Sustaining the Livelihood of Single Mothers through Wealth Creation and Savings Opportunities: A Long Road Ahead

M. N. Zarina and A. A. Kamil

Abstract—Single motherhood is spreading in Malaysia and re-entering single motherhood life poses challenges to single mothers. Financial abilities play crucial roles in single mothers’ survival in particular, when financial supports from ex-spouses and government agencies are not as helpful as they would like it to be. In many cases, single mothers are left without sustainable financial sources to re-start their new single lives. On average single mothers in our study have 2 to 3 children under their care. Studies have shown that the existence of children make it less likely for low income single mothers to save. Consequently, accumulating assets and savings fall in the last place in their priority lists. Other immediate needs take up most of their resources. As asset accumulation and savings are one of the ways to obtain a better livelihood other than education, this issue deserves to be addressed by policymakers, academics as well as society as a whole. Efforts and programs to alleviate poverty among single mothers should also inculcate self dependency as its ultimate goal. Our preliminary findings suggest that low income single mothers in our sample have accumulate minimal assets and savings - but with many mouths to feed.

Index Terms—Asset accumulation, poverty, saving, single mother.

I. INTRODUCTION

Poverty issue in general has received much attention in literature as well as from policymakers. Poverty rates serve as a yardstick to measure the extent of deprivation in an economy thus become a benchmark for the success or failure of economic system and government policies to combat poverty out of the society [1]. Poverty alleviation has indeed been one of the thrusts of development policies for most of the governments in the world. Yet, the incidence of poverty still persists in many countries despite all the effort. It seems like the root of poverty are too deep to be totally uprooted. However, the ongoing efforts by many quarters have produced remarkable results in reducing poverty rates among people. The same is true for Malaysia. Government report in the Tenth Malaysia Plan 2011-2015 has stated that the incidence of poverty has been drastically reduced from 49.3% in 1970 to only 3.8% in 2009, with hardcore poverty declining to 0.7% in 2009. The report admits that pockets of poverty remain in particular among specific communities and locations. What is more, urbanization has also change the face of poverty whereby urban poverty is a pressing issue at the moment. Previously, poverty has always been the problem of societies in rural areas. Therefore Malaysian government has created appropriate interventions to address this issue through various means such as agropolitan projects and micro credit schemes [2].

Programs to reduce incidence of poverty should go beyond fulfilling basic needs of the family. In a longer term the creation of wealth and savings is a more sustainable way to escape the vicious circle of poverty. This is of course, easy said than done yet - it does not reduce the importance of its virtue. Asset accumulation is an increase in assets, usually as a result of saving, which is made possible when income exceed consumption. It is widely accepted that savings and asset accumulation are desirable goals for individuals and families alike [3]. And for average Malaysian households, they are very protective and the savings behaviour is driven by precautionary savings. Further, research in this area finds that the major causes of savings in Malaysia are real income and dependency ratio [4].

Unfortunately, this is not always the case for low income earners. It is well documented that low income families have difficulties to save and to accumulate assets. Almost all of their incomes are used for daily expenses, and oftentimes are barely enough to see them through. Thus, there is nothing left for saving, even though they like to do that for many obvious reasons. Savings and assets would indeed make low income families more resilient to shocks and better be able to take advantage of opportunities [5]. The possession of wealth provides current use value, generates more wealth when it is invested, provides a buffer during financial emergencies, and can be inherited to future generations [6]. Moreover, the benefits of asset ownership extend beyond purely monetary reasons [5] as research has shown that asset ownership also leads to mental, physical and social benefits.

In a different note, research into asset accumulation and savings among low income female- headed families are lacking from the mainstream literature. It is reported that poverty among female-headed households in Malaysia has declined through income generating programs and provision of basic living quarters. Yet proper data measures and are not available to imply the significance of the programs in eradicating poverty among the said group. However, the formation of Ministry of Women and Family Development in 2001 has given an avenue to better address the many issue of women in this country, in particular the issue pertaining to the

Manuscript received March 3, 2012; revised April 13, 2012. This work was supported by Universiti Sains Malaysia (USM) under the Short Term Grant with the account number of 304/PJAUH/6310094.

M. N. Zarina is with the Management Section, School of Distance Education, Universiti Sains Malaysia, 11800 Penang, Malaysia, (e-mail: zarina.nor@usm.my).

