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Evidence**

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**How Not to Defend the Revolution:  
Mark Weisbrot and the Misinterpretation of Venezuelan Evidence**

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**Abstract:** Mark Weisbrot (2008) has claimed that under the Chávez administration in Venezuela the share of pro-poor spending has increased, inequality has declined, poverty has fallen rapidly, and there has been a massive reduction in illiteracy. All of these conclusions are based on the use of heavily slanted data and on the misinterpretation of the existing empirical evidence. Weisbrot uses estimates of social spending that are upward biased by the inclusion of large infrastructure projects, debt refinancing, and even military spending; his inequality data is distorted by the inexplicable exclusion of households that received no income; his econometric estimates on illiteracy actually show the exact opposite of what he is arguing for. Weisbrot confuses basic economic concepts and offers a bizarre interpretation of events leading up to the 2002 currency crisis. Once one corrects for Weisbrot's biases, the evidence paints a consistent image of an administration that has not effectively prioritized the well-being of the Venezuelan poor.

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In a paper published in the March/April issue of *Foreign Affairs* (Rodríguez, 2008), I argued that there is little evidence that the government of Hugo Chávez has given priority to the well-being of Venezuela's poor. In recent days Mark Weisbrot (2008) published a rebuttal on the website of the Center for Economic Policy Research - a Washington think-tank that he co-directs - arguing that some of my conclusions were "altogether wrong, and others grossly exaggerated and/or misleading." In particular, Weisbrot argued that I am mistaken in asserting that the share of pro-poor spending has not increased under Chávez, that inequality had risen, that the government had not taught 1.5 million persons how to read and write, that the rate of poverty reduction has been slower than normal given Venezuela's economic growth, that other health and human development indicators show a deterioration in the living standards of the poor, and that the 2002 recession was not caused by the country's political crisis. On each of these, Weisbrot argues the exact for the exact opposite conclusions to those that I have drawn.

I welcome the opportunity to have an in-depth discussion of the evidence regarding the well-being of the Venezuelan poor under Chávez. Indeed, many of the points raised in Weisbrot's paper as well as in this response have been discussed previously in academic fora. The broad dissemination of both papers thus offers an extraordinary opportunity to involve a broader group of policymakers and academics in the discussion and analysis of Venezuela's social and economic policies.

As I will show, Weisbrot's critiques are generally invalid, relying on erroneous reading of the evidence or use of severely biased indicators that do not accurately reflect the evolution of the Venezuelan economy or the well-being of the poor. For example, I will show that Weisbrot's estimates of social spending are upward biased by the inclusion of large infrastructure projects, debt refinancing, and even military spending in what he contends is pro-poor spending, that his inequality data is distorted by the inexplicable exclusion of households that received no income, and that his econometric estimates on the effect of the *Robinson* program on illiteracy actually show the exact opposite of what he is arguing for. Weisbrot's other criticisms are based on a misinterpretation of the concept of elasticity and on the questionable interpretation of existing health indicators and of the evidence leading to the 2002 recession.

Before delving into these differences, I would like to emphasize one basic point of agreement with Weisbrot. Official Venezuelan statistics are far from the ideal of what we would need in order to properly evaluate the performance of the Chávez administration. Well-designed impact assessments of the government's social programs are either inexistent or have not been made public by the administration. The raw data and methodological descriptions necessary to replicate official calculations are only made available with severe lags, and often not at all. Many series that are vital to the analysis of the government's policies are not public, and it is not uncommon for different entities to produce contradictory numbers. These weaknesses cause an inherent ambiguity in the interpretation of the evidence regarding the Chávez administration, a fact that helps to underline the usefulness of a serious academic debate on how to read the data.

In the rest of this note, I will take each one of Weisbrot's criticisms and show why they are invalid. In most cases, I will show that he has misinterpreted the evidence or used severely biased indicators, and that when we correct for these biases we come to conclusions which are opposite to what he contends. In a number of issues, our disagreements reflect alternative possible interpretations of ambiguous data, and it is useful to lay out the sources of these differences in interpretation for readers to make up their own minds. All in all, I will argue, the image that emerges from a close reading of the evidence is still one in which there is little evidence that the Chávez administration has prioritized or produced favorable effects on the well-being of the poor above and beyond what we could have expected any other government to do.

### **1. Has the share of pro-poor spending gone up?**

In my article, I argued that government spending figures show no evidence that the Chávez administration is giving greater priority to the categories of spending that benefit the poor. As an example, I cited the fact that the average share of the central government's budget allocated to health, education, and housing during Chávez's first years in office was 25.12 percent, essentially identical to the share in the previous eight-year period, 25.08 percent. Weisbrot has countered with three pieces of evidence: that the share of social spending – a broader category - in total spending has increased markedly since 1998, that the absolute amount of resources received by the poor has also increased significantly, and that my calculations exclude the contributions by PDVSA to social projects, which he claims summed to \$13.3 billion, or 7.3 percent of GDP, in 2006.

Before looking at the data in detail, it is relevant to think a bit about what we should be looking for. Let us start from the following fact: the Venezuelan state is undeniably much richer today than it was nine years ago, to a great extent (if not completely) due to the ten-fold increase in oil prices that has occurred since 1999. As a result, the Venezuelan government has substantially increased its spending levels, and therefore is indeed spending more in real terms on just about any type of expenditures. This means that all categories of spending can be expected to have increased in real terms since Chávez reached office, be they social programs, infrastructure projects, military spending, or growth of the public bureaucracy.

