

Understanding changes in social cohesion in Bolivia

Werner L. Hernani-Limarino
Fundación ARU

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UNDERSTANDING CHANGES IN SOCIAL COHESION IN BOLIVIA

Werner L. Hernani-Limarino*

Maria A. Villegas

Fundación ARU

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Abstract

This paper attempts to measure and explain the changes in “social cohesion” that took place in Bolivia during the first term of presidency of Evo Morales Ayma - Bolivia’s first indigenous president. Following Maxwell (2006), we define social cohesion as a distribution of beliefs, values and modes of thinking that make people feel they are members of the same community, engaged in common enterprises, and facing shared challenges. Accordingly, we measure the lack of social cohesion as the observed deviation from cooperative equilibrium in experimental games of trust with monetary rewards conducted in a sample of undergraduates. We find that social cohesion has declined significantly, despite ethnic fractionalization measures have remain constant and economic and political heterogeneity measures have declined. This results - declines in social cohesion despite declining trends in social divisions, are at odds with what would be expected; since, traditionally, the lack of social cohesion has been associated and measured as the extent of ethnic, income and political divisions observed in a society (e.g. Esterly, Ritzan and Woolcock (2006)). Therefore, we argue that social cohesion is not only related to the extent of ethnic, economic and political divisions within a society, *within-group identification*, but also and even more importantly, to the degree of *between-group alienation* observed between ethnic, economic and political groups. Furthermore, we show that our measure of lack of social cohesion, the average deviation from cooperative equilibrium observed in the trust game, is equivalent to Esteban and Ray (1994) polarization measure where within-group identification is measured by group size and between-group alienation is measured as the average lack of cooperation between-groups. Using this measure, we argue that the decline of social cohesion in Bolivia can be explained by an increase in alienation between ethnic and political groups motivated mainly by the institutional reforms implemented during Morales’ administration.

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1 Introduction

This paper is interested in measuring and understanding the changes in social cohesion that occurred during the 2006-2009 period in Bolivia. Bolivia represents an interesting case of study because it has been implementing a series of institutional reforms in both, economic and political issues. On the economic front, Bolivia has moved from a market oriented economy to some form of “mixed” economy. After taking office in 2006 President Evo Morales Ayma has notoriously increased state’s participation in mining, oil and gas, electricity, telecommunications and banking sectors. The nationalization of oil and gas reserves -ordering the military to occupy Bolivia’s gas fields and giving foreign investors a six-month deadline to comply with demands or leave; four power companies - including a subsidiary of France’s GDF Suez; the biggest smelter and the top telecommunications firm are examples of this orientation. On the political front, Bolivia has began a major institutional reform with the election of representatives for a Constituent Assembly on July 2006 that was in charge of re-writing the national constitution. The new text not only defines Bolivia, wordily, as “a United Social State of Plurinational Communitarian Law” but also sweeps rights to the country’s 36 indigenous groups -some of whom group only a few hundred people; recognizes “community justice” imparted by elders and indigenous authorities; introduces popular election of judges and members of a judicial council; limits landholdings to 5,000 hectares (12,400 acres) -curbing the power of big landowners in the east, some of whom gained their land illegally from military governments and many of whom are among Bolivia’s most efficient farmers; mandates “social control” of public institutions by “organized civil society”; and dictates education must become “decolonizing”, “liberating” and “revolutionary”; among other reforms. The new constitution was approved by referendum on January, 2009.

Understanding the changes in social cohesion that took place in Bolivia during the period of institutional reforms is probably as interesting as it is challenging. Understanding changes in social cohesion requires proper measurement, which in turn requires a particular definition enclosed in an adequate conceptual framework. Important attempts to conceptualize and define social cohesion are Jenson (1998) - that identifies five constituent dimensions: (1) belonging/isolation, (2) inclusion/exclusion, (3) participation/non-involvement, (4) recognition/rejection, and (5) legitimacy/illegitimacy; Bernard (1999) - that includes equality/inequality as a sixth dimension, and suggests a typology of three categories: (A) economic (inclusion and equality), (B) political (legitimacy and participation) and (C) socio-cultural(recognition and belonging), and also specifies “the character of the dimension”¹; and Kearns and Forrest (2000, cited in Beauvais and Jenson 2002) that identifies five constituent elements of social cohesion: (1) common values and a civic culture, relating the first with aims, objectives, moral principles and codes of behavior; and the second with support for political institutions and participation in politics; (2)social order and social control, as the absence of incivility, conflicts and threats to the established order, along with inter-group cooperation, effective informal social control, tolerance and respect for differences; (3)social solidarity and reductions in wealth disparities, regarding harmony in economic and social development, equal access to services and welfare benefits, redistribution of public income and opportunities, and common conscience of social obligations and predisposition to support others; (4)social networks and social capital, referred to social interaction within communities and fam-

