Manuela Angelucci
University of Michigan
mangeluc@umich.edu
http://www-personal.umich.edu/~mangeluc/
https://scholar.google.com/citations?user=u1jvf6IAAAAJ&hl=en

Research Statement

I am a development economist studying the behavior of the poor in the presence of financial market imperfections. Specifically, my work seeks to understand how constraints in credit and insurance markets, and the policy interventions designed to alleviate such constraints, affect economic behavior. Most of my research focuses on Mexico.

My doctoral work studied Mexican migration to the United States using two large panel data sets, composed of the data collected for the rural evaluation of PROGRESA/Oportunidades and migration histories from the Mexican Migration Project. My post-doctoral work extends my previous research both substantively and methodologically by studying a range of phenomena linked to financial market imperfections, by using a broader class of econometric methods and estimators, and, when secondary data are insufficient to answer my research questions, by collecting primary data through the implementation of large-scale randomized control trials and lab experiments in Mexico, Kenya, and the United States.

Within this research agenda, there are two separate, yet overlapping themes: (i) social interactions and spillover effects; and (ii) household behavior in the presence of financial market imperfections, and in response to the policies designed to alleviate constraints in credit and insurance markets.

In my future work, I also intend to study financial and mental distress, with the goal of shedding light on the complex relationships between mental health, economic behavior, and poverty traps.

Social interactions and spillover effects

Social interactions are powerful tools to acquire information and overcome market imperfections. For example, when formal insurance and credit markets and imperfect or do not exist, households resort to various informal activities, such as pooling resources, to insure against idiosyncratic risk. Under such conditions, a household’s positive income shock spills over to its whole resource-pooling network, whose consumption will increase. Detecting the existence and size of these spillover effects is important for three reasons: (i) to understand how households cope with imperfect financial markets; (ii) to study the broader effects of policy interventions; and (iii) to design effective policies and experiments to evaluate them.

“Indirect effects of an aid program...” (with G. De Giorgi, American Economic Review, 2009) argues that, when households share resources within their village, an income shock to one household affects the consumption of its entire sharing network. To test this hypothesis, the paper uses the data collected to evaluate Oportunidades, Mexico’s conditional cash transfer program (CCT). To evaluate its effectiveness, in 1998 the program was randomly implemented in 320 villages and withheld until 2000 in 186 villages. Therefore, the data are a panel of four groups of households: eligible v. ineligible (the intended program recipients and the other slightly less poor village residents) and living in treatment v. control villages.

The paper shows that, in villages reached by the program, food consumption increases by about 10% per month per adult equivalent for the ineligible households, which is about half as much as the average increase for the eligible households. Failing to consider this indirect effect underestimates treatment

1 CCT’s provide cash transfers to send children to school and have periodic health checks.
effect on food consumption by 12 percent. Moreover, there is no evidence that this increase in consumption is caused by general equilibrium effects, while there are effects on insurance and credit markets: ineligible households in treatment villages borrow more money (mainly from family and friends), receive more transfers, and, to a small extent, reduce their precautionary savings. These findings suggest that the estimated indirect effects on consumption operate through informal sharing within one’s social network.

“Resource sharing within family networks…” (with G. De Giorgi and I. Rasul, under submission at the Review of Economic Studies), builds on the previous paper in two ways: by studying (i) whether the extended family is one resource-pooling network in the surveyed villages, and (ii) how pooling resources within the extended family affects insurance and investment. The paper models how the extended family can provide insurance against idiosyncratic risk and relax credit constraints to investment. Under such circumstances, the Oportunidades cash transfer will be shared among extended family members and increase the current consumption of both eligible households and their ineligible relatives, but not of ineligible households that lack an extended family. Moreover, the cash transfer may increase investment more among extended family members, who can pool resources to undertake an investment that each individual household could not undertake on its own, resulting in higher current investment and higher future consumption.

