

Inequality and State Violence: A Preliminary Report

By James K. Galbraith and George Purcell

LBJ School of Public Affairs and Department of Government
The University of Texas at Austin
Austin, Texas 78713

UTIP Working Paper No. 4

Email: Galbraith@mail.utexas.edu; GPurcell@mail.utexas.edu

Prepared for presentation at a joint session of the American Economics Association and Economists Allied for Arms Reduction, New York, January 4, 1998

This paper is a product of the University of Texas Inequality Project. Support from the Ford Foundation and from the Jerome Levy Economics Institute is very gratefully acknowledged. We thank especially Lu Jiaqing for his work on the inequality data set underlying this paper, Pedro Conceição for theoretical work on the Theil statistic and Vidal Garza Cantú for supplying a full sequence of political changes in Latin America since 1970. As the title implies, the results reported here are preliminary. This paper will be available on-line at Utip.gov.utexas.edu.

First Draft: December 8, 1998

This preliminary report asks whether there exist systematic relationships between changes in economic inequality and levels of state violence in countries around the world. The question is, of course, quite natural. Entire lexicons exist that describe economic relationships in terms that evoke violence; such words and phrases as exploitation, dependency, unequal exchange and class struggle are but prominent examples. And the case histories of war, revolution, state terrorism and coups d'état are certainly loaded with analyses of what seem transparently to be efforts either to rectify gross inequalities, or else to impose them.

Yet from the standpoint of an empiricist, interested mainly in the search for patterns in data, substantial obstacles stand in the way of definite observations. There is first of all the difficulty that reliable measures of change in economic inequality, measures that are both consistent and consistently available, have not existed. Second, there is the problem of arriving at a consistent categorization of types of violence, so that one may define the predicted effect of each type on economic inequality and vice versa. Third, there is the problem of developing consistent and comparable data across countries and through time on levels and types of violence.

In what follows we first describe the first problem and our efforts to fix it. We then offer a taxonomy of major types of violence and a preliminary assessment of the relationship between economic inequality and one relatively standard type of violence, for which 27 cases exist in our data set, namely the coup d'état.

Measuring the Evolution of Inequality

Most recent comparative studies of economic inequality have been based on one of two data sources: the Luxembourg Income Studies and the monumental compilation of quintile income distributions and Gini coefficients by Deininger and Squires of the World Bank.

The Luxembourg data are almost unusable for historical work. Their emphasis is, rather, on acquiring detailed information on population characteristics at each time of survey. In most countries, only a few LIS observations exist, and those few papers which work with LIS data over time have been restricted to making comparisons between distributions observed at just two or three widely separated dates. The LIS studies also have so far emphasized the relatively rich, peaceful and politically stable industrial world, so that this source is unlikely to contain much information bearing on the relationship between economic inequality and state violence.

At first glance, the World Bank data set might seem much more promising. It covers most of the countries of the world, and in many cases spans very long periods of time. But on closer examination it, too, is virtually unusable for detailed analysis of historical episodes. Deininger and Squire find that only a very small number of available Gini coefficients are of acceptable quality; only a handful of countries have as many as half a dozen usable coefficients in thirty years (Conceição and Galbraith, 1998). Such enormous gaps in the data mean that the effects of some particular episode -- a revolution or a war, say, let alone a financial crisis or a devaluation, usually cannot be disentangled from the larger flows of history that pass between observations.

Our approach draws primarily on the 1998 work of Galbraith, Darity and Lu (hereafter GDL), supplemented by Garza-Cantú and by Conceição, who have worked together to build a dense and consistent data set that measures annual *changes* in the dispersion of earnings across industrial categories in manufacturing sectors. We stress that our emphasis is on changes rather than levels, on employee earnings rather than family incomes, and that our analysis is restricted to the manufacturing sector. These limitations are more than outweighed by the fact that restricting ourselves in this way permits us to measure the movement of inequality almost every year back to 1970, for 64 countries (so far) comprising the overwhelming part of world product, and in many cases to register observations in times of war and revolution when the normal civilian activities of census and survey-taking are generally suspended, as well as for countries like Iran and Cuba which have not maintained consistently cordial relations with the World Bank.