¹ *Formal* when it is referred merely to a lack of social exclusion and *Substantial* when it implies involvement in social interaction.

ilies, as well as civic engagement, associational activity and easy resolution of collective action problems; and (5) place attachment and identity.

In this paper, we follow Maxwell (1996) and define social cohesion as a distribution of beliefs, values and modes of thinking that make people feel they are members of the same community, engaged in common enterprises, and facing shared challenges. Accordingly, we measure the lack of social cohesion as the observed deviation from cooperative equilibrium in experimental games of trust with monetary rewards conducted in a sample of undergraduates. We also contrast our “direct” measure of social cohesion with commonly used “indirect” measures that define social cohesion by the nature and extent of social and economic divisions within society - whether by income, ethnicity, political party, caste, or language, such as the “middle class consensus” and the ethnolinguistic fractionalization (See Easterly, Ritzan and Woolcook; 2006). We find that social cohesion has declined significantly, despite ethnic fractionalization measures have remain constant and economic and political heterogeneity measures have declined.

The remaining of the paper is organized as follows. Section 2 presents the alternatives to defining and measuring social cohesion that have been used in the literature and their potential connections. Section 3 presents the data used to construct alternative indicators of social cohesion in Bolivia and their evolution for the period of 2006-2009 -coincidentally Morales first term presidency. It also analyzes the importance of changes in within-group identification and between-group alienation to the observed changes in social cohesion - when groups are defined by ethnicity, race, income and political ideology. Finally, section 4 concludes.

2 On the Measurement of Social Cohesion

What does social cohesion mean? and how do we measure it?, are questions that have to be answered before any cross-country or time-series analysis can be conducted. This section presents indirect, direct and experimentalist approaches for defining and measuring social cohesion.

2.1 Social Cohesion and Social Divisions

One alternative to the measurement of social cohesion is to define it as *the nature and extent of social and economic divisions within society (...) - whether by income, ethnicity, political party, caste, language or other demographic variable ...around which political salient societal cleavages can (though not inevitable or “naturally”) develop* (Easterly, Ritzan and Woolcook; 2006). Under this definition, proxy measures of social cohesion are found in measures of existing social divisions by income, ethnicity, race, political ideology or other socioeconomic characteristics - such as the Gini coefficient (Rodrik;1999), the so called “middle class consensus” - the share of income accounted by the middle 60 percent of the population (Easterly; 2001), or the popular ethnolinguistic fragmentalization index - the probability that two randomly selected individuals will not belong to the same ethnolinguistic group (Mauro; 1995 and Easterly; 1997).

The heart of this literature is the assumption that social division measures are good proxies of structural factors such as class and ethnic inequalities, that may undermine the capacity of different groups to work together and increase the probability of developing politically salient cleavages, which in turn may compromise the institutional quality of a country and its development prospects in general, and its economic growth prospects in particular. For example, Easterly(2001) finds that

countries with less social divisions - e.g. a middle class share above 50 percent - are more prone to be rich economies. Taking one step further, Easterly, Ritzan and Woolcook (2006) argue that measures of “social divisions”, such as middle class consensus and ethnolinguistic fractionalization, endogenously determine institutional quality, which in turn causally determine growth.

2.2 Social Cohesion and Trust

An alternative approach define social cohesion as the process of *building shared values and communities of interpretation, reducing disparities in wealth and income, and generally enabling people to have a sense that they are engaged in a common enterprise, facing shared challenges, and that they are members of the same community* (Maxwell; 1996). In line with this definition, social cohesion have been measured as membership and participation rates in social organizations, self-declared trust on people, and the propensity to exhibit cooperative behavior in experimental games of trust with monetary rewards.