We obtained the last names of all household heads and their spouses. This lets us identify the first degree relatives (parent, offspring, sibling) of each household head and spouse, exploiting the fact that each person has two surnames (one inherited from the father and one from the mother) and the patrilineal surname transmission (by which the paternal surnames are passed on to the next generation). We find that the extended family network – the network of first-degree relatives – achieves full insurance, but not the other households in the village. We also find that Oportunidades increases consumption only for ineligible households that belong to extended families, and not for ineligible households without eligible relatives. In sum, the entire family network benefits from the conditional cash transfers.

Moreover, we find differential effects on investment in secondary education, for which Oportunidades provides a partial subsidy: the effect of the cash transfer differs depending on whether the recipients have first-degree relatives in the village or not. While the secondary school enrollment of eligible households -- the direct transfer recipients -- increases by 12% when they have first-degree relatives in the village, enrollment does not increase at all for eligible households without first-degree relatives, who invest in assets with returns that are likely lower than those associated with schooling. Finally, we show that these differential effects are long lasting: similar cash transfers result in higher future consumption for members of extended families than for households without close relatives in the village.

In related work on extended families in rural Mexico, “Extended family networks in rural Mexico…” (with G. De Giorgi, M. Rangel, and I. Rasul, in Institutional Microeconomics of Development, edited by Timothy Besley and Raji Jayaraman, 2010) describes the structure of the extended families in the sampled villages; “Village Economies…” (with G. De Giorgi, M. Rangel, and I. Rasul, B.E. Journal of Economic Analysis and Policy, 2009) explores how this structure relates to the poverty and inequality of the village of residence; and “Family networks and schooling outcomes…” (with G. De Giorgi, M. Rangel, and I. Rasul, Journal of Public Economics, 2010) studies in detail how the spillover effects of Oportunidades on education operate through the family network. Through this body of research, I have acquired extensive knowledge of the features, institutions, and constraints on these central Mexican rural villages and their residents.
Given the conceptual and practical importance of spillover effects, it is useful to design randomized control trials that enable the researcher to detect and measure them. “Program evaluation and spillover effects” (with V. Di Maro, Journal of Development Effectiveness, 2015) discusses both how to design such an experiment and under what conditions we can identify and estimate spillover effects using non-experimental methods. This paper, meant as a guide for practitioners and researchers, was the outcomes of lectures I gave at the United Nation’s Food and Agricultural Organization and the Inter-American Development Bank in 2009 and 2010 to teach state-of-the-art program evaluation methods to practitioners.

One of the findings from my research is that spillover effects may strongly affect policy outcomes, at times in unintended ways. This intuition was one of the motivations behind “When incentives backfire: spillover effects in food choice” (with S. Prina, H. Royer, and A. Samek, under submission at the Quarterly Journal of Economics). A common policy intervention consists of providing monetary incentives to adopt certain actions with positive expected returns. This type of intervention is used in both developing and developed countries, and in very disparate settings (e.g. from nutrition to health, education, savings, and insurance). While incentives often work, they may also signal that the incentivized action is difficult or unpleasant. That is, incentives may have both positive and negative effects on their recipients. Similarly, incentives may have positive and negative spillover effects by changing the proportion of one’s peers who takes up an action and who is incentivized to take up an action. For example, if my neighbors adopt a new technology, I may become more likely to adopt it too; however, if I observe that my neighbors are being paid to use the technology, I may also deduce that the technology is hard or unpleasant to use.

Given the lack of existing data to measure the direct and spillover effects of incentives and to further disentangle the positive and negative spillover effects, we designed and ran a field experiment with over 1,600 children in 9 K-8 schools, in which we randomly incentivized the choice of grapes over cookies during the school lunch and randomly changed both the fraction of one’s peers that were incentivized and the visibility of the incentives. We find that, when incentives are private, grapes take-up grows with the proportion of children incentivized. Conversely, when incentives are visible, grapes take-up does not differ when we incentivize 0, 50, and 100% of children. This occurs because the negative effects from observing other children being incentivized to choose grapes offset the positive effects of the incentives. This finding may offer one potential explanation for the low rates of technology adoption often found in developing countries: when the new technology is highly of fully incentivized, the incentive may send a negative signal about the value of the technology – an explanation that is also consistent with recent evidence from Fischer, Karlan, McConnell, and Raffler (”To charge or not to charge…”, 2014).

