Understanding Domestic Savings in Latin America and the Caribbean
RG-K1198

1. Background and Justification

There is a widespread perception among academic and policy circles that domestic saving rates are low in the Latin American and Caribbean (LAC) region. On average, domestic saving rates in LAC have remained stagnant at approximately 18 percent of GDP since the 1980s, compared to over 30 percent in fast-growing East Asia. However, it is not clear that cross-country comparisons such as this one are the right way to evaluate the level of savings in an economy.

Saving rates in an economy depend on various factors, such as: (i) demographic trends;[1] (ii) income growth and how growth is distributed across generations; (iii) age profile of earnings for different cohorts in the population; (iv) pension and old-age living arrangements; (v) asset markets and intertemporal trades available to individuals; (vi) individual preferences and their heterogeneity—including aversion to uncertainty and precautionary motives; (vii) future growth expectations. Different theories about saving behavior and the quantitative importance of the various factors mentioned here can generate a variety of patterns at the aggregate level. Therefore, it is not surprising that countries at different stages of demographic transition and with varying growth experiences have different aggregate saving rates.

Nevertheless, it is surprising that saving rates in LAC have remained stagnant, despite the favorable demographic transition under way in the region since the 1970s.[2] Why haven't aggregate saving rates changed much? Are there factors constraining savings in the region? More generally, it is interesting to establish facts such as why (and whether) people are saving. Who is saving? What are the main motivations? What vehicles do people use for saving? How important is saving for retirement? What is the relationship between saving and inequality? What is the impact of financial development on private saving? What is the relationship between financial crises and private saving—between precautionary saving due to classical risk aversion and Knightian uncertainty aversion?

A country's saving rate may be considered suboptimally low if there are identifiable factors that distort saving decisions. Therefore, an alternative to international comparisons in evaluating the level of savings in LAC is to search for idiosyncratic distortions in saving decisions. Moreover, since (aggregate) domestic savings are the sum of both public and private savings—where the latter results from the aggregation of households' and firms' savings—identifying sector-specific distortions could be extremely helpful in terms of policy design. The challenge for the researcher is

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[1] The theoretical underpinnings for the relationship between demographic factors and savings come from the Life-Cycle Hypothesis (LCH). The LCH is derived from the aggregation of finite-lived, overlapping generations and introduces age-related consumer heterogeneity. The LCH posits that individuals will have negative savings when they are young, have positive savings during their working years, and deplete their savings in retirement. In the absence of growth, these will add up to zero. In the presence of growth, younger generations will be 'wealthier' than older ones that are dissaving: this difference can generate a positive relationship between growth and aggregate saving.

[2] See Brea (2003) for a discussion about population dynamics in Latin America and the Caribbean.

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establishing which factors are relevant in each case, and this can be done with the combination of micro and macro data.

2. Objective

The main objective of this research project is to have a complete characterization of savings patterns for a set of countries in the region with available data, and to identify the determinants of, and the potential constraints to, saving. Each study should provide a decomposition of saving in each country among the household, corporate, and public sectors, an assessment of the main drivers of saving in each sector, and a diagnosis of possible factors that may be distorting saving decisions and potentially resulting in under-saving in the country being analyzed. The project intends to draw cross-country comparisons and make policy recommendations based on the collection of case studies.

The country case studies' specific objectives are:

(1) To generate country-specific evidence on saving patterns by economic sector (i.e., public and private—in the latter case, differentiating between households and firms), documenting the contribution of each sector to aggregate national saving.

(2) To do an econometric study of the determinants of savings rates for each economic sector, by identifying idiosyncratic factors that may distort saving decisions in the selected country;

(3) In the cases of households and firms, to complement/contrast evidence based on aggregate saving data (which may be subject to aggregation problems), with evidence based on microeconomic data.[3] This way, one can get a more comprehensive view of the characteristics and determinants of the saving patterns of individuals and firms.[4]

It is important for each country case study to describe the relevant demographic trends in the countries being studied, including the actual and expected impacts on saving.

To explain observed saving patterns in the country being analyzed, country case studies are also expected to discuss the roles of possible factors such as: pension arrangements, informality, labor market imperfections, and financial frictions (to name just a few).

We plan to commission between five and eight papers, depending on the proposals received and the resources available.
Each project is likely to focus on one country, although proposals comparing more than one country would also be acceptable; the latter option may be appropriate for comparisons with countries in other regions.

