

Proposal for the Russell Ackoff Doctoral Student Fellowship  
for Research on Human Decision Processes and Risk Management

**Understanding the Emerging Micropensions Sector in India**

Spring 2012

*Doctoral Student:*

Anita Mukherjee (Third year, Applied Economics)  
3000 Steinberg Hall-Dietrich Hall  
3620 Locust Walk  
Philadelphia, PA 19104  
Phone: 650.799.6527  
E-mail: [amukh@wharton.upenn.edu](mailto:amukh@wharton.upenn.edu)

*Faculty Adviser:*

Olivia S. Mitchell (Business Economics and Public Policy)  
3402 Steinberg Hall-Dietrich Hall  
3620 Locust Walk  
Philadelphia, PA 19104  
Phone: 215.746.5706  
E-mail: [mitchelo@wharton.upenn.edu](mailto:mitchelo@wharton.upenn.edu)

*Note:* In lieu of signature, Olivia S. Mitchell has been copied on my electronic grant submission.

## Understanding the Emerging Micropensions<sup>1</sup> Sector in India

I request funds to conduct a market scan of the emerging micropensions sector in India and to spearhead a series of laboratory studies (at the field site) that aid understanding of this new product. Specifically, I request funds to add a set of survey questions related to old-age risks to an ongoing household survey in India that seeks to gauge demand for retirement, life insurance and health insurance products. I also request funds to oversee this data collection and collaborate with field staff in India. My hope is that this initial work will aid me to design an informative randomized controlled trial on long-term financial decision-making under the broad set of risks related to retirement planning.

### *Overview*

I seek to understand the behavioral, economic, and institutional factors that influence participation or lack thereof, in the emerging micropensions market. My analysis will focus on the emerging defined contribution micropensions market in India, with two studies: (1) a market scan on the supply and demand characteristics of the micropensions market; and (2) a lab-based pilot study to explore specific factors related to the take-up of micropensions in India.

Informal workers in the developing world face significant challenges in providing for their own retirement, particularly in view of the dynamics of demographic transition and the fact that many workers are excluded from formal pension systems. One important challenge for retirement planning is that decision-making about saving and investment choices over the lifecycle is a complex problem (Chai et al., 2011). Moreover, many behavioral factors such as inertia (Mitchell et al., 2006), myopia (Holmes, 2011), attention (Karlan et al., 2010), heuristics and biases (Benartzi and Thaler, 2007), and framing (Brown et al., 2008) have been shown to shape decision-making regarding retirement saving. Recent evidence demonstrates conclusively that these decisions are more difficult for consumers with low levels of financial literacy (Lusardi and Mitchell, 2008; Gaurav, Cole and Tobacman, 2011).

In the developing world, there has been a recent effort to make micropensions available to assist the poor in making saving and investment decisions. Most micropensions are of the defined contribution type, involving fixed voluntary contributions over a long period of time; the assets are then professionally invested; and then at some predetermined age (e.g. 58-60), the funds are disbursed either as a lump-sum or as phased withdrawals. India provides an ideal setting to study micropensions because this country's New Pension System is designed to aggressively target a majority of workers in the informal sector (93% of Indian workers). Further, Asher and Vausdevan (2009) note that Indian micropensions are particularly important in view of rising life expectancies and massive changes in migration and family structure.

### *Summary of research objectives*

(1) Market scan (in progress): Understanding the supply and demand for micropensions is a critical first step to scaling up the product as it is still relatively new. I hypothesize that there is heterogeneity across individuals (e.g., by age, sex, marital status, and financial literacy) with

---

<sup>1</sup> Micropensions are small-scale pension products for informal sector workers. In India, the typical micropension requires payment of USD 1-5 per month and drawdown begins at age 58. The typical return is 14% (not inflation adjusted) over 20 years. A lump-sum drawdown is usually possible but carries significant penalties.

regard to their demand for long-term saving accounts. Sex and age may capture systematic differences in risk attitudes and exposure (e.g. women are likely to outlive men), while individual financial literacy can interact with understanding of investment and payout risks (e.g., longevity, investment, and inflation risks; see Shankar and Asher, 2009).

On the supply-side, I seek information on what types of micropension products are on offer, what organizations offer these products, how they are sold, and how they are described to savers. I also seek to know the cost, investment, and actuarial features of the product, and the extent to which sellers are promising lifetime payouts versus access to lump-sums or phased withdrawals. Related questions include the market structure on the supply side: is there entry or exit of firms? Is there competition (and if yes, along which dimensions)? How profitable (if at all) are these products? Is there an effort to cross-sell products such as health and life insurance?

On the demand-side, I seek to understand how household decision-makers currently plan and save for retirement. For example, how do demographic factors like sex, age, marital status, occupation, health status, and financial literacy affect take-up of micropensions? In this context, I seek Ackoff funds to add a set of questions to an existing household survey on perceived risks in areas pertinent to micropensions: life expectancy, health status (especially disability) and poverty in old age. The survey will be conducted by this study's partner organization, the Centre for Micro Finance in India. The survey will be administered to 750 below-poverty line households in June 2012 in the Indian states of Karnataka, Orissa and Uttar Pradesh.