The last paper in this set, “Spillover effects of micro-credit in Mexico” (with T. Conley, D. Karlan, and J. Zinman), is currently in progress. This paper seeks to identify the spillover effects of microfinance, the mechanisms through which they occur, and the sources of heterogeneity in their effects.

In sum, in this line of research I use well-known data in novel ways and collect primary data to provide evidence on the importance of informal institutions to overcome market imperfections, and on how the effect of a policy depends on local institutional features and social interactions, sometimes in unexpected ways. Thus, the design and evaluation of policies should depend on the characteristics of these institutions, which can generate multiple types of spillover effects, and, therefore, affect both treated and untreated subjects.
Household behavior with financial market imperfections (and policies to alleviate them)  

Financial market imperfections are one determinant of poverty traps, for example by constraining investment opportunities for poor households. I tackle these issues by both documenting the existence of financial constraints and studying the effects of policies designed to alleviate them.

The first two papers mentioned previously, “Indirect effects of an aid program...” and “Resource sharing within family networks....” indirectly document the existence of imperfections in insurance and credit markets. In addition “Migration and financial constraints...” (Review of Economics and Statistics, 2015) provides evidence that credit constraints prevent some poor rural households in central Mexico from migrating to the United States: the paper shows that migration to the U.S. increases when the households receive an exogenous, temporary, but guaranteed income stream. It further shows that one determinant of this increase is the ability to borrow, as the guaranteed income stream is likely used as collateral. Therefore, as economic growth, anti-poverty efforts, and micro-finance programs relax financial constraints for the poor, unauthorized Mexican migration to the U.S. will likely increase.

As unauthorized migration from Mexico to the United States increases, as has been happening for the last several decades, it becomes more and more important to study the effectiveness of border enforcement, as unauthorized migrants enter the U.S. primarily through its southern border. “U.S. border enforcement...” (Economic Development and Cultural Change, 2012) discusses how border enforcement has an ambiguous effect on the stock of unauthorized immigrants, since higher enforcement reduces both the inflow and outflow of unauthorized aliens in the United States. Using panel data on border enforcement, and turnover in the House and Senate Appropriations Committees and the intensity of the “War on Drugs” as instrumental variables, this paper shows that marginal increases in border controls increased the stock of undocumented Mexican migrants between 1972 and 1986, had negligible effects between 1987 and 1996, and decreased the stock only from the late 1990’s.

One purpose of anti-poverty programs is to overcome the barriers to investment in physical and human capital, thus providing the program recipients with a path out of poverty. In a number of papers, I evaluated the effects of Oportunidades, Mexico’s conditional cash transfer program, on its urban beneficiaries’ consumption, savings, assets, and transfers (in “The Effect of Oportunidades...” and “The Impact of Oportunidades...”). Since the urban evaluation of the program was not a randomized control trial, we use non-experimental methods to measure its effects: “Oportunidades: program effects on consumption...” (with O. Attanasio, Economic Development and Cultural Change, 2009) discusses the methodological issues involved in the identification and estimation of treatment effects in this context, proposing one matching estimator that seems well suited to these data.

If increases in income relax credit constraints on migration, then conditional cash transfer programs will affect the type and timing of migration. These programs are currently being implemented in more and more developing countries (29 by 2009), many of which have long histories as sources of international migration. “Conditional cash transfer programs...” (LABOUR, 2012) explains how conditional transfers, where the potential recipient has to comply with some requirement in order to qualify for eligibility, may decrease contemporaneous migration for some households, but increase future migration for others, while, unconditional grants may increase contemporaneous migration.

Policy impacts are often best understood in light of a theoretical model. In turn, the effects of a policy can be used to test a theory. “The demand for food...” (with O. Attanasio, American Economic Journal:
Policy, 2013) uses the data for the evaluation of Oportunidades to estimate the demand for food for the urban poor, a population for which little empirical evidence is available. We explain how to use the estimated policy effects to generalize the standard tests of unitary models, and show that the program changes the demand curve of a unitary household for some commodities, rather than changing the household’s consumption along the curve. We argue that this finding rejects the unitary model itself, given our indirect evidence that the program’s existence is unlikely to change household preferences, and suggests that Oportunidades changes the mechanisms through which resources are allocated within the household.

