,000			
3	10,000 – 15,000			
4	15,001 – 20,000			
5	20,001 – 25,000			
6	25,001 - 30,000			
7	30,001 - 40,000			
8	40,001 - 50,000			
9	50,001 - 100,000			
10	100,001 - 300,000			
11	300,001 - 500,000			
12	More than 500,000 baht			

* The case of not living with father/mother

Date of interview.....Institute.....

APPENDIX C

Variables Used in the Research

Variables used consist of 24 independent variables, 20 dependent variables, and 1 latent construct, that is total expenditure, as shown in table 1

Table 1 Variables Used in the Research

variables	variable names	variable measurement
1. Dependent Variables	1. clothes/personal ornaments	baht per month
1.1 Adolescents' Expenditures	2. shoes	baht per month
	3. food or fast food	baht per month
	4. concert attendance	baht per month
	5. watching movies (in cinema)	baht per month
	6. multimedia equipment	baht per month
	7. mobile phone (handset and call fees)	baht per month
	8. the Internet	baht per month
	9. entertainment books	baht per month
	10. sports	baht per month
	11. cosmetics	baht per month
	12. cosmetic treatment in beauty salon	baht per month
	13. entertainment center	baht per month
	14. tourist attractions	baht per month
	15. transport to school/college	baht per month
	16. educational equipment	baht per month
	17. gifts for father/mother	baht per month
	18. gifts for friends	baht per month
	19. donations	baht per month
	20. residential rent	baht per month

Table 1 (Continued)

variables	variable names	variable measurement
2. Independent Variables		
2.1 Adolescent Characteristics		
1. gender	adolescent's gender	0 = male 1 = female
2. age	adolescent's age	number of years after birth
3. level of education	grade/year of education	1 = secondary school 2 = vocational certificate or diploma 3 = bachelor's degree
4. GPA	study outcome	1 = less than 2.00 2 = 2.00-2.49 3 = 2.50-2.99 4 = 3.00-3.49 5 = 3.50-4.00
5. birth order	adolescent's birth order	birth order among siblings
6. domicile	adolescent's province of birth	0 = Bangkok 1 = other provinces
7. residential characteristics	characteristics of adolescent's present residence	0 = house 1 = apartment-mansion-condominium and others
2.2 Family Characteristics		
1. family status	adolescent's family status	0 = the parents living together 1 = the parents living

Table 1 (Continued)

variables	variable names	variable measurement
		separately and others
2. The person taking care of the adolescent.	The person responsible for adolescent's expenditures and other issues	0 = only father and mother 1 = father or mother, parent and others
3. The person with whom the adolescent lives.	The person the adolescent lives with at present.	0 = father and mother 1 = father or mother, relatives, friends and others
4. Father's and mother's education attainment	Parents' highest educational level	1 = lower than primary school 2 = primary school 3 = secondary school 4 = vocational school 5 = diploma 6 = bachelor's degree 7 = higher than bachelor's degree 77 = no father 88 = unknown
5. Father's and mother's occupation	The parents' occupations at present	0 = civil servant, state enterprise, private sector 1 = business, agriculture, others
6. Family's residence	Family's residential characteristics	0 = detached house, town house, commercial building 1 = apartment, mansion, condominium, others

Table 1 (Continued)

variables	variable names	variable measurement
7. Family's ownership of the residence	Ownership of the present residence	0 = owner-occupier 1 = rented, others
8. Number of children in the family	Number of children born to the same father/mother of adolescent	number of siblings
9. Frequency of adolescent's receiving money from the family	Frequency of adolescent's receiving money from the father/mother, parent	0 = daily, weekly, others 1 = monthly
10. Amount of adolescent's total incomes	Adolescent's total incomes both from the family (regular and occasional depending on festivals) and from part-time jobs per month	baht per month
11. Amount of savings	The total saving up to present	baht per month
12. Sum of money available in credit cards	Sum of money usable in each month by credit cards	baht per month
13. Family's income	Adolescent family's income (per month)	1 = lower than 5,000 baht 2 = 5,000-10,000 baht 3 = 10,001-15,000 baht 4 = 15,001-20,000 baht 5 = 20,001-25,000 baht 6 = 25,001-30,000 baht 7 = 30,001 -40,000 baht 8 = 40,001-50,000 baht 9 = 50,001-100,000 baht

Table 1 (Continued)

variables	variable names	variable measurement
		10 = 100,001-300,000 baht 11= 300,001-500,000 baht 12 = over than 500,000 baht 13 = no income
2.3 Social/Cultural Characteristics		
1. Religion	Adolescent's religion	0 = Buddhism 1 = Christianity, Islam. others
2. Type of educational institute	The type of educational institute which the adolescent is attending.	0 = public 1 = private

BIOGRAPHY

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B.S. (Statistic, Science)

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PUBLICATION

1. Manipat Saimek, Pachitjanut Siripanich and Suwanlee Piampiti. 2008. Expenditure of College Student in Bangkok. In **Annual Conferences 2008**. September, 1-2. Bangkok: Council of the University Faculty Senates of Thailand (CUFST). Pp. 312-323.
2. Manipat Saimek, Pachitjanut Siripanich and Suwanlee Piampiti. 2008. Expense Allocation of Thai Adolescent. In **the Forth Administration and Management Conference**. October 16-17. Bangkok: Dhurakij Pundit University. Pp. 27 / CD. 1-10.
3. Manipat Saimek, Pachitjanut Siripanich and Suwanlee Piampiti. 2008. How can Adolescents Help the Families Reduce the Cost of Living? In **the 2008 Thai National Symposium on Population Studies**. November 20-21. Bangkok: the Population Council United Nations Population Fund, National Research Council of Thailand and Thai Population Association. Pp. 33-42.