(2) Lab-based studies: Lab-based experiments will be used to explore attitudes toward and expectations about micropensions. In particular, I seek to identify the separate and interactive roles of financial literacy, behavioral biases, and trust in the take-up of micropensions.

Specific questions addressed in these studies will include: what are informal sector workers' expectations about longevity risk, health risk, and poverty in old-age? How does financial literacy interact with behavioral biases in the context of retirement planning? I intend to pose financial literacy questions to evaluate both what people know and how they perceive their own levels of financial literacy. I will also examine whether financial literacy affects take-up of micropensions and/or other financial products.<sup>2</sup> Relatedly, I will examine whether exponential growth bias (Stango and Zinman, 2009) may be a primary deterrent to saving in micropensions<sup>3</sup>.

The lab experiments will also be used to explore the role of trust in the institutions providing micropensions<sup>4</sup>. Trust is important in the context of long-term saving products since money is typically deposited and invested on a monthly basis for 25 years or longer. A potential lab experiment is to test the impact on micropension take-up depending on whether a micropension is emphasized to be (or not be) a government product, a microfinance institution product, or a product provided by a private company.

My ultimate goal with this research topic is to pair economic models with empirical evidence that can shed light on the market for retirement saving among India's poor. I plan to use economic models in this under-researched area to test hypotheses regarding the specific channels (e.g., financial literacy, behavioral biases and trust) which impact the take-up of micropensions. The complementary market scan will address potentially important impediments on both the supply and demand sides of this market.

---

<sup>2</sup> Related research by Hastings and Mitchell (2011) suggests that the least financially literate in Chile were less likely to contribute to government-mandated pension systems. See also Mitchell and Lusardi (2011).

<sup>3</sup> In a recent paper, Song (2012) finds that training on compound interest affects take-up of Chinese micropensions.

<sup>4</sup> See Reuben et al. (2009).

## References

- Benartzi, Shlomo and Richard H. Thaler. 2007. "Heuristics and Biases in Retirement Savings Behavior." *Journal of Economic Perspectives*, 21(3): 81-104.
- Benartzi, Shlomo and Richard H. Thaler. 2004. "Save More Tomorrow: Using Behavioral Economics to Increase Employee Savings." *Journal of Political Economy*, Part 2, 112(1): 164-187.
- Brown, Jeffrey R., Jeffrey R. Kling and Sendhil Mullainathan. "Why Don't People Insure Late Life Consumption? A Framing Explanation of the Under-Annuitization Puzzle," 2008, *American Economic Review Papers and Proceedings*, 98(2): pp. 304-309.
- Chai, Jingjing, Wolfram Horneff, Raimond Maurer, and Olivia S. Mitchell. 2011. "Optimal Portfolio Choice Over the Life-Cycle with Flexible Work, Endogenous Retirement, and Lifetime Payouts." *Review of Finance*, July, 15(3).
- Choi, James J., David Laibson, Brigitte Madrian, and Andrew Metrick. 2004. "For Better or For Worse: Default Effects and 401(k) Savings Behavior." In *Perspectives in the Economics of Aging*, ed. David Wise, Chicago: University of Chicago Press: 81-121.
- Choi, James J., David Laibson, Brigitte Madrian, and Andrew Metrick. 2005. "Optimal Defaults and Active Decisions." NBER Working Paper #11074.
- Gaurav, Sarthak, Shawn Cole and Jeremy Tobacman. 2011. "Marketing Complex Financial Products in Emerging Markets: Evidence from Rainfall Insurance in India." *Journal of Marketing Research*. November forthcoming.
- Hastings, Justine and Olivia S. Mitchell. 2011. "How Financial Literacy and Impatience Shape Retirement Wealth and Investment Behaviors." NBER Working Paper No. 16740.
- Holmes, Craig. 2011. "Myopia, Pension Payments and Retirement: An Experimental Approach." Nuffield Centre for Experimental Social Sciences Working Paper.
- Kahneman, Daniel and Amos Tversky. 1984. "Choices Values and Frames." *American Psychologist*, 39: 341-50.
- Karlan, Dean, Margaret McConnell, Sendhil Mullainathan and Jonathan Zinman. 2010. "Getting to the Top of Mind: How Reminders Increase Saving," NBER Working Paper 16205.
- Mitchell, Olivia S. and Annamaria Lusardi, eds. 2011. *Financial Literacy: Implications for Retirement Security and the Financial Marketplace*. Oxford: OUP, forthcoming.
- Mitchell, Olivia S., Gary R. Mottola, Stephen P. Utkus, and Takeshi Yamaguchi. 2006. "The Inattentive Participant: Portfolio Trading Behavior in 401(k) Plans." Wharton School, Pension Research Council Working Paper #2006-5.
- Reuben, Ernesto, Paola Sapienza, and Luigi Zingales. 2009. "Is Mistrust Self-fulfilling?" *Economics Letters* 104 (2), August: 89-91
- Song, Changcheng. 2012. "Financial Illiteracy and Pension Contributions: A Field Experiment on Compound Interest in China." Working paper.
- Stango, Victor and Jonathan Zinman. 2009. "Exponential Growth Bias and Household Finance." *Journal of Finance*, 64(6): 2807-2849.