But the *absolute* level of pro-poor spending is not what should concern us if we are interested in evaluating a government's priorities. Precisely because the government has experienced such a huge windfall, we want to study how it has allocated it among different possible objectives. To use an intuitive metaphor, if you want to know how much your rich uncle cared about you, you'd like to compare how much of his inheritance he left you with what he gave everyone else. If all of your siblings got a million dollars in his will, while you received the old man's poodle to take care of, it would be hard to argue that you were his favorite nephew. Thus, of all the pieces of evidence thrown about by Weisbrot, the ones that we should study closely are those that reflect the relative distribution of government spending among different categories of spending.

What do we see when we look at these figures? The upper panel of Table 1 shows the percentage share of different categories of "social" spending in total government

spending.<sup>2</sup> I compare two periods of equal length: 1999-2006, corresponding to the Chávez administration, and 1991-1998, corresponding to the previous eight years, in order not to contaminate the comparison by the behavior of the data in one particular year. I enclose the word “social” in quotation marks precisely because, as should become clear by looking at the categories included in it, only some of these types of expenditure are pro-poor. Financing of the education and health system, as well as public housing programs are clearly programs that are primarily oriented towards the poor. This is also arguably the case with social development expenditures, but definitely not the case with investment in science and technology or culture and communications.

In any case, what strikes one as evident when one looks at Table 1 is that the only significant change in government priorities that appears to have occurred in this period is an increase in social security spending. Indeed, if one takes out social security, the share of social spending in total spending actually goes down from 32.0 to 29.8% between the pre-Chávez and pro-Chávez periods. Therefore, the increase in the share of “social” spending that Weisbrot presents as evidence of the government’s pro-poor priorities is completely driven by a more than doubling in the share of social security spending.

Table 1: Decomposition of Social Spending as a Percent of Total Spending, 1991-2006		
	1991-1998	1999-2006
Education	14.4%	16.0%
Health	5.7%	5.4%
Housing	5.1%	3.7%
Education, Health and Housing	25.1%	25.1%
Social Development	5.6%	3.3%
Culture and Communications	0.8%	0.7%
Science and Technology	0.5%	0.7%
Social Security	4.5%	9.9%
All Categories	36.5%	39.7%

Venezuelan social security spending is essentially spending on pensions. Roughly half of the budgetary assignment to the social security system goes to the financing of the Venezuelan Social Security Institute (*Instituto Venezolano de los Seguros Sociales*) while the other half goes to direct payment of public sector pensions, including the very generous military pension system, which by itself accounts for 8.9% of total government social security spending.<sup>3</sup> There is a vast array of evidence showing that pension expenditures in Latin America are highly regressive because poor individuals tend to belong to the informal sector, and thus do not enjoy coverage by the formal social security system.<sup>4</sup> This is certainly the case in Venezuela, where only 13% of individuals in the lowest quintile participate in the social security system.<sup>5</sup>

<sup>2</sup> These calculations use the *Escuela de Gerencia Social’s* spending indicators, available ([http://www.gerenciasocial.org.ve/bases\\_datos/gerenciasocial/cuadros/Gasto/PresupuestoSocial.zip](http://www.gerenciasocial.org.ve/bases_datos/gerenciasocial/cuadros/Gasto/PresupuestoSocial.zip)).

<sup>3</sup> See Ministerio del Poder Popular para las Finanzas (2007), p. 184.

<sup>4</sup> See, e.g., World Bank (2004).

<sup>5</sup> Own calculations from the Households Surveys available at [http://frodriquez.web.wesleyan.edu/space/FP\\_debate.zip](http://frodriquez.web.wesleyan.edu/space/FP_debate.zip).

In sum, the share of the central government budget devoted to pro-poor spending has not increased. The only category of “social” spending that has increased markedly is spending on pensions, which are regressive. In a particularly befuddling instance of trickle-down thought, Weisbrot actually argues that even if the beneficiaries of the pension system are relatively better-off formal sector workers “their pensions are in many cases shared with families and extended families who are in the informal sector, thus contributing to poverty reduction among others besides the recipients.” Using this reasoning, Weisbrot could just as well go ahead and throw in the rest of the budget into social expenditures.

Alas, this is not that far from what he goes on to do. Weisbrot goes on to criticize me for excluding PDVSA “social” expenditures, which according to him sum to \$13.3 billion, or 7.3% of GDP, in pro-poor spending. The simple reason why one need not include them is that including them makes little difference to the aggregate calculations, as most of these expenditures are not, under any conceivable definition of the category, classifiable as social or pro-poor expenditures.

