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Technical Report

Patterns and Determinants of Household Saving In the Philippines

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Prepared for

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Preface

This report is the result of the technical assistance provided by the Economic Modernization through Efficient Reforms and Governance Enhancement (EMERGE) Activity, under contract with the CARANA Corporation, Nathan Associates Inc. and The Peoples Group (TRG) to the United States Agency for International Development, Manila, Philippines (USAID/Philippines) (Contract No. AFP-I-00-00-03-00020 Delivery Order 800). The EMERGE Activity is intended to contribute towards the Government of the Republic of the Philippines (GRP) Medium Term Philippine Development Plan (MTPDP) and USAID/Philippines' Strategic Objective 2, "Investment Climate Less Constrained by Corruption and Poor Governance." The purpose of the activity is to provide technical assistance to support economic policy reforms that will cause sustainable economic growth and enhance the competitiveness of the Philippine economy by augmenting the efforts of Philippine pro-reform partners and stakeholders.

Deputy Governor Nestor A. Espenilla, Jr., of the Bangko Sentral ng Pilipinas (BSP) Supervision and Examination Sector (SES) requested this analysis of household saving behavior in the Philippines using disaggregated demographic variables to obtain additional insights for its saving mobilization policies from both macroeconomic and microeconomic perspectives. The analysis was undertaken by Dr. Lisa Grace S. Bersales, Professor of Statistics, and Dennis S. Mapa, Assistant Professor of Statistics and Director of Research, both of the School of Statistics, University of the Philippines, between March and July 2006.

The views expressed and opinions contained in this publication are those of the authors and are not necessarily those of USAID, the GRP, the University of the Philippines, EMERGE or the latter's parent organizations.

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Patterns and Determinants of Household Saving In the Philippines

Executive Summary

The Office of the Deputy Governor of the Bangko Sentral ng Pilipinas Supervision and Examination Sector (BSP-SES) commissioned this technical assessment of the patterns and determinants of household saving in the Philippines. With the information from this assessment, the BSP is better informed on how it may align its policies for mobilizing more saving and developing the domestic banking system and capital markets. An improved understanding of the demographic triggers of household saving enhances the capacity of the BSP to respond to the various development initiatives for the country's banking and capital markets.

The relevant data from seven Family Income and Expenditure Surveys (FIES) for the FIES years 1985, 1988, 1991, 1994, 1997, 2000, and 2003 were used in this study. Profiles of household saving by per capita income deciles at both the national and regional levels were estimated.

The study had documented interesting observations about household saving profiles across regions and income categories. The rate and level of household saving have been decreasing. The country's lowest household saving rate since 1988, amounting to of 16.4 per cent, was recorded in 2003. The pattern applies to all income deciles, with the exception of the highest income group, whose saving rate increased in 2003 from 2000.

With only 13 per cent of households in 2003 having bank deposits, it appears that the country's households are either unfamiliar or uncomfortable about entrusting their saving with the formal financial institutions. The national capital region (NCR) had the most number of households (25 per cent of the sample) having bank deposits in 2003. Region 6 (Western Visayas) had the next highest percentage of households with bank deposits at 22 per cent, despite the fact that it had the lowest saving rate. In contrast, Region 2 (Cagayan Valley) which had saved the most in 2003 had one of the poorest access or lowest use of the formal banking system; only 8 per cent of its households had bank deposits.

The life-cycle pattern of saving, which depicts individuals as tending to dis-save when they are young, save increasingly more as they grow older and increase their incomes, and to live off with their saving in their senior years, appears validated with one exception. The individuals belonging to age group 65 years and above had not dis-saved as expected, but instead continued to save more. Peak saving rate in 2003 was for the age group 50 to 64 years. In contrast, the households with peak saving rates in Thailand and Taiwan were younger than their counterparts in the Philippines. Based on the 2000 Philippine Census of

Population and Housing, 72 per cent or nearly three fourths of the Philippine population is aged 34 years and below, while only 8 per cent of individuals were 50 to 64 years old. These demographic information helps explain why household saving rates in the Philippines are relatively low.

The study identified the determinants of household saving rate using an econometric model. The model relates the relative sizes of the young population (0 to 14 years) and the elderly population, on the household saving rate. Part of the analysis checked and did find any reverse causality. The econometric analysis found the following to be statistically significant determinants of household saving rate: level of income, education, percentage of young dependents, percentage of the elderly and percentage of income from abroad. Unexpectedly, factors such as the inflation rate and number of banks had insignificant effects.

The study used instrumental variable estimation techniques using a pseudo-panel data constructed from FIES years from 1988 to 2003. It estimated two specifications of the econometric model, using the Generalized Least Squares Estimation and Instrumental Variable Estimation. Both procedures produced the same significant determinants for the two specifications.

The highlights of the results of the econometric analysis are the following:

- A 100 pesos increase in the average per capita income results to an increase in the estimated mean saving rate by about 0.67 percentage point, all things being the same.
- A one-percentage point increase in the proportion of household heads with at least high school diploma increases the estimated mean saving rate by about 0.27 percentage point.
- A one-percentage point reduction in the proportion of young dependents results to an increase in the average saving rate by 0.34 percentage point, all things being the same.
- A one percentage point increase in the proportion of the elderly results to an estimated increase of 2.03 percentage points in the average saving rate.
- A one percentage point increase in income from abroad results to an increase in the estimated mean saving rate by about half-percentage point, *ceteris paribus*.

The authors suggested the following measures to further mobilize household saving in the Philippines:

- Achieving a slower rate of population growth should be an explicit development objective of the country. Lower rates of childrearing will

substantially increase the incentives for saving as experienced by East Asian countries like Singapore, South Korea, Taiwan and Thailand.

- There is still a need for banks to offer more attractive incentives for households to deposit savings in banks. Specifically, since the percentage of the older population (ages 65 and above) is a significant positive determinant of saving, efforts should be made to create awareness among the elderly regarding proper investment. The financial institutions can provide financial instruments that will fit the needs of the elderly population.
- Education is also vital to increasing aggregate household saving. Policy-wise, efforts should be made to reduce the gender gap in education. These policies should encourage women to participate in the labor force.
- Remittance is a major source of aggregate household saving as the econometric model shows. However, remittances can be also a disincentive for saving as these are withdrawn immediately to settle bills and as payment for consumer goods. Policy-wise, efforts should be made to encourage both the migrants and recipients to save a portion of the remittances using the formal channel. Financial institutions should develop saving products that would target the needs of the lower market migrants.
- It is vital that a survey with a nationwide coverage be conducted to collect data that provide more in-depth and comprehensive picture of saving behavior of households in the Philippines. Many more issues need to be answered with respect to household saving but data are not available on a nationwide scale similar to the scale of the FIES. Thus, it is indeed vital that FIES data be augmented with more specific data related to saving.

Patterns and Determinants of Household Saving In the Philippines

I. Introduction

The Office of the Deputy Governor of the Bangko Sentral ng Pilipinas Supervision and Examination Sector (BSP-SES) had commissioned a nationwide assessment of household saving in support of the BSP's objective to further mobilize savings and more effectively align its policies and regulations with the development of the banking system and the domestic capital markets. While the BSP-SES has observed that Philippine saving rate is relatively lower than those in many economies of the region, there has not been a recent nationwide systemic assessment of the micro-foundations of saving. An updated understanding of the demographic triggers of household saving is essential for saving mobilization and providing the BSP-SES the technical basis in analyzing the various proposed initiatives aimed at developing the banking system and capital markets.

Upon the request for technical assistance of the Deputy Governor, EMERGE consultants prepared this report, using disaggregated demographic and other variables from the Family Income and Expenditure Surveys (FIES). The following scope of work was identified to answer the objective of the technical assistance:

1. Identify and collect all currently available data pertinent to a study of saving behavior for the population as a whole and for representative households. This will include aggregate and demographic data for the national and sub national (i.e., regional, provincial, city, town and other geographical classifications as data permits) levels.
2. Conduct empirical tests on the data collected to generate a profile of saving behavior at the national and, more importantly, sub-national levels. These tests should establish the basic structure of saving, including determinants and causality.
3. Prepare a technical report of the findings, identifying both their possible policy implications and, where necessary, other information that may be relevant to the BSP-SES on this policy issue but which are currently not available.
4. Present, at a forum to be organized by the BSP-SES, the key findings of the technical report and to seek the concurrence of BSP-SES on the additional data that should be generated further for policy purposes but which are currently unavailable.

Lack of data prevented the taking up of the following concerns in this technical assessment: influence of demographic variables on the type of financial instruments used; conversion of economic saving into financial saving; impediments to the creation of financial saving; identifying any other potential saving that remain untapped; possible impact of taxes on the generation and distribution of saving; and, simulate the possible impact of different banking policies and programs.¹

The report is organized as follows. In the following section, it discusses the profile of household saving using FIES data from FIES years 1985 to 2003. This is followed by a discussion of the determinants of household saving using the same dataset. A third section takes up the approach to institutionalizing a consumer finance survey in the Philippines.

II. Profile of Household Saving in the Philippines (1985 TO 2003)

The economic performance of the Philippines in the last three decades has been mediocre relative to its Asian neighbors. One way of aiming for a higher economic growth path is by raising the rate of investments. Investments, however, require financing that will have to be generated from domestic or foreign sources. The picture of the country's Gross Domestic Saving (GDS) - measured as a percentage of GDP - is not so bright relative to other countries in Asia. The average GDS ratio of the Philippines during the period 1975 to 2000 is only about 22 percent, much lower compared to Thailand's 28 percent, South Korea's 32 percent or Singapore's 44 percent. The link between saving and economic growth is not an uncharted territory. Growth theories have shown that saving is important for economic growth and there are several cross-country studies supporting this. A study by Mapa and Balisacan (2004), using data from 80 developed and developing countries for the period 1975 to 2000 showed a positive and significant effect of gross domestic saving to economic growth. In their study, the authors concluded that a one-percentage point increase in GDS increases the yearly average growth rate of income per person by 5 basis points, all things being the same.

While the impact of saving at the macro level is well documented, the micro aspect of saving or the saving behavior of households is not well understood and, in the Philippines, is not well documented empirically in recent years. Rodriguez and Meyer (1988) examined the saving behavior of 1,000 rural households using data gathered by the Agricultural Credit Policy Council (ACPC) of the Philippines in 1987. The authors found that factors such as income, household size and education of the household head, among others, play significant and positive roles in raising saving among rural households. Bautista and Lamberte

¹ For the last unanswered concern, banking policies and programs that BSP wants studied for their impact on saving were only recently instituted and are outside the scope of data used for the empirical analyses. These data are from the triennial Family Income and Expenditure Surveys from 1985 to 2003.

(1990), on the other hand, analyzed the saving behavior of rural and urban households in the Philippines using data of 17,495 households from the 1985 Family Income and Expenditure Survey (FIES). The result showed that marginal propensity to save of households in Metro Manila is lower than that of households in any other region (except Region 2). The study also showed that at a given income level, rural households generally save more than urban households. Moreover, the marginal saving rate of rural households increases more rapidly as they move up from low- and middle-income groups to the high-income group compared to the urban households.

There is a dearth of studies on saving after the studies done by the Agricultural Credit Policy Council (ACPC) and the Philippine Institute of Development Studies (PIDS). Gardiol, Helms, and Deshpande (2005) provide a good assessment of country savings in the Philippines at four levels – clients, financial institutions (micro-level), supporting infrastructure (meso-level), and policy (macro-level). They, however, use anecdotal information and data from specific groups at the micro-level. Thus, their assessment is not supported by nationwide nor regional data. Of interest, though, are the results they quoted from Karlan, *et al.* (2004), which utilized a random sample of 1,285 persons in major market places in the cities of Butuan (Northern Mindanao), Baguio (Cordillera Autonomous Region), and Bacolod, Negros Occidental (Western Visayas). Karlan, *et al.* (2004) reported that 63.5 per cent of those who save keep their savings at home while 9.7 per cent deposit in rural banks, 9.4 per cent place savings in cooperatives, 6.7 per cent in self-help groups, 2.2 per cent in commercial banks, and 2.3 per cent others. Furthermore, 42.0 per cent of respondents save for emergencies; 34.0 per cent for children's education; 6.6 per cent for food and daily needs; 5.9 per cent for retirement, future family, marriage; 3.4 per cent to capital to start or expand business or buy land; 2.3 per cent for housing; and 5.8 per cent for other reasons.

Such saving patterns and behavior of Philippine households are important for the government and other stakeholders such as financial institutions whose aim is savings mobilization.

A. Objectives

In this section of the report, the saving patterns of households at the national and regional levels and across national per capita income deciles are presented. The information covered includes saving rate, level of savings, deposits in banks, and transfers from abroad.

B. Data

The saving patterns by household, which are documented in this study, are obtained using the relevant data from the Family Income and Expenditure Survey (FIES) for the FIES years 1985, 1988, 1991, 1994, 1997, 2000, and 2003. The

number of households surveyed is presented in Table 1. Furthermore, the regional classification uses the fourteen regions of the 1988 FIES regional classification and is presented in Table 2.

Table 1. Sample Households by FIES Year

FIES Year	Number of Sample Households
1985	16,971
1988	18,922
1991	24,789
1994	24,797
1997	39,520
2000	39,615
2003	42,094

Source: Family Income and Expenditure Survey data

Table 2. Regions in the 1988 Family Income and Expenditure Survey (FIES)

Region	Name of Region
1	Ilocos Region
2	Cagayan Valley
3	Central Luzon
4	Southern Tagalog
5	Bicol Region
6	Western Visayas
7	Central Visayas
8	Eastern Visayas
9	Western Mindanao
10	Northern Mindanao
11	Southern Mindanao
12	Central Mindanao
13	National Capital Region (NCR)
14	Cordillera Autonomous Region (CAR)

Source: Family Income and Expenditure Survey data

Households are also categorized by per capita income deciles at the national and regional levels in the case of regional profiles. Accordingly, households were first ranked nationwide according to their per capita income and then categorized into the income deciles. This classification was maintained even in the regional profiling of saving behavior.

Household saving rather than aggregate saving is the focus of the paper. This treatment allows the analysis of saving behavior under the life cycle model and for different per capita income deciles and by region. Currently only FIES data

can support such objectives. Aggregate saving computed from macro-economic data such as GDP, RGDP, and flow of funds data cannot provide micro-level data needed for such an analysis. This is the same reason for the use of Attanasio and Szekely (2001) of household saving rather than aggregate saving. The following operational definition of household saving and saving rate, respectively, is used in the study:

$$\text{Saving} = \text{Total income} - \text{Total spending of the household}$$

$$\text{Saving rate} = \frac{\text{Saving}}{\text{Total income of the household}} \times 100 \text{ per cent}$$

Total Family Income and Total Family Expenditure of the FIES were used in computing saving and saving rate. Total Family Income includes total wages and salaries, pensions, dividend from investments, interests, rentals, cash receipts/gifts/support from domestic and international sources, net share of crops, income from family sustenance activities as well as receipts from others sources not elsewhere classified. *Attachment 1* gives the variable names for Total Family Income and Total Family Expenditure in the 2003 FIES. It must be noted that the definitions of these variables in FIES has remained the same from 1985 to 2003.

The definition of saving used in this paper has been fully discussed (e.g., Attanasio and Szekely, 2001). However, as in other studies, this definition of saving has been used due to the limitations in the collection of data of household consumption of durables. Another operational definition of saving is to take out from expenditures durables and other items which may be viewed as household investment. In the FIES questionnaire, however, no dis-aggregation of such items is done.

In order to compare savings across FIES years, the data was deflated using the consumer price index (CPI) (1997=100). Further, the Cost of Living Index (reference=NCR) developed by the Asia Pacific Policy Center was used to adjust savings to compare it across the regions.

C. Saving Profile of Philippine Households, 1985 to 2003

In this section, saving patterns are first presented at the national level and then by regions. In both cases saving profiles by national income deciles are done. National saving rate and level of savings are presented first. These are followed by the regional profiles of saving rate and level of savings. Discussions of data on deposits in banks and transfers from abroad then follow.

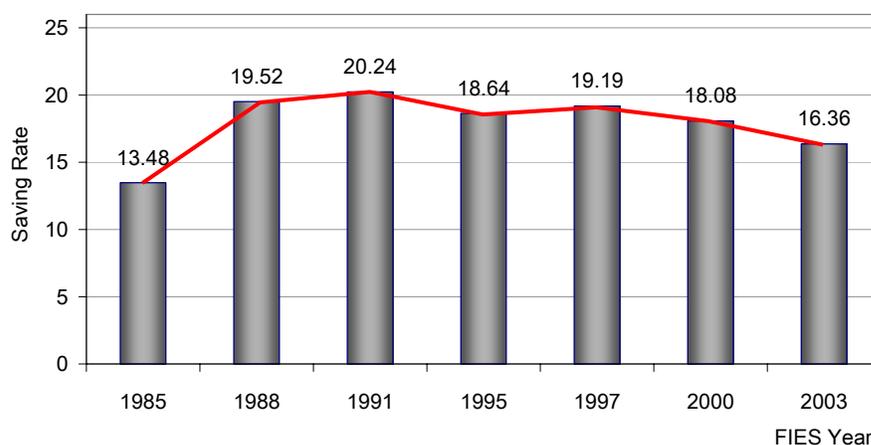
1. National Profile

Saving rate and level of savings nationwide are presented below both for all households and for national per capita income deciles.

1.a) Saving Rate

Based on 2003 FIES, household saving rate nationwide is 16%. In 1997, it was 19%. This is lower than the recorded household saving rate of Thailand of 30% and Taiwan of 49% in 1996 (Attanasio and Szekely, 2001). Recent years' saving rates are higher than the 1985 level. However, from 1997, a downward trend is noted, as shown in Figure 1.

Figure 1. National Saving Rates, by FIES Year: 1985 to 2003



Source: Family Income and Expenditure Survey data

(1) Saving Rate by Income Decile

The downward trend in household saving is generally reflected by the saving rates across the different national per capita income deciles, except for the highest income decile, whose saving rate increased in 2003 from 2000. Table 3 further shows that the bottom 20% is dissaving. It is also noted from this table that the top 10% saving rate is 1.7 times that of the second 10% and is more than twice that of the other income deciles. Table 3 and Figure 2 present the saving rates and visual illustration of the saving patterns, respectively.