2.2.1 Memberships and participation rates

Putnam (1993) had used membership of organizations as a measure of what he calls social capital. Subsequent studies such as Helliwell and Putnam; 1995 and Guiso, Sapienza, and Zingales; 2000 have found that this measure is positively associated with regional economic performance in Italy; although obtaining the same results in cross-section of countries has proved problematic. For example, Knack (2001) shows that a “trust” variable contributes to the explanation of economic growth, but that the “membership of organizations” variable -which Knack (2003), following Olson (1983) and Putnam (1993), argues could be either bad or good for growth, respectively -shows only a modest positive effect ².

2.2.2 Self-declared Trust

Another measure of trust is the agregate of answers to the question “Do you think people can be trusted?” for a random sample of respondents obtained typically from the World Value Survey (see Knack and Keefer; 1995 and 1997, La Porta et. al. ;1997 and Knack; 2001). According to the World Values Survey data, “trust” is typically high in the richer countries - with rates around 50%, and low in developing countries. Central and Eastern European (CEE) countries generally have higher trust rates (between 15 and 35%) than Latin American (LA) countries (with rates as low as 5% in Peru). African countries are in- between CEE and LA countries in trust levels, while Asian countries are in-between developed world and CEE countries.

2.2.3 Revealed Cooperative Behavior

Finally, trust can also be measure as the propensity to exhibit cooperative behavior in “trust” games with monetary rewards. The trust game (Berg, Dickhaunt and McCabe; 1995) is a two-player game in which Player A is given a fixed amount of money and asked to decide whether to transfer any of

²Participation in social organizations have been measured in developing countries by Deepa Narayan and her collaborators (e.g., Narayan and Pritchett, 1999; Krishna, 2002), but mostly on a micro (community) scale. At that level they are shown to be significant predictors of income and an aptitude for cooperation.

it to Player B, and if so how much. The experimenter then triples the transferred amount and gives it to player B who is asked to choose whether to transfer any money back to Player A. The game reveals the sense that Player A has that his game partner is *engaged in a common enterprise* since the amount of money that Player A transfers Player B serves as an indication of his trust. Notice that the cooperative equilibrium -which is also the efficient outcome in the sense that it maximizes the size of the pie - required that Player A **transfers all money** to Player B; so that resources would be tripled and Player A receives 50 percent more the amount originally received. On the other hand, the non-cooperative outcome -which is also the sub-game perfect equilibrium, implies **no transfers** between Player A and Player B, since Player B can not commit to any cooperative behavior. Interestingly, Baran, Sapienza and Singales (2010) present evidence that trust measures derived from Berg et al. (1995) trust game in a laboratory setting predict the reciprocal behavior of the same subjects in a real-world situation.

The magnitude of revealed trust in this type of experiments was around 52 percent in the original US sample reported in Berg, et.al.(1995), 67 percent in experiments conducted in the U.S., China, Japan and Korea (Croson and Buchan; 1999) and between 34 and 50 percent in Latin American countries (Cardenas, Chong and Nopo; 2008). Although these results are not strictly comparable due to different experimental designs, it is interesting that as occurred with self-declared trust, proclivity to exhibit cooperative behavior is also more likely to be observed in richer countries.

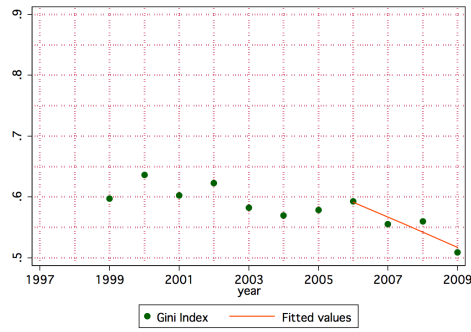
3 Changes in Social Cohesion in Bolivia

3.1 The Data

In order to measure the changes in social cohesion in Bolivia during the 2006-2009 period we use different information sources. Social division measures are calculated using the LSMS household surveys and official electoral results. Trust measures are constructed using the results of experimental games of trust conducted by the *Fundación ARU* on a sample of undergraduates. The first sample was collected between September and October 2006, while the second was collected between April and May 2009. It is important to notice that these samples were collected two to three months after the election of representatives for the constitutional assembly - conducted on July 2nd, 2006; and the approbatory referendum of the constitution, conducted on January 25th 2009. Further details on the experimental design used are provided in the appendix at the end of the document.