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[3] Researchers are expected to carry out these micro studies; however, if relevant studies are available, researchers can contrast the macro evidence with whatever micro studies may be available.
[4] Butelmann and Gallego (2000) illustrate the relevance of the microeconomic analysis, in order to avoid some aggregation problems presented in the savings literature.

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3. Scope, Methodology, and Data

This eminently empirical project seeks to combine time-series evidence based on aggregate saving data by country—obtained primarily from national accounts—with cross-sectional evidence based on microeconomic data (i.e., surveys of households and businesses). Therefore, using different methodologies throughout the project is required.

The exact methodologies to be used will depend on data availability. Ideally, studies should include the following modules:

- Accounting decomposition of saving by economic sector using aggregate (macro) data, which is in the spirit of "growth accounting literature". The objective is to illustrate each sector's contribution to national saving over time. Ideally, the sectors should be: (i) public sector; (ii) households that save voluntarily; (iii) households that are forced to save (i.e., pension contributions); and (iv) firms.
- Reduced form, time-series regressions with different saving rates (by sector) as dependent variables that take into account the time-series properties of variables (see Bennett, Loayza, and Schmidt-Hebbel (2001) for a discussion regarding a paper about saving in Chile).[5]
- Cross-sectional regressions using microeconomic (households and firms) data to explore microeconomic determinants of savings. (See, for example, Butelmann and Gallego [2000] for a study using micro data from a household survey in Chile; and Horioka and Terada-Hagiwara [2013] for a recent study using firm-level data in China). When repeated cross sections of the survey data are available, synthetic cohort techniques may be applied to exploit the variation over time (see, for example, Attanasio and Székely [2000] and Sandoval-Hernández [2013]).

The main objective of each study is to evaluate alternative explanations of the evolution of aggregate savings in each country, determine the sense in which aggregate saving rates may be suboptimal, identify the key factors that may induce suboptimal saving if sub optimality is indeed found, and suggest policy measures that may help address this problem.

In terms of data, this project seeks to contribute by providing new measures of saving by economic sectors. In addition to conventional saving measures based on national accounts (i.e., income minus consumption), proposed studies should—particularly in the case of private saving—seek to incorporate additional measures, including (at least):

a) Voluntary household saving and mandatory household saving (e.g., pension contributions).

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[5] While it is not necessary for the regression specification to be derived from a structural model, the authors should base the reduced-form specification on the extensive theoretical literature on the determinants of saving and consumption.

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If data are available, it would be interesting to include extensions such as:

b) Consumption of durable goods (possibly including real estate);
c) Human capital accumulation;
d) Changes in asset values due to inflation;
e) Disposition of saving – i.e., what are the country in question's main saving vehicles for each sector?

Proposals that aim to make use of previously unused datasets, such as surveys of informal firms and firm-level balance sheet data, are encouraged.

4. Selection Criteria

Research institutions only may submit proposals. The IDB seeks to produce up to eight (8) studies and will contribute up to US$30,000 for each study. Research proposals will be selected based on the following criteria:

a) Quality and feasibility of the proposed case;
b) Clarity of the description of the research question(s) and methodology;
c) Scope of the proposed study. Studies that propose using *only* macroeconomic or microeconomic datasets will be considered, although proposals that combine both macro and micro analysis will be given higher scores;
d) Experience of the research team.

To be considered for the project, the research proposal should include the following elements:

1. A brief survey of previous studies on this topic, conducted on the country or countries.
2. Data templates for the description and analysis of domestic saving by economic sectors, and assessment of data availability.
3. A justification for, and description of, the strategy for collecting any additional relevant data.
4. Most importantly, a detailed description of the research question(s) and methodologies to be used in the quantitative exercise.
5. Careful identification of which hypotheses in the proposed case studies could be tested in their macro and micro parts, and which could not, based on data availability.

In addition, proposals must include:

- The name of the research leader and a list of other researchers involved. The center should present a research team whose makeup is justified by its capacity to meet the objectives of the project, including relevant prior experience. Curricula vitae of all researchers involved in the entire project may appear in a separate annex. Subsequent substitutions for researchers originally specified in the proposal may be made with prior approval from project coordinators, but the research leader (of each subject) should lead the entire project to completion;

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- A budget (in a separate annex) indicating the time and resources that will be used within the context of the research work plan. The budget proposed by the research center should disaggregate items financed by the IDB's contribution and those financed by the research center. The budget should distinguish among amounts assigned to professional honoraria, "overhead", and other major categories of research expenditures. **The proposal and corresponding budget _must_ be sent in separate files**;

- Institutions must provide the name and contact information of their legal representative, with authority to sign contracts with the IDB.