Table 2 presents the decomposition of what PDVSA calls “expenditures for social development,” calculated using PDVSA’s financial statements, both for 2006 and for the whole 2001-06 period.<sup>6</sup> We have classified PDVSA expenditures according to one of three categories, corresponding to the categories of spending that we have used for the central government budget: education, health and housing; other social spending; and non-social spending. In 2006, only 26.8 % of PDVSA’s “expenditures for social development” corresponded to spending on educational, health, or housing programs (including the educational and health misiones and low-income housing projects) while an additional 10.5 corresponded to other social expenditures (Mercal, *Misión Ciencia*, Community Development). Thus the total share of social spending was 37.4% of total PDVSA expenditures. Note that these percentages (26.8% and 37.4%) are very similar to those found for the central government budget and shown in Table 1 (25.1% and 39.7%). Adjusting government expenditures for PDVSA’s expenditures thus leaves essentially unchanged the conclusion that the priorities of the current Venezuelan administration – at least as far as its spending figures reveal – are very similar to those of its predecessors.

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<sup>6</sup> PDVSA(2006). “Expenditures for Social Development” actually sum to \$12.0 billion. Once one includes subsidiaries, the figure goes up to \$13.7 billion. We use the more detailed accounts for PDVSA expenditures as these are available since 2001; the differences once one includes subsidiaries are minor and do not alter our main point. See the Appendix for the full decomposition and classification of PDVSA expenditures.

**Table 2: Decomposition of PDVSA's "Expenditures for Social Development"**

	Education, Health and Housing	Other Social	Total Social	Non-social	Total (Social and Non- social)
Year 2006					
Direct Expenditures	2130	1265	3396	676	4072
Investment Funds	207	0	207	859	1066
FONDEN	882	0	882	5974	6856
Total	3219	1265	4484	7510	11994
Percent	26.8%	10.5%	37.4%	62.6%	100%
Years 2001-2006					
Direct Expenditures	4957	2081	7037	1110	8147
Investment Funds	857	0	857	6709	7566
FONDEN	1078	0	1078	7303	8381
Total	6892	2081	8972	15122	24094
	28.6%	8.6%	37.2%	62.8%	100%

Source: See Appendix

What, then, makes up the bulk of PDVSA's "social" expenditures? Table 3 lists the eight largest non-social items included in PDVSA's "social" expenditures. These include \$3.2 billion for debt refinancing, \$1.1 billion for Ministry of Defense projects, \$1.3 billion for four large infrastructure projects, and \$613 million for capitalization of two sectoral finance entities. These projects are representative of the broader pattern of PDVSA's non-oil business related expenses. Whatever the relative merit of these investments, it is very hard to categorize them as expenditures whose primary aim is to benefit the poor.

**Table 3: Largest Non-Social Expenditures included in PDVSA's "Expenditures for Social Development"**

<b>Project</b>	<b>Expenditures (Million US\$)</b>	<b>Intermediary Financing Entity</b>
Ministry of Finance - Debt Restructuring	3221	FONDEN
Ministry of Defense - Various Projects	1093	FONDEN
Highway - Ezequiel Zamora	476	FONDEN
Agricultural, Fishing and Forestry Fund	327	FONDEN
Venezuelan Agricultural Bank	286	FONDEN
Orinoco River Bridge	273	FONDEN
Caracas-Tuy Railroad	272	FONDESPA
Barquisimeto Mass Transit System	251	FONDESPA

Source: PDVSA (2006), pp.71-76

In sum, regardless of whether one includes or excludes PDVSA expenditures in the aggregate budget figures, there is little evidence of a change in the priority given to pro-poor spending in the Venezuelan budget. The relative shares of pro-poor spending appear to be very similar to those of previous periods, although of course the absolute levels are higher. The only way to reach a different conclusion is to include either spending in pensions or large infrastructure projects, debt refinancing, and military spending in the definition of pro-poor spending. This is clearly not reasonable.

## 2. Has inequality increased or decreased?

In my article, I argued that Venezuelan income inequality had gone up since Chávez came into office, and in particular since the second semester of 2000, the moment in which Chávez gained control of all branches of government and was first granted enabling law legislation allowing him to approve laws by Executive Decree. In particular, I cited the findings of a study by the Venezuelan Central Bank that found this deterioration in the 2000-2005 period.<sup>7</sup> Weisbrot takes issue with the comparability of the indicators used by the Central Bank. In response, he cites a series of income inequality calculated by the National Institute of Statistics that shows a strong improvement in inequality starting in 2006 which offsets the increase occurring up to 2005.