The GDL method is easy and cheap. They merely compute the between-groups component of Theil's T statistic, a well-known and highly regarded measure of dispersion. As a generalized entropy measure of dispersion, Theil's T has the property of linear decomposability: the value of T for a whole population will be the sum of T-values for any comprehensive partition of that population in mutually exclusive groups, plus a term accounting for the between-group dispersion. As Theil (1972) observed, the between-group component of T (hereafter TN) is a lower-bound estimate of T. The GDL approach relies on the fact that a consistent set of categories, sampled mechanically year after year, will yield measures of TN whose movement must generally track that of the distribution as a whole. Unless there is something very, very strange about the categories, category averages will become more dispersed when the distribution itself becomes more unequal, and conversely when inequality declines category averages will tend to move closer together.

The remarkable fact is that consistent categorical sampling frames do exist in most countries with significant manufacturing activity. These are the reports of payroll and employment by manufacturing category, usually a standard industrial classification, collected routinely by ministries of labor and reported equally routinely to international agencies such as the Organization for Economic Cooperation and Development (OECD) and the United Nations International Development Organization (UNIDO). These data sets are available to researchers for a few hundred dollars apiece, but we are aware of no previous systematic efforts to deploy them to measure the evolution of inequality.

By the same token, there is no reason to think that these numbers were collected with any particular political purpose, or that there would have been any reason to misrepresent them. Hence, the evolution of TN has desirable properties as a passive and nearly ubiquitous measure of changes in earnings inequality in manufacturing. We further believe, with some evidence in support, that the movement of the distribution of earnings within manufacturing is a reasonable indicator of the larger movement of inequality as between, say, manufacturing and agriculture. If the relative wage of workers in food processing and garment-making declines, so generally will the farm wage relative to wages of factory workers; Garza-Cantú's comparisons of the ratio of average wages in manufacturing to per capita GDP and within-manufacturing inequality measures for Latin America tend to bear this out.

Characterizing and Categorizing State Violence

We have no firm theory to guide our efforts to categorize the types of state violence to which people and nations are periodically subjected. Some are fairly clear-cut. War, for instance, is generally a well-defined experience involving protracted conflict between regular military forces across national frontiers; conventional scholarly definitions exist (Singer and Small, 1968). Fuzziness emerges only in a few modern cases where a large country engages in a small and distant conflict not involving an immediate threat to its own security; Britain in the Falklands in 1982 is an example.

Revolution is, again, relatively clear-cut; we define it as a popular insurrection leading to a change of state power. Four examples come under our observation here: Portugal in 1974, Nicaragua and Iran in 1979, and Zimbabwe in 1980. Levels of violence differed in these cases; Portugal's military-led revolution was nonviolent while that of Zimbabwe eventuated in a negotiated solution. The revolution in Nicaragua was won by force of arms and that in Iran by violent popular uprising. But all shared, at the beginning, a wide base of popular support and all embodied a drive for social reform.

Coups d'état are somewhat harder to keep track of, particularly in countries where military regimes are endemic. We define them as a take-over of state power by organized elements of a state's own military forces, often though not always accompanied by violence, and generally with an intent to bypass or dismantle existing constitutional forms. We do not distinguish between left- and right-wing coups; overwhelmingly coups in modern times are right-wing in character. We have identified 27 such episodes in the countries for which we have inequality measures.

Other forms of state violence include insurgencies, civil war, martial law, dirty war, proxy wars, state terrorism, and conditions of endemic and continuing violence such as one finds in the Middle East. South Africa, Israel, Turkey, Colombia and many other places are examples. We are leaving these for later investigation, mainly because they vary greatly in scale and intensity from case to case. Also, it is very unclear whether these cases will necessarily intersect strongly with the manufacturing sectors of the countries in question; in big countries civil violence may often be a phenomenon of the hinterlands and truly isolated from the experience of the cities.

