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CIDE

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HOUSEHOLD SAVING IN MEXICO

Abstract

In this paper we use data from four recent household income and expenditure surveys to examine whether observed consumption and saving profiles in Mexico are consistent with some implications of the basic life cycle theory using individual age cohorts. In particular we find that household consumption tracks income closely and that older households do not dissave as predicted by this model. These results are similar with empirical work for other countries. We also explore some hypothesis that have been advanced to explain the recent decline in the private saving rate in Mexico. In particular we analyze the impact of financial liberalization on liquidity constrained consumers as well as the effect of capital gains changes on real estate and financial assets on household saving. Our results offer some evidence for the argument that the relaxation of credit constraints have been a contributing factor to recent saving decline.

I. Introduction

Probably, one of the most disturbing problems that policymakers have faced over the last decade is a decline on the rate of domestic saving. This trend has been spread worldwide, and Mexico is not the exception. According to official data, the gross domestic saving rate declined from 21% of GDP as an average during the 80's to less than 16% in 1994. A large part of the drop in saving has come from a falloff in the rate of private saving. This rate declined continuously from a level around 18 percent of GDP in 1988 to 10.5 percent in 1992, showing a slightly recovery since 1993. Moreover, there is preliminary evidence that the main contributing factor has been a reduction in personal saving. It is the believe that his moderate level of saving has constituted a constraint for the rate of investment and has made the country more vulnerable to foreign capital flows. It should be remembered that foreign savings was around 7 percent of GDP in 1992. Although foreign savings will continue to play an important role in the medium and long term, for the government it is crucial to increase domestic saving as the main source for financing economic growth. In order to succeed, it is important to understand more fully the determination of domestic saving, and in particular of private saving. Currently, there are many studies analyzing the behavior and determination of private saving, but they are based on aggregate data, while work using micro data is still very scanty. There is a consensus that the latter will offer more benefits in the future and therefore, it is important to promote these kind of studies.

In this paper we analyze the saving behavior of Mexican households. We use data from four recent household income and expenditure surveys (Encuesta Nacional de Ingreso y Gasto de los Hogares, ENIGH) to examine whether observed consumption and saving profiles in Mexico are consistent with some implications of the basic life cycle theory. We also explore some hypothesis that have been advanced to explain the recent decline in the private saving rate. In particular we analyze the impact of financial liberalization on liquidity constrained consumers as well as the effect of capital gains changes on household saving. In the next section we present a brief summary of the evolution of the aggregate saving rate and its components derived from national accounts. In section three we explain the basic characteristics of the household surveys, ENIGH, and of the variables used in our analysis. Section four presents the analysis of the cohorts profiles while section five explore the relevance of some hypothesis to explain recent behavior of household saving. We conclude with some final comments.

II. Aggregate Saving Behavior

In this section we summarize the recent evolution of the gross national saving rate in Mexico using data derived from national accounts. It is well known that the measurement of this variable faces serious problems because it is a residual arrived at after deducting the balance of payment deficit on current account, assumed to equal external saving inflow, from estimates of gross domestic capital formation. Since data on capital formation, and to a lesser extent on the current account deficit, are subject to substantial margins of error, the saving residual is vulnerable to erroneous influences from both sources. Still, there are other problems when breaking the total down into private and public savings. The latter is assumed to be equal to the fiscal operational deficit plus public investment while the former is a residual. There are alternative estimations adjusted for some different factors to neutralize the effects of inflation, exchange rate changes, or to include different definitions of consumption, investment and income. Although these alternatives estimations differ in absolute values, in general all of them present the basic trend observed during the last eight years showing a decline since 1989. It is for this reason that we use the official data for our analysis, displayed on table 1.

Table 1
Saving rates in Mexico
 (%GDP)

	Domestic	Public	Private	Foreign
<i>1960-1969</i>	18.0	3.4	15.6	2.2
<i>1970-1981</i>	19.8	3.9	15.9	3.6
<i>1982-1989</i>	21.3	3.7	17.6	-0.8
<i>1990</i>	19.6	6.5	13.2	3.0
<i>1991</i>	18.4	7.7	10.6	5.1
<i>1992</i>	17.1	6.6	10.5	7.3
<i>1993</i>	16.8	4.5	11.9	6.4
<i>1994</i>	15.6	3.7	12.0	7.8
<i>1995</i>	19.2	4.3	15.0	0.3

SOURCE: Banco de México.