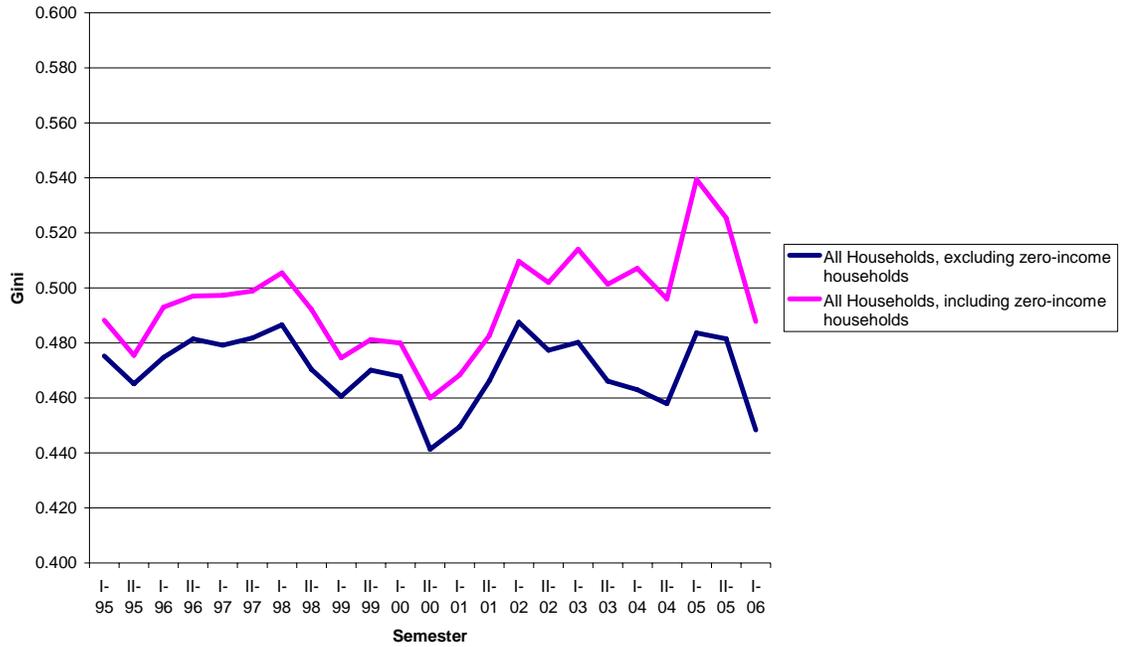
The series cited by Weisbrot is highly problematic because it excludes from the calculation all households with reported income equals to zero, thus omitting the poorest households from the construction of an inequality index. This fact is illustrated in Figure 1, where I show the effect of excluding zero-income households from the calculation of income inequality.<sup>8</sup> If they are excluded, the Gini index declines from .461 in the first semester of 1999 to .448 in the first semester of 2006, a decline of .012 points. When all households are counted, however, the relative comparison changes, and the index increases from .475 to .488 for the same period. Thus it appears that the decline in inequality in the series cited by Weisbrot up to 2006 is an artifact created by the exclusion of the poorest households from the sample. Figure 2 shows that the deterioration of inequality is also present for a variety of alternative inequality indicators as long as families with zero reported income are included in the sample.

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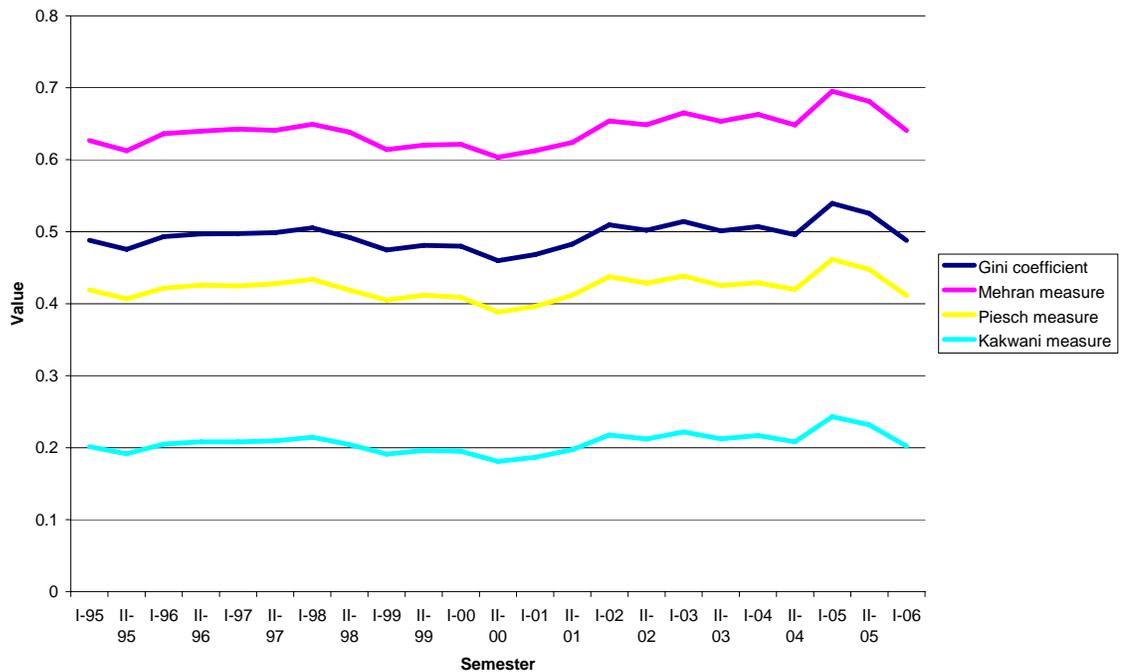
<sup>7</sup> This trend is actually present for many different income inequality measures for the 2000-05 period, a fact that Weisbrot misses in part because he only reports first semester figures. Alternative series differ in the magnitude of this increase and in whether the improvement after 2006 is large enough to offset it.

<sup>8</sup> All of these calculations are done using the raw data from the Venezuelan Households Surveys, available at <http://frrodriguez.web.wesleyan.edu/data.htm>.