Examples of Revolution, War and Civil Violence

Revolutions are fought to rectify injustice. As the experience of France in 1789 established, they often prevail against regimes that are trying to save themselves by reducing injustice, but that cannot manage to do so quickly enough. Or so a history sympathetic to the *ancien regime* often maintains. The experiences of our four clearly identified revolutions are shown in Figure 1. In each case, the revolution accomplished, to some degree, what it promised to accomplish. In each case we observe a reduction of inequalities in pay, beginning during or just before the revolution and accelerating sharply as it took hold.

The revolution in Iran shaded quickly into war with Iraq, while that in Nicaragua came

under the intense pressure of the contra war. But the two experiences in the war following the revolution were evidently quite different. Nicaragua quickly reversed its revolutionary inequality reductions. In Iran, in contrast, inequality remained at revolutionary levels for a decade, rising only with the partial liberalization of the early 1990s. Difference in the two cases that might account for this -- differences of wealth, the internal and external balance of power, and ideology -- are not far to seek.

Figure 2 presents the singular contrast of the cases of Iran and its antagonistic neighbor, Iraq. Both countries export oil, and so were immeasurably enriched by the first oil crisis in 1973. A critical difference between them, however, was that in Iraq inequality declined sharply following the oil boom: incomes of low-paid Iraqis rose more rapidly than those at the top of the scale. In Iran this did not happen. It is interesting that the proportionate reduction in inequality in Iran following the 1979 revolution was only moderately greater than in Iraq after 1973, though much more sudden and violent. Both countries experienced prolonged mobilization that kept inequality low, while inequality increased once hostilities ended (in 1988). Both countries experienced rapidly rising inequality in the 1990s; the experience of Iraq following the Gulf War and its sanctions seems to have been dramatic.

War is often the end-game for military governments. Two examples from our data set are given in Figure 3: that of Greece at the end of the colonels' government in 1974, and that in Argentina following the Falklands/Malvinas debacle of 1982. In both cases, military governments collapsed and were replaced by classically liberal, politically conservative regimes, that of Constantine Karamanlis in Greece and of Raul Alfonsín in Argentina. In both of these cases, inequality rose under the successor government, until it was replaced by a regime substantially to its left. This happened in Greece with the return of the Socialist Andreas Papandreou in 1980 and in Argentina with the election of the Peronist Carlos Menem in 1986.

We leave additional analysis of other cases, including India-Pakistan, for a later date.

Civil violence is hard to quantify, and we are only beginning to work our cases. We do however present in Figure 4 series for a number of countries where levels of violence were endemically high during recent years: Peru, Algeria, Guatemala and Colombia. The difference in the inequality records of the first two cases and the latter two can, we think, be best explained by the nature of the civil violence each experienced. That of Peru and Algeria reached into the cities; that of Guatemala and Colombia generally did not.

An Analysis of Coups D'Etat

We now turn to a brief analysis of coups. Table 1 lists our 27 cases. Figure 5 shows the canonical case of Chile, where inequality declined sharply through the 1960s and up to 1973, when the military took power in a bloody uprising that suppressed democracy for 17 years. Inequality, as measured in our data, rose promptly and continuously, accelerating sharply with the financial crisis of 1979.

Is this a general pattern? Figure 6 presents the average percentage change in our

inequality measures over our 27 coups, for each year from five years before the coup until five years after. The figure gives, we think, quite a striking result. Coups typically follow the emergence of a government or policy environment that results in a sharp reduction in inequality. In the five years following the coup, inequality rises. This is the mechanism of violent repression.

We caution that the standard deviations around each of the yearly averages in this table are high. Figure 7, therefore, gives corroborating evidence, in the form of a count of cases. Each bar measures the excess of positive changes over negative changes in the year, relative to the coup year, in question. Again the pattern is striking: there is a preponderance of inequality reduction before a coup d'état, and a preponderance of inequality increases afterwards.

Conclusions

It is too early in this research for conclusions. But we believe we have shown a promising connection between two phenomena that intuitively and theoretically should be considered connected: inequality and state violence. We have also shown that it is in principle possible to measure the movement of inequality across a wide variety of national settings in ways that do appear to be sensitive to social and economic developments, of which state violence is, of course, only one extreme manifestation.