3.2 Changes in Social Cohesion

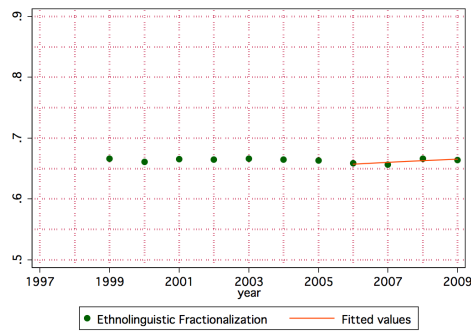
Figures 1 and 2 present, respectively, the observed changes in indirect and direct measures of social cohesion in Bolivia during the 2006-2009 period. Interestingly, although social divisions have remained constant or declined significantly during the period, social cohesion - measured as the average propensity to exhibit cooperative behavior have decline significantly. On the one hand, during the 2006-2009 period, income inequality has decreased from .59 to .51, the share of the 60 percent middle has increased from .36 to .43, ethnolinguistic fractionalization has remained constant around .66 while political fractionalization has declined from .62 to .51. On the other hand, during the same period, trust have declined significantly from .39 to .28.



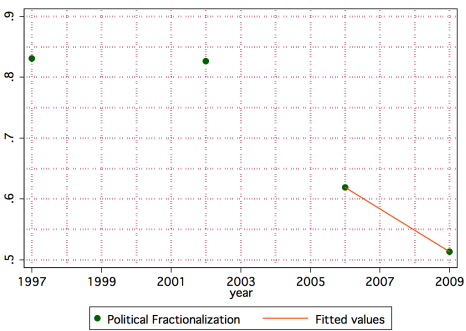
(a) Gini Index



(b) Middle Class Consensus



(c) Ethnolinguistic Fractionalization



(d) Political Fractionalization

Figure 1: Changes in Social Divisions



Figure 2: Changes in Trust

Source: Authors calculations based on *Fundación ARU* experiments, 2006 and 2009

The results presented here - declines in direct measures of social cohesion despite declining

trends in social divisions - are, at first sight, contradictory with what would be expected; since, traditionally, the lack of social cohesion has been associated and measured as the extent of ethnic, income and political divisions observed in a society (e.g. Esterly, Ritzan and Woolcock; 2006). However, it is important to recognize that, although income, ethnic, language and political party divisions are vectors around which politically salient societal cleavages may develop, the existence of such divisions is neither a necessary nor a sufficient condition for the development of societal cleavages. On the one hand, social divided societies may well find ways of to harness the potential conflict residing in their societal diversity. On the other hand, political salient societal cleavages may well arise in relatively homogeneous societies or - as the bolivian case illustrate - in societies where the magnitude of such divisions are declining.

3.3 Social Cohesion and Social Polarization

It is interesting to note that the trust proxy for social cohesion resembles Esteban and Ray (1994) social polarization -ER hereafter. ER's social polarization is defined as the sum of "effective antagonisms" between members of a society. In turn, effective antagonisms are determine by two individual feelings: *identification* with similar people and *alienation* from dissimilar people. Therefore, ER polarization is not only related to the extent of ethnic, economic and political divisions within a society, *within-group identification*; but also and even more importantly, to the degree of *between-group alienation* observed between ethnic, economic and political groups. More formally, let G be the number of relevant social divisions in a society, p_i the proportion of the population in group $i \in 1, 2, \dots, G$, and Δ_{ij} the degree of effective antagonisms felt by group i with respect to group j , then ER social polarization measure will be given by:

$$ERP = \sum_{i=1}^G \sum_{j \neq i}^G p_i p_j \Delta_{ij} \quad (1)$$

Notice that our measure of lack of social cohesion, the average deviation from cooperative equilibrium observed in the trust game, is equivalent to Esteban and Ray (1994) polarization measure where social distances between groups, i.e. effective antagonism between-groups is measured as the average lack of cooperation between-groups. Formally, average trust can be express as:

$$\bar{\tau} = \sum_{i=1}^G \sum_{j=1}^G p_i p_j \tau_{ij} = \sum_{i=1}^G \sum_{j \neq i}^G p_i p_j (1 - \Delta_{ij}) \quad (2)$$

where τ_{ij} is the average lack of cooperation between group i and group j .