According to table one, domestic saving keep a growing tendency between the 60's and the 80's. But after 1989 this trend shows a reversion at least during the first part of the 90's, explained basically by the evolution of the private saving rate. It is interesting to note how the evolution of foreign saving is associated with the position of the country with respect to the international goods and capitals markets. For example, the exclusion of Mexico of the voluntary international capital market during most part of the 80's as a consequence of the 1982 debt crisis is reflected in a negative foreign saving rate on average during this period. After the abrupt opening of the economy since 1989 and the strong inflow of capital, foreign saving as a proportion of GDP increased substantially, reaching levels above 7 percent for some years. In any case, this component is the one who shows more variability. In the case of public saving, its evolution is associated with the fiscal stance of the public sector. Between the 60's and the 80's this component represented around 3.6 percent of GDP on average. But after 1989, its participation as a proportion of the GDP was also increased to almost 5 percent as a consequence of the stabilization and structural change programs implemented by the government that improved the finances of the government. Finally, the private saving rate increased its participation in the GDP from 15.6 percent in average during the 60's to 17.6 percent during the 80's, but after 1989, this participation declined to a lower level of 10.5 percent in 1992. To have a better understanding of this evolution, it would be desirable to decompose private saving into its personal and corporate components, but this is not possible with the information from national accounts. For the Mexican case, Calderón (1996) estimates these components using flow of funds accounts. His results suggest that most of the contraction of private saving during this period can be accounted by the evolution of personal saving, but these results are still preliminary. In any case, most of the hypothesis advanced to explain the decline in the saving rate are related to the behavior of private agents' consumption. That is, most of the causes behind the fall in the private saving rate are related to the consumption boom experienced by the private sector after 1989. Among these causes it has been emphasized the effect on private saving derived from the processes of financial liberalization and commercial opening followed by Mexico during these years. In the first case, it has been argued that a financial liberalization process will conduct to a higher consumption and lower saving for liquidity constrained consumers as a consequence of a relaxation of credit constraints. There is some empirical evidence for many countries that have suffered a decline in its private saving rate after starting a financial liberalization process as discussed by Japelli and Pagano (1994). For the Mexican case, some empirical studies have found that liquidity constraints play a relevant role in explaining consumption-saving decisions. Therefore, it is possible that these consumers adjusted their consumption toward their unconstrained optimum after the sharp increase in the availability of private credit. In the case of the external trade opening, it also fosters the consumption boom as a consequence of a substantial

increase in imported consumption goods as their relative prices went down with the appreciation of the peso in real terms during this period.

Another hypothesis argues that a decreasing rate of inflation observed by the Mexican economy after 1989 fosters a boom in the stock and real estate markets and therefore, a revaluation of private sector portfolios. As a consequence of this wealth effect, consumers adjusted upwards their consumption levels resulting in lower saving. Also, the structural reforms and the desinflationary process reduce uncertainty and improved private sector expectations of future income. These consumers also adjusted upwards their consumption levels. Finally, there is an argument that emphasizes a displacement effect on private saving as a consequence of rising public saving. This argument is related to the Ricardian Equivalence Hypothesis, but empirical evidence on this issue for the Mexican case reviewed in Villagómez (1993) generally rejects the notion of a strict Ricardian Equivalence. Therefore, this effect should be only partial. In this paper we only explore the liquidity constraint effect and wealth effects on private saving using micro data.

III. Household Surveys (ENIGH)

Household surveys offer an alternative way to analyze household saving behavior. In the case of Mexico we have two basic problems when using this data. First, this information is gathered only for some years that are not consecutive. Therefore, we cannot use panel data in our analysis. Second, it is not possible to track the same individual or household over time, therefore we use age cohorts through the successive surveys and construct income, consumption and saving profiles for them. To best of our knowledge this kind of studies has not been attempted for the Mexican economy.

The Survey

Although these surveys have been conducted by the Mexican government for a long time ago, it is only recently when their concepts and methodology are more comparable. Therefore, we use the surveys for 1984, 1989, 1992 and 1994. This survey is conducted by the INEGI¹ and consists of a stratified sampling where the

¹ INEGI stands for Instituto Nacional de Estadística, Geografía e Informática.

probability to select a particular household is not constant. The sample size varies between surveys. In 1984 included 4,737 households, 11,531 in 1989, 10,530 in 1992 and 12,815 in 1994. The sample is representative of the country and INEGI uses non constant expansion factors to report the results. The primary goal of the survey is to obtain information about typical household spending and therefore its emphasis in the interview is placed in obtaining detailed and accurate information about family consumption. At the individual level the information included refers to income, social and demographic characteristics. Unfortunately, this survey does not include information about individual or family wealth holdings.

Variables

Both, income and consumption data reported include a monetary component and an in-kind component. Consumption includes basically total expenditure on durable and non-durable goods as well as home-produced food, while income includes wages, earnings, rents, income from financial assets and self-employment income and is after tax. For our analysis we use two alternative definitions of consumption. The first excludes durable goods (C1) and the second excludes additionally some expenditures on education and health (C2) which we consider should not be included as current expenditure. In both cases it would be desirable to consider only the flow of services provided by these items, but we do not have stock data to have a better treatment. Saving is the difference between after-tax income (excluding also contributions to social security) and consumption, therefore we have two savings variables, S1 and S2, corresponding to each of the above consumption definitions.