References

Klaus Deininger and Lyn Squire, 1996. "New ways of looking at old issues: inequality and growth", The World Bank: Mimeo.

Pedro Conceicao and James K. Galbraith, 1998. "Constructing Long and Dense Time-series of Inequality Using the Theil Index," UTIP Working Paper No. 1, The University of Texas at Austin, Manuscript, 1998, available at Utip.gov.utexas.edu.

James K. Galbraith, William Darity, jr. and Lu Jiaqing, 1998. "Measuring the Evolution of Inequality in the Global Economy," The University of Texas at Austin, Manuscript.

Vidal Garza-Cantú, 1998. "Grading the Performance of Latin American Regimes," The University of Texas at Austin, manuscript..

Singer, David J. and Melvin Small. 1968. "Alliance Aggregation and the Onset of War, 1816-1965." Quantitative International Politics ed. J. David Singer, pp. 247-86. New York: Free Press.

Henri Theil, 1972. Statistical Decomposition Analysis: With Applications in the Social and Administrative Sciences, Amsterdam-London: North Holland Publishing Company.

Figure 1

Four Revolutions

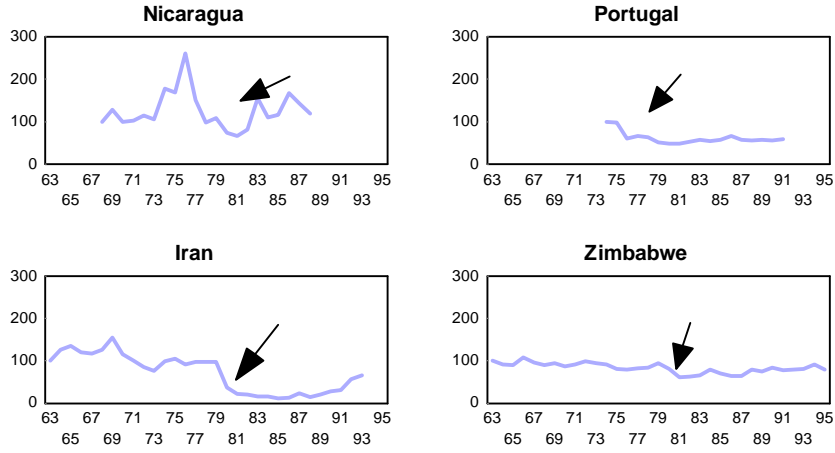


Figure 2

Inequality in Iran and Iraq

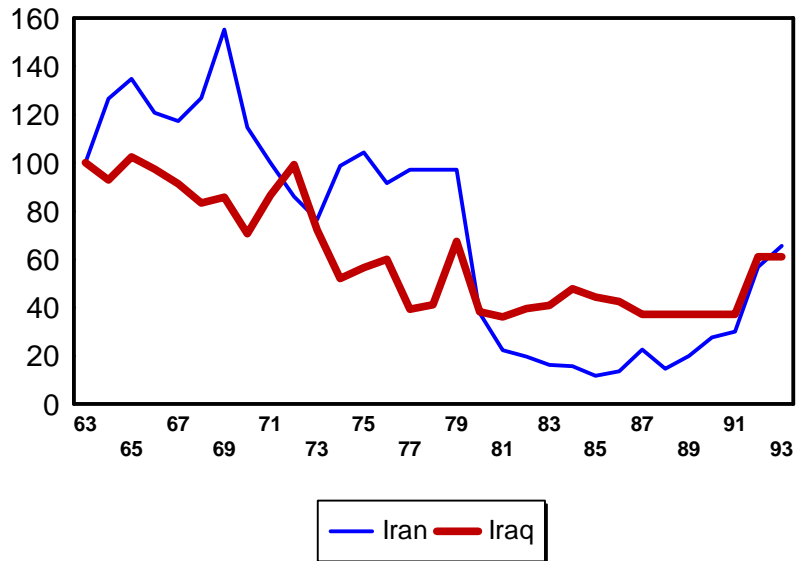


Figure 3

Two Military Endgames

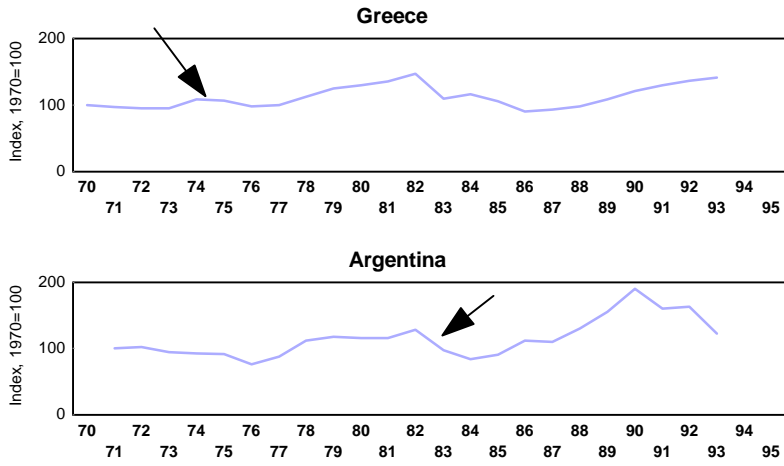


Figure 4

Civil Violence

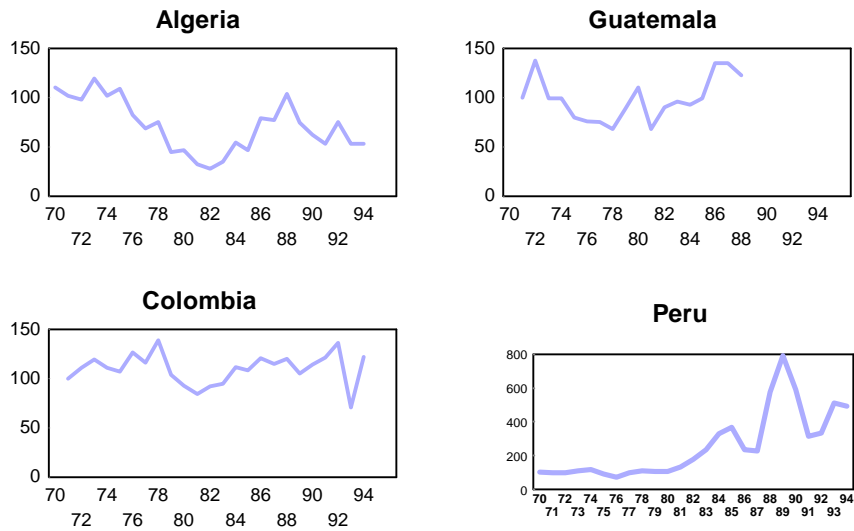


Figure 5
Inequality in Chile

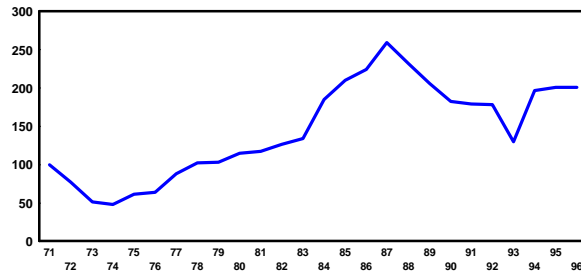


Figure 6
Coups and Inequality

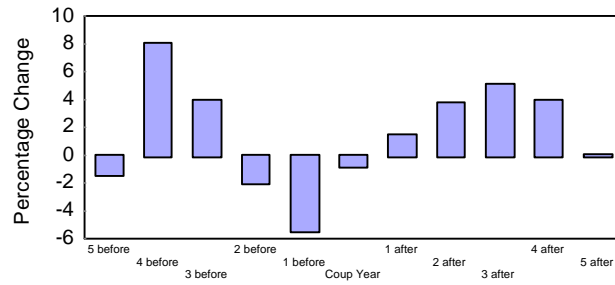


Figure 7
Coups and Inequality