An alternative way to foster investment among the poor is to increase the supply of credit that is available to them. The premise of micro-credit programs is that credit access will reduce transaction costs and informational asymmetries, enabling poor households, who are typically excluded from the formal credit market because they lack collateral or steady sources of employment and income, to overcome constraints to investment. “Microcredit impacts…” (with D. Karlan and J. Zinman, American Economic Journal: Applied, 2015) undertakes one of the first large-scale randomized evaluations of the effect of the joint liability loans offered by Compartamos Banco, Mexico’s largest micro-lender. We sampled over 16,000 households in three different cities in Northern Mexico in which Compartamos had not previously lent, and measured effects 27 months post-expansion. In line with the other existing experimental evidence, we find modest positive effects, ruling out both the transformtive large positive effects and the detrimental large negative effects that had been alternatively hoped for and feared in the past.

FUTURE RESEARCH: financial and mental distress

I have recently become interested in the relationship between financial and mental distress. In “Love on the Rocks…” (B.E. Journal of Economic Analysis and Policy – Contributions, 2008), I found that large cash transfers to women increased the aggressive behavior of husbands who hold traditional views of gender roles. This behavior is inconsistent with standard household bargaining models and standard economic theories of domestic violence, while it is consistent with the view that the wife’s entitlement to large cash transfers threatens the husband’s identity, causing frustration. The husband then reasserts his identity and releases his frustration by beating up his wife. Moreover, in “Microcredit impacts…,” we found that access to micro loans reduces depression among the women to whom the loans are offered. These findings highlight the fact that financial and mental distress are related. If financial uncertainty -- one aspect of poverty -- causes poor mental health, and this, in turn, worsens economic behavior (by, e.g., reducing cognitive function and therefore productivity), then poor mental health may be one determinant of poverty traps.

In ongoing and future work I intend to test the two hypotheses that poor mental health worsens economic behavior and that improving economic conditions betters mental health. In ongoing work (“Cash transfers, smoothing, and mental health,” with Carlos Chiapa and Silvia Prina), we study the effect of a large, recurrent, and anticipated bimonthly income transfer on the mental well-being, cognitive function, and economic behavior of the recipients, who are poor Mexican women. We find preliminary evidence that these women do not smooth consumption, as their households’ assets and livestock increase after receiving the expected income shock; that cognitive function, labor income, and locus of control improve after the positive shock, while psychosocial stress decreases. We obtained funding from Innovation for Poverty Action and the Bill and Melinda Gates Foundation, among other donors, to collect more data to study this phenomenon. Moreover, ongoing lab experiments, currently in the USA with Karina Cordova (and about to
be implemented in Kenya with Prachi Jain), confirm that acute stress affects earnings by reducing productivity and worsening the quality of decision making. In sum, preliminary evidence from my ongoing research shows that features of the income process affect mental health and that mental health affects productivity and earnings, and, more broadly, that simplifying the financial lives of the poor affects both their economic behavior and mental health.

To further the understanding of the relationship between these variables, Daniel Bennett and I will study the economic impact of depression treatment, the mental health impact of a job placement service, and the relationship between these two treatments. Poor mental health is a leading cause of morbidity in developing countries. Depression is the most prevalent mental disorder, affecting 20 to 30% of adults in developing countries. This condition is typically stigmatized and untreated. If depression reduces productivity and impairs decision-making, it may have high economic costs for the subjects and their households and children. In this study, we will randomly offer job placement services to mildly depressed poor women in peri-urban Karnataka, India, either before or after psychiatrists treat their depression. This will let us measure the economic impact of depression, the effect of providing employment assistance on depression, and whether the impact of job assistance varies for women before and after their depression is treated, thus shedding light on the interactions between interventions to improve mental health and economic outcomes. Having just secured funds from J-PAL Urban Services Initiative, we are currently setting up a pilot RCT with our field partner Basic Needs, an international non-profit organization with extensive experience in providing both mental health care and economic assistance to the poor.