**Figure 1: Alternative Measures of the Gini Coefficient derived from Venezuelan Households Surveys**



**Figure 2: Alternative Inequality Measures Including Zero-Income Households, 1995-2006**



The National Institute of Statistics has not yet released its raw data for the second semester of 2006 or the first semester of 2007; in the last of these periods it estimated a

further decline in inequality. Note, however, that there are periods during which the Gini excluding zero-income households and that including all households move in different directions, so that it is not a foregone conclusion that the properly calculated series will also decline.<sup>9</sup> More importantly, inspection of Figures 1 and 2 appear to reveal three distinct periods: a period of decline in inequality that starts in 1998 (the last year of the Caldera administration) and continues up to 2000, a sharp increase in inequality that occurs in 2001 (before the political crisis start), and a stabilization at high levels of inequality after 2002, with large roughly offsetting up and down swings in the final three periods. Whether this will be followed by a reversion to the levels characteristic of the start of the decade remains to be seen, but what is true is that, at least until very recently, inequality climbed and remained high during the Chávez administration.

### **3. Did the Chávez government teach 1.5 million persons how to read and write?**

Weisbrot takes issue with the claim, made in my *Foreign Affairs* article as well as in a more extensive and technical research paper jointly written with Daniel Ortega (Ortega and Rodríguez, 2008a), that the data does not support the hypothesis that the Venezuelan government enrolled 1.5 million persons in the *Misión Robinson* literacy program. He claims that the simplicity of the Households Survey question – which asks the respondent whether each family member knows how to read and write - makes it impossible to use it to assess the effects of a literacy program. Furthermore, he also claims to have found, together with his coauthor David Rosnick - also of the Center for Economic Policy Research – that our results were not robust and an artifact of the specification that we chose.

We have already provided an extensive rebuttal of Weisbrot and Rosnick’s objections to our paper (Ortega and Rodríguez, 2008b). As we show there, Weisbrot and Rosnick’s arguments provide no support for the hypothesis that Venezuela carried out a large scale literacy program – indeed, their estimates show the exact opposite. It is only by systematically ignoring the results of his own empirical analysis that Weisbrot is able to keep on claiming that the Venezuelan government taught upwards of one million persons how to read and write.

Let us consider for a moment the leap of faith one must take to believe that the Venezuelan government carried out a large scale literacy program but that nevertheless that program fails to register in our data. Imagine that the Venezuelan government did indeed give reading and writing classes to 1.5 million Venezuelans. Surely, if these people already felt that they could read and write before the program, then they would have answered “yes” to the literacy question both before and after the end of the program, and thus would not be picked up by the survey. But the fact is that there were 1.1 million people who were claiming **not** to know how to read and write in early 2003. So in order to believe that the program took place one would either have to believe that (i) the

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<sup>9</sup> An additional problem in evaluating income inequality figures in the first semester of 2007 would come from the fact that during this period there were growing scarcities for consumption items of the poor, a fact that we discuss in more detail in the next section. Given that scarcity increases the income level necessary to achieve certain levels of consumption, it is also likely that even a decline in inequality of nominal incomes would not represent a decline in inequality of real incomes.

program did not reach these people, or (ii) these people still claimed not to know how to read and write even after finishing the program.

The first possibility (a massive program not reaching a substantial fraction of those who claimed to be illiterate) is hard to believe and in itself would be an indictment of the program's effectiveness. We would have to buy the story that the Venezuelan government devoted the massive resources necessary to put upwards of a million persons in classrooms and yet ended up putting *exactly* the wrong million persons in the program - those who already felt that they knew how to read and write - while systematically excluding those who claimed to need the program the most. In order to get an idea of the dimension of the necessary assumptions, imagine that the program was composed in 90% of people who claimed to know how to read and write, with only the other 10% coming from the group that believed to be illiterate. Even in that case, taking the government's claims at face value, 150 thousand people who claimed to be illiterate before the start of the program would have enrolled in it. But this number is more than three times as high as the largest point estimates found in our study (as well as in Weisbrot and Rosnick's analysis).

The second possibility is almost as farfetched. It would imply that upwards of a million persons who claimed not to know how to read and write were enrolled in a seven-week program, showed their skills by composing a letter to President Chávez at the end of the program, received a certificate that indicated that they had passed the *Robinson* program, yet would still assert that they did not know how to read and write when asked by an interviewer. It would appear that in order for this to be true the program participants would have to be extremely skeptical that anything that they did while in the program even remotely resembled a literacy course. Again, if this were true, it would in itself constitute a striking demonstration of the program's failure.

How about Weisbrot's claim that our results were not robust and an artifact of our choice of specification? As we show in our detailed rebuttal, what Weisbrot and Rosnick found was that there was one of the dozens of specifications that we evaluated - an aggregate time-series regression with a lagged program indicator - in which you could find a program effect. This is of course a common phenomenon - whenever you run hundreds of specifications, some of them will be significant. Weisbrot and Rosnick have selected the one specification that gives the results which are most favorable to the Venezuelan government. But indeed, even Rosnick and Weisbrot's preferred specification imply that only between 34 and 42 thousands persons benefited from the program. This is quite far from 1.5 million persons. In other words, Rosnick and Weisbrot's results show that the Venezuelan government did not carry out a massive literacy program - indeed, their estimates point to a program of approximate size less than 1/30<sup>th</sup> of that claimed by the Venezuelan government. Remarkably, this is a result that Weisbrot has chosen to ignore, despite the fact that it arises from his own empirical work.