Furthermore, notice that fractionalization indexes are polarization indexes that assume that social distances are zero within a group and 1 between groups. Notice that fractionalization measures are given by,

$$ELF = 1 - \sum_{i=1}^G p_i^2 = \sum_{i=1}^G \sum_{j \neq i}^G p_i p_j = \sum_{i=1}^G p_i (1 - p_i) \quad (3)$$

3.4 Understanding Changes in Social Cohesion

Interpreting social cohesion as the lack of effective antagonisms allow us to understand why we observe declining trends in social divisions associated with declining trends in social cohesion in the Bolivian case. Under the identification-alienation framework, it is perfectly plausible to observe increases in between-group effective antagonisms - equivalent to decreases in between group average trust at the same time we observe increases in within-group identification. Figure 3 presents the trends in average observed trust. Panel (a) present the trends between race groups³; while Panel (b) and (c) presents the trends between income classes⁴ and political groups⁵. Tables 1 to 3 presents the numbers associated with the figures.

Clearly, during the period 2006-2009 there was an important reduction in trust between-groups in general, but particularly between ethnic and political groups. Notice that indigenous *observed* trust in their non-indigenous counterparts have declined from .34 to .11 while non-indigenous *observed* trust in their indigenous counterparts have decline from .29 to .09⁶. Interestingly, within-group trust have remain constant within indigenous and non-indigenous groups at levels above the global average -above .55 for indigenous and above 50 for non-indigenous. Also notice that the poorest 20% *declared* trust in the richest 20% have decline from .31 to .14 while the richest 20% average trust in the poorest 20% have declined from .34 to .13. Again, within-group trust have remain relatively constant above .56 for the poorest 20% and above .45 for the richest 20%. Finally, notice that people identified with the left trust in their right counterparts have declined from .10 to .01 while people identify with the right trust in their left counterparts have declined from .08 to .02. One more time, within-group trust have remain high, above .61 for those identified with the left and above .59 for those identified with the right.

4 Conclusions

This paper attempts to measure and understand the changes in social cohesion that took place in Bolivia during the 2006-2009 period. This period was not only the first term of presidency of Evo Morales Ayma - Bolivian first indigenous president, but also a period where major institutional reforms were implemented, from some type of “nationalization” of oil and gas reserves, power companies and the biggest telecommunications firm, among others; to the election of representatives for a Constituent Assembly that re-wrote the national constitution.

Following Maxwell (1996), we define social cohesion as a distribution of beliefs, values and

³Following Hernani-Limarino (2008) and define races as symbolically marked groups where the markers are genetically transmitted (physical characteristics) that can be proxied by an hetero-identification of race in a scale between 1 to 10 where categories 1 to 4 are used to identify *white* or *non-indigenous population*, categories 5 and 6 are used to identify *mixed* or “*mestizo*” population and categories 7 to 10 are used to identify *indigenous*.

⁴Income classes are categorized by percentiles of the income distribution in the poorest 20%, the middle and the richest 20%; where the percentile of an individual is proxied by the answer to the following question *Would you say the per-capita monthly income of your household is?* (1) *below Bs.200* (2) *Between Bs.2001 and Bs.400* (3) *Between Bs.401 and Bs.650*, (4) *Between Bs.651 and Bs.1000*, and (5) *Above Bs.1000*

⁵Political identification is proxied by the answer to the following question *In a scale from 1 to 10, where 1 is extreme left and 10 extreme right. What would you say is your political position?* which are categorized in three political groups: left for those that declare their position is between 1 to 4, middle for those that declare their position is 5 or 6, and right for those that declare their position is between 7 and 10.

⁶Observed trust behavior is related to the observed outcomes in trust games with monetary rewards.

modes of thinking that make people feel they are members of the same community, engaged in common enterprises, and facing shared challenges. Accordingly, we measure the lack of social cohesion as the observed deviation from cooperative equilibrium in experimental games of trust with monetary rewards conducted in a sample of undergraduates. We find that social cohesion has declined significantly. Average trust have declined 28 percent in the 2006-2009 period - from .39 to .28, despite ethnic fractionalization measures have remain constant and economic and political heterogeneity measures have declined. This results - declines in social cohesion despite declining trends in social divisions, are at odds with what would be expected; since, traditionally, the lack of social cohesion has been associated and measured as the extent of ethnic, income and political divisions observed in a society (e.g. Esterly, Ritzan and Woolcock; 2006).