Kamil A.A. is with the Mathematics Section, School of Distance Education, Universiti Sains Malaysia, 11800 Penang, Malaysia, (e-mail: antoni@usm.my).
II. BACKGROUND OF STUDY

Female headed households have grown in recent decades in developed and developing countries, so does in Malaysia. Female headed families are becoming more common in Malaysia whereby the families are headed by unmarried women, divorcees or widows. For the purpose of this paper, we are focusing on families headed by single mothers (divorcees and widows) but not that of single unmarried women. It is important to note that the socially acceptable definition of single mother in Malaysian culture is that of divorced mothers or widowed mothers as marriage institution are the base to build a family. We also exclude unmarried mothers and single women with adopted children for the purpose of convenience. The objective of this preliminary study is to get some insights into the patterns of asset accumulation and savings among low income single mothers. This study bears an important social and policy consequences as these groups of single mothers have many dependents under their care. Therefore, the future of their children depends on their ability to support and maintain a suitable living condition. Given the lack of fathers’ economic support - in many cases – after the divorce [7], the responsibility of looking after the children, especially the young ones, befalls on the mother. As such, the issues of maintaining a regular income and acquiring liquid and illiquid assets are crucial for single mothers in providing immediate necessities to their dependents and hopefully to provide a more stable livelihood for them and their children.

Furthermore, a small amount of assets and savings are also needed so that these single mothers have some back up for unexpected events and emergencies such as illness and death of family members. Moreover, they are not isolated from developments in the rest of the economy such as escalating food prices and energy as well as recession, create huge problems to them [5]. Unsurprisingly, studies in the US have shown that single parents are economically disadvantaged with single mothers face the most severe economic difficulties in household wealth accumulation [7-9], consistent with the notion that single mothers are economically vulnerable [10]. For poor single mothers, the severity could be worst. The Tenth Malaysia Plan has outlined a specific strategy for the bottom 40% of the low income segment. The objective of the strategy is to ensure that the low income households have the opportunity to enjoy a better living standard. The success of this plan remains to be seen as the current economic conditions are not as conducive as we would like it to be. For example, a high level of inflation pushes up the price of goods in the country. As a result, higher living standard for this group of people becomes harder to attain. Thus, negatively affect their ability to acquire assets and to save.

Previous research has suggested that low income earners have done little saving through the year for specific events. In Malaysia, religious and customary celebrations such as Eid Mubarak, Chinese New Year, Christmas and Diwali are important and require lots of money. The start of school year also requires a fair amount of money from these single mothers. Therefore the announcement made by the Prime Minister of Malaysia in the 2012 Budget has been welcome whereby every school children would be eligible for RM100 school assistance. We are hoping that these poor single mothers have the mean and access to this financial assistance though it is a one-off payment. The money could be saved for the children’s future because it will be paid out via bank account but research suggests that low income families tend to choose saving over spending when it is a default option [11]. It is interesting to note that majority of low income families are good at coping with their spending patterns [5].

Research on wealth in the developing countries has more to explore regarding the impact of rise in female-headed households on the accumulation of asset. Most research concentrates on developed countries for instant in the US and UK. Therefore, initial investigation presented in this paper is hoped to provide pathway to a deeper examination and understanding of this important issue, yet subliminal to many in Malaysia.

III. METHODOLOGY

A. Scope of Study

The scope of this research includes single mothers (divorcees and widows) in the state of Penang, Malaysia. Our respondents consist of single mothers with monthly income less than RM1000.00, as our study focuses on low income single mothers. Our respondents came from all 5 districts in Penang namely Northeast District (Timur Laut), Southwest District (Barat Daya, BD), Northern Mainland (Seberang Perai Utara, SPU), Central Mainland (Seberang Perai Tengah, SPT) and Southern Mainland (Seberang Perai Selatan, SPS). Two of these districts are located in Penang Island while the remaining three are on the mainland of Penang.

In 2009, the poverty line in Peninsula Malaysia is estimated to be RM763 per month. Therefore, even at RM1000 per month, it is hard enough for many to have a decent standard of living amidst the escalating food prices in Malaysia. It is noted that 58% of single mothers registered with the Department of Women Development of Penang in 2009, have monthly income of about RM500 only. Given the reported average income of RM1200 for Malaysian, and the poverty line level, we posit that those with an income of RM1000 per month can be considered as low income group.