#### 4. Has poverty reduction been faster than normal given Venezuela's economic growth?

In my article, I argued that the performance of the Chávez administration in reducing poverty compared unfavorably with that of most other countries. As an illustrative calculation, I showed that the decline in poverty between the first semester of 2003 and the first semester of 2007 corresponded to a decline of roughly one percent in the poverty rate for every percentage point increase in per capita income, a ratio that compares unfavorably to that of most cross-national estimates, which put the elasticity at around minus two.<sup>10</sup> Weisbrot argued that if this was true, Venezuela should have eliminated poverty during this period, a conclusion which appears absurd.

It is a basic mathematical fact that with a finite elasticity of poverty reduction, poverty will never reach zero for any positive level of income, a truth that seems to escape Weisbrot. I realize that I may have inadvertently contributed to Weisbrot's confusion in this case by using an approximation to the income elasticity of poverty reduction which was reflective of the patterns found in more detailed calculations which I did not discuss for reasons of technical complexity. The source of confusion in this case is that the percent change definition that I used is an approximation to the point elasticity (the relative change in the dependent variable for an infinitesimally small relative change in the independent variable), which will only be accurate if the poverty-income relationship is linear.

A more precise estimate of the income elasticity of poverty reduction will require at least two adjustments. One of them is the use of a functional form that allows us to estimate the point elasticity adequately. The other is to properly account for the effect of scarcities of consumption items in the poverty basket in the first semester of 2007. These adjustments operate in opposite directions, and for some reasonable parameter values their effects cancel out. However, even if one accepts only one of these adjustments, Venezuela's elasticity of poverty reduction appears to be at best near the lower bound of – and at worst substantially lower than – cross-national estimates.

The first adjustment reflects the need to properly take into account the nonlinearity of the poverty-income relationship. Properly estimating the point elasticity requires the assumption of a functional form that allows us to traduce the observations of discrete changes in poverty (what we observe) into point estimates corresponding to infinitesimally small changes. The simplest and most common way to do this is by assuming an isoelastic logarithmic specification, such as:

$$\log pov_{it} = \alpha_i + \beta \log y_{it} \quad (1)$$

Note that using the log elasticity definition will raise the income elasticity of poverty reduction, a reflection of the fact that for an isoelastic function like (1) the elasticity will always be underestimated by the percentage change definition. If one uses definition (1) for Venezuela for the period between the first semester of 2003 and the first semester of 2007, one gets an elasticity estimate of  $-1.67 \ln(27.5/54)/\ln(942,308/629,589)$ . This

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<sup>10</sup> By contrast, Ravallion and Chen (1997) estimate the log-elasticity of poverty reduction at between -2.59 and -3.12 on a sample of 64 developing countries. World Bank (2000) estimates -2, a value that is similar to that estimated by Bourgoignon (2003) and routinely used in World Bank simulations.

estimate is still lower in absolute value than – though closer to the lower bound of - the values found in most of the cross-national literature.

A second adjustment necessary to accurately estimate the elasticity of poverty reduction in Venezuela is to take into account the effect of the chronic scarcities of basic foodstuffs subject to price controls that occurred in Venezuela since early 2007. According to the Venezuelan Central Bank, the scarcity index (percentage of times for which surveyors were not able to find the item in question) was 14.3% in the first quarter of 2007, with extremely high levels for basic staples of poor families' diet like sardines (86%), black beans (85%), and milk (65%). Since the regulated prices of these goods are used to construct the poverty line, this line will cease to be an adequate indicator of the resources necessary to escape poverty when scarcity is prevalent as it will be measuring the price of a basket of goods that poor individuals cannot buy. As individuals either buy these goods in black markets which are not covered in the price index surveys, or substitute towards more expensive sources of caloric intake, the real income necessary to attain a standard of living above poverty will increase.

Quantifying the effect of scarcities on the poverty line is an extremely difficult task, because it would require information on the prices that individuals pay on the black market as well as the substitutability between different sources of calories. As we lack that information, we can try to put some reasonable bounds on its magnitude, which will ultimately depend on the prevalence of scarcity in the consumption basket of the poor and the magnitude of the black market/substitution premium. Given that scarcities are concentrated in the goods that are under price controls, and that the strictest controls affect precisely the prices of the consumption baskets of the poor, it is intuitive to assume that the scarcity level affecting the poor is larger than that of the population as a whole. Let us suppose that it is between 2 and 3 times as large. On the other hand, let us assume that the markup on the prices of goods in the black market is between 20 and 40%. In that case we can create a lower bound scenario in which accounting for scarcity would raise the poverty line by 5.72% ( $2 \cdot .143 \cdot .2$ ) and an upper bound scenario where it would raise it by 17.16% ( $3 \cdot .143 \cdot .4$ ) in comparison to the poverty line used by the National Institute of Statistics.

How many additional people would this place under the poverty line? Since the National Institute has not yet made publicly available the raw survey data for the first semester of 2007, we use the latest available survey (first semester of 2006) to make this calculation. In order to do this, we find a cutoff level of income in this distribution such that the number of people below it will be similar to those in poverty according to official statistics in the first semester of 2006.<sup>11</sup> We then raise the poverty line by our upper and lower bound estimates and calculate the new number of households in poverty. The resulting estimates of the number of households under poverty in the lower and upper bound scenarios are respectively 29.3% and 35.8%. We call these the scarcity-adjusted poverty rates. Using the scarcity-adjusted poverty rates, the log-elasticity of poverty reduction decreases to -1.51 in the lower bound scenario and -1.02 in the upper bound scenario, numbers that are substantially smaller than cross-national estimates and close to the number presented in my article.