Final papers will be considered for dissemination as IDB working papers or technical notes, depending on quality. Other forms of dissemination or publication should be explicitly approved by the coordinators.

In all cases, the final dataset used in the analysis will be delivered to the IDB along with the research paper. (An exception may be made for proprietary data, in which case the team should provide the appropriate documentation. Even in those cases, however, providing the data at some level of aggregation may be required).

5. Proposal Submission

Research institutions interested should submit a proposal no later than **March 24, 2014** using the Web Submission Form. Please note that the submission form allows for two options: one for institutions and one for teams of individual researchers. Please be sure to choose the institutions option. If you are unable to submit the form electronically, please send an e-mail to red@iadb.org.

Proposing **research institutions** should be registered as Research Network members (contact Elton Mancilla at red@iadb.org) and based in the Latin American and Caribbean region. U.S. and European institutions do not qualify as members of the Research Network. However, researchers from the United States and Europe can participate with research teams from proposing institutions.

Note: All proposals and research papers must be submitted in English.

6. Coordination

The project will be coordinated by Eduardo Cavallo (IDB) and Orazio Attanasio (University College London). Klaus Schmidt-Hebbel (Catholic University of Chile) and Peter Montiel (Williams College) will be on the Advisory Committee.

The tentative schedule of activities is as follows:

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- **March 24, 2014:** Due date for **receiving proposals.** Institutions should ensure that complete documentation is submitted to the Evaluation Committee. Complete documentation includes: the registration form providing all requested information, research proposal, budget, and curricula vitae (CVs must be up to three pages long).
- **April 4, 2014:** Announcement of **selected research proposals**
- **July 3, 2014:** Due date for receiving a **first draft** of research papers (drafts should include outlines for missing sections, detailing data and methodology that will be used)
- **July 15–16, 2014: First Discussion Seminar** in Washington, D.C., with the technical directors of the project, to present the first drafts of the research studies
- **December 10, 2014:** Due date for receiving a **second draft**. This draft should be very close to being finalized.
- **January 20–21, 2015: Second Discussion Seminar** in Washington, D.C. with the technical directors of the project, to discuss the second drafts of the research papers
- **February 20, 2015:** Deadline for the **final version** of the research papers, including **a summary that discusses policy lessons.** Data should be submitted by this date. Research papers must follow the **IDB Manual of Style** for working papers.

7. Financial Contribution and Payment Schedule

The IDB will provide up to **US$30,000** as a contribution to the total budget of each study. The payment schedule is as follows:

- **20 percent** within 15 days of signing the formal agreement between the IDB and the respective research center;

- **30 percent** within 15 days of presenting and approving the first draft of the research paper;

- **30 percent** within 15 days of presenting and approving the second draft of the research paper.

- **20 percent** within 15 days of presenting the final research paper, the delivery of the datasets utilized by the study, and its approval by the IDB.

8. References

Attanasio, Orazio P., and Miguel Székely. 2000. "Household Saving in Developing Countries: Inequality, Demographics and All That: How Different Are Latin America and South East Asia?" Working Paper No. 427. Research Department, Inter-American Development Bank, Washington, D.C.

Bennett, Herman, Norman Loayza, and Klaus Schmidt-Hebbel. 2001. "Un estudio del ahorro agregado por agentes económicos en Chile." In F. Morandé and R. Vergara, eds., *Análisis empírico*

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Brea, J. A. 2003. Population Dynamics in Latin America. Pop. Bull. Available at http://findarticles.com/p/articles/mi_qa3761/is_200303/ai_n9173891/?tag=content;col1.

Butelmann P., Andrea, and Francisco Gallego. 2000. "Household Saving in Chile: Microeconomic Evidence." *Journal Economía Chilena (The Chilean Economy)* [Central Bank of Chile] 3(1) April: 5–24.

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Sandoval-Hernández, Jesús. 2013. "Household Saving Behavior in Mexico: Evidence from Cross-Sectional Analysis and Synthetic Panels. College of Charleston, Charleston, SC. Available at: http://sandovalhernandezj.people.cofc.edu/Household%20saving%20behavior.pdf