The sample that we use excludes households without information of the family head. Additionally we only include data where the age of the household head is between 15 and 90 years. Jointly, these exclusions represent around 4 percent of the whole survey sample. In other studies rural households are excluded because these data is less reliable, but we include them in our analysis because they represent around 37 percent of the sample. It is difficult to have an assessment about the accuracy of these data compared with national accounts data since the latter do not separate private saving into personal saving and corporate saving and there are also serious measurement problems. Another interesting feature in our surveys for all years is that they show negative saving rates for all four years at least for the first four lower deciles. One reason to explain this might be the tendency to underreport income relative to expenditure showed also in surveys from other countries. In any case, we include these households in our analysis.

IV. Consumption, Income and Saving Profiles

One of the most popular models to analyze saving behavior of individuals is the Life-Cycle model in which consumption and saving for a consumer evolve during his life according to his age and based on intertemporal allocation criteria. The most popular implication of the basic model is that consumers save during working years and dissave during retirement. Therefore, savings follows a hump-shaped pattern. Another interesting feature implied by this model is a positive causal relation from growth to saving. An increase in productivity will derive in wealthier younger consumers compared with their parents at the same age. Since the younger consumers are the savers, there will be a positive net increase in aggregate savings. Also, when using cohorts this effect will be reflected in a shifted consumption profile for the younger cohorts. We can explore whether the observed patterns in consumption and saving across different household can be fit into the life cycle story for the Mexican case using this new set of available information.

It would be desirable to track the behavior of the same individual over time to analyze these implications, but this is not possible with the available information. Alternatively we can use cohorts and track individual age cohorts through the successive surveys. This cohorts are constructed by aggregating and averaging data of the relevant variables, like the logarithm of income and consumption, for a household head according to his age in the first survey and then following the behavior of this cohort "x" age greater in the successive surveys. This is the procedure we follow in this paper. We consider five years intervals so that the first cohort includes household heads born between 1965 and 1969. For the first survey, 1984, these household heads will be between 15 and 19 years old, and for the last survey in 1994, they will be between 25 and 29 years old. In total we defined 12 cohorts. Since we have four observations for each cohort, we ended up with 48 observations. It is important to note that, as Deaton and Paxson (1993) point out, the procedure of averaging by the age of the household head has the problem of confounding genuine changes in stable households with changes in both household formation and headship. One possible effect is that we will observe that at high ages, households saving rates increase with the age of the head. Unfortunately this problem has no solution and we need to keep this problem in mind when interpreting the results.

In figure 1 we plot the age-income profile for our whole sample and for its division between rural and urban cohorts, while figure 2 plots the age-consumption profiles for our two consumption definitions. In general these profiles follow the pattern suggested by the life cycle model. They increase up to middle-age and then bend down at old ages. In the case of the income profiles, the peak is reached at an age of around 50 years for the whole sample, but it is earlier (around 45 years) for the urban cohorts and latter for the rural cohorts (after 50 years). Also, it can be

observed that there is a faster growth for the younger cohorts, in particular when looking at the urban sub-sample. These age income profiles shift up for each successive cohort. In any case this effect is quite small compared, for example with Taiwan. One reason can be that the Mexican economy has experienced a very modest growth rate during the last two decades. A similar pattern can be observed for the age consumption profiles. In this case it is interesting to observe a clear increase in consumption in 1992, the third survey year, for all cohorts. This jump captures the consumption boom experienced after the financial liberalization and trade opening of the Mexican economy in 1989-1990.