Table 3. Household Saving Rate by FIES Year and National Per Capita Income Decile

FIES Year	National Per Capita Income Decile									
	1	2	3	4	5	6	7	8	9	10
1985	-15.02	-2.95	-0.58	2.78	4.69	7.87	8.53	11.34	14.48	26.65
1988	-10.45	0.13	4.7	8.28	10.53	12.65	15.17	17.2	20.94	33.53
1991	-10.97	2.32	5.96	10.44	10.97	13.42	17.03	17.18	21.47	32.34
1994	-6.77	2.89	5.91	9.67	11.53	12.56	15.33	17.91	20.96	28.97
1997	-11.6	-1.2	2.25	6.49	8.58	11.26	14.58	18.13	20.96	30.85
2000	-8.29	-1.58	2.26	5.84	8.77	11.69	13.68	17.63	20.45	28.62
2003	-9.38	-1.64	1.66	4.51	6.95	9.66	11.78	14.52	17.46	29.42

Source: Family Income Expenditure Survey data

1.b) Household Saving

In 2003, mean estimated household saving is P29,579 (in 1997 pesos) per household but median household saving is just P7,007 (in 1997 pesos). Thus, saving per household is highly variable. This is also reflected by the coefficient of variation. For example, in 2003, the coefficient of variation is 810 per cent indicating a standard deviation eight times the value of the mean. Table 4 shows this relative high variability as well as the decline in the level of household savings from 2000 to 2003. Median saving appears to be a better statistic that may be used for analysis of household saving because of this variability.

(1) Saving by Income Deciles

Tables 5.1 and 5.2 present the estimated household saving by national per capita income deciles in FIES years, 1985 to 2003, respectively. Both mean and median saving had declined from 2000 to 2003 for all income deciles. Interestingly, median saving for the top income decile was more than twice that of the next top income decile.

2. Regional Profile

Regional profiles of saving rate and level of saving are discussed below. As in the discussions above, such profiles are also presented for national per capita income deciles.

Figure 2. Household Saving Rate by FIES Year and Income Decile

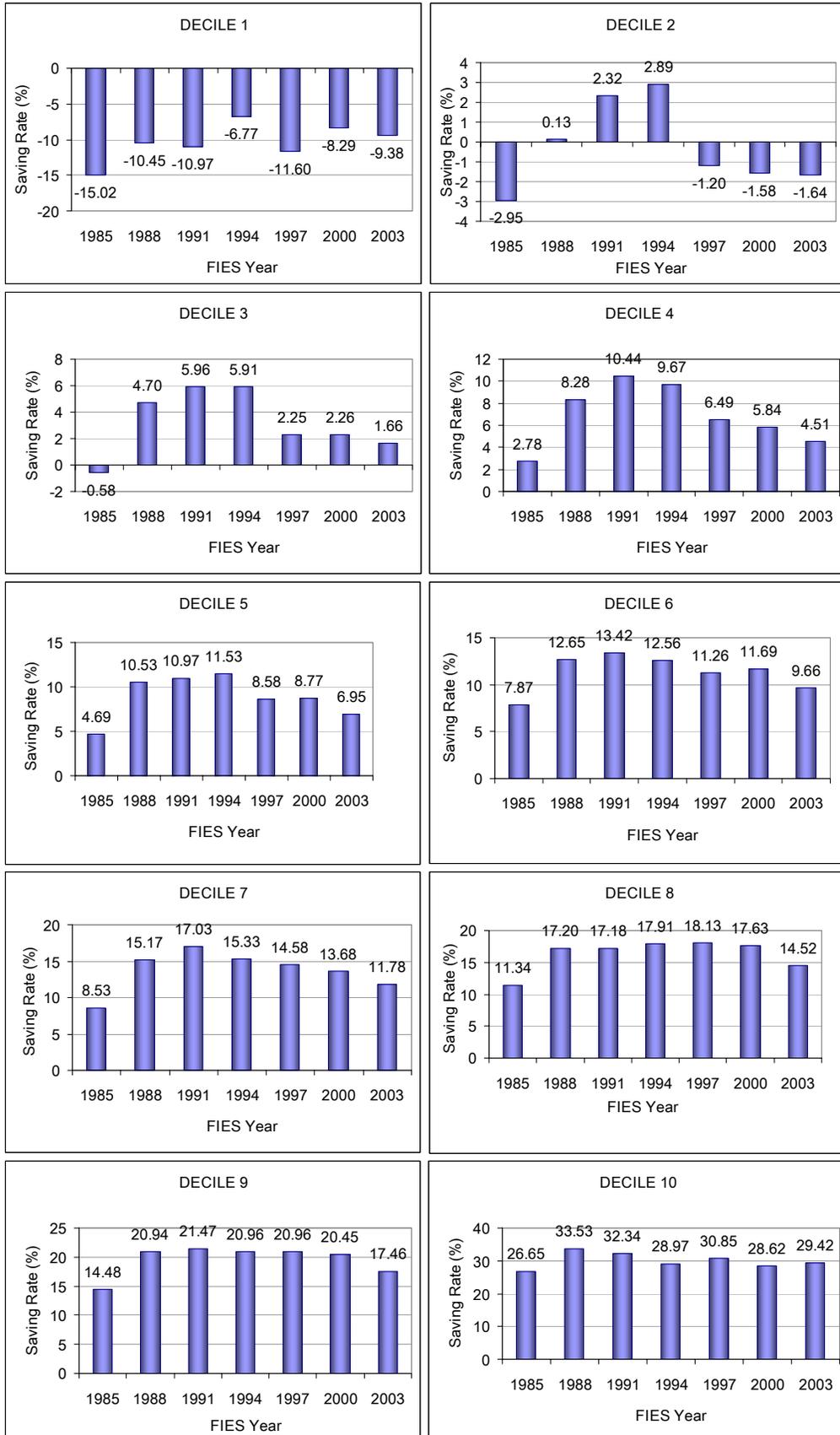


Table 4. Estimated Household Saving, by FIES Year

FIES YEAR	Household Saving (in pesos at 1997 prices*)				Number of Households
	Mean	Standard Deviation	Median	Total	
1985	14,544	89,489	4,168	143,224,127,398	9,847,339
1988	23,614	98,223	7,772	248,746,008,099	10,533,927
1991	25,023	204,997	9,102	299,662,370,901	11,975,441
1994	23,300	83,859	9,086	297,173,352,834	12,754,463
1997	28,397	131,245	7,698	403,026,019,444	14,192,462
2000	31,492	148,609	8,269	480,871,484,954	15,269,655
2003	29,579	239,721	7,007	487,469,252,987	16,480,393

*deflated using CPI(1997=100)

Source: Family Income and Expenditure Survey data

Table 5.1 Mean Household Savings by National Per Capita Income Decile, by FIES Year
(in pesos at 1997 prices*)

FIES Year	National Per Capita Income Decile										Overall
	1	2	3	4	5	6	7	8	9	10	
1985	-4862	-1113	-68	2042	3800	7071	8683	13854	23063	92980	14544
1988	-3811	274	3200	6192	9166	12318	17813	24478	38992	127519	23614
1991	-3987	1355	3864	7729	9309	12974	20015	25434	42176	131377	25023
1994	-2614	1804	4041	7426	10411	13258	19081	27497	42346	109746	23299
1997	-4811	-546	1701	5376	8276	13210	20740	32900	50674	156474	28397
2000	-4252	-921	1960	5804	10239	16309	22946	36782	58235	167823	31492
2003	-5129	-965	1722	4856	8759	14318	21166	32543	51539	167645	29579

*adjusted using Asia Pacific Policy Center Cost of Living Index (reference=NCR)

Source: Family Income Expenditure Survey data

Table 5.2 Median Household Savings by National Per Capita Income Decile, by FIES Year
(in pesos at 1997 prices*)

FIES Year	National Per Capita Income Decile										Overall
	1	2	3	4	5	6	7	8	9	10	
1985	-1724	511	1293	2252	3783	5968	6809	10512	16702	43210	4168
1988	-1198	1130	2979	4472	6858	9414	13501	19228	31040	69960	7772
1991	-1202	2448	3552	6554	8244	10995	16881	21804	32089	67686	9102
1994	-987	2186	3723	6095	8546	11530	14646	21859	34476	67681	9085
1997	-2930	201	1925	4126	6371	10138	15185	24347	39261	86825	7698
2000	-2997	-359	1877	4165	7175	10947	16553	26939	45108	100314	8269
2003	-3737	-645	948	2917	5847	9603	15115	23028	38200	83645	7007

*adjusted using Asia Pacific Policy Center Cost of Living Index (reference=NCR)

Source: Family Income Expenditure Survey data

2.a) Saving Rate

Table 6 shows the regional saving rates in 2003. It is noted that Cagayan Valley had the highest household saving rate, while Western Visayas got the lowest rate. Following Cagayan Valley were Central Mindanao and Southern Mindanao. At the other extreme, Bicol Region, Central Luzon and Southern Tagalog had slightly higher rates than Western Visayas.

The three best performing regions in 2003 were at least about 2.7 percentage points above the national saving rate. On the other hand, Central Luzon, Bico Region, and Western Visayas, which had the lowest saving rates, had saving rates at least 2.65 percentage points lower than the country's saving rate. The saving rates of five regions were below the national rate, while the remaining eight regions performed better than the average rate. Figure 3 illustrates the distribution of regional saving rates.

Annex 1 compares regional household saving rates for different FIES years and for different income deciles. Based on the data in Annex 1, Bicol Region and Western Visayas apparently consistently had saving rates among the lowest in the country. The regions of Eastern Visayas, Western Mindanao, Northern Mindanao (Regions 8, 9, and 10) and Cordillera had among the highest saving rates.

The year 1985, when the Philippine economy went through a depression, had low regional saving rates. The highest saving rate through the FIES years did not consistently go through any region.

2.b) Household Saving

The regional household savings at 1997 prices were estimated from 1985 to 2003 and the estimates of the mean and median savings are presented in Tables 9.1 and 9.2, respectively. Based on the data shown in these tables, the National Capital Region consistently has the highest average household savings. In 2003, the median savings per household was Php 16,386. The regions of Bicol and Western Visayas posted the lowest median saving per household of Php 1,077 and Php 1,295 respectively, in the same year. Interestingly, the median household saving in Western Visayas in 1997 was negative PhP 257, which may suggest a highly unequal distribution of saving in Region 6.

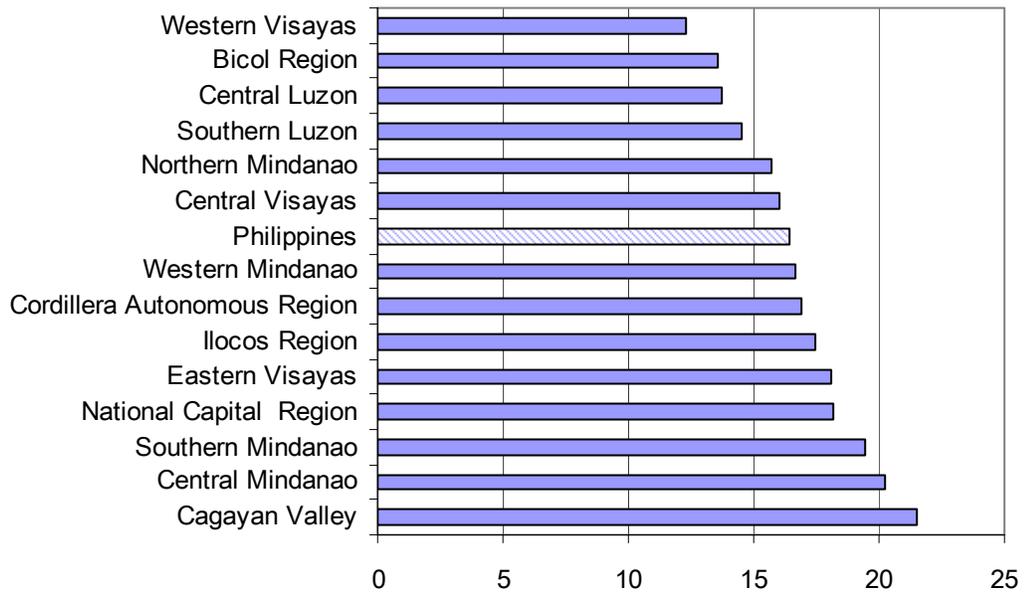
Table 6. Regional Saving Rates, 2003

Region	2003 Saving Rate (in per cent)
1 Ilocos Region	17.4
2 Cagayan Valley	21.5*
3 Central Luzon	13.8
4 Southern Luzon	14.6
5 Bicol Region	13.6
6 Western Visayas	12.3**
7 Central Visayas	16.1
8 Eastern Visayas	18.1
9 Western Mindanao	16.7
10 Northern Mindanao	15.7
11 Southern Mindanao	19.4
12 Central Mindanao	20.3
13 NCR	18.2
14 CAR	16.9
All regions	16.4

*Maximum ** Minimum

Source: Family Income and Expenditure Survey data

Figure 3. Household Saving Rate in 2003 and by Region



Source: Family Income and Expenditure Survey data

Table 7. Regions with the Highest or Lowest Saving Rates, by FIES year

FIES Year	Highest Saving		Lowest Saving	
	Rate (in per cent)	Region	Rate (in per cent)	Region
1985	18.4	Northern Mindanao	5.6	Bicol
1988	25.4	Cagayan Valley	12.5	Bicol **
1991	25.7	Cordillera Autonomous	10.6	Western Visayas
1994	24.8	Eastern Visayas	9.7	Western Visayas
1997	22.9	Western Mindanao*	9.4	Western Visayas
2000	21.2	Eastern Visayas*	13.4	Bicol **
2003	21.5	Cagayan Valley	12.3	Western Visayas

* The saving rates of Cordillera Autonomous Region in 1997 and 2000 were close to the the highest rate.

**The saving rate of Western Visayas in 1988 and 2000 hardly differed from the lowest rate.

Source: Family Income and Expenditure Survey data

Table 8. Highest and Lowest Saving Rates, by region and FIES Year

Region	Highest Saving Rate (in per cent)	FIES Year	Lowest Saving Rate (in per cent)	FIES Year
1 Ilocos	20.8	2000	16.4	1985
2 Cagayan Valley	25.4	1988	18.2	2000
3 Central Luzon	20.8	2000	10.5	1985
4 Southern Tagalog	21.4	1997	11.8	1985
5 Bicol	14.8	1991	5.6	1985
6 Western Visayas	13.6	2000	9.4	1997
7 Central Visayas	21.6	1991	16.0	2000
8 Eastern Visayas	24.8	1994	10.6	1985
9 Western Mindanao	23.0	1988	14.8	1994
10 Northern Mindanao	20.6	2000	15.7	2003
11 Southern Mindanao	20.2	1991	14.1	1985
12 Central Mindanao	21.1	1994	7.6	1985
13 National Capital (NCR)	23.9	1988	15.3	1985
14 Cordillera Autonomous (CAR)	25.7	1991	12.7	1985
All Regions	20.2	1991	13.5	1985

Table 9.1 Mean Household Savings* by Region and FIES Year
(in pesos at 1997 prices)

REGION	1985	1988	1991	1994	1997	2000	2003
1 Ilocos Region	18,119	21,222	25,797	20,724	27,103	35,351	30,318
2 Cagayan Valley	17,086	24,772	20,964	24,376	23,142	25,067	35,738
3 Central Luzon	12,473	22,035	25,025	26,185	31,259	35,028	24,934
4 Southern Luzon	10,915	16,097	24,271	22,643	31,407	29,549	27,101
5 Bicol Region	3,948	10,828	12,221	13,044	12,913	15,708	19,301
6 Western Visayas	9,120	13,234	10,515	10,516	11,557	21,016	19,454
7 Central Visayas	15,509	20,750	21,982	19,246	21,614	22,913	27,272
8 Eastern Visayas	7,120	16,168	15,086	21,859	20,734	27,178	26,039
9 Western Mindanao	15,537	23,831	19,701	12,368	26,778	21,740	22,581
10 Northern Mindanao	21,472	29,497	20,702	24,901	30,088	32,853	26,104
11 Southern Mindanao	14,244	21,287	23,153	19,771	25,528	30,112	34,782
12 Central Mindanao	7,498	25,851	20,007	23,737	20,657	23,607	25,126
13 NCR	28,396	49,800	53,867	42,698	53,153	56,065	48,452
14 CAR	14,273	16,465	29,038	23,413	34,089	39,483	34,172
All Regions	14,544	23,614	25,023	23,299	28,397	31,492	29,579

*deflated using CPI (1997=100) and APPC cost of living of index

Source: Family Income and Expenditure Survey data

Table 9.2 Median Household Savings* by Region and FIES Year
(in pesos at 1997 prices)

REGION	1985	1988	1991	1994	1997	2000	2003
1 Ilocos Region	6,985	9,135	10,809	7,726	6,424	11,794	10,157
2 Cagayan Valley	9,686	10,612	9,601	10,187	6,897	6,622	8,726
3 Central Luzon	2,865	7,584	11,794	13,068	13,522	15,734	10,191
4 Southern Luzon	3,916	5,440	9,933	10,235	11,521	10,364	7,938
5 Bicol Region	1,659	3,151	4,834	4,456	2,044	2,510	1,077
6 Western Visayas	1,677	2,730	2,860	3,217	-257	2,088	1,295
7 Central Visayas	5,453	8,065	9,234	8,653	5,740	5,301	7,620
8 Eastern Visayas	3,165	7,009	7,362	8,832	6,474	6,421	5,443
9 Western Mindanao	4,905	9,538	8,553	5,550	6,315	4,706	3,489
10 Northern Mindanao	4,727	7,766	7,899	8,181	7,768	5,413	4,771
11 Southern Mindanao	3,955	9,918	9,056	8,683	7,913	5,660	4,861
12 Central Mindanao	2,950	13,485	10,869	9,995	6,555	6,481	6,282
13 NCR	8,795	17,975	18,019	18,270	16,034	21,709	16,836
14 CAR	5,695	8,197	12,506	10,312	9,543	12,398	8,795
All Regions	4,168	7,772	9,102	9,085	7,698	8,269	7,007

*deflated using CPI (1997=100) and APPC cost of living of index

Source: Family Income and Expenditure Survey data

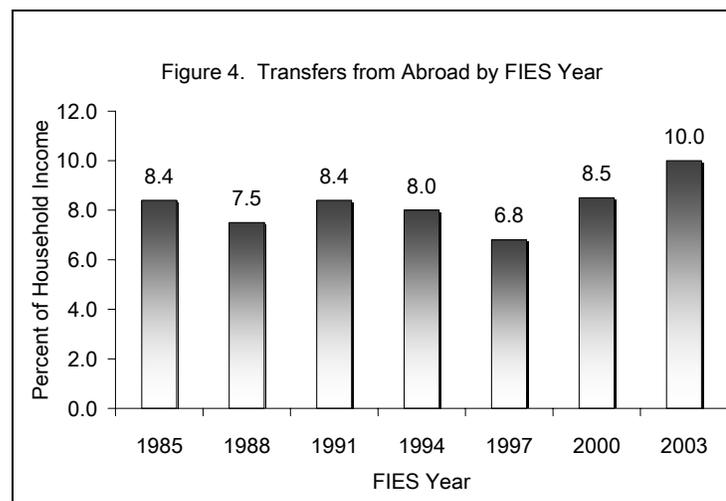
3. Transfers from Abroad

Income transfers from abroad as a percentage to household incomes had been rising, although these had fluctuated through the FIES years, as shown in Figure 4. The Ilocos Region consistently posted highest percentages during the years covered by this study, as shown in Table 10. Central Luzon and Western Visayas came next to Ilocos.