B. Data

In this study, 223 self-administered questionnaires were distributed to single mothers living in Penang. We segregated those single mothers with monthly income of under RM1000 and there were 162 of them. However, after checking the completeness of their answers only 133 were used for analysis. The sample of single mothers with children was selected that include a range of household sizes from three main ethnicities i.e. Malay, Chinese and Indians, as well as with variation in employment status. Furthermore, the data collection was carried out during non-festive months such that extra incomes received from various quarters are expected during those months. Therefore, responses on financial matters are reliable.
IV. RESULTS AND DISCUSSION

In this section we will present and discuss the results of this preliminary study. As such, our results are limited to descriptive analysis of our findings.

A. Descriptive Analysis

Our respondents came from all 5 districts in Penang namely Northeast District (TL), Southwest District (BD), Northern Mainland (SPU), Central Mainland (SPT) and Southern Mainland (SPS). The state of Penang is divided into two separate lands; one is an island and the other is located in the mainland of peninsular Malaysia. There exist economic differences among the five districts where businesses and industrial zones are concentrated in certain areas whilst other areas are less developed and consist of traditional villages. Yet, the industrial zones on the island, Perai and the neighbouring Kulim High Tech area in Kedah have opened up vast opportunities for employment, in particular for women, in the production lines.

<table>
<thead>
<tr>
<th>Location</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast (TL)</td>
<td>27</td>
<td>20.3</td>
</tr>
<tr>
<td>Southwest (BD)</td>
<td>30</td>
<td>22.6</td>
</tr>
<tr>
<td>Northern Mainland (SPU)</td>
<td>32</td>
<td>24.1</td>
</tr>
<tr>
<td>Central Mainland (SPT)</td>
<td>30</td>
<td>22.6</td>
</tr>
<tr>
<td>Southern Mainland (SPS)</td>
<td>14</td>
<td>10.5</td>
</tr>
</tbody>
</table>

N= 133

Our data shows that the respondents consist of more divorcees than widows, with 67% of them are divorcees while 33% are widows as shown in Table II. The reasons behind this phenomenon and the different consequences that may exist between these two groups of single mothers in terms of asset accumulation and savings but they are beyond the scope of this paper. In terms of ethnicity, 77 percent of our respondents are Malays and 11 percent for both Chinese and Indians.

<table>
<thead>
<tr>
<th>Status</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divorcee</td>
<td>89</td>
<td>67</td>
</tr>
<tr>
<td>Widow</td>
<td>44</td>
<td>33</td>
</tr>
<tr>
<td>Average Age</td>
<td>38.3 years</td>
<td></td>
</tr>
<tr>
<td>Average single motherhood period</td>
<td>4.3 years</td>
<td></td>
</tr>
<tr>
<td>Average number of children</td>
<td>2.6</td>
<td></td>
</tr>
</tbody>
</table>

On average, we find that the age of our respondents are less than 40 years old. Fig. 1 shows the age of all of our respondents. The youngest single mother - a divorcee - in our sample is 20 years old and as expected, she has a child and living with her parents and siblings. The two oldest respondents are divorcees of 55 years of age. The first mother has been divorced for 5 years and the second one has been divorced for 10 years. In both cases, the duration of their single motherhood is longer than the average of 4.3 years recorded for this study. In addition, they also have many children with 6 and 4 children respectively which are more than the average of 2-3 children for the rest of the sample. Figure 2 shows the number of children for all the respondents whilst Fig. 3 shows the duration of single motherhood of the respondents.

A report by CBN News that citing the US government study in 2009 reveals that middle income families with baby born in 2008 will spend about US$221,000 raising the child through age 17. The figure climbs to about US$300,000 after adjustment for inflation and that excludes expenses for higher education [13]. Another study by the Australian government also indicates that the cost of raising a child through to the age 18 is estimated to be AUS1 million and most of the children will stay with their families until the age of 24 [14]. These figures are staggering even for most high income earners in Malaysia! Unfortunately, there is no verified numbers from government study that can be used for comparison in Malaysia though some suggest that Malaysians need about RM1 million to raise a child until they finish their higher education level. Given this insight, the children of low income single mothers tend to be left out from the many choices and life options available to children.
from different higher economic background if left unnoticed and unassisted. We believe that the education of poor children deserves to be given a higher priority in any poverty alleviation programs as education will most likely help them to fare well in their future endeavor.