Figure 1
Age Income Profiles

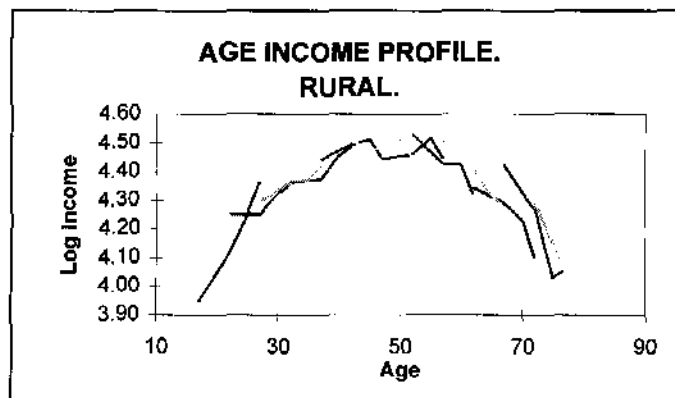
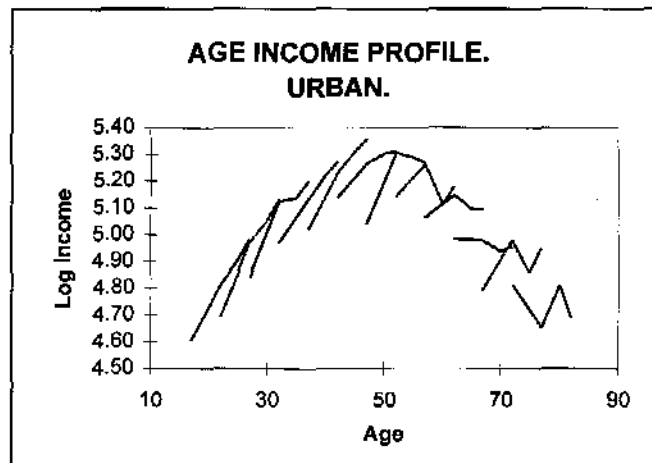
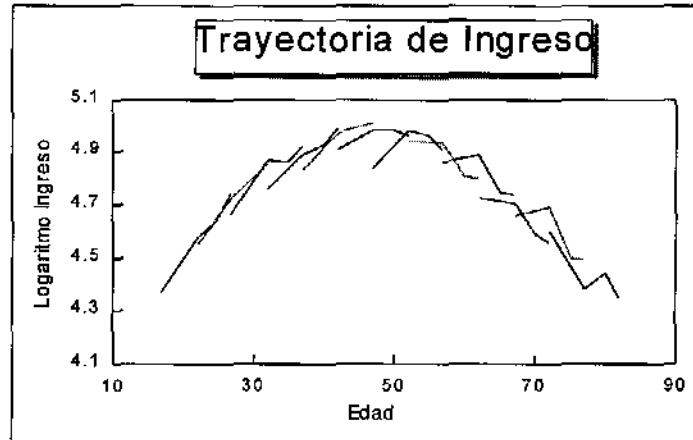
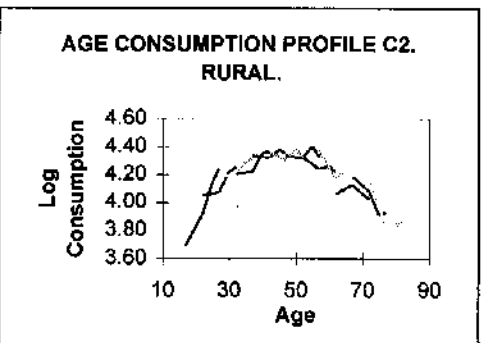
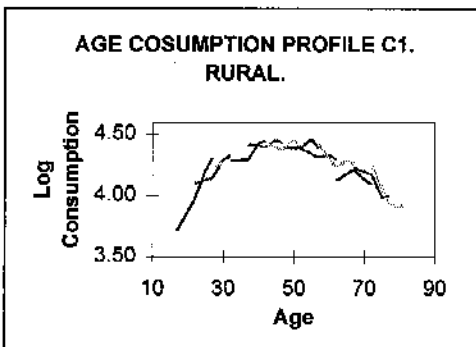