Table 10. Percentage of Income Transfers from Abroad, by FIES Year
(in percent of household income)

Region	FIES Year						
	1985	1988	1991	1994	1997	2000	2003
1 Ilocos	14.7	11.6	15.0	13.6	12.7	15.0	15.2
2 Cagayan Valley	6.2	6.0	6.2	6.4	5.3	6.9	9.3
3 Central Luzon	12.6	11.5	12.1	11.3	8.7	10.4	12.9
4 Southern Luzon	9.6	9.0	9.1	9.1	8.1	9.7	11.7
5 Bicol	7.7	3.3	5.0	4.0	3.9	4.8	8.1
6 Western Visayas	7.9	7.7	7.2	8.4	8.7	11.6	12.7
7 Central Visayas	4.6	5.4	6.9	5.0	5.4	7.6	10.6
8 Eastern Visayas	4.5	2.6	4.9	5.3	4.5	5.4	6.4
9 Western Mindanao	3.8	4.1	3.7	3.0	4.2	4.7	4.0
10 Northern Mindanao	2.0	1.2	2.4	3.2	3.0	3.5	6.4
11 Southern Mindanao	1.6	2.1	4.1	4.1	4.4	4.4	6.3
12 Central Mindanao	1.2	2.3	2.2	2.9	3.0	4.5	3.4
13 National Capital (NCR)	11.0	10.4	10.0	9.5	6.7	9.0	9.4
14 Cordillera Autonomous (CAR)	10.1	5.2	6.3	6.4	6.7	8.9	10.2
All regions	8.4	7.5	8.4	8.0	6.8	8.5	10.0

Source: Family Income and Expenditure Survey data



4. Deposits in Banks

Table 11 shows the proportion of households with bank deposits in 2003, which is the most recent FIES data covered in this study. Only 13% of households in 2003 had bank deposits. This is an indication that households' savings do not enter the formal financial system. NCR has the highest percentage of households (at 25%) with deposits in banks in 2003. Western Visayas had the next highest proportion with 22% of households having deposits in banks. It must be noted that Western Visayas usually had relatively low, if not the lowest, household saving rate. Cagayan Valley, which posted the highest saving rate in 2003, had one of the lowest percentage of households with deposits in banks.

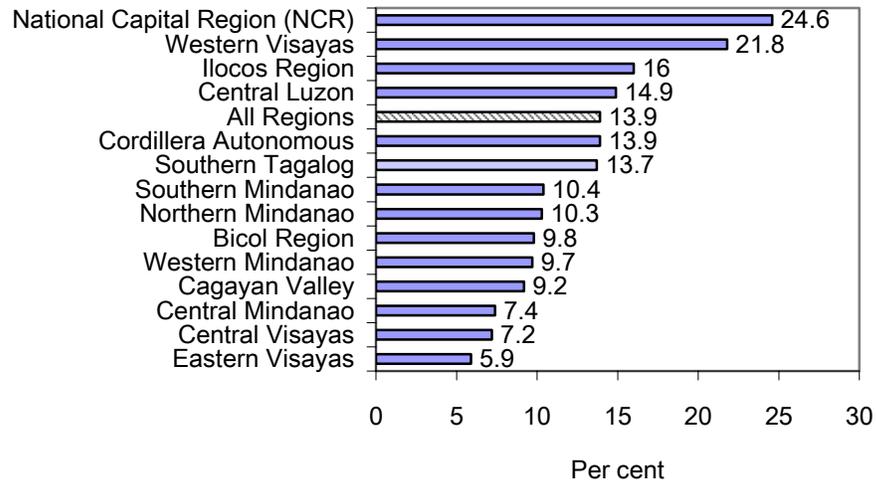
Figure 5 shows the distribution of regions with respect to their respective access and use of the banking system. For the entire country, nearly 14 per cent of households have bank deposits in 2003. Four other regions exceeded this performance. NCR and Western Visayas had at least 21 per cent of households having bank deposits, a performance which is significantly higher compared to the proportion for the entire country. On the other hand all of the regions in Mindanao had below national performance in so far as bank deposits are concerned. Eastern Visayas and Cagayan Valley, which high household saving rates as Table 6 shows, have low proportion of households with bank deposits.

Table 11. Percentage of Households with Bank Deposits, by
Region: 2003

	Region	Percent of Households
1	Ilocos Region	16.0
2	Cagayan Valley	9.2
3	Central Luzon	14.9
4	Southern Luzon	13.7
5	Bicol Region	9.8
6	Western Visayas	21.8
7	Central Visayas	7.2
8	Eastern Visayas	5.9
9	Western Mindanao	9.7
10	Northern Mindanao	10.3
11	Southern Mindanao	10.4
12	Central Mindanao	7.4
13	National Capital (NCR)	24.6
14	Cordillera Autonomous (CAR)	13.9
	All regions	13.9

Source: Family Income and Expenditure Survey data

Figure 5. Proportion of Households with Bank Deposits in 2003 and by Region



Source: Family Income and Expenditure Survey data

D. Life Cycle Profiles

The FIES data collected by the National Statistics Office (NSO) is a pooled data of households where a sample of predetermined number of households is collected every three years. The FIES series does not collect genuine panel data of household, that is, following the same household through time. The lack of panel data creates a problem in the analysis of household saving since saving is a dynamic phenomenon. To prevent this problem, the researchers made use of the synthetic cohort techniques pioneered by Browning, Deaton and Irish (1985) and adopted by Attanasio and Szekely (2001) in their analysis of household saving in East Asia and Latin America.

The basic idea of the synthetic cohort analysis is to follow the average behavior of group of households, rather than the individual household. The group membership is assumed to be fixed over time. This strategy allows us to study the dynamic behavior of the average household saving rates through time. In the study of the aggregate household saving, the synthetic cohort analysis is use, by grouping the different households, according to the age group of the household head, from different FIES years (1985 to 2003) and the average behavior of these groups are assumed representative of cohort behaviors through time. This type of analysis is, however, not immune to problems as pointed out by Attanasio and Szekely (2001), particularly the endogeneity of family formation and dissolution, differential mortality and migration rates across the different socio-economic groups.

Table 12 shows the national saving rate by age group. It is noted that those aged 85 and above are the ones with the higher saving rates. The regions with the highest saving rates in these age groups are Ilocos Region, Western Visayas, and Southern Luzon. Those aged 70 to 74 follow with a nationwide saving rate of 24.6%. The region having the highest saving rate for this age group is NCR. The next age groups with saving rate 20% or more are those within 50 to 64. The regions with the highest saving rates for these age groups are Southern Mindanao, NCR, and Northern Mindanao. In younger age groups, the regions with highest saving rates are Eastern Visayas, Ilocos Region, CAR, and NCR.

Table 12. Household Saving Rate, by Age Groups: FIES Years 1985-2003

Age Group	Average Saving Rate		Highest Regional
	for All Regions	Saving Rate	Region with Highest Saving Rate
15-19	11.1	30.1	Eastern Visayas
20-24	14.5	20.8	Ilocos Region
25-29	14.0	18.3	Cordillera Autonomous (CAR)
30-34	15.5	19.6	National Capital (NCR)
35-39	14.9	19.2	Cordillera Autonomous (CAR)
40-44	15.7	19.4	Eastern Visayas
45-49	17.4	20.7	Cagayan Valley
50-54	20.3	32.8	Southern Mindanao
55-59	21.8	26.0	National Capital (NCR)
60-64	22.0	32.2	Northern Mindanao
65-69	18.0	26.8	Cordillera Autonomous (CAR)
70-74	24.6	32.2	National Capital (NCR)
75-79	18.9	27.5	Central Mindanao
80-84	19.0	28.9	Western Mindanao
85-89	21.3	30.2	Ilocos Region
90-94	22.2	32.3	Western Visayas
95-99	28.7	37.2	Southern Luzon

Highest saving rate = 28.7 Standard deviation = 4.4

Lowest saving rate = 11.1% Coefficient of variation =23.5

Source: Family Income and Expenditure Survey data

The life-cycle model was validated by the FIES data as shown in Figure 6, except for the age group 70 years and above, that failed to exhibit the expected dissaving. This information in this Figure is derived from the data for the FIES years 1997 to 2003. It should be highlighted that the saving rate peaked at the age group 50 to 64 years, which is relatively late compared to Thailand and Taiwan. In both these countries, saving starts its peak at 40 to 44 years. The 2000 Census of Population and Housing revealed that seventy two per cent (72 per cent) of the Philippine population is aged 34 years and below, while only 8 per cent belonged to the age group, 50 to 64 years. Thus, the household saving rate was substantial at least for the years covered by this analysis.

The upward blip of saving rate for age group 70 years and above appears to hold using annual data as shown in Figure 7. In 1997, the life-cycle pattern of saving peaked at age group 55 to 59 years. After declining to 22.07 per cent, the 1997 saving rate sent up slightly back to 22.81. The other deviation of the 1997 data was that the age groups 15 to 19 and 20 to 24 years saved more compared to the older age groups. Except for this, the annual data for 2000 and 2003 had younger age cohorts saving less and older age groups having higher saving rates.

Annex 2 provides the table and graphs showing the saving rate of the age groups by region.

E. Concluding Remarks

As expected, there are differences in saving profiles of households across regions and across income deciles. This paper has provided the empirical evidence for this. Results indicate that saving rate and levels of saving of households are decreasing since 1988, with saving rate reaching the lowest level of 16.4% in 2003. This decreasing trend is reflected across all deciles except for the highest income decile whose saving rate increased in 2003 from 2000. The top 10% saving rate is 1.7 times that of the second 10% and is more than twice that of the other income deciles. The bottom 20% is dissaving.

Region 2 has the highest saving rate while Region 6, the lowest. The next two highest saving rates are for Regions 12 and 11. On the other hand, the other bottom regions are Regions 5 and 3 with Region 4 not far behind.

Figure 6. Household Saving Rate by Age Group of Head of Household

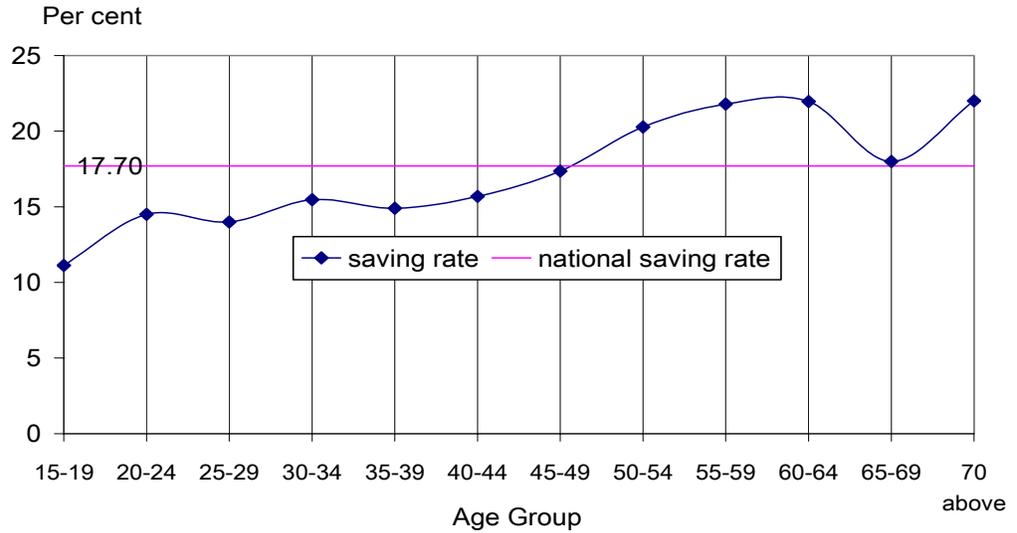
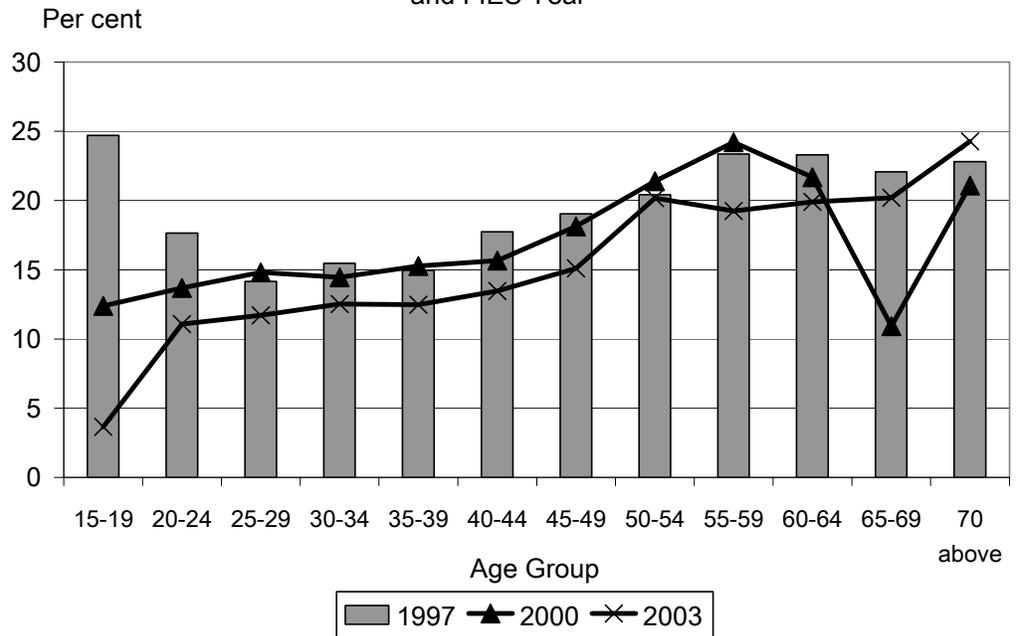


Figure 7. Household Saving Rate by Age Group of the Head of Household and FIES Year



Furthermore, the regions of Cagayan Valley, Southern and Central Mindanao had saving rates significantly higher than the national saving rate. On the other hand,

the households in Central Luzon, Bicol region, and Western Visayas had tended to save at a rate lower than the national saving rate.

The estimated regional household savings at 1997 prices from 1997 to 2003 showed that the national capital region (NCR) had the highest median saving per household equal to Php 18,065. Western Visayas posted the lowest median savings per household of P992.

Income transfers from abroad had been rising, with the Ilocos Region consistently posting the highest proportion of transfers to household income in most of the FIES years covered by this study. Central Luzon and Western Visayas had the next highest proportion of income transfers in the same period.

Only 13 per cent of households in 2003 had bank deposits. This is an indication that households' savings do not enter the formal financial system. NCR has the highest percentage (25%) of households with deposits in banks in 2003. Region 6 which has the lowest saving rate has the next highest percentage of households with deposits in banks (22%). On the other hand, Region 2 which has the highest saving rate has one of the lowest percentages of households with deposits in banks.

The life-cycle model is validated by the data except for the age group 70 years and above who do not exhibit the expected dissaving. Peak of saving is the age group 50 to 64 years, which is relatively late compared to Thailand and Taiwan. The 2000 Census of Population and Housing revealed that the bulk of the Philippine population (72 per cent) is aged 34 years and below while only 8 per cent are aged 50 to 64 years. Thus, the savings will not be substantial.

III. Determinants of Household Saving in the Philippines (1988 to 2003)

The saving rate is one of the most studied economic variables. It is important in understanding a wide range of economic phenomena. In the absence of efficient credit and insurance markets, household saving is a crucial determinant of welfare in developing countries (Attanasio and Szekely; 2001). How much society saves today for tomorrow's consumption has important implications for economic growth, consumption levels and the welfare of the elderly. So why exactly do households save? In his book, "The General Theory of Employment, Interest and Money," John Maynard Keynes provided eight motives as to why a household would save:

1. To build up a reserve against unforeseen contingencies (the precautionary motive);
2. To provide for an anticipated future relationship between income and the needs of the individual (the life-cycle motive);
3. To enjoy interest and appreciation (the inter-temporal substitution motive);
4. To enjoy a gradually increasing expenditure (the improvement motive);

5. To enjoy the sense of independence and the power to do things, though without a clear idea or definite intention of specific action (the independence motive);
6. To secure a masse de maneuver to carry out speculative or business projects (the enterprise motive);
7. To bequeath a fortune (the bequest motive); and,
8. To satisfy pure miserliness, i.e., unreasonable but insistent inhibitions against acts of expenditure as such (the avarice motive).

In addition to the eight motives above, Browning and Lusardi (1996) provided a ninth reason to save: “To accumulate deposits to buy houses, cars and other durables” (the down payment motive).

Corresponding to these reasons for saving, Keynes also provided a list of motives for consumption: enjoyment, shortsightedness, generosity, miscalculation, ostentation, and extravagance.

There are a lot of reasons why a household might save and many reasons why it may not. Moreover, an individual might save for different reasons at different stages of his or her life. It is therefore unreasonable to expect a single theory to be able to capture the facts of saving behavior.

The standard theoretical model that explains much of household saving behavior is the so-called inter-temporal utility optimizing agent model (commonly known as the life-cycle model). In this model, the household chooses its current consumption and saving, and an asset portfolio, so as to smooth its utility over time. There are several representations of this standard theory and the one provided here follows that of Coleman (1998). In this model, the household solves the following problem:

$$\begin{aligned}
 & \text{Max}_{C_t, A_t} E_t [U(C_t, C_{t+1}, \dots, C_T; B) | Z_t, Z_{t+1}, \dots, Z_T] \\
 & \text{s. t.} \quad C_{t+s} + A_{t+s+1} = Y_{t+s} + (1 + r_{t+s})A_{t+s}
 \end{aligned} \tag{1}$$

where C_{t+s} is the consumption at time $(t + s)$;

Y_{t+s} is the income at time $(t + s)$;

A_{t+s} is the asset held at the beginning of the period $(t + s)$;

Z_{t+s} are variables affecting utility of consumption such as household size;

B is a bequest left to younger generation, $B \geq 0$;

r_{t+s} is the interest rate at time $(t + s)$;

U is the utility function; and,

E_t is the expectation operator taken at time t.

The utility function U is assumed to be inter-temporally additive,

$$U[C_t, C_{t+1}, \dots, C_T; B] | Z_t, Z_{t+1}, \dots, Z_T = \sum_{s=0}^T \beta^s v(C_{t+s}) \quad (2).$$

This particular assumption means that consumption is enjoyed when it takes place and is independent of consumption at other times. The discount rate β indicates the patience of the consumer and is assumed to be less than 1 indicating that households prefer a marginal peso spent now than a marginal peso spent later.