Based on the ages of the mothers in our sample (Fig. 1), we expect that most of their children are still depending on their income and their care, lest some of the children do not pursue their studies and already in the job markets. We however do not ask the age of the children in the distributed questionnaires. School going children require a lot of expenses from their mothers. Some fees exemptions may have been given by the government, still daily expenses and other miscellaneous expenses asked by the schools have to be fulfilled. In a normal school environment, the students have to buy many different clothes for physical activities, extra-curricular activities (e.g. compulsory participation in uniformed group activities like Scout, Red Cross, and Cadets) besides the formal school uniforms. All of these demands a fair amount of cash outlays from the mothers thus further exhaust their limited resources.

The livelihood of older single mothers could be harder as they will face more difficulty in finding new jobs and adjustment to single motherhood life. On the other hand, their children would probably not that young and do not need full care from the mothers so that the mothers can go out to work. For young single mothers with small children, child care is a big issue. It is hard for them to leave home to work as they have to care for the children themselves. Childcare expenses are too expensive for them, unless they can leave the children with extended family members such as their parents or siblings and go to work. There are many in our respondents work in factories and the likelihood that they have to work in shifts is high. That alone will add to the problem of childcare. Hence, the support from close family members is critical in the life of these single mothers that come in the form of moral, material and childcare support. A complete age distribution of our respondents is presented in Fig. 1.

It is common to literally relate income and employment with education level because education and job training are still required as a common passageway out of poverty [15]. These low income single mothers indeed have low educational level with 93% of them left school after finishing lower secondary school level, most probably at the age of 15, after taking their lower middle school exams (previously known as SRP and now as PMR) as shown in Table II. The most prominent wage job among the respondents is as a factory production worker. A few of them are clerks and most of them are petty traders who involve in selling traditional food and cakes, tailoring, etc. All of them though, have income less than RM1000 per month. Therefore, job opportunities are available for single mothers with low education level though high tech industries need their employees to have at least Malaysian Education Certificate or SPM.

### TABLE II: RESPONDENT EDUCATION LEVEL

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Formal Education</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Primary School</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Lower Secondary School</td>
<td>124</td>
<td>93</td>
</tr>
<tr>
<td>Upper Secondary School</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

N=133

### B. Types of Assets Owned by Single Mothers

Table III shows that most of our respondents live in flats or houses in traditional villages, and almost all of them do not own the house that they currently live. In almost all cases, those houses are rented or belong to their parents. However, we find that their homes have basic furniture such as beds, tables and chairs as well as TVs, refrigerators, washing machines, fans and gas stoves. Yet, IT devices such as computer and laptops are rare. In the age of information, these single mothers do not have the privilege to a huge information hub that is the internet that may help them in finding job options, connect with other people and using various online services.

Issues on the condition and locations of housing areas of poor single mothers have been considered in many studies but they need to be further addressed [16-18] as it is a complex but important to the livelihood of single mothers and their families. In our study 70 percent of the single mothers live in flats which means that they are living in the vicinity of a city or in suburbs. As such the living costs that they have to bear are most likely higher than that of those live in the village. This condition leads to extra burden to the single mothers amidst the rising prices of ordinary items.

### TABLE III: RESPONDENT HOUSING ARRANGEMENTS

<table>
<thead>
<tr>
<th>Types of Assets Owned by Single Mothers</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flats</td>
<td>93</td>
<td>70</td>
</tr>
<tr>
<td>Village houses</td>
<td>37</td>
<td>28</td>
</tr>
<tr>
<td>Terrace house</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Squatters</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

N=133

It is interesting to note that 30% of our respondents live with their extended families as well as their own children. In all cases the cohabitants could be their parents, mother only, father only, or parents and siblings. None of our respondents lives with their siblings only, indicating that these single mothers are probably decided to return to their parents’ houses after becoming a single mother. House to live is an important thing in anyone’s life as such, government needs to determine how to best address community’s low-income housing needs [6]. Housing projects for the poor have been carried out by the government such as People’s Housing Project (PHP) and People’s Housing Project for the Poorest (PHPP). This kind of projects has to be continued as there are many in the lowest strata that need help in acquiring their own homes.