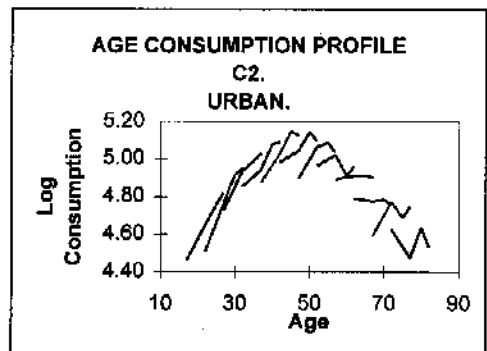
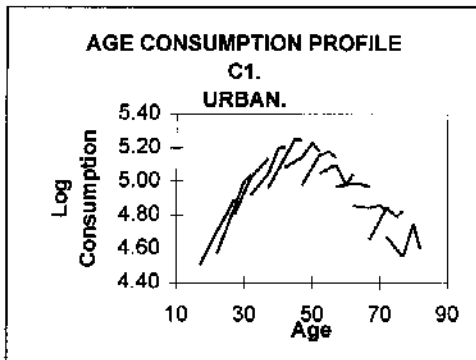
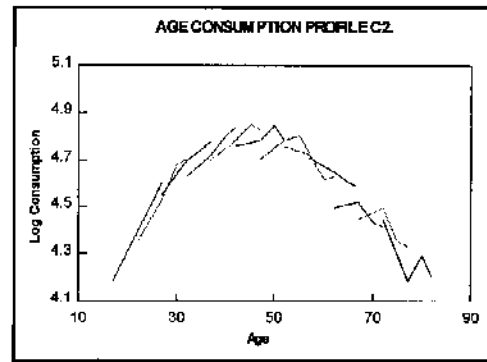
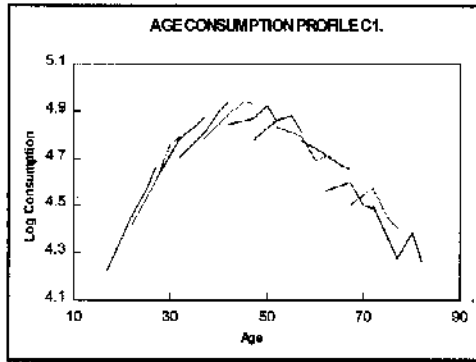
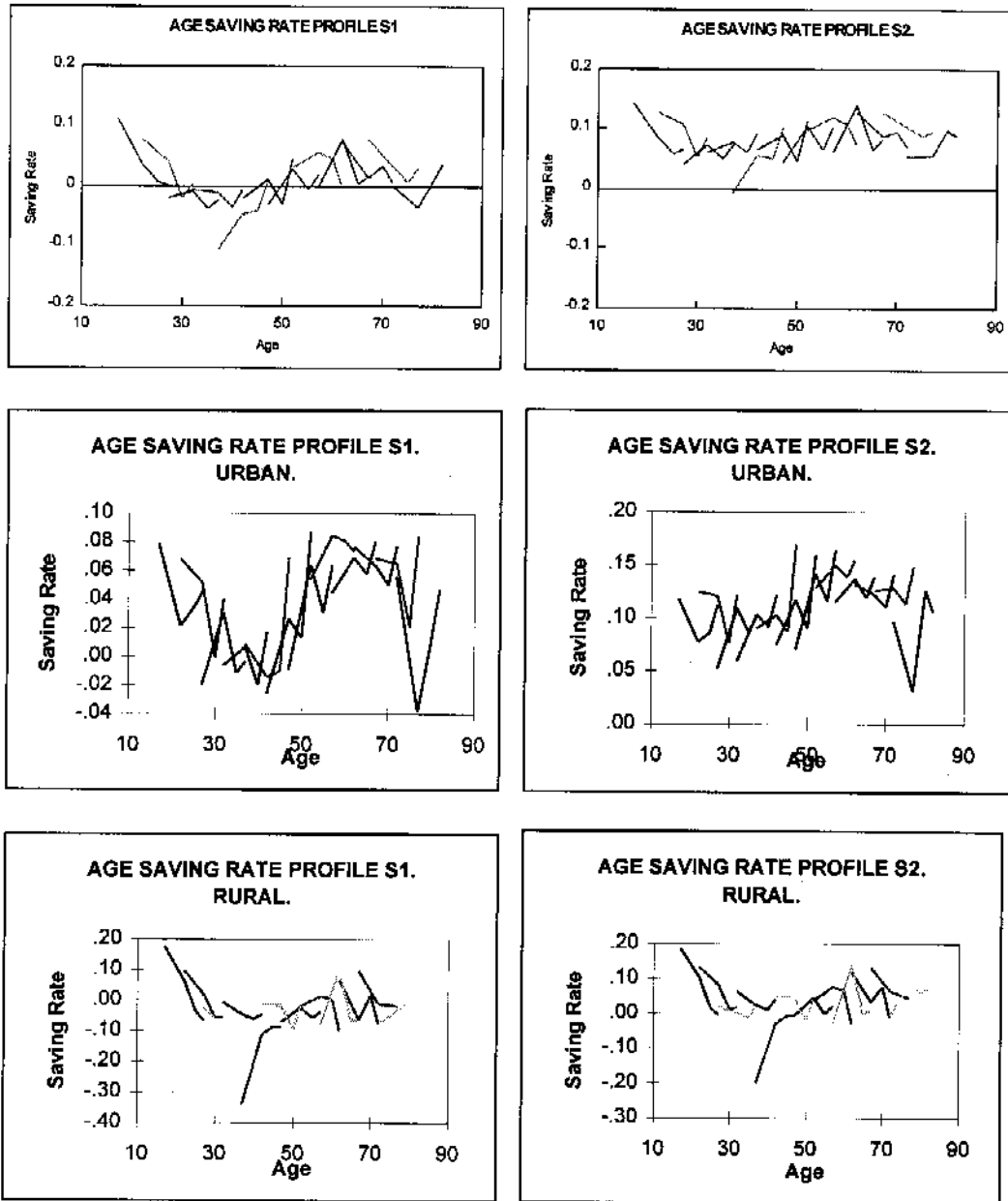