The utility function $v(C_t, Z_t)$ is assumed to be quadratic in which households are risk-neutral. The model is known as the certainty equivalence model (Hall; 1978). If we let, $v(C_t, Z_t) = v(C_t/\alpha(Z_t))$, where $\alpha(Z_t)$ is an equivalence scale for the demographics characteristics of the household, the solution to the maximization problem above equates marginal discounted marginal utility across time:

$$\frac{\partial v(C_t/\alpha(Z_t))}{\partial C_t} = E_t \beta(1+r) \frac{\partial v(C_{t+1}/\alpha(Z_{t+1}))}{\partial C_{t+1}} \quad (3)$$

The equation above implies that optimal consumption depends solely on the person's level of impatience and lifetime resource, the marginal propensity to consume from current income is the same as the marginal propensity to consume from expected future income (for instance, young people expecting higher income later in life will borrow against this income). In each period, the household plans to equate discounted consumption over time and in making that decision, what is important is the household's lifetime income and not current income. Moreover, when $\alpha(Z)$ varies over the lifecycle, consumption varies accordingly--rising when there are children and falling as children becomes independent.

There are several shortcomings of the model above. For one, the elderly do not seem to dis-save nearly as much as the model predicts. In fact, empirical evidence suggests that the elderly do save. Researches suggest that rising longevity plays an important role in determining national savings. Lee, Mason and Miller (1998, 2000) and Bloom, Canning and Graham (2002) argue that elderly do not dis-save that much as what the lifecycle model predicts, primarily because of the need to finance a longer period of retirement (the precautionary motive). These observations have been documented using household data from East Asia. It is

therefore important that empirical models of aggregate saving include longevity as determinant. Moreover, there is evidence pointing that liquidity constraints matter. For example young people do not borrow against future income because they are concerned that they may not earn what they expect later in life (Coleman, 1998). Also, there is an important issue of the bequest motive for saving and accumulating wealth. It is also important to understand why bequests are made since empirical evidence suggests that a large portion of accumulated capital stock results from bequests.

Despite the shortcomings of the life-cycle model of saving behavior, it is still useful in providing a picture as to why people save. It seems that many individuals, especially the better educated, tend to smooth their consumption over their lifetime. Moreover, people do partly save for retirement. However, augmentation of the model to capture some of its shortcomings is needed and might be useful from the point of view of policy.

A. *Econometric Models for Saving Rate*

This section discusses the theoretical framework of the econometric model for saving rate. The set of possible explanatory variables are identified, based primarily on the life cycle model, and augmented with other determinants of saving rate as suggested by the available literature on saving.

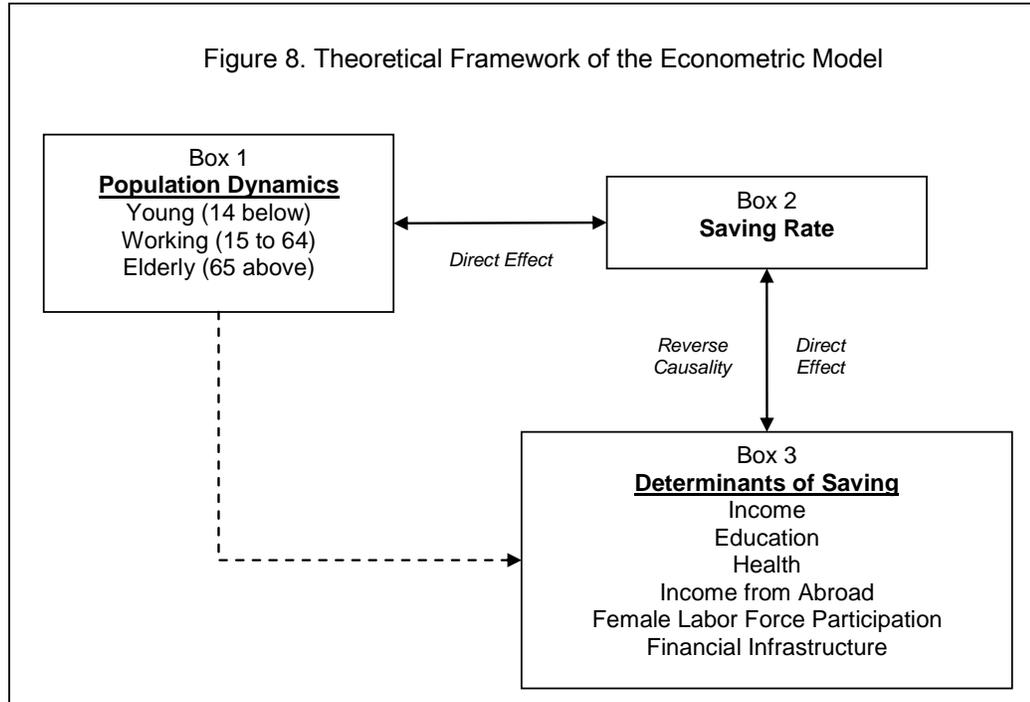
The framework of the econometric model is given in Figure 8. The econometric model estimates the direct effect of the population dynamics, particularly the impact of the young population (0 to 14 years) and the elderly population, on the household saving rate (the impact of the first box on the second box). At the same time, the model also estimates the effects of other determinants of saving rate (the impact of box 3 on the second box). The reverse causality is represented by the arrow coming from growth (box 2) going to the population dynamics (box 1) and the other determinants of growth, notably education (lower box). This reverse causality creates a problem in the estimation of the regression model, resulting to biased and inconsistent estimates. This problem is remedied through the introduction of instrumental variables into the regression equation.

The basic econometric model for aggregate saving is the two-way error component fixed effects model where,

$$y_{it} = \alpha_i + \lambda_t + \underline{x}_{it}' \underline{\beta} + \varepsilon_{it} \quad i = 1,2,\dots,14 \text{ and } t = 1,2,\dots,6 \quad (4)$$

In here, y_{it} is the saving rate of Region i in time t , the vector \underline{x} represents the determinants of saving discussed above, $\underline{\beta}$ is the vector of coefficients, α_i represents the regional and unobservable fixed effect, λ_t denotes the unobservable

time effect and ε_{it} is the random error term assumed to be normally distributed with mean 0 and constant variance σ_ε^2 . The coefficient $\underline{\beta}$ is estimated using the Generalized Least Squares (GLS).



1. Variable of Interest

The variable of interest in the econometric model of saving rate is the aggregate regional household saving rate from 1988 to 2003. The variable is defined as,

$$S_{it} = \frac{I_{it} - C_{it}}{I_{it}} \times 100\% \quad i = 1, 2, \dots, 14 \quad t = 1, 2, \dots, 6 \quad (5)$$

where S_{it} is the aggregate household saving rate of the i^{th} region at time t ; I_{it} is the total household income of the i^{th} region at time t ; and C_{it} is the aggregate expenditure of the i^{th} region at time t .

The data source for the aggregate regional household saving rate is the Family Income and Expenditure Survey (FIES) done in 1988, 1991, 1994, 1997, 2000 and 2003 (time periods). The data set is a panel data with 6 time periods corresponding to the FIES years and 14 cross-sectional units equivalent to the 14 Regions as defined in 1988. Although there are currently 17 Regions, the

geographical boundaries of the regions were kept constant throughout the period 1988 to 2003. The 14 Regions as defined in 1988 are shown in Table 2.

A weakness of using FIES data to study saving patterns is that specific questions on households' attitudes on reasons for saving as well as actual savings are not available. Furthermore, as discussed in the previous chapter, household savings is simply the difference between total family income and total family expenditure as defined in the FIES. The advantages of FIES data, however, are that income and expenditure from different sources are captured. Other sources of income include pensions as well as gifts/support/ transfers from domestic sources and abroad are captured. Also, triennial data are available from 1985 to 2003 with the sampling designed to provide reliable estimates on the regional level. Thus, patterns through time may be studied.

2. Determinants of Aggregate Saving

In the construction of an econometric model for the saving rate, defined above, the following variables are identified as possible determinants.

2.a) Age Structure/Demographics

The average saving rate can be written as the sum of the savings rate of the different age groups in a population weighted by their income shares. That is, the average savings rate is,

$$\begin{aligned}\bar{s} &= \sum_{i=0}^T s_i \frac{Y_i}{Y} \\ &= \sum_{i=0}^T s_i \frac{P_i}{P} \frac{y_i}{\bar{y}}\end{aligned}\tag{6}$$

This decomposition suggests that the age structure of the population matters. In theory (in absence of a bequest motive), the dis-saving of the old should offset the saving of the young so that in a stable population there will be no aggregate saving. However, As argued by Bloom, Canning and Graham (2002), if the age structure of the population is unbalanced, which happens during a demographic transition, the saving behavior of the various cohorts does not cancel out and aggregate saving (or dis-saving) is expected.

The variables to be used to represent age structure (at the beginning of the period) are the youth share of the population and the elderly share of the population and are defined as follows:

1. Percentage of Young Dependents (aged 0 to 14 years), over the total population, at the beginning of the period; and,

2. Percentage of the Elderly (aged 65 and above), over the total population, at the beginning of the period.

2.b) Level of Education

Empirical evidence suggests that schooling transition towards higher levels is one reason for the diverging saving patterns between Latin American countries (Mexico and Peru) and East Asian countries (Thailand and Taiwan). More educated individuals usually have higher incomes, and thus, higher saving capacity and this may be the potential factor behind differences in domestic saving.

3. The percentage of household heads having at least high school diploma would be used to capture the effects of education to aggregate saving.

2.c) Female Labor Force Participation

Fertility and female labor participation are usually jointly determined, and they have a double effect on saving behavior--lower fertility rates imply fewer children in the average household, while higher participation implies more household members in the work force and thus, more income.

4. To capture this effect, the percentage of women (15 years and above) in the labor force would be used.

2.d) Longevity

In addition, longevity raises the saving rates of every age group. This suggests that an addition of some function of life expectancy to the relationship is necessary.

5. Life Expectancy (at birth) in years (at the start of the panel period) would, therefore, be added in the econometric model as a possible determinant of aggregate saving.

2.e) Growth Tilting

Economic growth increases the relative income of the young and it not only increases the average savings but also increases the effect of having a large young

cohort. This leads to a phenomenon known as “growth tilting”, making the impact of a large young cohort on saving larger in a fast-growing economy.

6. To capture the effect of this determinant, annual average growth rate of per capita Gross Domestic Product (in 1985 prices) over the previous 5 years (in percent) of the period (example for 1988 panel, the average growth rate of GDP from 1983 to 1987 was used) will be used.

2.f) Inflation

Periods of high inflation tend to be associated with highly negative real rate of interest and may deter opportunities for saving.

7. Therefore, annual regional inflation rate (in percent) will be added in the econometric model as determinant of aggregate saving.

2.g) Presence of the Financial Infrastructure

Presence of financial infrastructure in the regions, such as number of banks, investment houses and other financial institutions can promote saving among households. However, problems encountered by these financial institutions such as closed banks can create a negative perception among the households and may be a disincentive for saving. In the econometric models, the researchers use appropriate proxies to measure the presence of financial infrastructure in the regions.

8. The presence of financial infrastructure in the regions is measured using the average number of branches of banks in the region (using the average of three years: the FIES year, a year before and after the FIES year); and

9. The number of closed banks during the same three years was also included as a determinant of saving rate.

2.h) Initial Level of Income/ Initial Level of Income Growth

The magnitude of life-cycle savings may depend on the region’s income level (or initial income growth level) to capture the relationship of life-cycle saving with the level of regional development.

10. The natural logarithm of the initial regional per capita GDP (measured in 1985 prices) shall be used to capture this relationship.

2.i) Remittance (Income transfer from abroad)

The model is also interested in looking at the contribution of remittances to the saving of the households. The data source for income transfer is the FIES.

11. Percentage of income from abroad defined as aggregated household income (assistance) from abroad over total household income would be included in the model.

2.j) Institutional and Cultural Differences

The institutional and cultural differences across regions can be accounted for by allowing regional fixed effects in the estimation.

B. *Empirical Analysis of the Model*

The average regional household saving rate from 1988 to 2003 is 18.48 per cent as shown in Table 13. In 2003, the average household saving rate was even lower at 16.36 per cent. The household saving rate of the Philippines pale in comparison with its neighboring countries in East Asia such as Thailand and Taiwan where the household saving rates were recorded at 30 per cent for Thailand (in 1996) and 49 per cent in Taiwan (in 1996).

Table 13. Summary Statistics for the Variables in the Econometric Model

Variable	Mean	Maximum	Minimum	Std Dev.
Saving rate	18.48	25.72	9.4	3.46
Log of initial income	9.15	10.33	8.49	0.44
Education	36.37	62.14	22.82	9.05
Percentage of young dependents	39.20	45.43	32.06	3.24
Percentage of Elderly	4.54	6.61	2.2	1.17
Log of Life Expectancy	4.18	4.26	4.09	0.04
Female Labor Force Participation	49.46	64.86	34.94	5.92
Household Income from Abroad (in %)	7.00	15.16	1.21	3.45
Inflation Rate	7.81	16.43	0.7	3.45
Number of Banks	410	2651	65	526
Number of Closed Banks	3.34	3.83	0	19

Source: Family Income and Expenditure Survey data

To explain what drives household saving rate, an econometric model was built using panel data. The results of the two specifications using the Generalized Least Squares (GLS) are provided in Table 14 below.

In Model 1 (base model), the determinants include initial per capita GDP, level of education, the demographic variables, female labor force participation, longevity variable (life expectancy), and the proportion of income from abroad. The two

demographic variables have significant but opposite signs. On one hand, the percentage of young dependents has a negative and significant effect on saving rate which is consistent with the life cycle model and supports earlier studies that slowing population growth has been associated with high savings in East Asia (Harrigan, 1998).

On the other hand, the percentage of the elderly population has a significant but positive effect on saving rate. Under the life-cycle model, in the absence of bequest motive, the elderly population should be dis-saving. However, the data from the regional panel say otherwise. The result for the elderly population in the model runs in contrast with the result of the cross-country saving rate regression where it was found that “presence of large proportion of elderly people in the population depresses saving rate, with the effect of the old being particularly large” (Bloom, Canning and Graham; 2002). The income and education variables have both positive and significant effects on saving rate which are consistent with the earlier studies. The percentage of income from abroad is also positive and significant driver of saving rate, while the female labor force participation and measure of longevity are not significant.

Table 14. Determinants of Regional Household Saving Rate¹
(Panel Data; Fixed Effects Model)

Variable	MODEL 1		MODEL 2	
	Coefficient	s.e. ^α	Coefficient	s.e. ^α
Log of initial income	5.3985**	2.6732	6.9796*	2.8851
Education	0.2734*	0.153	0.2728	0.1643
Proportion of young dependents	-0.3645**	0.1743	-0.3747*	0.2078
Proportion of elderly	2.37989***	0.5592	2.1166***	0.6841
Female labor force participation	-0.0373	0.0933	-	-
Log of life expectancy	22.5994	22.8262	-	-
Percentage of Income from abroad	0.5559***	0.2306	0.4405**	0.1941
Growth Rate per capita GDP	-	-	-	-
Inflation Rate	-	-	-0.1977	0.1957
Number of Closed Banks	-	-	-	-
Constant	-134.95	89.6475	-54.7563*	29.9182
N	84		84	
Adjusted R-squared	0.69		0.7	

¹ Dependent variable is aggregate regional household saving rate

*** significant at 1%; ** significant at 5%; * significant at 10%;

α: standard errors are White's heteroskedasticity consistent

Another variation of the model is given in Model 2 where the inflation rate is incorporated into the regression model and the two insignificant variables (female labor force participation and life expectancy) excluded from the model. The results show that inflation rate does not play a significant role in determining aggregate saving rate.

A potential problem in the regression specification is the potential reverse causation from the saving rate to the level of income. Growth studies have shown that saving rate is a key variable in determining the speed of economic growth and the steady state level of income. There is also potentially a feedback from saving to education, implying that higher saving may give rise to higher level of education. To solve the problem, we use an instrumental variable approach treating income and education as potentially endogenous. The instrumental variables used are initial geographical conditions (percentage of provinces in the region that are landlocked), percentage of households with access to electricity and measures of inequality.

Table 15 shows two specifications of the models using instrumental variable regression. In model 3, the number of closed banks is incorporated to include presence of financial infrastructure (other variants of the model which also included the number of bank branches in the region but was found to be insignificant).

Table 15. Determinants of Regional Household Saving Rate¹
(Panel Data; Fixed Effects Model, Instrumental Variable)

Variable	MODEL 3		MODEL 4	
	Coefficient	s.e. ^α	Coefficient	s.e. ^α
Log of initial income	6.9440**	2.711	6.9795**	2.8851
Education	0.2674*	0.1573	0.2703*	0.1508
Proportion of young dependents	-0.3322**	0.1626	-0.3406**	0.1395
Proportion of elderly	2.0694***	0.6106	2.0273***	0.5498
Female labor force participation	-	-	-	-
Log of life expectancy	-	-	-	-
Percentage of Income from abroad	0.4727***	0.1744	0.5054***	0.1565
Inflation Rate	-0.2076	0.2001	-0.2001	0.1952
Number of Closed Banks	0.0015	0.0842	-	-
Constant	-53.93**	22.99	-53.9899**	25.2887
N	84		84	
Adjusted R-squared	0.7		0.7	

¹ Dependent variable is aggregate regional household saving rate

*** significant at 1%; ** significant at 5%; * significant at 10%;

α: standard errors are White's heteroskedasticity consistent

The results in models 3 and 4 are somewhat the same as the previous two models with level of income, education, percentage of young dependents, percentage of the elderly and percentage of income from abroad as being significant drivers of saving rate. The highlights of the econometric model (using model 4) are the following:

- A 100 pesos increase in the average per capita income results to an increase in the estimated mean saving rate by about 0.67 percentage point, all things being the same.
- A one-percentage point increase in the proportion of household heads with at least high school diploma increases the estimated mean saving rate by about 0.27 percentage point.
- A one-percentage point reduction in the proportion of young dependents results to an increase in the average saving rate by 0.34 percentage point, all things being the same.
- A one percentage point increase in the proportion of the elderly results to an estimated increase of 2.03 percentage points in the average saving rate.
- A one percentage point increase in income from abroad results to an increase in the estimated mean saving rate by about half-percentage point, *ceteris paribus*.
- Neither the rate of inflation (included in models 3 and 4) nor the number of banks (included in model 3) in the region plays a significant role in determining the aggregate saving rate.

C. Concluding Remarks

The results of the econometric model suggest that the country's population dynamics plays an important role in the aggregate household saving rate. A higher proportion of young dependents (ages 0 to 14 years) creates hindrance to the aggregate household saving, supporting the life-cycle hypothesis on saving. The Philippines with its rapid population growth over the years exhibited a big bulge in the lower portion of the age pyramid that resulted to a higher percentage of young dependents compared to the working population (ages 15 to 64). The swelling of the young dependency group also increases the demand for education and health which results to lower aggregate saving. This only suggests that the country pays a high price for its high population growth through lower saving rate and consequently, lower economic growth. Achieving a slower rate of population growth should be an explicit development objective of the country. Lower rates of childrearing will substantially increase the incentives for saving as experienced by East Asian countries like Singapore, South Korea, Taiwan and Thailand.