Therefore, we argue that social cohesion is not only related to the extent of ethnic, economic and political divisions within a society, *within-group identification*, but also and even more importantly, to the degree of *between-group alienation* observed between ethnic, economic and political groups. Furthermore, we show that our measure of lack of social cohesion, the average deviation from cooperative equilibrium observed in the trust game, is equivalent to Esteban and Ray (1994) polarization measure where within-group identification is measured by group size and between-group alienation is measured as the average lack of cooperation between-groups. Using this measure, we argue that the decline of social cohesion in Bolivia can be explained by an increase in alienation between ethnic and political groups motivated mainly by the institutional reforms implemented during Morales' administration.

From our point of view, our results have important implication for both, the measurement of social cohesion and the challenges of institutional reform. On the measurement of social cohesion, we believe that indirect measures of social divisions, such as the share of income of the middle 60 percent of the population or the ethnic fractionalization measures, are not useful for monitoring the evolution of social cohesion in a particular country, although they might be useful in cross country studies. Socially divided societies - whether by income, ethnicity, race, political ideology or any other socioeconomic characteristics do not naturally develop politically salient cleavages. Furthermore, as the results of our research illustrate, there might be reductions in the extent of social divisions with growing between-group alienation that makes societies less cohesive - in the sense that their members are less prone to exhibit cooperative behavior. Therefore, we believe the best alternative to monitor the evolution of social cohesion in a particular country is using social experiments, whenever the size and costs of obtaining a representative sample is feasible. Whenever size and cost considerations make social experiments unfeasible for inferring the degree of trust in a society, experiments may help deciding which type of attitudinal surveys questions are good alternatives for predicting cooperative behavior and *trust*. On the challenges of institutional reform, we believe that the Bolivian experience illustrates that the relationship between institutional reform and social cohesion may well be endogenous. The profound social divisions - by income, ethnicity, race and political ideology, that exist in the Bolivian society have fueled the belief that major institutional reforms were needed to construct a more equitable society, as much as major institutional reforms may have increase alienation and decrease trust between groups.

References

- [1] Baran, N., P.Sapienza and L.Zingales (2010). *Can we infer social preferences from the lab?* NBER Working Papers 15654. National Bureau of Economic Research, Inc.
- [2] Beauvais, C., J.Jenson (2002). *Social Cohesion: Updating the State of the Research* CPRN Discussion Paper F22. Canadian Policy Research Networks.
- [3] Berg, J., J. Dickhaut and K.McCabe (1995). *Trust, Reciprocity, and Social History* Games and Economic Behavior vol. 10, pages 122-42.
- [4] Bernard, Paul (1999). *Social Cohesion: A Critique* CPRN Discussion Paper F09. Canadian Policy Research Networks.
- [5] Croson, R., and N.Buchan (1999). *Gender and Culture: International Experimental Evidence from Trust Games* American Economic Review, American Economic Association, vol. 89(2), pages 386-391.
- [6] Easterly, William (2001). *The middle class consensus and economic development* Journal of Economic Growth vol. 6(4), pages 317-35.
- [7] Easterly, W., J.Ritzan and M.Woolcock (2006). *Social Cohesion, Institutions and Growth* Working Paper Number 94. Center for Global Development.
- [8] Esteban, Joan and D.Ray (1994). *On the Measurement of Polarization* Econometric Society, vol. 62(4), pages 819-51.
- [9] Guiso L., P.Sapienza and L.Zingales (2000). *The Role of Social Capital in Financial Development* NBER Working Papers 7563, National Bureau of Economic Research, Inc.
- [10] Helliwell J. and R.Putnam (1995). *Economic growth and social capital in Italy* Eastern Economic Journal vol. 21, pages 295-307.
- [11] Hernani-Limarino, Werner (2008). *Culture, ethnicity and race in Bolivia* Mimeo.
- [12] Hernani-Limarino, Werner (2009). *Preferencias y Polarizacion Politica en Bolivia* Mimeo.
- [13] Jenson, Jane (1998). *Mapping Social Cohesion: The State of Canadian Research* Canadian Policy Research Networks.
- [14] Kaufmann, D., S.Wei (1999). *Does "Grease Money" Speed Up the Wheels of Commerce?* NBER Working Papers 7093. National Bureau of Economic Research, Inc.
- [15] Knack, S. And P.Keefer (1995). *Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Indicators* MPRA Paper 23118. University Library of Munich.
- [16] Knack, S. And P.Keefer (1997). *Does Social Capital Have an Economic Payoff? A Cross-Country Investigation* The Quarterly Journal of Economics vol. 112(4), pages 1251-88. MIT Press.