Figure 2
Age Consumption Profiles



The feature that turns out to be very interesting when looking at these income and consumption profiles is that they appear to track each other, consistent with similar evidence of tracking for other countries as discussed by Deaton (1992) and Paxson (1996) among others. These authors mention the possibility that borrowing constraints or a buffer stock like model can explain the coincidence of movements in income and consumption over the life cycle. In any case, the important implication derived from this fact is that the age-saving profile can take on any shape unlike the one suggested by the basic life cycle model. In Figure 3 we plot the age saving profiles derived from our data. In particular, saving decreases continuously reaching its lowest point at an age of around 40 years old, being more drastic for urban cohorts when using the first definition of consumption.

Figure 3
Age Saving Profiles



It is possible that this pattern can be explained, at least in part, by family size and the expenditure that go with it. For the typical Mexican households, the family size peak between 40 and 50 years of the household head age. This is quite similar for urban as well as rural households, although the size differs being smaller for the former.

V. Why did Saving fall?

As we mentioned in section II, private saving seems to explain most of the decline in national saving after 1989. In this section we explore some of the hypothesis advanced to explain this phenomena. Using the available information we will concentrate our analysis on the arguments based on the relaxing of liquidity constraints and the wealth effect due to the revaluation of financial assets and real estate.

In table 2 and 3 we show saving rates by age of household head compiled from our household surveys for our two consumption definitions. These rates are the average for two periods, 1984-89 and 1992-94 and are arranged by deciles. The reason for this splitting is because 1989 turns out to be the year when the financial liberalization and trade opening programs were implemented by the government. Therefore, we expect to capture the change in the saving behavior of Mexican consumers between this two periods. The first interesting point displayed by these tables is that for the first three lower deciles the saving rates are negative. As we explained above, this information is difficult to interpret. Moreover, by looking at the change between the two sub-periods, it seems like there is an increase in savings for these households, but it might be that there is just less dissaving. The second interesting feature is that both tables capture the decline in the saving rate after 1989, but this decline is smaller compared with national accounts data and is concentrated for households for the age group between 15-30 years and for households headed by individuals over 41 years. Third, although there is a decline of the saving rate for households heads over 61 years old after 1989, their saving rates for the two sub-periods are high. This evidence seems to contradict the life cycle implication that older consumers tend to dissave during retirement. It is possible that the bequest motive plays a major role in explaining this behavior, but we also have the issue of the extended family, that is still an important feature of the Mexican society.

In order to explore the causes of the saving decline, we use the above information, but arranging our households groups with respect to their holdings of real estate and financial assets. For these purposes we use the following information from our surveys. First, we have information about homeownership. In this case, it is

postulated that homeowners can use their real estate as a collateral when looking for a credit. During a process of financial liberalization, these consumers will be in a better position to obtain a credit and therefore, their saving rates will decline. To explore the argument based on capital gains due to a revaluation of financial assets, since we do not have information about holdings of these assets, we postulate that these consumers can be proxied by those households that report some income derived from financial holdings (savings deposits, checking accounts, equity, etc.). This is a strong assumption since these financial holdings include items other than equity, but we will take it as a rough approximation.

Using these information we construct our household groups arranging them according to our control variables: homeownership and financial assets holdings. We estimate the saving rates for these groups and their change between 1984-89 and 1992-94. In tables 4 and 5 we compare the change in the saving rates for households with and without real estates and with and without financial assets holdings for our two definitions of saving. Our data shows that for households owning a house, the decline in their saving rate between 1984-89 and 1992-94 is greater than for those households without a house. Moreover, for the former this pattern is generalized among all deciles and ages while for the latter the decline occurs for the households located at the last decile and for those between 41 and 50 years of age. Therefore, the survey data provide some evidence that the relaxation of credit constraints for those households with a real estate may have been a contributing factor to lower saving. When we contrast the behavior of households with and without financial holdings, the data do not provide evidence with respect to a wealth effect derived from a revaluation of financial assets. Moreover, for these households the change in their saving rates between both periods is positive while we were expecting a negative change. It is still possible that the reduction in the saving rates for those homeowners is a result not only because the credit relaxation but because there is also a revaluation of their real estate. To explore further this possibility we compute the saving rates for households with financial assets and real estate. The change in their saving rates between both periods are displayed at the bottom of tables 4 and 5. For these households the changes are positive as in the case of households having only financial assets. Therefore, this data do not show evidence to support the wealth effect as a factor explaining the decline in private saving rates. Given these results, we believe that the credit relaxation argument plays a stronger role in explaining recent household saving behavior.

CONCLUSIONS

In this paper we present an exploratory analysis of the saving behavior of the Mexican households in order to explain the recent decline in private saving rates. We used data from recent income and expenditure surveys to examine whether observed consumption and saving profiles are consistent with some implications of the basic life cycle theory. This analysis is based on individual age cohorts. We find that household consumption tracks income closely and that the age saving profiles do not take on the hump-shaped pattern suggested by the basic life cycle model. In particular, saving declines with age up to around 40 years of age and then bend up at older ages. Also, older households do not dissave as predicted by this model.