An interesting result from the econometric model is the fact that the older population (ages 65 and above) still saves, contrary to the expectation of the life-cycle model. This phenomenon has also been documented in studies by other Asian countries such as Taiwan and Thailand. Unfortunately, in the Philippines, as in other countries, there are cases where the elderly are being victimized by various forms of "investment scams". This suggests that efforts should be made to create awareness among the elderly regarding proper investment. The financial

institutions should provide financial instruments that will fit the needs of the elderly population.

Education is also vital to increasing aggregate household saving. Policy-wise, government has already provided free elementary and high school education in public schools. Efforts to lessen drop-outs and advocate for more students to continue and finish high school should be maintained.

Remittance is a major source of aggregate household saving as the econometric model shows. Policy-wise, efforts should be made to encourage both the migrants and recipients to save a portion of the remittances using the formal channel. Financial institutions should develop saving products that would target the needs of the lower market migrants.

IV. The Need for a Consumer Finance Survey in the Philippines

While the impact of saving at the macro level is well documented, the micro-aspect of saving or the saving behavior of households is not well understood. As noted by Börsch-Supan and Essig (2003), several studies have shown that actual saving behavior may deviate from the accepted economic models. It is recommended that household saving be understood better by looking not only at the economic aspect but at the psychological and sociological characteristics of households as well. Studies in the 1990s profiling saving behavior and identifying determinants of saving in the Philippines were done by Rodriguez and Meyer (1988); Bautista and Lamberte (1990); Badiola and Tolentino (1992); Chan and Tolentino (1992); Clar de Jesus and Tolentino (1992); and Magno and Tolentino (1992). The analysis of aggregate household saving discussed in this report provides profiles on the national and regional levels and for national per capita income deciles using data from 1985 to 2003 of the triennial Family Income and Expenditure Survey (FIES).

The highlights are the following:

- Household saving rate has been decreasing from 1988 to 2003 with the lowest in 2003 of 16.4 per cent saving rate.
- The declining trend of saving rate is likewise observed among household income deciles, except for the highest decile, which posted an increase of saving rate in 2000 and 2003.
- Only 13 per cent of households in 2003 had bank deposits, an indication that whatever savings the country's households generate do not enter the formal financial system.
- The national capital region (NCR) had the highest proportion (25 per cent) of its households with bank deposits in 2003. Western Visayas which had the lowest saving rate had the next highest proportion or 22 per cent. On the other

hand, despite the fact that it had the highest saving rate in the country in 2003, Cagayan Valley had the lowest proportion of its households using the banking system for their saving.

- The FIES data validates the life-cycle pattern of household saving, except for the age group 70 years and above. The saving of the latter failed to exhibit its expected dissaving. On the contrary, this age group increased their saving. The peak of household saving rates occurred in the case of the age group 50 to 64 years. This peak saving rate is late compared to Thailand and Taiwan. Given the above information and that on the demographic distribution of households, the level of household saving in the country may be shallow. The 2000 Census of Population and Housing revealed that the bulk of the Philippine population (72 per cent) is aged 34 years and below. Only 8% of the population is aged 50 to 64 years.

The econometric model on the determinants of aggregate household saving using regional data, discussed in this report showed that:

- A 100 peso increase in the average per capita income results to an increase in the estimated mean saving rate by about 0.67 percentage point, all things being the same;
- A one-percentage point increase in the proportion of household heads with at least high school diploma, the estimated mean saving rate increases by about 0.27 percentage point;
- A one-percentage point reduction in the proportion of young dependents result to an increase in the average saving rate by 0.34 percentage point, all things being the same;
- A one percentage point increase in the proportion of the elderly results to an estimated 2.03 percentage points increase in the average saving rate;
- A one percentage point increase in income from abroad results to an increase in the estimated mean saving rate by about half-percentage point, *ceteris paribus*; and,
- Neither the rate of inflation nor the number of banks in the region plays a significant role in determining the aggregate saving rate.

All the studies, however, still do not cover the suggested psychological and sociological behaviors suggested for consideration. For example, the following should be included for a more comprehensive and in-depth profiling and econometric modeling:

- households' choice of saving and financial instruments;
- households' choice of financial institutions;

- degree of usage, acceptability, and confidence of use of e-banking technology and other advanced technology among households; and
- use of credit cards against cash in households' transactions.

A limited number of studies have recently discussed the reasons for saving and where these savings are placed. However, these studies have limited coverage. For example, the study by Karlan et.al.(2004) used a random sample of 1,285 persons in major market places in cities of Butuan (Northern Mindanao), Baguio (Cordillera Autonomous Region), and Bacolod, Negros Occidental (Western Visayas), as reported by Gardiol, Helms, and Deshpande (2005) in their assessment of country savings in the Philippines.

It is vital that a *survey* with a nationwide coverage be conducted to collect data that provide more in-depth and comprehensive picture of saving behavior of households in the Philippines. A review of existing surveys of the government's statistical agencies resulted in the conclusion that the Family Income and Expenditure Survey (FIES) of the National Statistics Office is the best source of data on saving. However, it still does not provide the needed information for a more comprehensive analysis of saving behavior of households. Current practices from other countries, notably the United States and Germany, reveal that households'/consumers' saving behavior are studied using survey panel data outside the countries' Income and Expenditure Surveys. For example, the U.S. has the Survey of Consumer Finances conducted every 3 years while Germany has the SAVE panel of households conducted every two years with the first survey done in 2001. Studies using panel data have the advantage of looking at the saving behavior of the same set of households through time. This is important when one wants to study how the household's saving reacts to some exogenous shocks. Attachment 3 describes the U.S. Survey of Consumer Finances (SCF) and Germany's SAVE Survey and presents a comparison of the Philippine 2003 FIES questionnaire with the SCF questionnaire.

It is, thus, argued that a regular survey on consumer finances following the questionnaire items of the SCF and/or the SAVE Survey be done in the Philippines. It should be designed to build a database of a panel of households. Since FIES already provides data that can be utilized to build such panel data, it is suggested that this survey on consumer finance be linked with the FIES master sample. Thus, it is projected that the survey shall also be triennial following the FIES years.

V. Conclusion and Policy Recommendations

Triennial FIES data from 1988 to 2003 indicate that saving rate and levels of saving of households have consistently been decreasing with saving rate reaching the lowest level of 16% in 2003. This decreasing trend is reflected across regions and across per capita income deciles except for the highest income decile whose saving rate increased in 2003 from 2000. In 1997, household saving rate was

19%. This is lower than the recorded household saving rate of Thailand of 30% and Taiwan of 49% in 1996 (Attanasio and Szekely, 2001).

The results of the econometric model suggest that the country's population dynamics plays an important role in the aggregate household saving rate. A higher proportion of young dependents (ages 0 to 14 years) creates hindrance to the aggregate household saving, supporting the life-cycle hypothesis on saving. The Philippines with its rapid population growth over the years exhibited a big bulge in the lower portion of the age pyramid that resulted to a higher percentage of young dependents compared to the working population (ages 15 to 64). The swelling of the young dependency group also increases the demand for education and health which results to lower aggregate saving. This only suggests that the country pays a high price for its high population growth through lower saving rate and consequently, lower economic growth. Achieving a slower rate of population growth should be an explicit development objective of the country. Lower rates of childrearing will substantially increase the incentives for saving as experienced by East Asian countries like Singapore, South Korea, Taiwan and Thailand.

As expected, some regions save more than others. The Bicol Region and Western Visayas have consistently posted lowest saving rates for the years of study. In particular, Cagayan Valley had the highest saving rate, while Region 6, the lowest in 2003. The next two highest saving rates are for Central Mindanao and Southern Mindanao. On the other hand, the other bottom regions are the Bicol Region and Central Luzon with Southern Tagalog not far behind.

Econometric modeling of aggregate regional household saving rate resulted in level of income, education, percentage of young dependents, percentage of the elderly and percentage of income from abroad as being significant drivers of saving rate. All these factors are positive drivers except for percentage of young dependents. Inflation rate and number of banks/ density of banks in the regions are not significant.

Statistical non-significance of number of banks – the only indicator available for financial infrastructure in the region – is consistent with the result that only 13 per cent of households in 2003 had bank deposits. This is an indication that households' savings do not enter the formal financial system. NCR has the highest percentage of households (25 per cent) with deposits in bank in 2003. Region 6 (Western Visayas) which has the lowest saving rate has the next highest percentage of households with deposits in bank (22 per cent). On the other hand, Region 2 (Cagayan Valley) which has the highest saving rate has one of the lowest percentages of households with deposits in bank (8 per cent).

Information on preferred financial services of households and where they want to place their respective savings are not available on a nationwide scale. A quick look of the possible picture is provided by those who gathered the information from a sample of persons in major market places in cities of: Butuan in Northern

Mindanao, Baguio in the Cordillera Autonomous Region, and Bacolod in Western Visayas.

They reported that 63.5 per cent of those who save keep their savings at home while 9.7 per cent deposit in rural banks, 9.4 per cent place savings in cooperatives, 6.7 per cent in self-help groups, 2.2 per cent in commercial banks, and 2.3 per cent others. Furthermore, 42.0 per cent of respondents save for emergencies; 34.0 per cent for children's education; 6.6 per cent for food and daily needs; 5.9 per cent for retirement, future family, marriage; 3.4 per cent to capital to start or expand business or buy land; 2.3 per cent for housing; and 5.8 per cent for other reasons.

FIES results as well as the results of Karlan, *et al.* suggest that services of banks in the different regions do not promote savings placement in banks. There is still a need for banks to offer more attractive incentives for households to deposit savings in banks.

The life-cycle model is validated by the data, except for the age group 65 years and above who does not exhibit the expected dissaving. This picture covers the FIES years 1997 to 2003. It should be highlighted that the peak of saving is the age group 50 to 64 years, which is relatively late compared to Thailand and Taiwan. In both these countries, saving starts its peak at 40 to 44 years. The 2000 Census of Population and Housing revealed that the bulk of the Philippine population (72%) is aged 34 years and below while only 8% are aged 50 to 64 years. Thus, the savings will not be substantial.

The percentage of the older population (ages 65 and above) is a significant determinant of saving. This is contrary to the expectation of the life-cycle model. This phenomenon has also been documented in other Asian countries such as Taiwan and Thailand. Unfortunately, in the Philippines as in other countries, there are cases where the elderly are being victimized by various forms of "investment scams". This suggests that efforts should be made to create awareness among the elderly regarding proper investment. The financial institutions can provide financial instruments that will fit the needs of the elderly population. It must be noted, though, that the elderly are not the only ones subject to investment scams. Thus, the other age groups, 30 and above especially, should also be provided with awareness campaigns and with financial instruments fitting their needs.

Education is also vital to increasing aggregate household saving. Policy-wise, government has already provided free elementary and high school education in public schools. Efforts to lessen drop-outs and advocate for more students to continue and finish high school should be maintained

Remittance is a major source of aggregate household saving as the econometric model shows. However, remittances can be also a disincentive for saving as these are withdrawn immediately to settle bills and as payment for consumer goods.

Policy-wise, efforts should be made to encourage both the migrants and recipients to save a portion of the remittances using the formal channel. Financial institutions should develop saving products that would target the needs of the lower market migrants.

Recommendations mentioned earlier do not include more specific issues including the suggested psychological and sociological behaviors. For example, the following should be included for a more comprehensive and in-depth profiling and econometric modeling: (i). households' choice of saving and financial instruments; (ii) households' choice of financial institutions; (iii) degree of usage, acceptability, and confidence of use of e-banking technology and other advanced technology among households; and, (iv) use of credit cards against cash in households' transactions. It is vital that a survey with a nationwide coverage be conducted to collect data that provide more in-depth and comprehensive picture of saving behavior of households in the Philippines. This discussion is presented previously in the chapter discussing need for a consumer finance survey in the Philippines. It is reiterated here that many more issues need to be answered with respect to household saving but data are not available on a nationwide scale similar to the scale of the FIES. Thus, it is indeed vital that FIES data be augmented with data through a consumer finance survey.

Annex 1: Definition of Income and Expenditure

Income in FIES 2003

Total Family Income (**TOTINC**) = Total Wages and Salaries from Agriculture activities (**WSAG**) + Total Wages and Salaries from non Agricultural activities (**WSNAG**) + Total Other Income (**OTHIN**).

OTHIN includes:

- Net share of crops
- Cash Receipts, gifts, support, etc. from Abroad
- Cash Receipts, gifts, support, etc. from domestic source
- Rentals received from non-agri lands, buildings, etc.
- Interest
- Pensions
- Dividends from investments
- Receipts from others sources not elsewhere classified
- Total value received as gifts
- Income from family sustenance activities
- Rental value of the house

Expenditure in FIES 2003

Total Family Expenditure (**TOTEX**) = Total Food Expenditure (**FOOD**) + Total Non-Food Expenditure (**NFOOD**)

NFOOD includes:

- Total Tobacco expenditure
- Total fuel, light and water expenditure
- Total Transport and Comm. expenditure
- Total Household operation expenditure
- Total Personal care and effects expenditure
- Total Clothing, Footwear and other wear in expenditure
- Total Educational fees expenditure
- Total Recreation expenditure
- Total Medical Care expenditure
- Total Non-durable furnishings expenditure
- Total Durable furniture and equipment expenditure
- Total Taxes
- Total house rental value
- Total House Maintenance and repairs expenditure
- Total Special Family occasion expenditure
- Total Gifts and contributions expenditure
- Total Other expenditure

Attachment 1

Table A.1. Saving Rate by Region, 1985-2003

FIES Year	Regions (based on the 1988 FIES classification)*														All Regions
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1985	16.4	18.2	10.5	11.8	5.6	10.1	18.4	10.6	18.2	18.4	14.1	7.6	15.3	12.7	13.5
1988	18.7	25.4	17.5	15.6	12.5	12.8	20.8	19	23	20.1	18.6	21.1	23.9	15.1	19.5
1991	20.6	21.4	18.8	20.5	14.8	10.6	21.6	17.5	21.6	17.1	20.2	19.6	23.5	25.7	20.2
1994	18.1	22.7	19.8	18.9	14.4	9.7	18.6	24.8	14.8	20.4	15.7	21.1	20.3	19.2	18.6
1997	18.8	21	20.7	21.4	13.1	9.4	18.4	21.7	22.9	20.5	18.8	17.6	19.6	22.6	19.2
2000	20.8	18.2	20.8	16.6	13.4	13.6	16	21.2	18.4	20.6	18.2	17.9	18.7	21	18.1
2003	17.4	21.5	13.8	14.6	13.6	12.3	16.1	18.1	16.7	15.7	19.4	20.3	18.2	16.9	16.4
Highest Saving Rate Year	20.8 2000	25.4 1988	20.8 2000	21.4 1997	14.8 1991	13.6 2000	21.6 1991	24.8 1994	23 1988	20.6 2000	20.2 1991	21.1 1994	23.9 1988	25.7 1991	20.2 1991
Minimum Saving Rate Year	16.4 1985	18.2 2000	10.5 1985	11.8 1985	5.6 1985	9.4 1997	16 2000	10.6 1985	14.8 1994	15.7 2003	14.1 1985	7.6 1985	15.3 1985	12.7 1985	13.5 1985

* See Table 2 for description of Regions.

Figure A.1. Household Saving Rates By Regions, 1985-2003

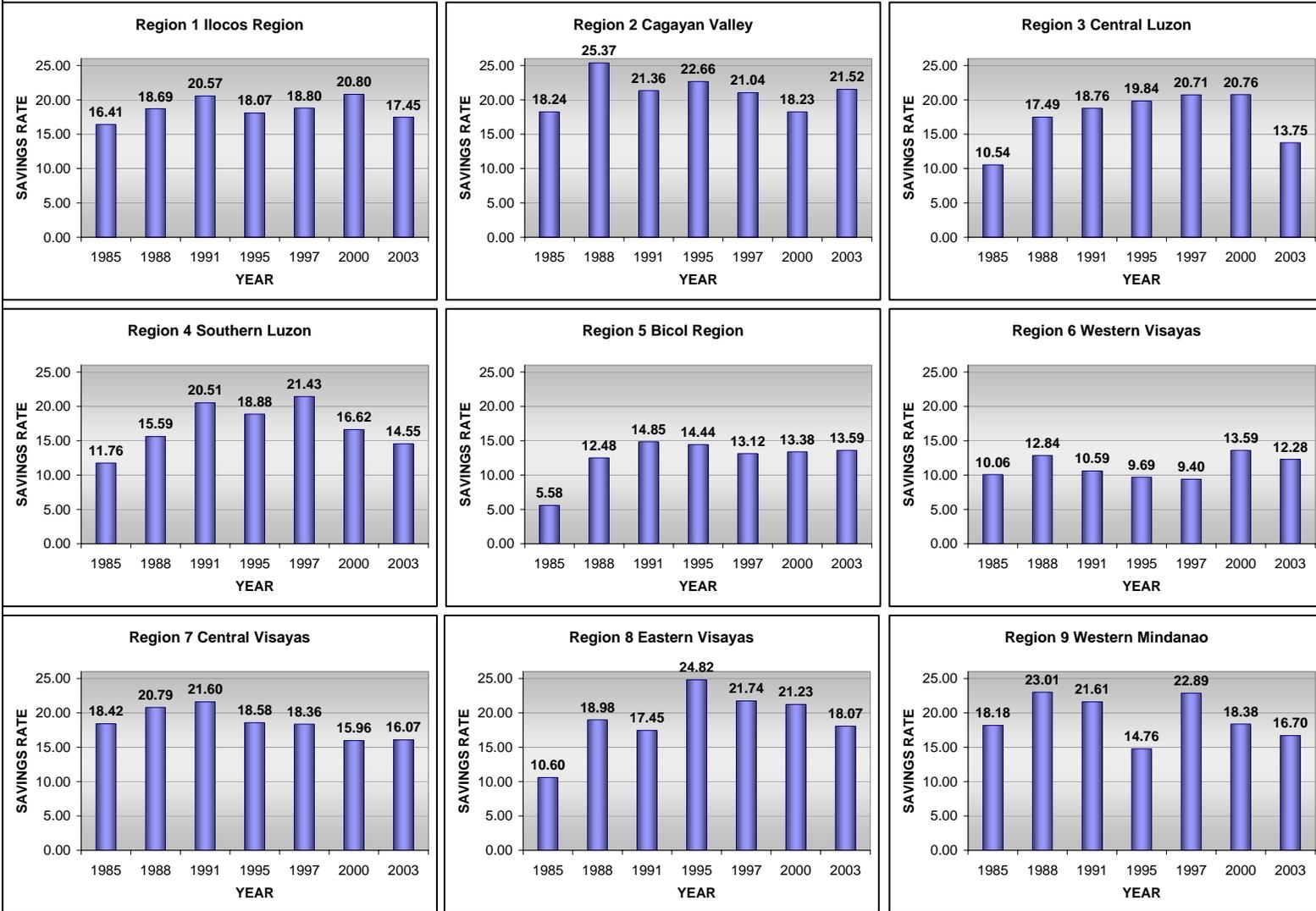


Figure A.1. Household Saving Rates By Regions, 1985-2003 (continued)