We also find that none of our respondents owns a land or an insurance policy (Table IV). Only five of the respondents have some savings in government’s mutual fund known as Amanah Saham Bumiputera (ASB) – a fund for bumiputras, the Malay and indigenous peoples in Malaysia - whilst only one respondent has a saving in Tabung Haji, a fund for performing hajj (pilgrimage) in Mecca. [11] indicates that low income households tend to save when it is a default option. Understandably, this option is scarce among these single mothers as they are outside the mainstream employment areas that provide monthly saving scheme such as Employee Provident Fund (EPF) or Social Security Organization (SOCSO). Moreover, efforts such as IDAs (Individual Development Accounts) in the US and Child trust Fund in the UK are not available in Malaysia. Being outside wage jobs employment these single mothers do not have...
access many benefits available to government servants and industrial workers like disability benefits, free healthcare and home/car loans. Many options are not available simply by not having a pay slip to prove their monthly income. Fortunately, the microcredit facilities are available in Malaysia. Microcredit providers such as Amanah Ikhtiar Malaysia (AIM) and TEKUN have been providing financial assistance to the needy, including single mothers, to start their own businesses. Microcredit is found to be able to improve the livelihood of single mothers by helping fulfilling basic needs of their families and create savings opportunities though the sustainability of their incomes remain a question [19].

We also find that only 23 or 17% of our respondents have vehicles that include van, cars and motorbikes. The cars are Malaysian made cars and all of the vehicles are more than 5 years old. [12] suggest that female headed households with children are less likely than single headed households without children, to own vehicles. However, our study further suggests that the average number of children among vehicle owned single mothers are higher (3.3 children) as compared to the whole sample’s average of 2.6 children. In this initial study, we are unable to propose the underlying reason for this matter but it could probably due to their education level (all of them have attained lower and upper secondary school education) and they also involved in some kind of business dealings funded by various microcredit programs that may require them to have vehicles to run their trades.

In another note, given the unsatisfactory level of public transport facilities, availability and efficiency in most parts of Malaysia, the mobility of the single mothers is more limited if they do not have their own vehicles. In other words, the absence of vehicles from the households of single mothers deprives them further from wider options and opportunities compared to vehicle owned single mothers though extra costs also occur for maintaining the vehicles itself from wear and tear as well as for yearly car insurance and road tax expenses. Consequently, higher transportation costs spell higher spending for single mothers at the bottom of the quintiles [20].

Government financial assistance is easy to obtain in developed countries. Various financial assistance are available for the people including stay-at-home mothers such as in Australia. In developing countries this kind of assistance is not yet practiced. Our observation shows that there are stringent and tedious procedures that the applicants have to go through to be considered as recipients of government assistance. In some cases the application will take a very long time to process. The technicality of the procedures somewhat deter the applicants from pursuing the application as they do not have the knowledge and guidance to follow the procedures. This situation is reflected in our study where there are only 16 or 12 percent of our respondent receive financial assistance from government institutions such as the Welfare Department, on regular basis. Irregular assistance and contributions are sometimes given to these families from other institutions such as the tithe distribution (zakat) or other kind of donations from NGOs and individuals.

It is necessary to note that these single mothers are mostly Malays. National statistics show that the Malays represents the biggest portion of the poor in Malaysia. This fact is also reflected in our results whereby 77 percent of the low income single mothers in our sample are Malays. In Malaysia, all Malays are Muslims. Therefore, the poor Malays will usually receive goods and small amount of money before the fasting month of Ramadan and before the end of fasting month as a preparation of Eid celebration, which is the biggest celebration for Muslims in Malaysia and other parts of the world. Extra expenses cannot be avoided, in particular for single mothers with children as they are too young to understand the hardship faced by their mothers. New clothing, shoes and Eid cookies are desired by all children from all walks of life. Helps in monetary form or in kinds, to some extend ease the burden of these mothers. Given the multi-racial society in Malaysia, the same goes for low income single mothers of Indian and Chinese descendants who celebrate Diwali, Chinese New Year or Christmas.

V. CONCLUSION

The trap of poverty preys on unsuspecting and unsuspecting victims. Studies have shown that many single mothers fall into this trap and it would be hard for them get out of it without formal and informal assistance. This is more pronounced when the mothers are left with children to care without proper financial support from ex-husbands and government bodies. Poverty deprives those at the bottom of income strata from many things in life - that are taken for granted by many at the middle/top of income thresholds.