- [17] Knack, Stephen (2003). *Groups, Growth and Trust: Cross-Country Evidence on the Olson and Putnam Hypotheses* Public Choice, Springer, vol. 117(3-4), pages 341-55.
- [18] Krishna, Anirudh (2002). *Enhancing Political Participation in Democracies. What is the Role of Social Capital?* Comparative Political Studies vol. 35, pages 437-60.
- [19] La Porta, R., F.Lopez-de-Silanes, A.Shleifer, and R.W.Vishny (1997). *Trust in large organizations* American Economic Review vol. 87 (2), pages 333-338.
- [20] Mauro, Paolo (1995). *Corruption and Growth* The Quarterly Journal of Economics, vol. 110(3), pages 681-712.
- [21] Maxwell, Judith (1996). *Social dimensions of economic growth* Eric John Hanson Memorial Lecture Series, Volume 8. University of Alberta.
- [22] Narayan, D., and L.Pritchett (1999). *Cents and Sociability: Household Income and Social Capital in Rural Tanzania* Economic Development and Cultural Change vol. 47(4), pages 871-897.
- [23] Nopo, H., A.Chong and J.C.Cardenas (2008). *Lo que se dice del comportamiento social y acciones reveladas: Evidencia de seis ciudades latinoamericanas utilizando muestras representativas* RES Working Papers 4576. Inter-American Development Bank, Research Department.
- [24] Olson, Mancur (1983). *The rise and decline of nations: Economic growth, stagflation, and social rigidities* New Haven, Yale University Press.
- [25] Putnam, Robert (1993). *Making Democracy Work: Civic Traditions in Modern Italy* Princeton, NJ, Princeton University Press.
- [26] Rodrik, Dani (1999). *Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses* Journal of Economic Growth, Springer, vol. 4(4), pages 385-412.
- [27] Rose, Richard (1995). *Russia as an Hour-Glass Society: A Constitution without Citizens* East European Constitutional Review vol.4 (3), pages 34-42.
- [28] Schleifer, A., R.Vishney (1993). *Corruption* Quarterly Journal of Economics vol. 108, pages 599-617.
- [29] Tanzi, V., H.Davoodi (1997). *Corruption, Public Investment, and Growth* IMF Working Paper 97/139. International Monetary Fund.
- [30] Zak, P. and S.Knack (2001) *Trust and growth* The Economic Journal, vol. 111, pages 295-321.

Table 1: Bivariate density of *observed* trust by race, 2006 and 2009

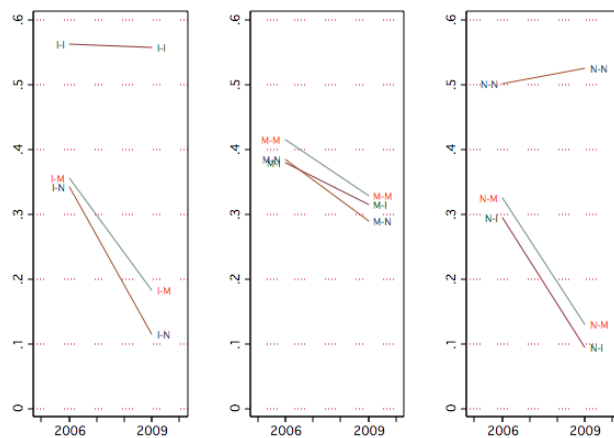
Race	Player B			
	Indigenous	Mestizo	Non-indigenous	Average
%	0.30	0.33	0.37	
Player A	2006			
Indigenous	0.563	0.356	0.342	0.413
Mestizo	0.379	0.415	0.385	0.393
Non-Indigenous	0.294	0.325	0.502	0.381
Average	0.403	0.364	0.416	0.395
Player A	2009			
Indigenous	0.558	0.182	0.115	0.274
Mestizo	0.315	0.329	0.290	0.311
Non-Indigenous	0.095	0.130	0.525	0.262
Average	0.307	0.211	0.324	0.282
Player A	2009/2006			
Indigenous	0.99	0.51	0.33	0.66
Mestizo	0.83	0.79	0.75	0.79
Non-Indigenous	0.33	0.40	1.05	0.69
Average	0.76	0.58	0.78	0.71