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<sup>11</sup> That number is 27.2% of the population. Since there is a discrete mass of individuals at this income level, it is not possible to find a level that will exactly replicate the rate of 27.5% corresponding to the first semester of 2007.

Relying on this same methodology, we can back out what the poverty rate should have been in Venezuela in the first semester of 2007 if the country had had an income elasticity of poverty reduction equal to -2, closer to the average of other countries. In that case, we can derive that the scarcity-adjusted poverty rate should have fallen to 24 points. Remember, however, that since the rate of poverty that is reported by the National Institute is not scarcity-adjusted, we would have to use our upper and lower bound effects again to calculate the poverty rate that we would have observed in this scenario. Once we do that, we derive a range of values between 18.5% and 22.5%. This is the range to which the poverty rate should have fallen if the Venezuelan economy had evolved according to the patterns observed in other developing economies.

## 5. Other objections

Among the other elements of my analysis that Weisbrot has objected to are the use of indicators of low birthweight babies, quality of dwellings, and drinking water access to evaluate the well-being of the Venezuelan poor, as well as my interpretation of the events preceding the 2002 economic crisis. I will answer each of these briefly.

Weisbrot claims that the increase in the percent of low birthweight babies is due to the decline in the percentage of children monitored for low birthweight. Weisbrot does not present an argument why the change in the population sample would lead to an increase in the number of low birthweight babies. Indeed, one might expect just the opposite – that as the prevalence of monitoring falls, low income areas are left out of the sample first, thus leading to a decline in measured number of low birthweight babies. In any case, the claim that the reason for the increase in measured birthweight is that the Venezuelan state is no longer monitoring the weight of infants does not paint the most encouraging picture of the state of the country's public health system.

Regarding the rest of the series, I agree with the idea that there could be multiple factors that explain the deterioration in other indicators of the well-being of the poor, among them measurement error in the reported series. But this is precisely the point: if Venezuela had seen a sea change in government policies, we would expect to see consistent improvements in all of these indicators. But we instead find that the infant mortality rate has continued declining at the historical rate and that many indicators of the health and well-being of the poor have deteriorated. Perhaps all of these indicators are so poorly measured that they can't tell us anything about whether the poor are better off or not. But they are definitely not providing evidence that the lot of the Venezuelan poor has improved under Chávez.

Regarding the 2002 recession, a close analysis of Venezuela's fiscal and external accounts at the close of 2001 easily shows that the country was headed for a balance of payments and fiscal crisis even in the absence of a political crisis. Despite a decline in the price of oil in 2002, the government had maintained a highly appreciated exchange rate, leading to a significant decline in external demand. The appreciated exchange rate hurt Venezuelan competitiveness – the Bolívar appreciated in real terms by 55% and 137% with respect to the Colombian and Brazilian currencies – and also hurt the Venezuelan fiscal accounts, leading the country to run a fiscal deficit of 4.0% in 2004 (and of 5.9% after discounting Central Bank distributions of forex gains).<sup>12</sup> The attack on

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<sup>12</sup> Moreno and Rodríguez, 2007, Figure 3, p.6.

the currency lasted through 2001, and by November the Central Bank had lost \$5.4 billion dollars in reserves trying to defend the currency, well before any political crisis had started.<sup>13</sup> In order to believe that this currency crisis was politically motivated, one would have to buy into an interpretation where a full year before there was even talk of a national strike the private sector started withdrawing its deposits from domestic banks in order to cause economic and political instability. It is difficult to see why one would want to appeal to this fantastic conspiracy theory when there is clear evidence of deteriorating internal and external fundamentals leading up to the crisis.

## 6. Concluding Comments

It is useful to recap some of our key arguments. First, there is no evidence that the Chávez administration is devoting a higher share of resources to pro-poor spending. Second, inequality increased between 1999 and 2006, unless by inequality one means inequality among everyone except those who earn no income. Third, the Venezuelan government did not teach 1.5 million persons how to read and write – at most the magnitude of the program was 1/30<sup>th</sup> of what was claimed. Fourth, however one calculates it, Venezuela’s income elasticity of poverty reduction is below typical values for developing countries. Fifth, the majority of human development indicators do not show striking improvements under Chávez, and some show deteriorations.

Weisbrot has not produced a convincing counterargument to any of these claims. He has argued that social spending has increased by using series that are distorted by the inclusion of regressive pensions, large infrastructure projects, and even military spending. He has argued that inequality has declined on the basis of a series that excludes the poorest families from the sample. He has argued that the Venezuelan government put more than a million persons in literacy courses while presenting regression estimates that indicate that at most forty thousand persons were enrolled in these courses. He has misinterpreted the concept of elasticity, and furthermore argued that the reason why government statistics do not show an improvement in the health of newborns is that the monitoring system has collapsed. To top this all off, he has presented an incredible conspiracy theory of the 2001 Venezuelan balance of payments crisis according to which the private sector withdrew funds from the domestic system during more than a year in order to provoke a political crisis.