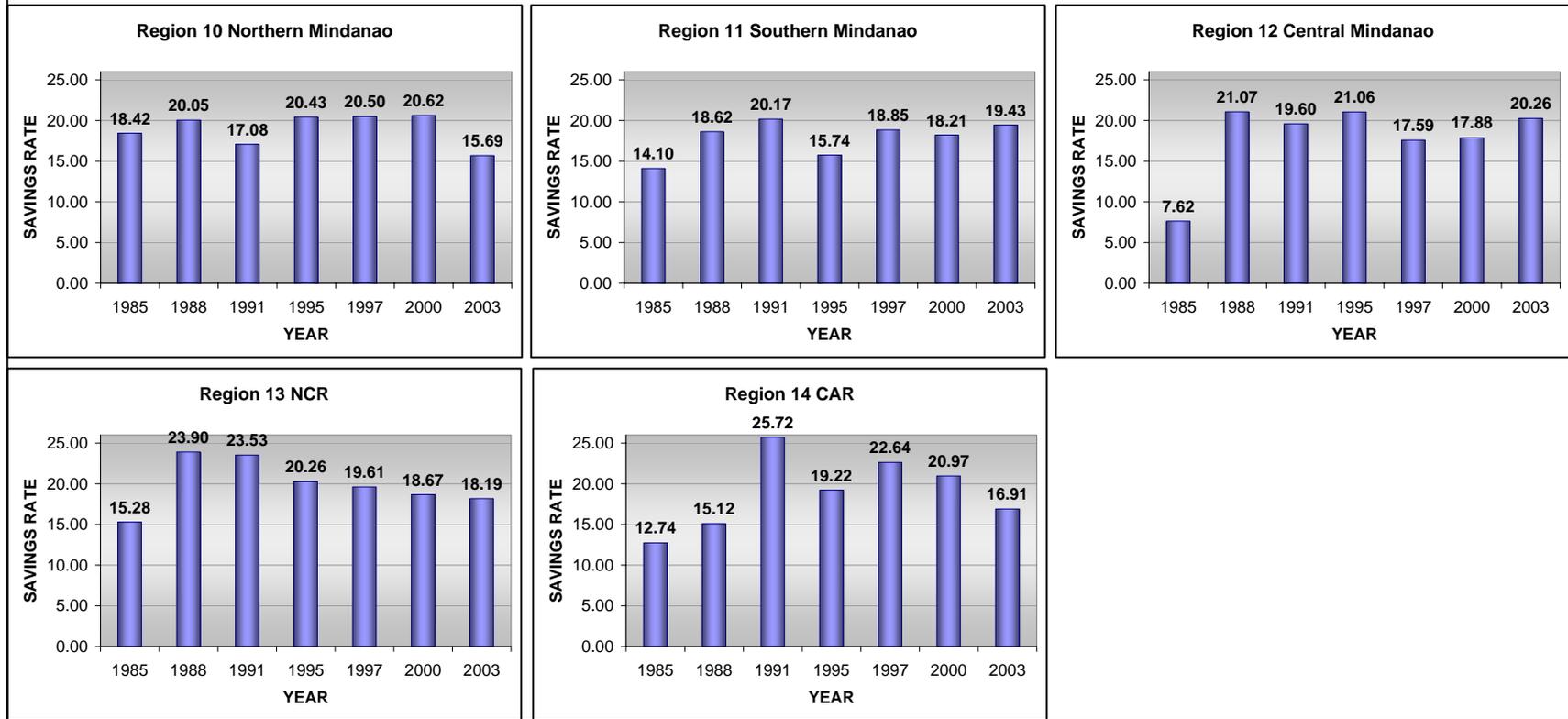


Table A.2. Saving Rate of National per Capita Income Deciles by Region

Saving Rate in Region 1(Ilocos Region)	National Per Capita Income Decile									
	1	2	3	4	5	6	7	8	9	10
1985	-24.21	-2.51	2.8	10.58	9.43	12.12	13.47	14.07	14.29	33.25
1988	-37.24	0.5	6.58	6	16.43	14.51	22.03	18.13	29.02	32.67
1991	-24.65	-5.31	3.15	8.07	18.53	14.73	21.63	19.49	26.72	37.73
1994	-24.74	-6.64	-1.55	11.04	12.73	15.5	20.78	25.16	25.7	35.02
1997	-22.79	-7.3	-0.27	5.45	5.54	15.12	15.47	24.71	25.15	36.66
2000	-18.08	-7.21	2.82	8.36	12.09	12.99	21.11	22.05	29.69	38.91
2003	-18.67	-9.09	0.54	6.04	9.6	13.34	18.02	20.46	26.26	34.16
Saving Rate in Region 2 (Cagayan Valley)	National Per Capita Income Decile									
	1	2	3	4	5	6	7	8	9	10
1985	-15.81	1.24	7.42	11.85	13.53	20.69	18.21	20.97	21.35	27.66
1988	-14.95	2.32	7.95	10.24	16.45	20.64	29.05	29.72	30.64	42.6
1991	-18.84	2.44	4.52	14.31	13.19	22.37	26.16	21.7	31.04	30.41
1994	-2.17	5.06	7.43	9.71	19.23	21.6	23.27	30.4	26.79	31.6
1997	-19.12	-3.4	-2.22	5.32	13.68	12.77	21.97	28.35	30.74	43.81
2000	-13.14	-14.03	1.26	6.68	10.93	12.23	11.86	22.09	24.53	39.7
2003	-14.31	-3.17	0.64	5.07	9.4	15.8	20.46	19.57	25.55	42.89
Saving Rate in Region 3 (Central Luzon)	National Per Capita Income Decile									
	1	2	3	4	5	6	7	8	9	10
1985	-37.84	-15.61	-17.34	-12.47	-8.34	-1.05	2.29	5.01	13.24	26.67
1988	-48.01	-11.11	-7.16	0.93	0.43	7.49	11.03	14.3	19.71	33.9
1991	-38.87	-12.47	-6.38	3.28	8.33	10.81	17.3	17.21	23.31	28.76
1994	-20.19	-10.55	1.63	5.84	10.27	11.76	15.56	19.23	24.72	34.23
1997	-37.29	-10.15	-2.8	0.99	6.56	11.59	15.81	19.33	26.19	37.86
2000	-13.86	-10.36	0.17	4.21	9.78	12.71	15.94	20.45	25.63	36.18
2003	-16.01	-9.37	-3.17	1.97	5.21	11.47	12.69	15.12	16.82	22.65

Table A.2. Saving Rate of National per Capita Income Deciles by Region (continued)

Saving Rate in Region	National Per Capita Income Decile									
	1	2	3	4	5	6	7	8	9	10
4 (Southern Luzon)										
1985	-23.07	-9.43	-2.13	3.28	1.85	5.81	7.18	10.45	13.59	25.11
1988	-14.62	-4.64	1.73	5.31	8.6	11.42	12.13	16.42	18.3	28.78
1991	-8.24	3.49	4.23	8.34	3.53	12.48	15.14	18.45	21.43	34.37
1994	-9.12	-1.44	2.77	5.26	8.39	13.49	14.47	18.41	21.18	29.7
1997	-9.92	-2.82	4.46	5.67	8.27	11.11	14.69	18.8	21.48	36.03
2000	-7.77	-2.66	-0.41	0.85	6.35	8.61	11.77	15	16.59	27.52
2003	-8.9	-5.97	-1.08	1.4	2.52	5.21	8.26	11.71	15.03	27.35
Saving Rate in Region 5 (Bicol Region)										
1985	-20.11	-5.1	3.34	4.72	-0.4	8	7.03	6.9	14.1	21.93
1988	-5.27	0.33	8.46	7.27	13.81	10.15	11.04	17.17	21.26	27.7
1991	-5.99	4.26	8.81	13.24	10.39	16.66	19.42	24.72	22.24	28.16
1994	-7.42	4.29	5.12	13.07	10.34	13.7	13.9	19.67	25.7	30.08
1997	-10.4	-1.49	0.93	6.11	6.1	8.45	16.92	15.78	20.74	34.55
2000	-5.31	0.05	3.69	3.85	5.54	13.34	13.73	18.34	22.21	31.77
2003	-12.99	-4.88	-0.36	2.52	7.36	7.53	12.59	15.56	18.92	34.82
Saving Rate in Region 6 (Western Visayas)										
1985	-9.97	-2.55	1.99	3.46	6.23	7.75	1.52	11.6	5.11	25.87
1988	-9.72	-2.11	2.91	4.72	4.2	9.67	11.39	13.94	20.8	29.43
1991	-9.98	-1.49	-0.21	4.43	4.35	7.22	11.68	15.12	16.94	24.33
1994	-13.47	-2.82	1.84	4.8	4.67	7.62	13.07	9.46	17.58	20.45
1997	-21.35	-9.68	-6.94	-1.52	2.9	4.91	8.54	17.27	17.47	25.92
2000	-9.16	-4.08	0.87	2.89	4.36	8.41	11.13	15.89	18.02	29.34
2003	-10.89	-1.98	-0.63	2.59	6.28	7.13	9.92	12	18.16	29.68

Table A.2. Saving Rate of National per Capita Income Deciles by Region (continued)

Saving Rate in Region	National Per Capita Income Decile									
	1	2	3	4	5	6	7	8	9	10
7 (Central Visayas)										
1985	3.34	10.24	12.64	14.4	14.88	15.97	17.34	15.94	23.84	30.98
1988	3.34	9.44	15.01	17.88	17.24	20.52	20.37	25.25	21.68	31.5
1991	0.57	12.43	15.37	18.18	19.1	20.82	22.84	20.52	23.94	32.13
1994	4.2	10.93	12.43	14.45	16.51	15.76	17.34	23.44	21.66	28.21
1997	-3.53	5.24	4.16	8.98	9.27	14.88	17.05	20.57	27.22	31.34
2000	-7.64	1.65	2.62	10.31	8.15	15.75	12.05	15.47	19.48	36
2003	-4.72	3.79	8.6	8.1	12.31	12.85	14.35	13.23	16.28	28.83
8 (Eastern Visayas)										
1985	-12.72	3.18	-2.1	5.36	13.25	8.06	15.54	20.4	20.87	28.39
1988	-3.82	3.18	9.51	17.18	15.1	16.18	26.45	26.48	27.62	36.38
1991	-12.41	1.69	12.37	15.1	18.97	18.4	18.99	20.98	30.06	31.76
1994	-7.93	8.86	11.98	16.66	21.8	25.6	29.08	31.32	34.57	50.3
1997	0.56	9.8	10.99	17.01	15.55	22.07	23.22	32.56	29.68	36.86
2000	-2.54	4.46	5.44	12.82	14.13	20.2	21.4	26.05	29.21	37.68
2003	-4.19	3.67	8.07	11.69	10.62	16.38	18.69	21.06	18.98	36.95
9 (Western Mindanao)										
1985	-18.47	-1.73	1.96	3.21	9.37	18.76	13.61	21.89	28.9	46.27
1988	-4.61	4.02	7.94	14.59	17.78	18.73	16.83	31.27	29.22	43.3
1991	-12.07	7.46	8.1	17.55	17.78	21.21	22.77	29.75	29.04	45.82
1994	-1.55	6.07	9.94	11.69	9.83	11.15	18.58	21.73	28.56	30.08
1997	-13.49	0.37	4.42	12.71	17.24	19.13	23.34	26.59	28.57	49.78
2000	-7.57	1.83	6.2	12.92	13.57	19.14	22.33	28.03	29.72	38.6
2003	-9.57	3.6	5.7	10.62	13.84	19.84	23.28	26.19	26.3	32.86

Table A.2. Saving Rate of National per Capita Income Deciles by Region (continued)

Saving Rate in Region		National Per Capita Income Decile									
10 (Northern Mindanao)	1	2	3	4	5	6	7	8	9	10	
1985	-12.78	-1.36	-0.2	3.12	9.77	12.4	15.61	13.74	12.13	44.91	
1988	-12.56	-3.85	5.71	12.72	9.51	15.21	14.23	15.26	19.62	41.69	
1991	-10.48	4.37	11.5	15.64	15.58	9	16.78	17.9	27.08	31.87	
1994	-4.28	6.6	8.86	13.17	19.16	16	19.39	17.76	24.86	46.24	
1997	-9.8	1.66	5.88	10.92	14.15	12.61	18.26	23.31	25.03	36.53	
2000	-8.48	1.19	2.24	7.68	11.32	16.27	18.68	23.3	27.45	46.09	
2003	-7.51	1.32	3.58	6.81	9.67	15.54	13.96	18.69	22.32	30.18	
Saving Rate in Region 11 (Southern Mindanao)		National Per Capita Income Decile									
1	2	3	4	5	6	7	8	9	10		
1985	-6.07	-0.9	-0.68	2.46	4.62	6.26	12.08	12.78	17.46	34.2	
1988	-17.29	5.53	0.79	7.76	14.78	13.36	17.79	18.33	24.22	34.89	
1991	-10.7	2.29	8.98	11.04	13.39	15.58	19.05	18.34	27.84	38.55	
1994	-2.25	6.14	6.03	11.2	10.3	10.43	16.08	16.93	22.96	25.69	
1997	-10.1	2.64	7.42	10.13	10.79	14.55	16.96	22.11	25.28	34.42	
2000	-8.65	-2.52	0.54	5.77	12.26	12.44	13.72	17.84	25.1	39.36	
2003	-8.4	-0.47	1.11	5.9	8.52	6.36	10.73	15.74	20.67	46.99	
Saving Rate in Region 12 (Central Mindanao)		National Per Capita Income Decile									
1	2	3	4	5	6	7	8	9	10		
1985	-55.99	-13.01	-7.77	-1.36	3.46	11.9	6.54	19.6	15.46	30.49	
1988	-4.45	2.7	7.38	12.35	16.53	18.37	20.46	22.51	26.3	38.01	
1991	-13.97	7.81	8.99	16.55	20.45	19.83	22.54	20.39	29.97	35.36	
1994	-2.33	9.21	12.5	13.25	22.49	16.96	25.13	23.55	20.39	41.82	
1997	-11.83	-0.77	6.08	12.07	16.49	18.24	21.55	24.49	26.51	37.85	
2000	-10.55	-0.27	5.99	10.92	14.57	17.68	22.74	27.34	29.79	40.85	
2003	-10.01	2.54	6.27	10.4	15.45	21.78	23.54	29.12	35.19	48.96	

Table A.2. Saving Rate of National per Capita Income Deciles by Region (continued)

Saving Rate in Region 13 (National Capital Region)	National Per Capita Income Decile									
	1	2	3	4	5	6	7	8	9	10
1985	-26.8	-15.67	-10.37	-4.92	0.2	4.35	4.78	9.48	12.46	22.32
1988	-66.82	-17.6	-4.84	0.08	3.35	6.3	10.34	14.04	17.57	33.16
1991	-18.52	-17.81	-5.72	-0.09	1.08	6.26	10.49	11.1	16.36	31.86
1994	-72.09	-4.56	-9.43	2.26	2.32	4.75	8.07	12.03	15.97	26.6
1997	-13.67	-13.95	-5.29	-1.88	0.81	4.02	7.98	10.01	14	26.05
2000	-11.15	-5.93	-6.04	0	3.5	6.69	9.19	13.57	16.18	23.43
2003	-24.04	-3.82	-4.39	-2.02	1.6	5.57	7.9	11.84	13.97	26.33
Saving Rate in Region 14 (Cordillera Autonomous Region)	National Per Capita Income Decile									
	1	2	3	4	5	6	7	8	9	10
1985	-23.49	-0.85	-10.88	1.88	9.54	3.87	11.64	2.73	10.81	25.4
1988	-31.48	-1.04	4.15	8.4	16.55	12.68	15	6.01	15.89	36.43
1991	-18.91	-12.41	11.1	14.26	14.55	22.23	25.43	27.39	24.77	45.13
1994	-26.4	-6.22	3.17	9.94	15.31	9.13	17.03	25.34	36.12	30.04
1997	-28.3	-6.91	1.95	5.08	13.82	17.92	18.32	22.82	26.7	40.45
2000	-17.92	-1.8	4.84	7.72	10.28	14.1	13.94	18.4	23.12	38.22
2003	-19.95	-9.04	-4.71	-0.16	3.94	11.57	17.91	18.63	23.1	28.46

Attachment 2

Table B.1. Saving Rate by Age Group and by Region for all FIES Years 1985-2003

Age Group	Regions (based on the 1988 FIES classification)*													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
15-19	10.13	9.83	10.34	9.5	-2.19	6.8	11.38	30.13	-1.27	10.28	14.37	11.09	11.06	12.38
20-24	20.77	19.21	13.32	13.97	5.82	5.24	10.2	16.5	14.82	10.47	9.91	18.58	17.1	10.32
25-29	16.55	16.52	15.65	13.66	11.15	6.59	16.01	15.88	16.47	14.98	15.06	16.37	12.62	18.29
30-34	15.59	15.73	13.87	13.63	9.06	9.77	14.15	16.4	14.75	14.9	12.17	17.52	19.59	17.41
35-39	18.38	18.2	15	15.38	8.64	8.56	12.92	16.84	16.53	14.53	14.05	18.35	15.32	19.16
40-44	15.45	18.58	14.55	15.28	13.5	8.46	16.34	19.4	18.1	18.3	15.58	16.18	16.55	17.77
45-49	17.49	20.71	18.54	16.24	12.65	10.7	17.05	18.11	18.86	17.4	15.49	19.1	19.33	18.35
50-54	19.92	25.9	17.74	18.06	18.27	10.83	18.17	22.48	21.06	19.19	32.84	17.75	21.69	19.79
55-59	20.78	25.11	21.65	19.36	13.47	15.16	21.41	20.85	21.89	20.2	22.06	22.36	26.05	23
60-64	21.74	22.33	23.02	21.24	17.43	14.59	19.75	24.45	25.68	32.16	18.61	23.05	23.46	22
65-69	22.29	22.9	23.36	21.05	16.81	14.76	19.67	25.83	21.68	20.85	16.52	21.59	12.13	26.77
70-94	20.9	23.56	20.15	22.87	12.55	15.06	21.92	21.16	21.57	19.98	18.58	21.78	27.19	22.93
Max	22.29	25.9	23.36	22.87	18.27	15.16	21.92	30.13	25.68	32.16	32.84	23.05	27.19	26.77
Min	10.13	9.83	10.34	9.5	-2.19	5.24	10.2	15.88	-1.27	10.28	9.91	11.09	11.06	10.32
sd	3.51	4.55	4.15	3.91	5.67	3.6	3.83	4.42	6.77	5.77	5.87	3.34	5.35	4.53
cv	19.14	22.87	24.06	23.45	49.58	34.14	23.12	21.41	38.66	32.45	34.33	17.89	28.93	23.82

* See Table 2 for description of Regions.