Savings and asset accumulation have been proven to be an important and sustainable means to move the poor out of poverty and improve their economic wellbeing [16]. Research has also indicated that benefits of asset ownership extend beyond monetary indicators [21]. Therefore, continuous efforts by government agencies and various quarters need to be taken in helping them to start saving and eventually build their assets should take a center stage in poverty alleviation programs. Bureaucratic and outdated procedures in obtaining government assistance should be revamped such that the poor could have the assistance that they need before they are able to chart their own way out of poverty. With proper assistance, ultimately these poor people will inculcate a sense of self reliance and start building their own savings and wealth.

The findings of our study reflect the reality of hardships faced by low income single mothers. While this study is very basic in nature but it opens up a bigger venue for further research in understanding the economic and financial issues of single motherhood. We believe this is an important issue because the future of the children of single mothers depends on the ability of their mothers to provide them with the opportunities in terms of education and life experiences. As such the plight of these mothers should be addressed as they are rising future generation of a nation.

For further research, we propose to investigate this issue in a deeper manner and to analyze the differences between

| TABLE IV: RESPONDENT ASSETS AND FINANCIAL INSTRUMENTS |
|-----------------|---|
| Land            | 0 |
| Vehicle         | 23|
| Insurance       | 0 |
| Mutual fund (ASB)| 5 |
| Haj Fund (Tabung Haji) | 1 |
divorces and widows in their savings patterns and wealth creation if there are any.

ACKNOWLEDGMENT
Zarina M.N. would like to thank Zahirah Izzatzy for her unwavering support and encouragement in completing this paper.

REFERENCES

Zarina Md Nor was born in the UNESCO World Heritage City of Malacca, Malaysia on February 26, 1973. Zarina obtained her undergraduate degree in Management (major in finance & minor in mass-communication) in 1997. Zarina then completed her MBA in 2004. Both degree are from Universiti Sains Malaysia (USM). In 2005 Zarina went to Australia to pursue her PhD at the RMIT University, Melbourne and she was awarded a PhD in economics and finance in March 2005. She is a Senior Lecturer for Management Program at the School of Distance Education, USM since March 2009. Her research interest is in the field of women economics and financial issues. Her initial works have been published in indexed proceedings. Dr Zarina was awarded the Best Thesis Award 2009 by the RMIT University, Melbourne. She is also a member of panel reviewer for the 3rd International Conference on Business and Economic Research (3rd ICBER 2012) and a panel reviewer for the 1st ICoBM 2011. Dr Zarina is actively involved in community engagement projects under the Industry and Community Network of USM, targeting to improve the livelihood of disadvantaged single mothers in Penang.

Anton Abdulbasah Kamil was born in Bandung, Indonesia, on September 4th, 1964. He enrolled at the Padjadjaran University (UNPAD), Bandung, Indonesia for his tertiary education (Drs. in Statistics) and graduated in 1988. He then completed his M.S. in Applied Statistics (1993) from Bogor Agricultural University (IPB), Bogor, Indonesia and Ph.D. in Econometrics and Operations Research (1998) from University of Economics (VSE), Prague, Czech Republic. His specialization is in Stochastic Frontier Analysis and Financial Mathematics. He is an Associate Professor in Mathematics at Universiti Sains Malaysia (USM), Penang, Malaysia. He has more than a hundred publications to his credit in journals and proceedings. Presently he is a lecturer and a chairperson for Mathematics Program at School of Distance Education, USM. He was also a Honorary Lecturer at School of Health Sciences, Universiti Sains Malaysia from 2007 to 2008. He helped to develop the Mathematics and Economics Program at the School of Mathematical Sciences, Universiti Sains Malaysia, during period 2000 - 2006 and had been the Chairperson of that program from 2003 - 2005. In 2005, he was also appointed as Honorary Lecturer at School of Science and Technology, Universiti Malaysia Sabah, Kota Kinabalu, Sabah, Malaysia. Assoc. Prof. Dr. Kamil is also member of international professional associations related with his field, such as International Society on Multiple Criteria Decision Making (MCDM). He continues to be an active researcher in his field. He strives to promote mathematics and economics at all levels. He is on the Editorial Board of three international journals namely, The Bulletin of the Malaysian Mathematical Sciences Society, the Electronic Journal of Applied Statistical Analysis (EJASA), and the Munich Personal RePEc Archive. Besides that he has been appointed to hold committee positions in several international conferences and he also involves in consultations with, Fire Department Malaysia (2011), Ministry of Tourism Malaysia (2005-2006) and Japan International Cooperation Agency (for the project of Research and Development for Reducing Geo-Hazard Damage in Malaysia Caused by Landslide and Flood, 2011-2016).