Table 2: Bivariate density of *declared* trust by per-capita income class, 2006 and 2009

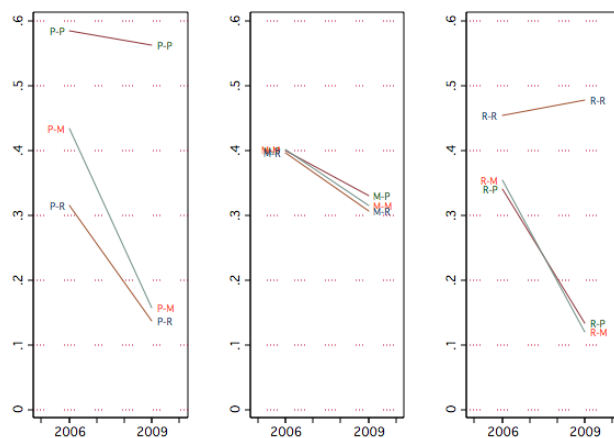
	Player B			
	Poorest 20%	Middle	Richest 20%	Average
%	0.050	0.600	0.350	
Player A	2006			
Poorest 20%	0.584	0.433	0.315	0.399
Middle	0.399	0.401	0.397	0.400
Richest 20%	0.341	0.353	0.454	0.388
Average	0.388	0.386	0.413	0.395
Player A	2009			
Poorest 20%	0.563	0.157	0.137	0.170
Middle	0.330	0.314	0.307	0.312
Richest 20%	0.134	0.120	0.478	0.246
Average	0.273	0.238	0.358	0.282
Player A	2009/2006			
Poorest 20%	0.96	0.36	0.44	0.43
Middle	0.83	0.78	0.77	0.78
Richest 20%	0.39	0.34	1.05	0.63
Average	0.70	0.62	0.87	0.71

Table 3: Bivariate density of *declared* trust by political preferences, 2006 and 2009

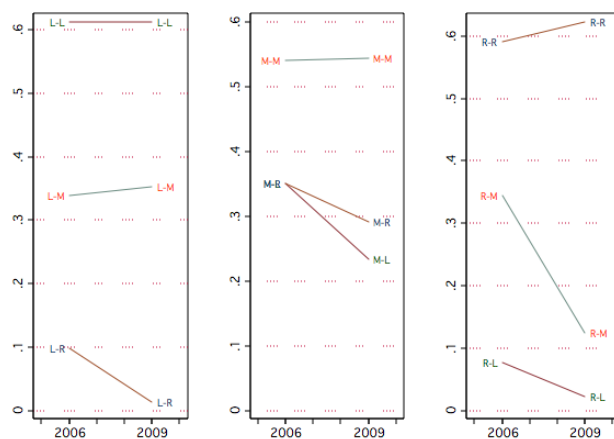
	Player B			
	Left	Middle	Right	Average
%	0.40	0.35	0.25	
Player A	2006			
Left	0.612	0.339	0.098	0.388
Middle	0.350	0.540	0.350	0.417
Right	0.076	0.345	0.591	0.299
Average	0.386	0.411	0.310	0.376
Player A	2009			
Left	0.613	0.3535	0.0132	0.374
Middle	0.234	0.5434	0.2905	0.348
Right	0.023	0.1243	0.623	0.211
Average	0.338	0.355	0.260	0.323
Player A	2009/2006			
Left	1.00	1.04	0.13	0.96
Middle	0.67	1.01	0.83	0.83
Right	0.30	0.36	1.05	0.71
Average	0.88	0.86	0.84	0.86



(a) Changes in Trust by Race



(b) Changes in Trust by Income Class



(c) Changes in Trust by Political Group

Figure 3: Changes in Trust