We also explore some hypothesis that have been advanced to explain recent decline in the private saving rate in Mexico. In particular we analyze the impact of financial liberalization on liquidity constrained consumers as well as the effect of capital gains changes on real estate and financial assets on household saving. Our results offer some evidence to support that argument that the relaxation of credit constraints for those households with a real estate may have been a contributing factor to lower saving. In the case of the capital gains argument our results are negative, although we acknowledge that our proxy for these consumers is weak.

Table 2
Saving rate S1
(% Income)

1984-1989/1992-1994

	1984-1989					
	Age Group					
	TOTAL	15-30	31-40	41-50	51-60	61 or more
TOTAL	0.85	2.83	-2.46	-1.66	4.42	3.13
Decil						
I-III	-19.77	-10.67	-25.89	-35.56	-17.36	-12.3
IV-VI	2.67	4.20	-1.90	2.09	4.03	8.47
VII-IX	11.66	13.19	8.71	10.91	13.46	14.34
X	24.44	22.12	20.99	24.15	26.7	29.18
	1992-1994					
TOTAL	-0.22	0.04	-1.97	-0.70	1.40	1.29
Decil						
I-III	-19.27	-15.73	-22.36	-25.77	-23.81	-12.39
IV-VI	1.20	3.63	-1.54	-0.79	2.54	3.74
VII-IX	10.34	12.21	8.47	7.99	12.58	13.11
X	21.11	21.12	18.18	20.23	23.68	24.57
	Change					
TOTAL	-1.07	-2.79	0.49	0.96	-3.02	-1.84
Decil						
I-III	0.50	-5.06	3.53	9.79	-6.45	-0.09
IV-VI	-1.47	-0.57	0.36	-2.88	-1.49	-4.73
VII-IX	-1.32	-0.98	-0.24	-2.92	-0.88	-1.23
X	-3.33	-1.00	-2.81	-3.92	-3.02	-4.61

SOURCE: Encuesta Ingreso-Gasto, INEGI

Table 3
Saving rate S2
(% Income)

	1984-1989					
	Age Group					
	TOTAL	15-30	31-40	41-50	51-60	61 or more
TOTAL	8.38	9.00	6.13	7.16	10.99	10.03
Decil						
I-III	-12.21	-4.96	-17.04	-25.65	-11.27	-5.05
IV-VI	9.78	10.31	6.54	10.03	10.33	14.25
VII-IX	19.33	19.82	17.09	19.50	20.32	21.44
X	32.72	29.03	30.06	33.29	34.08	37.10
		1992-1994				
TOTAL	7.54	6.18	6.94	8.40	8.60	8.07
Decil						
I-III	-12.04	-9.78	-13.72	-16.89	-16.18	-6.73
IV-VI	8.71	9.45	7.53	7.62	9.03	10.81
VII-IX	18.25	18.65	16.97	16.96	19.49	21.01
X	30.76	29.18	28.62	31.49	32.12	32.51
		Change				
TOTAL	-0.84	-2.82	0.81	1.24	-2.39	-1.96
Decil						
I-III	0.17	-4.82	3.32	8.76	-4.91	-1.68
IV-VI	-1.07	-0.86	0.99	-2.41	-1.30	-3.44
VII-IX	-1.08	-1.17	-0.12	-2.54	-0.83	-0.43
X	-1.96	0.15	-1.44	-1.80	-1.96	-4.59

SOURCE: Encuesta Ingreso-Gasto, INEGI.

Table 4
 Saving rates S1
 Change 1994-92 / 1984-89
 (Income %)

		Age				
		15-30	31-40	41-50	51-60	61 or more
Without home ownership						
Decil						
I - III	3.88	-2.24	-1.69	22.48	4.42	10.60
IV - VI	2.21	0.68	4.89	-0.42	6.37	-4.20
VII - IX	1.31	1.10	4.10	-3.03	3.17	-0.17
X	-3.11	0.66	-5.08	-6.23	-9.17	17.33
Total	1.28	-1.56	1.79	5.09	1.92	5.32
With home ownership						
Decil						
I - III	-0.51	-6.92	5.23	7.01	-8.07	-1.79
IV - VI	-2.97	-1.92	-1.96	-3.55	-2.84	-4.78
VII - IX	-2.39	-4.22	-2.20	-3.07	-1.55	-1.41
X	-3.49	-3.48	-1.88	-3.53	-2.11	-6.58
Total	-1.90	-4.00	-0.06	-0.08	-3.80	-2.89
Without financial assets holdings						
Decil						
I - III	1.04	-6.96	3.17	13.04	-3.00	0.12
IV - VI	-2.69	-1.66	-1.52	-3.92	-2.42	-5.57
VII - IX	-4.77	-4.66	-3.47	-5.36	-4.31	-6.62
X	-9.63	-6.10	-7.31	-13.09	-9.11	-10.59
Total	-3.99	-6.38	-2.84	-1.66	-5.22	-4.60
With financial assets holdings						
Decil						
I - III	23.86	31.18	33.34	24.16	8.49	18.05
IV - VI	12.02	7.89	24.60	12.76	8.59	0.71
VII - IX	14.16	12.87	12.51	12.26	13.50	23.53
X	6.42	2.43	5.13	16.10	4.77	2.43
Total	15.59	14.79	18.88	19.17	7.94	15.25
With home ownership & financial assets holdings						
Decil						
I - III	22.34	25.50	49.18	22.03	9.68	13.23
IV - VI	7.65	6.73	19.29	5.09	5.28	-0.16
VII - IX	12.99	10.04	11.81	12.57	9.61	21.99
X	6.40	-5.52	3.64	16.93	5.13	2.41
Total	14.21	16.29	19.48	16.78	4.73	13.12