Figure B.1 National Saving Rate by Age Group

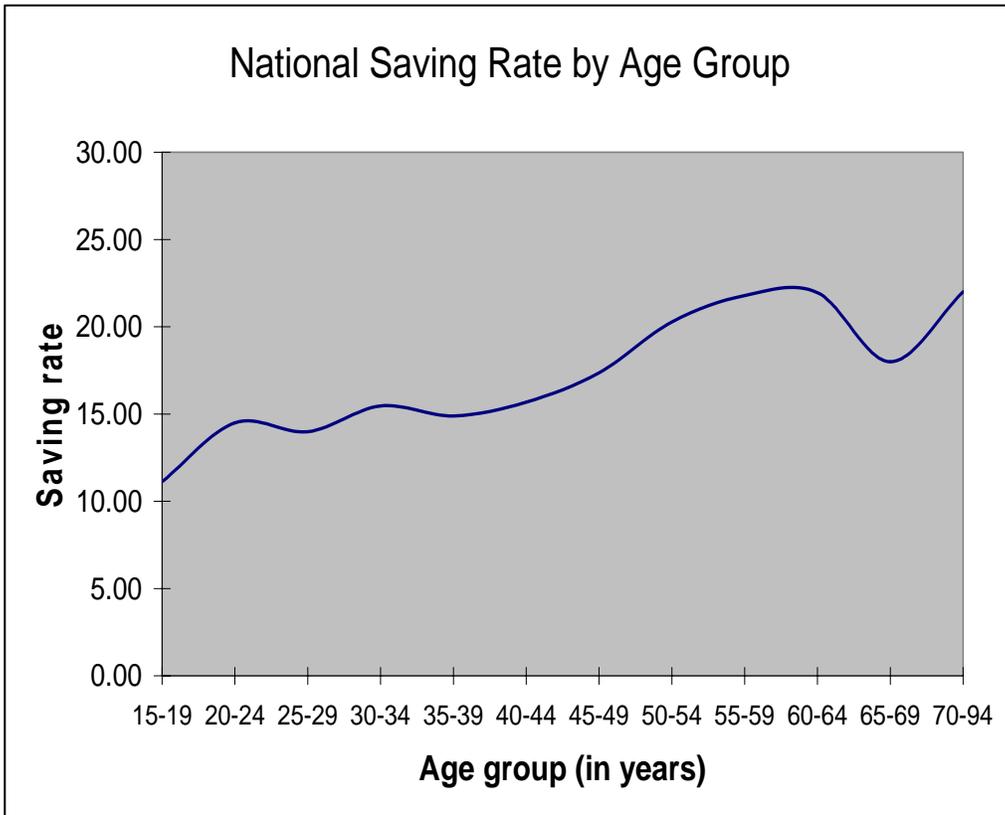
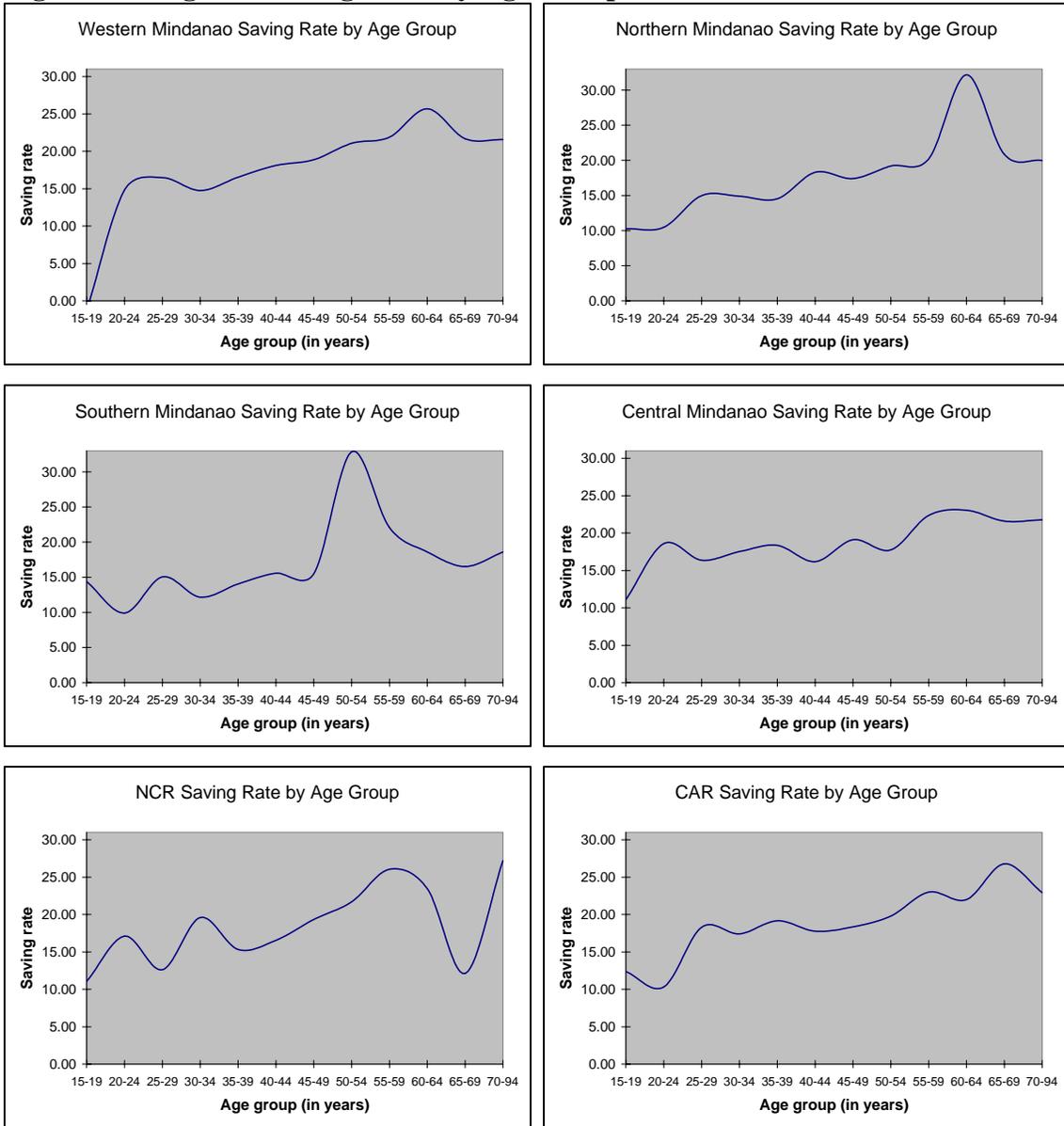


Figure B.2 Regional Saving Rates by Age Group



Figure B.2 Regional Saving Rates by Age Group (continued)



Attachment 3

The U.S. Survey of Consumer Finances and Germany's SAVE Survey are examples of surveys that provide data for comprehensive profiling of saving behavior of households. These two surveys are described below and a comparison of the Philippines FIES questionnaire and the SCF questionnaire follows.

U.S. Survey of Consumer Finances

The U.S. Survey of Consumer Finances (SCF) is a triennial survey of U.S. families sponsored by the Board of Governors of the Federal Reserve System. Since 1992, data for the SCF has been collected by a research organization of the University of Chicago.

The survey provides a core set of data on family income, assets, and liabilities as well as information on credit card use and saving behavior and attitudes. The interviews are conducted with the aid of a program running on a laptop computer to administer data collection using the questionnaire. The questionnaire includes the following sections of interest:

- Attitudes and Financial Institutions
- Attitude toward credit/credit cards
- Housing
- Other Properties, Land Contracts
- Saving Attitudes
- Financial Assets

In 2004, a total of 4,522 interviews were done for the SCF. Bucks, Kennickell, and Moore (2006) provide a report of the 2004 SCF vis-a-vis the 2001 SCF.

GERMANY SAVE Survey

The SAVE survey of Germany is a panel of 1,829 households. It was conducted in 2001, 2003, and 2005. A first in Germany, it has attempted to produce a detailed assessment of income, savings, and wealth. When one combines this economic information with the questions about psychological and social factors, the survey provides a multi-faceted picture of the surveyed households.

The survey was carried out in five different variants (see Table C.1). The variants in this initial wave were designed in order to find the best possible combination of accurate answers and willingness to answer (later waves will use only one variant). The first four variants were computer aided personal interviews (CAPI) carried out by Infratest-Burke, Munich on a representative quota-sample. The quotas were in proportion to current official population statistics (the 2000 micro-

census) and related to age, whether the respondent is a wage earner or a salaried employee, and household size. The sample augmentation in the 2003 and 2005 waves were random-route samples. In contrast, the fifth survey method was a conventional paper and pencil questionnaire (PAPI) given to a so-called Access Panel operated by the Test Panel Institute (TPI, Wetzlar). The two surveys collect information from households where the age of the household head is between 18 and 69 years old.

The questionnaire is structured in the following manner: part 1, introduction--determining which person will be surveyed in the respective household; part 2, basic socio-economical data of the household; part 3, qualitative questions concerning saving behavior, income and wealth; part 4, budget balance--quantitative questions concerning income and wealth; part 5, psychological and social determinants of saving behavior; and, part 6, conclusion--interview-situation.

Table C.1. Survey variants: sampling and interview techniques

	Computer Aided Personal Interview(CAPI) (numeric)	CAPI (categorical)	CAPI-D (via pick-up service)	CAPI-D (via mail)	Access Panel
Interview Technique	CAPI	CAPI	CAPI	CAPI	Paper and Pencil Interview(PAPI)
Type of the random sample	Quota sample	Quota sample	Quota sample	Quota sample	Access-Panel
Questions concerning income and fortune	in DM	brackets	in DM	in DM	in DM
Design of part 4	Part of CAPI	Part of CAPI	Drop-off (via pick-up)	Drop-off (via mail)	Part of PAPI
Number of interviews	295	304	294	276	660

The questionnaire is structured in the following manner: part 1, introduction--determining which person will be surveyed in the respective household; part 2, basic socio-economical data of the household; part 3, qualitative questions concerning saving behavior, income and wealth; part 4, budget balance--

quantitative questions concerning income and wealth; part 5, psychological and social determinants of saving behavior; and, part 6, conclusion--interview-situation.

The brief first part explains the purpose of the questionnaire and describes the precautions that have been taken in respect of data protection. This introduction is important because the survey deals with sensitive issues such as personal finances. The interviewer then asks to speak to a member of the household who knows about income and assets. If this person is not at home, the interviewer must make a return visit, at least five times.

Part 2 lasts about 15 minutes and is the standard initial interview in which questions are asked about the composition and socio-economic structure of the household, including age, education and participation in the labor force of the person surveyed and his or her partner.

Part 3 contains qualitative questions on saving behavior, such as the importance of a series of savings motives, whether there is actually anything left over to save, how regularly savings are made, etc. Questions are also asked about decision processes and possible rules of thumb, past patterns of behavior as well as their parents and attitude to money.

Part 4 is the critical part of the questionnaire because this is where a complete balance sheet of the household is ascertained. A detailed survey is made of income according to source, changes in income, the level of assets according to the various kinds of wealth, and changes in the types of wealth over the last year. Apart from financial assets, the questions also cover private and company pensions, ownership of property and business assets. Questions are also asked about debt. Part 4 is kept separate from the other parts.

Part 5 contains questions about psychological and social factors. It includes the social environment, expectations about the economic situation, health and possible future events, life expectancy and general attitudes to life.

Part 6 ends the interview with standard questions about the interview situation and leaves both the person surveyed and the interviewer considerable scope for their own comments. Comments about confidentiality, the length and accuracy of the questionnaire are entertained in this part. Questions are also asked about internet access and the willingness to participate in future waves of the survey as required under German law.

US Federal Reserve Board Consumer Finance Survey versus Philippine FIES

It is proposed that the Philippines also conduct a Consumer Finance Survey to augment the information provided by the FIES. Table C.2 provides the listing of

items in the CFS vis-a-vis the 2003 FIES. It shows the lack of detailed information from the FIES compared to the CFS.

Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

Survey of Consumer Finances (United States) (note: you \equiv you and/or any family member living with you)	Family Income and Expenditure Survey (Philippines)
<p>Attitude and Financial Institutions</p> <ol style="list-style-type: none"> 1. Expectations for the future (over the next 5 years): <ol style="list-style-type: none"> a. the country's economy (\uparrow, \downarrow, =) b. interest rates (\uparrow, \downarrow, =) c. family income [vs. prices] (\uparrow, \downarrow, =) 2. Over the past 5 years: <ol style="list-style-type: none"> family income [vs. prices] (\uparrow, \downarrow, =) 3. At this time, do you have a good idea of what your family's income for next year will be? 4. Credit or borrowing: <ol style="list-style-type: none"> a. shop around for the very best terms (almost no, moderate, great deal) b. What sort of information do you use to make decisions about credit or borrowing? (call around, newspapers, etc.) 5. Saving and investment decisions; <ol style="list-style-type: none"> a. shop around for the very best terms (almost no, moderate, great deal) b. What sort of information do you use to make decisions about credit or borrowing? (call around, newspapers, etc.) 6. Financial Institutions: <ol style="list-style-type: none"> a. number of financial institutions with accounts or loans b. kind of institution (commercial bank, savings, etc) c. name of financial institutions: <ol style="list-style-type: none"> i. do the most business ii. do the second most business iii. ...etc... d. Do you have an ATM card? e. Main ways how you do business (ATM, mail, etc) f. Distance from home 7. Do you use any debit cards? 8. Does someone in the family have any money directly deposited into one of your family's accounts? <ol style="list-style-type: none"> a. kinds (paycheck, social security, etc.) 9. Do you have any payments that are automatically paid directly 	

Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<p>from their accounts without having to write a check? a. what type of payment (utility bills, insurance, etc)</p> <p>10. Do you have any cards that you can use for a variety of purchases (smart card)?</p>	
<p>Attitudes toward credit/ credit cards</p> <p>1. Do you think it is a good idea or bad idea for people to buy things on installment plan? (good, bad, etc.)</p> <p>2. Do you think it is right for someone like yourself borrow money.. a. to cover expenses of a vacation trip b. to cover living expenses when income is cut c. to finance the purchase of a jewelry d. to finance the purchase of a car e. to finance educational expenses</p> <p>3. In the past 5 years, has a particular lender or creditor turned down any request you made for credit or not given you as much credit as you applied for? a. Were you able to obtain full amount by reapplying to the same institution or somewhere else? b. Reasons why you were turned down for credit c. Type of credit applied for (mortgage, car loan, etc.) d. Was there any time in the past 5 years that you thought of applying for credit but changed your mind because you thought you might be turned down? e. Why did you think you might be turned down?</p> <p>4. Do you have any debit cards? a. how many b. name of institution</p> <p>5. Do you have any credit cards? a. how many b. On your last bill, how much were the NEW charges made to the account? c. After the last payment, what was the balance still owed? d. What interest rate do you pay e. Name of institution</p>	
<p>Housing</p> <p>1. Ranch or Farm a. How many acres b. Do you operate a farming or ranching business on this property c. Do you rent out any part of this property to others</p>	<p>Ref no. b901: I. other disbursements: 1. purchase/amortization of real property</p>

Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<p>d. How much rent do you collect each month</p> <p>e. What part of this property is used for the farming or ranching business</p> <p>f. What is the legal status of this farm/ ranch (owns all, owns part, etc.)</p> <p>2. Other housing arrangements</p> <p>a. Do you own, pay rent, etc. this house and lot/apartment/condo, etc.</p> <p>b. Are you required to pay regular fees to an association or property management group in order to live here? How much?</p> <p>c. In what month and year did you move into this home?</p> <p>d. If respondent pays rent:</p> <p>d.1. How much rent to you pay a month</p> <p>d.2. Does that include some or all utilities</p> <p>d.3. Do you rent it furnished or unfurnished</p> <p>e. If respondent lives in a multiple housing structure:</p> <p>e.1 Do you own the entire building or just your unit</p> <p>3. How much did it cost when you originally acquired it</p> <p>4. How many years have you lived within about 25 miles of your current home</p> <p>5. How much are the real taxes per year</p> <p>6. Is there a mortgage or land contract/ loan</p> <p>a. Why did you choose this type of loan</p> <p>b. Was this assumed from the previous owner</p> <p>c. How much did you borrow or refinance</p> <p>d. How much is still owed on this contract</p> <p>e. How much are the payments and how often are they due</p> <p>f. Do the payments include property taxes</p> <p>g. Typical payment and how often</p> <p>h. In what month and year do you expect this loan to be repaid</p> <p>i. How much is still owed to this loan</p> <p>j. Is the loan paid off ahead of schedule</p> <p>k. Annual rate of interest being charged</p> <p>l. What institution, reason why you chose this lender</p> <p>m. Is this an adjustable rate loan (does it have an interest rate that can rise or fall from time to time</p> <p>m.1. does the change in the interest rate depend on some other interest rate</p> <p>m.2. what other rate does it depend</p> <p>m.3. how often can the rate change</p> <p>m.4. when the interest rate on your mortgage changes, does the size of your monthly payments also change</p>	<p>Ref no.b401: G. housing:</p> <ol style="list-style-type: none"> 1. type of building 2. tenure status 3. floor area 4. year house was built 5. alterations done <p>Ref no. b309: F. Taxes: No.2. Real estate tax</p> <p>Ref no. b901: I. other disbursements:</p> <ol style="list-style-type: none"> 1. major repair of the house 2. construction of new house
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Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<p>7. Do you have home equity line of credit or any other lines of credit not counting credit cards</p> <p>8. Have you ever made any major additions or done extensive remodeling to this property</p> <p style="margin-left: 20px;">a. total cost</p> <p style="margin-left: 20px;">b. do you owe money on loans taken out for these projects</p> <p>9. Do you rent out any portion of this house to others?</p> <p style="margin-left: 20px;">a. how much to do you collect each month</p>	
<p>Other properties, land contracts</p> <p>1. Have you ever sold any real estate for which you loaned money to the buyer?</p> <p style="margin-left: 20px;">a. Does the buyer still owe you money on any of these notes</p> <p style="margin-left: 20px;">b. How many such loans are you owed money</p> <p style="margin-left: 20px;">c. Loans:</p> <p style="margin-left: 40px;">i. is it a land contract, a mortgage, etc</p> <p style="margin-left: 40px;">ii. how much are you owed</p> <p style="margin-left: 40px;">iii. how much did you lend the borrower</p> <p style="margin-left: 40px;">iv. How much is still owed</p> <p style="margin-left: 40px;">v. How much are the payments and how often are they due</p> <p style="margin-left: 40px;">vi. Typical payment and how often</p> <p>2. Do you own any other real estate such as a lot, vacation home, etc.</p> <p style="margin-left: 20px;">a. Are any of these properties owned by a business</p> <p style="margin-left: 20px;">b. How many properties that are not owned by a business</p> <p style="margin-left: 20px;">c. What type of property</p> <p style="margin-left: 20px;">d. What percentage of the property do you own</p> <p style="margin-left: 20px;">e. What month and year did you first purchase</p> <p style="margin-left: 20px;">f. What was the total purchase price</p> <p style="margin-left: 20px;">g. Are there any outstanding loans or mortgages on this property</p> <p style="margin-left: 40px;">g.1. questions on loans</p> <p style="margin-left: 20px;">h. Did you receive any income from this property in [year]? How much</p>	<p>Ref no.b401: G. housing:</p> <p>1. other housing unit and rent per month</p>
<p>Vehicles</p> <p>1. number of vehicles being leased</p> <p style="margin-left: 20px;">a. type of vehicle, model, model year</p> <p style="margin-left: 20px;">b. monthly lease payments</p> <p style="margin-left: 20px;">c. how many years or months was the original lease</p> <p>2. number of vehicles owned</p>	<p>E2. Durable furniture and equipment (ref no. B201)</p> <p>No. 6. Transport equipment for household use:</p> <p>Did you purchase on cash basis, installment basis, receive as gifts</p>

Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<ul style="list-style-type: none"> a. type of vehicle, model, model year b. new or used c. what year bought d. loan? <ul style="list-style-type: none"> i. What month and year was the loan taken out ii. How much is borrowed or financed iii. How many monthly or yearly payments iv. How much are the monthly payments v. Typical payment and how often vi. In what month and year do you expect this loan to be repaid vii. How much is still owed to this loan viii. Is the loan paid off ahead of schedule ix. Annual rate of interest being charged x. What institution 3. vehicles that are owned by a business but are also used for personal purposes 4. other vehicles (motorcycle, boat, etc.) <ul style="list-style-type: none"> a. how much b. loan? (same as 2d) 	<p align="center">(quantity, price, value)</p>
<p>Loans for educational expenses</p> <ul style="list-style-type: none"> 1. Do you owe any money or have any loans for educational expenses 2. How many such loans 3. In what month and year was the loan taken out 4. How much was borrowed or financed 5. Paying loan now and when did you start paying loan? Or when will you start paying loan 6. Is this loan accumulating interest which you will have to pay? 7. Fixed amount each month or fixed number of months until loan is paid (how many monthly payments or months) 8. How much are the monthly payments 9. what is the typical payment and how often is it made 10. In what month and year do you expect this loan to be repaid 11. Is loan being paid off ahead of schedule 12. current annual rate of interest being charged 	<p>D1. Education (ref no. A801)</p> <p>Did you pay for education fees etc in cash or on credit... (quantity, price, value)</p>

Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<p>13. What institution</p> <p>14. How much is still owed in this loan</p> <p>15. Is there another loan (repeat steps above)</p>	
<p>Loans</p> <p>1. Do you owe any money or have any loans? a. reason (household appliances, medical bills, etc.)</p> <p>2. How many loans</p> <p>3. What was the loan for? (what was the largest loan for)</p> <p>4. In what month and year was the loan taken out</p> <p>5. How much was borrowed or financed</p> <p>6. Paying loan now and when did you start paying loan? Or when will you start paying loan</p> <p>7. Is this loan accumulating interest which you will have to pay?</p> <p>8. Fixed amount each month or fixed number of months until loan is paid (how many monthly payments or months)</p> <p>9. How much are the monthly payments</p> <p>10. what is the typical payment and how often is it made</p> <p>11. In what month and year do you expect this loan to be repaid</p> <p>12. Is loan being paid off ahead of schedule</p> <p>13. current annual rate of interest being charged</p> <p>14. What institution</p> <p>15. How much is still owed in this loan</p> <p>16. Is there another loan (repeat steps above)</p> <p>17. Thinking of all the various loan payments you made during the last year, were all the payments made the way they were scheduled, or were payments on any of the loans sometimes made later or missed?</p> <p>18. Were you ever behind in your payments by two months or</p>	<p>EXPENDITURE: ref no. B901</p> <p>2. payments of cash loan</p> <p>3. loans granted to persons outside the family</p> <p>INCOME: ref. no. C801</p> <p>1. loans from other families</p> <p>2. loans from business firms and government institutions</p> <p>3. payments received for loans granted to others</p>

Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<p>more?</p> <p>19. Have you ever filed for bankruptcy?</p> <p>20. When was the most recent time</p>	
<p>Savings Attitudes</p> <ol style="list-style-type: none"> 1. Reasons for saving 2. Are there any foreseeable major financial obligations that you expect will have to be met in the next 5 to 10 years? <ol style="list-style-type: none"> f. What kinds of obligations (education, health care, etc.) 3. In planning your saving and spending, which of the time periods is most important to you? (next few months, next year, next few years, etc.) 4. Which of the statements comes closest to the amount of financial-risk that you are willing to take when you save or make investments: <ol style="list-style-type: none"> a. Take substantial risks expecting to earn substantial returns b. Take above average financial risks expecting to earn above average returns c. Take average financial risks expecting to earn average returns d. Not willing to take any financial risks 5. Which of the statements comes closest to describing your saving habits: <ol style="list-style-type: none"> a. Don't save, usually spend more than income b. Don't save, usually spend about as much as income c. Save whatever is left over at the end of the month—no regular plan d. Save income of one family member, spend the other e. Spend regular income, save other income f. Save regularly by putting money aside each month 6. Rate the retirement income you (expect to) receive from Social Security and job pensions 7. Shop around for the very best terms (almost no shopping, a great deal of shopping, etc.) 8. Over the past year, would you say that your <ol style="list-style-type: none"> a. spending exceeded income, spending equaled income, spending was less than income b. did any of that spending include purchases of a home or automobile or spending for any investments c. To make up the difference, did you borrow money, 	

Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<p>spend out on savings or investments, do something else?</p> <p>9. About how much do you think you need to have in savings for emergencies and other unexpected things that may come up?</p> <p>10. Compared with other people of your generation and background, do you think you've been lucky in your financial affairs? (agree strongly, agree somewhat, etc.)</p> <p>11. When the things that you own increase in value, are you more likely to spend money? (agree strongly, agree somewhat, etc.)</p> <p>12. In an emergency, could you get financial assistance of _____ pesos or more from any friends or relatives who do not live with you?</p>	
<p>Financial Assets</p> <p>1. Do you have (Have you ever had) any <u>checking accounts</u>?</p> <ul style="list-style-type: none"> a. What is the most important reason why you don't have a checking account? (don't write enough checks to make it worthwhile, minimum balance is too high, etc.) b. What institution? What type of institution? c. How much is the account? (average over the last month?) d. Is this a money market type account? e. joint account or not? f. How much is in all your remaining checking account? g. What is the most important reason you chose the institution that you did for your main checking account? (location of offices, low fees, etc.) g.i. how many years have you done business with the institution <p>2. Do you or anyone in your family have <u>retirement assets</u>?</p> <ul style="list-style-type: none"> a. who has b. how many does he have c. what specific retirement assets d. what institution? What type of institution e. How much in total is in the account? f. How is the money in this account invested <p>3. Do you have any <u>money market accounts</u>?</p> <ul style="list-style-type: none"> a. does it have check-writing privileges? b. Is this a tax-free money market account? c. What institution? What type of institution? d. How much is the account? e. joint account or not? <p>4. Do you have any <u>CDs or certificates of deposit</u> at financial</p>	

Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<p>institutions (not including retirement assets)?</p> <ol style="list-style-type: none"> a. How many CDs do you have b. What is the total peso value c. What institution? What type of institution d. Is the CD held jointly with the partner <p>5. Do you have <u>other accounts</u> at banks, savings and loan associations, or credit unions? (passbook accounts, share accounts, etc.)</p> <ol style="list-style-type: none"> a. How many accounts b. What institution? What type of institution c. joint account or not? <p>6. Do you have any shares in <u>mutual funds</u>?</p> <ol style="list-style-type: none"> a. In how many different mutual funds do you own shares? b. What type of mutual funds (stock funds, tax-free funds, etc.) c. Has there been a gain or loss in the value of all these mutual funds shares since you obtained them? <ol style="list-style-type: none"> c.i. How much have they lost in value since they were obtained. <p>7. Do you have any corporate, municipal, government or other type of <u>bonds or bills</u>?</p> <ol style="list-style-type: none"> a. how many b. what type of bonds c. what is the face value d. what is the total market value <p>8. Do you own any <u>publicly traded stock</u>?</p> <ol style="list-style-type: none"> a. in how many companies b. what is the total market value c. overall, has there been a gain or loss in the value of this stock since you obtained it? <ol style="list-style-type: none"> c.1. how much did it gain? Lost? d. Is any of this stock in a company where you work or have worked? <ol style="list-style-type: none"> d.1. what is the total market value d.2. is the company's headquarter located outside the country? <p>9. Do you have a <u>brokerage account</u> for the purchase of sale of stocks and other securities?</p> <ol style="list-style-type: none"> a. What institution? What type of institution b. Over the past year, about how many times did you buy or sell stocks or other securities through a broker? c. Do you have a "cash" or "call money" account at a stock brokerage d. What is the total peso value e. Do you have any margin loans at a stock brokerage? f. What is the current balance on these margin loans? 	
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Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<p>10. Do you receive income from or have assets in a <u>trust or managed investment account</u>?</p> <ol style="list-style-type: none"> Are these trusts or managed investment accounts Are any of these set up so that you are legally entitled only to the income and do not have an equity interest. How much income did you receive from these trusts? Do you have trusts in which you have an equity interest. What is the total peso value Who manages these assets? institution, what type of institution <p>11. Do you have <u>life insurance</u>?</p> <ol style="list-style-type: none"> Are any of these groups or individual term insurance policies. What is the current face value Do you have policies that build up a cash value or that you can borrow on? <p>12. Have you ever owed any money by friends, relatives, etc? \</p> <ol style="list-style-type: none"> how much <p>13. Do you have other assets (artwork, precious metals, etc)</p> <ol style="list-style-type: none"> what kind of asset what is the total peso value <p>14. Are any accounts held in some currency other than peso?</p>	
<p>Employment</p> <ol style="list-style-type: none"> Are you working now, temporarily laid off... etc <ol style="list-style-type: none"> If laid off or on leave: when do you expect to go back, when did you last work If disabled or retired: are you doing any work for pat at the present time, when did you retire/become disabled Over this period, how many weeks in total were you unemployed and looking for work Do you work for someone else or self-employed official title of job sort of work you do on your main job what kind of industry do you work in How many hours do you work in your main job in normal week How many weeks do you work on this job in a normal year (including paid vacations) 	<p>Ref no. c001:</p> <p>A1. salaries and wages from regular employment</p> <ol style="list-style-type: none"> family member occupation kind of industry <p>A2. salaries and wages from seasonal/occasional employment</p> <ol style="list-style-type: none"> family member occupation kind of industry

Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<p>8. How much do you earn on your main job (before taxes)</p> <p>9. about how many employees work for this company</p> <p>10. how many years in total have you worked for this employer</p> <p>11. are you covered by a union or employee-association contract</p> <p>12. do you have any type of insurance other than Social Security that would help provide you with income in the event that you become disabled</p> <p>13. Does your employer offer any retirement plans</p> <p>14. are you currently receiving benefit payments from any retirement plans from this job</p> <p>15. are there any retirement or savings plans from this job where you are not yet drawing benefit payments</p> <p>16. At what age do you expect to start receiving benefits from this plan</p> <p>17. About how much do you expect your benefits would be</p> <p>SAVINGS PLAN</p> <p>1. Do you have a thrift or savings plan, supplemental retirement account, etc</p> <p>2. For how many years have you been included in this plan</p> <p>3. Does your employer make contributions to this plan (what percent)</p> <p>4. Do you currently make contributions to this plan</p> <p>5. Roughly how much money is in your account at present</p> <p>6. Can you borrow against the account</p> <p>7. Do you have a loan against that account, what is the amount of the loan balance</p> <p>8. If you needed money in an emergency, could you withdraw some of the funds in that account</p> <p>9. If you were to leave this job now, would you lose all, some, or none of the money in this account, what proportion would you lose</p>	
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Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<p>10. What other benefit payments do you expect to receive from the pension plans from this job?</p> <p>OTHER JOB</p> <p>1. Are you doing any work for pay now other than your main job?</p> <p>2. Hours of work per week</p> <p>3. How many weeks do you work on this job in a normal year (including paid vacations)</p> <p>4. How much do you earn on your main job (before taxes)</p> <p>WORK HISTORY</p> <p>4. Since you were 18, how many years have you worked full-time</p> <p>5. For how many different employers have you worked in full-time jobs lasting one year or more</p> <p>6. Longest Job:</p> <p>a. did you work for someone else, self-employed</p> <p>b. What sort of work</p> <p>c. What kind of business or industry</p> <p>d. What year did you start working for this job</p> <p>e. What year did you stop working for this job</p> <p>f. About how much were you earning before taxes when you stopped</p> <p>4. Since you were 18, have there been years when you worked only part-time, how many years</p> <p>5. In what year do you expect to stop working full-time</p> <p>6. Do you expect to work part-time after that</p> <p>7. In what year do you expect to stop working altogether</p> <p>PARTNER'S EMPLOYMENT (same questions above)</p> <p>BENEFITS</p> <p>1. Are you currently receiving Social Security benefit payments</p> <p>a. what type of benefits</p> <p>b. how long have you received these benefits</p> <p>c. how much do you receive each month/year</p> <p>2. other benefits...</p>	
Sources of income	

Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<ol style="list-style-type: none"> 1. How much income did you receive or loss before deducting taxes and anything else from... <ol style="list-style-type: none"> d. wages and salaries e. did you have income or losses from a professional practice, business, farm? f. ...non-taxable investments such as municipal bonds g. ...other interest income h. ...dividends i. ...net gains or losses from the sale of stocks, bonds, or real estate j. ...net rent, trust income, or royalties from any other investment or business k. ...unemployment or worker's compensation l. ...child support or alimony which you or your family receive m. ...income from Social Security or other pensions, annuities, etc. n. Did you have income from food stamps, or other forms of welfare assistance o. Did you have income from any other sources 2. About what would your income have been if it had been a normal year 3. Over the past 5 years, did your total income go up more than prices, less than prices, or about the same as prices? 4. Over the next year, do you expect your total income to go up more than prices, less than prices, or about the same as prices? 5. At this time, do you have a good idea of what your family's income for the next year will be? 6. Do you usually have a good idea of what your next year's income will be? 7. Do you usually have a good idea of what you family's next year's income will be? 8. How much was the total income you received in [year] from all sources before taxes and other deductions were made? 9. Is this income unusually high or low compared to what you would expect in a "normal" year, or is it normal? Reason 10. During [year] did you pay alimony, separation payments or child support? How much 11. During [year] did you provide any other financial support for relatives or friends who do not live here? To whom 	<p>Profits from sale of stocks, bonds, ... (ref no. c801)</p> <p>Ref. no. c501:</p> <p>c. other sources of income:</p> <ol style="list-style-type: none"> 1. cash receipts, gifts, support, relief and other forms of assistance from abroad 2. cash receipts, support, assistance and relief from domestic source 3. rentals received from non-agricultural lands, buildings, spaces and other properties 4. interest 5. pension and retirement, workmen's compensation and social security benefits 6. dividends from investment 7. other sources <p>d. other receipts</p>
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Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<p>12. Did you file or do you expect to file an income tax return?</p>	
<p>Inheritance and contributions</p> <ol style="list-style-type: none"> 1. Have you ever received inheritance, or been given substantial assets in a trust or in some other form? <ol style="list-style-type: none"> g. How many h. What was it i. Approximate value received j. What year received k. From whom 2. Do you expect to receive a substantial inheritance or transfer of assets in the future? <ol style="list-style-type: none"> a. how much (large, moderate amount, etc.) 3. During [year] did you make charitable contributions of money or property totaling [amount] or more? (do not include political contributions) <ol style="list-style-type: none"> a. how much b. During [year] did you volunteer an average of one hour or more a week to any charitable organizations? 4. Do you think it is very important, important, etc, to leave an estate or inheritance to your surviving heirs? 5. Do you expect to leave a sizeable estate to others? 	<p>INCOME: ref. no. C801</p> <p>inheritance</p>
<p>Interviewer Observations</p> <ol style="list-style-type: none"> 1. Type of structure of the house (condo, apt, etc.) 2. Buildings in the immediate neighborhood (all, mostly, etc. residential) 3. Housing structures on the block (__ ft apart) 4. Condition of the exterior of buildings on the block (better, as good as, worse than respondent's) 5. Physical condition of the interior of the house (excellent, good, etc.) 6. Ethnicity of neighborhood residents 7. Respondent's ability to express himself (excellent, good, etc.) 8. Was the respondent suspicious about the study before the interview? 	

Table C.2. Survey of Consumer Finances vs. Family Income and Expenditure Survey

<p>9. Was the respondent suspicious about the study after the interview?</p> <p>10. How great was the respondent's interest in the interview?</p> <p>11. Did the respondent refer to documents to answer questions? a. What documents (loan, account statements, etc.)</p> <p>12. In what language was the survey conducted?</p> <p>13. What is the final disposition of this case?</p>	
<p>Section Y</p> <p>1. Are you currently eligible to receive benefits from any government health insurance programs? What programs</p> <p>2. Are you covered by any other type of health coverage/plan? a. is this obtained through your employer or former employer, a union, through direct payments, etc. b. How is this paid for c. How much do you pay each month</p> <p>4. for other family members (same questions as 1 and 2)</p> <p>5. If some family members are not covered, why? (can't afford, etc.)</p> <p>6. For other family members who have independent finances, in [year] did they receive any income from wages and salaries? How much (before taxes and other deductions)</p> <p>7. What other sources of income do they have? How much (before taxes and other deductions)</p>	

IDENTIFICATION AND OTHER INFORMATION (Found in CFS but not in FIES)

1. Ethnicity
2. Number of children not living with the respondent
 - d. aged 25 above
 - e. aged 18 below
3. number of siblings of respondent
 - a. number older than respondent
4. partnership
 - a. how many years married
 - b. do you receive/ pay support to partner
 - i. how much
 - ii. frequency

- c. other marriages
 - d. age at first marriage
 - e. joint ownership of assets/debts
- 5. parents
 - a. still living?
 - b. Age
- 6. health
 - a. do you smoke
 - b. how healthy are you in your opinion
 - c. how long do you think will you live
- 7. degree earned of partner
- 8. Characteristics of household members:
 - a. Sex
 - b. Marital status
 - c. Financial independence of those aged 18 and above

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