In closing, I would like to stress my conviction that an in-depth academic discussion is indispensable in order to evaluate and understand the nature of recent changes in Venezuela’s economy and society. In any serious academic debate, there must be mechanisms that subject research to high standards of quality. One such mechanism is the peer review system, which ensures that research papers that do not pass basic standards of quality will not be published. I would like to invite Mark Weisbrot to make use of that mechanism in the future, and wish him the best of luck.

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<sup>13</sup> Indeed, I discussed many of the causes of the looming recession in the article “¿Por qué se desacelera la economía venezolana?” (“Why is the Venezuelan economy decelerating?”) published in the Venezuelan newspaper *El Nacional* on January 7, 2002.

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## Appendix: Decomposition of PDVSA Expenditures

Table A-1: Classification of PDVSA's "Social Development Expenditures" according to category of spending

	2006 Expenditures	2001-6 Expenditures
<b>Panel A: Breakdown of PDVSA Expenditures</b>		
<b>Direct Expenditures</b>		
<b>Health, Education, and Housing</b>	<b>2115</b>	<b>4829</b>
Vuelvan Caras	234	626
Ribas	280	1003
Barrio Adentro	1592	2210
Milagro		125
Sucre		784
Vivienda	9	9
Robinson	0	72
<b>Other Social Spending</b>	<b>1250</b>	<b>1953</b>
Mercal	280	729
Guaicaipuro		11
Identidad		45
Ciencia	230	230
Desarrollo Sustentable	63	63
Comunidades	677	875
<b>Non-Social Spending</b>	<b>661</b>	<b>982</b>
Nucleos de Desarrollo Endógeno	47	102
Proyecto Etanol		153
Obras Hidráulicas	27	27
Ampliación Vialidad	28	141
Bolivia	5	5
Argentina	186	186
Uruguay	150	150
Alba	40	40
Revolución Energética	178	178
<b>Of Ambiguous Classification</b>		
Otras	46	383
<b>Indirect Expenditures</b>		
<b>Investment Funds</b>		
<b>Health, Education, and Housing</b>	<b>207</b>	<b>857</b>
Vivienda	207	857
<b>Non-Social Spending</b>	<b>859</b>	<b>6709</b>
Infraestructura	207	857
Agrícola	423	1623
FONDESPA	229	4229
<b>FONDEN Expenditures</b>		
<b>Health, Education, and Housing</b>	<b>882</b>	<b>1078</b>
<b>Other Social Spending</b>	<b>0</b>	<b>0</b>
<b>Non-Social Spending</b>	<b>5974</b>	<b>7303</b>
<b>Panel B: Breakdown of Main FONDEN Projects</b>		
<b>Health, Education, and Housing</b>	<b>933</b>	<b>10.3%</b>
Adquisición de Equipos Médicos y electromecánicos Barrio Adentro 3. Primer Bloque de Equipos. Primera Etapa	447	4.9%
Inicio de la primera fase de la Construcción de Viviendas y 8.822 Viviendas para la culminación de Obras del Programa Cierre de Ciclo	14	0.2%
	104	1.2%
Construcción de nuevos desarrollos y compra de viviendas en el Indemnizaciones a Familias por Subsistencia en el Lago de Valencia	92	1.0%
Emergencia Vaguada	33	0.4%
	46	0.5%
Obras por ejecutar del INAVI para la construcción y culminación Barrio Adentro II	102	1.1%
	95	1.1%
<b>Non-Social Spending</b>	<b>8101</b>	<b>89.7%</b>
Línea III El Valle	274	3.0%
Línea IV	207	2.3%
Metro Maracaibo	102	1.1%
Metro Valencia	45	0.5%
Metro Los Teques	245	2.7%
Proyecto Ferroviario	12	0.1%
Sistema Vial	171	1.9%
Const Sistema Ferroviario	171	1.9%
Central Ezequiel Zamora Tramo:	476	5.3%
Autopista Acarigua - Barquisimeto	26	0.3%
Reh. del Sistema Centro Occidental "Simón Bolívar",	42	0.5%
Planta Termoelectrica Termozulia	81	0.9%
Plantas Termoelectricas Ezequiel Zamora y Alberto Lovera	14	0.2%
Consolidación de Redes de Distribución de los Edos. Monagas y Delta Amacuro	29	0.3%
Electrificación del Estado Apure	30	0.3%
Proyecto Ampliación Planta de Pequiven en Morón	162	1.8%
Sistema Vial Punte Mixto sobre Río Orinoco	273	3.0%
Central Hidroeléctrica Macagua I	63	0.7%
Capitalización Banco Agrícola de Venezuela	286	3.2%
Capitalización Fondo de Desarrollo Agropecuario,	327	3.6%
Culminación Fase I Proyecto saneamiento	13	0.1%
Iniciación de Proceso de Reestructuración de la Deuda Pública	3221	35.7%
VENESAT	10	0.1%
Proyectos Del Ministerio Para Del Poder Popular Para La Defensa	1093	12.1%
<b>Of Ambiguous Classification</b>	<b>364</b>	<b>4.0%</b>
120 Proyectos acordados en la IV Reunión de la Comisión Mixta del Convenio	364	4.0%

Source: PDVSA (2006) and author's calculations.