SOURCE: Encuesta Ingreso-Gasto INEGI.

Table 5
 Saving rates S2
 Change 1994-92 / 1984-89
 (Income %)

		Age				
		15-30	31-40	41-50	51-60	61 o more
Without home ownership						
Decil						
I - III	3.13	-1.68	0.32	15.05	4.48	8.16
IV - VI	1.49	-0.22	4.83	-2.89	6.74	-2.68
VII - IX	1.25	0.56	3.70	-1.59	2.96	-0.74
X	-1.83	0.70	-3.13	-5.76	-6.08	16.95
Total	0.90	-1.98	2.27	3.13	2.29	4.49
With home ownership						
Decil						
I - III	-0.73	-6.94	4.31	7.49	-6.28	-3.29
IV - VI	-2.12	-1.55	-1.01	-2.34	-2.69	-3.53
VII - IX	-2.03	-3.86	-1.85	-2.90	-1.47	-0.45
X	-2.10	-0.66	-0.75	-1.06	-1.35	-6.53
Total	-1.46	-3.65	0.20	0.76	-3.14	-2.93
Without financial assets holdings						
Decil						
I - III	0.56	-6.80	3.01	11.59	-2.49	-1.16
IV - VI	-2.26	-1.91	-0.57	-3.27	-2.26	-4.88
VII - IX	-4.12	-4.72	-2.79	-4.37	-4.04	-5.75
X	-6.84	-3.65	-5.05	-9.56	-6.86	-7.75
Total	-3.69	-6.42	-2.24	-1.22	-4.76	-4.71
With financial assets holdings						
Decil						
I - III	20.81	29.00	29.34	20.89	13.03	11.74
IV - VI	9.89	6.28	19.35	9.42	8.12	3.57
VII - IX	11.73	9.65	10.28	7.68	12.36	23.10
X	5.48	2.95	4.00	15.34	4.00	-1.45
Total	13.32	12.73	15.64	15.73	8.02	13.07
With home ownership & financial assets holdings						
Decil						
I - III	19.79	23.76	43.29	21.18	15.10	7.71
IV - VI	6.49	6.12	13.28	3.42	5.73	4.07
VII - IX	10.90	7.92	9.61	7.75	9.47	21.50
X	5.38	-1.86	1.77	16.59	4.52	-1.41
Total	12.37	15.09	15.54	14.15	5.62	11.46

SOURCE: Encuesta Ingreso-Gasto, INEGI.

REFERENCES

- Buira, A. (1994). "The Determinants of Savings in Mexico". Paper presented at the Conference on the Role of Savings in Economic Growth, FRB of Dallas, March. Mimeo.
- Calderón, A. (1996). "Explicaciones de la Caída del Ahorro Privado en México Desde Tres Perspectivas". Mimeo.
- Carroll, C. (1992). "The Buffer Stock Theory of Saving: Some Macroeconomic Evidence". *Brookings Papers on Economic Activity*, No. 2, p. 61-156.
- Deaton, A. (1990). "Saving in Developing Countries: Theory and Review". *Proceedings of the World Bank Annual Conference on Development Economics*, The World Bank.
- (1992). "Understanding Consumption". Clarendon Press, Oxford.
- and C. Paxson (1993), "Saving, Growth and Aging in Taiwan", NBER WP 4330, April
- INEGI, "Encuesta Nacional de Ingresos y Gastos de los Hogares", 1984, 1989, 1992 y 1994.
- Japelly and Pagano, (1994). "Saving, Growth and Liquidity Constraints". *Quarterly Journal of Economics*, May.
- Paxson, C. (1996), "Saving and Growth: Evidence from Micro Data", *European Economic Review*, 40: 255-288.
- Puchet, M. (1996). "Metodología para Medir el Ahorro en México". MCE, UACPyP-CCH, UNAM. Mimeo.
- SHCP, (1994). "Encuesta Sobre Sistemas Financieros en Poblaciones Semi-urbanas y Rurales".
- Villagómez, A. (1993). "Los Determinantes del Ahorro en México: Una Reseña de la Investigación Empírica". *Economía Mexicana*, Nueva Época, Vol. II.