# **Comments**

Andrew W. Horowitz: Cárdenas, Chong, and Ñopo have undertaken an ambitious project to measure and compare the magnitude of trust, reciprocity, and cooperation among Latin Americans. They administer three well-known experiments (namely, the trust game, the voluntary contributions mechanism, and the risk-pooling game) to over 3,000 subjects, conducting almost 150 sessions in six Latin American capitals. To my knowledge, this project has few rivals in terms of size, scope, and ambition. Understanding the conditions under which trust, cooperation, and reciprocity operate and fail is among the most important endeavors in the social sciences. Moreover, the question as to whether there are significant differences in the propensity to trust and cooperate across geographical regions is an important issue that has not been resolved convincingly.

The authors do an excellent job of providing background references and motivation. Their introductory framing extends beyond the confines of experimental economics, which is laudable. Recruitment procedures, the experimental design, and protocols are all described in good detail and follow generally accepted practice. The authors include further detail on their sampling design, recruitment, and the administration of the experimental sessions in the appendix. The paper then reports responses to a series of questions with the goal of providing insight into the subjects' sociodemographics, beliefs, and preferences.

The paper's experimental results are in line with those found in prior laboratory and field experiments, as noted by the authors. I take mild exception to the presentation of the findings, which I believe could be stated far more precisely. For example, the first finding, which states that "Latin Americans are willing to trust and cooperate," would be much more informative if it were instead stated as follows: "Trust game behavior of Latin American subjects is similar to behavior elsewhere." Similarly, the other findings could be stated more precisely. The fact that subject behavior departs significantly from *Homo* 

*economicus* (that is, the participants trust and cooperate) is not news—indeed, a finding that Latin Americans behaved as *Homo economicus* would be shocking.

Beyond this quibble with phrasing, my more serious doubt concerns the possibility that recruitment bias or local transitory shocks could contaminate the international comparisons. The potential for recruitment bias in field experiments is well known, and the authors' dismissal of this possibility is cursory. A particular concern in this regard is that recruitment strategies differed significantly across cities—for example, 85 percent were recruited by phone in Caracas and 100 percent through door-to-door contact in Lima. These distinct recruitment strategies could potentially yield subject pools that differ in unobserved ways. The multinational comparisons may also be contaminated by local transitory shocks that affect trust. For example, the authors state that trust differs across the cities, with Bogotá being the least trusting city. It is certainly possible that there was a kidnapping or other violent incident the week of the experiment in Bogotá, while the week preceding the experiments in the other cities was relatively tranquil. Alternatively, there might have been a local transitory political shock in Caracas or some dire economic news in Argentina. These hypothetical local events underscore the point that while the multinational scope is attractive, it introduces problems that do not exist when all subjects are in the same location (and subject to the same local transitory shocks). When the subject of analysis is trust, reciprocity, and cooperation (rather than self-interest), a local shock involving violence or corruption may be particularly problematic for international comparison. The good news regarding this concern is that it can be addressed, even ex post, by a careful retrospective confirmation that no local transitory shocks occurred close to the experiments. This critique can be eliminated in future endeavors of this kind with ex ante confirmation by the local teams that no local shocks occurred in the week (or two) prior to the experiment.

Despite the reservations noted above, this paper is commendable on a number of grounds. The authors have chosen important experiments and taken great care in their design and execution. Though the experimental results are similar to those found in other countries, this ambitious attempt to compare trust, reciprocity, and cooperation in six cities simultaneously is pioneering. Perhaps the most significant contribution of the paper are the data themselves. The rich background information and experimental results should provide future researchers with an invaluable resource to continue investigation of these critical issues.

1. On recruitment bias, see Harrison and List (2004).

**Daniel Lederman:** The authors and the Inter-American Development Bank (IDB) provide a valuable public good in the form of a unique data set and their insightful discussion of the relevant literature. They also provide econometric estimates of the determinants of trust and cooperation. These are magnificent contributions, precisely because the data set is unique and the topics are important for understanding Latin American economies and communities. But, alas, our world is imperfect, as are the data and the econometric analyses presented by the authors. Some discussion of potential pitfalls is therefore warranted.

## The "Representative" Data

An important claim made by the authors is that "a crucial feature of the paper is that our data are representative of the population from each of the six cities studied." In fact, the appendix on the sampling approach tells us that the study used well-established, quota-based sampling approaches that followed the sampling used in well-established household surveys and censuses in each of the cities. However, no evidence is provided to indicate that the sample of individuals that actually participated in the experimental games had socioeconomic or other characteristics that are typical or representative of the populations in each city. In any case, I do not doubt that the authors "aimed at a representative sample of 500 participants" for each city. With a bit of effort, I have convinced myself that the experimental samples are, indeed, representative of the targeted urban populations.

Nonetheless, even under the assumption that the experimental samples are representative in terms of their socioeconomic characteristics, a potential pitfall lies in the fact that participants were invited to participate. In the words of the authors, "Each team had to recruit subjects so that they could have at least four homogeneous sessions and twenty-one mixed sessions in terms of socioeconomic level." A potential sampling bias could thus arise even if the distribution of the subjects mimics the general population in terms of their socioeconomic and demographic characteristics. The concern is that there might have been self-selection into participating in the experiment: for a given age, gender, and income level (of their neighborhood), individuals could differ in terms of their willingness to participate. Because the data are being used to assess the determinants of social behavior, this self-selection could result in biased estimates of the correlates of trust and collaboration.

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The challenge for the authors and future research with the data is to assess the extent to which the data suffer from the self-selection bias. On the one hand, it is reassuring that the results, for example in the trust game, are similar to those found in the relevant literature. On the other hand, as stated by the authors, in their design "the participants were recruited from random samples of the general population, whereas most of the [cited] studies were conducted within the population of a single village or university." That is, the results are eerily similar to studies that do not use "representative" samples. My conclusion is thus that either the sampling does not matter, or self-selection bias dominates the data, in spite of the sampling approaches. This could be due to the fact that in all studies cited by the authors, the subjects of the experiments were voluntary, including in the IDB's project.

#### **Determinants of Trust and Collaboration**

Perhaps the most important finding can be described as the dominance of expectations. In tables 11–14, the most robust explanatory variables of trust and group formation across cities are related to pre-determined expectations about the game outcomes. I agree with the authors that this is an important finding: if trust and group participation are themselves predictors of economic transactions and other social interactions, then the formation of expectations based on limited interactions could be crucial for development.

However, this robust finding, combined with no other plausible generalization, left me hungry for more substantial explanations. It would be important to know, for example, if any of the social, economic, or political characteristics of the communities affect those expectations. The discussion of the results implicitly assumes that those expectations are unrelated to the other explanatory variables included in their econometric models. It is common among researchers to be infatuated with partial correlations and t statistics, often forgetting that a lack of significance in one partial correlation can be due to a significant correlation between explanatory variables. Investigating the determinants of the expectations variables could thus be a fruitful avenue for future research.

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