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James K. Galbraith*

Causes of Changing Inequality in the World

When we analyse inequalities at the world level, we are required to cope with complex and uncertain data, and at the same time to seek simpler and more abstract theories. With some 220 countries, if each one spawned its own narratives, as the rise of inequality in the US has done, we would never get anywhere. But to come up with a theory that has common application across many countries, we need measurements of inequality across countries and through time that are reasonably comprehensive and reasonably reliable – and this is a major challenge.

What do we know about inequality in the whole world?

Leaving aside efforts to construct a single measure of inequality for the world's population, there are a number of major data sets that have collected Gini coefficients for a wide range of countries and years, almost entirely restricted to the period since 1950, and for the most part to much more recent years.

The great early effort along these lines was by Klaus Deininger and Lyn Squire at the World Bank, who in 1995 released a compendium of over 700 "high quality" Gini coefficients, along with many others that they deemed less reliable.[1] The coefficients came from many different sources, some from the public sector but many based on surveys conducted by non-governmental research organisations. Coverage was sparse and weighted to the rich countries; even 700 coefficients spread unevenly over 220 countries will leave many with little or no reported information. Concepts differed; the measures were sometimes gross and sometimes net of tax, sometimes based on household units and sometimes on individuals, sometimes based on income and sometimes on expenditure. As a result, it was very difficult for researchers using the Deininger-Squire (DS) data set to arrive at consistent and credible conclusions as to what the data actually showed.

The DS data set has since been incorporated into the work of the World Institute for Development Economics Research (WIDER) of the United Nations University in Helsinki, which has added greatly to the data base. Problems of coverage have been reduced, but the difficulties of differing concepts and uncertain comparability across measures remain. The DS and WIDER efforts are perhaps best viewed as vital repositories of past studies rather than as polished comparative data sets. They are compendia of work done by hundreds of different research teams around the world over the years; it is not a criticism to state

James K. Galbraith, University of Texas, Austin, TX, USA.

1 K. Deininger, L. Squire: A New Data Set Measuring Income Inequality, in: World Bank Economic Review, Vol. 10, No. 3, 1996, pp. 565-591.

that when the underlying measures and calculations differ, the resulting data has to be treated with caution.

The World Bank has since moved on and now publishes a "Gini coefficient" as part of the World Development Indicators (WDI) reported annually by the Bank.[2] The actual genesis of and concepts underlying these coefficients are not as clearly distinguished as they might be – for instance, expenditure and income measures, which are definitely not comparable, are presented side by side. And the coverage is very sparse, so that the WDI cannot be considered a serious comparative research data set.

The Luxembourg Income Study (LIS) takes a different approach, concentrating on the meticulous comparison of micro data sets accumulated from the original sources and available for micro studies of all kinds. Summary measures of household income inequality (market, gross and net) from the LIS are considered to be among the most trustworthy available for comparative research. But coverage (though growing) is still small by world standards, with an emphasis on a handful of recent years in the wealthier countries.

Thomas Piketty of the Paris School of Economics and his associates, Emmanuel Saez, Anthony Atkinson, Facundo Alvaredo and Gabriel Zucman, attempt to build measures of *top income shares* from tax data in a selection of countries.[3] These measures are not measures of inequality, since they reflect just a single point (the share of total taxable income of the top ten per cent or one per cent, or even the top 0.1 or 0.01 per cent) of the distribution. But they are a useful complement to inequality measures, since the movement of the top shares reflects, to a degree, the overall movement of income inequality. The advantage of the top share data sets is a long run of data for a few of the world's wealthiest countries, including the US, the UK, France and Germany. Disadvantages include the fact that there are only 29 countries in the data set, that it is restricted to countries with income tax records, and that comparability across countries is limited by differences in the definition of income and in the effectiveness of tax enforcement. Comparability across time is also something to be treated cautiously, since countries constantly rewrite their legal definitions of taxable income.

Moving in a different direction, Frederick Solt of the University of Iowa has produced the very large Standardized World Income Inequality Database (SWIID), providing about 7000 estimates each of market and net income inequality for 174 countries in a recent update.[4] The SWIID has achieved wide acceptance; it has been used, for instance, in recent studies by the International Monetary Fund. But some scholars remain sceptical, since the SWIID draws on many distinct sources and is not based in all cases on actual measurement. Rather, many reported observations are generated by imputation – by filling in missing values based on observations in neighbouring places and neighbouring times. This makes statistical work with the SWIID problematic, since there are fewer independent observations than the data set reports. The SWIID appears broadly consistent with the actual surveys on which it is based, but it does exhibit some strange behaviour in countries and for years in which actual observations are sparse, often in the early or late years of a series.

A final effort along these lines is the Estimated Household Income Inequality (EHII) data set of the University of Texas Inequality Project. EHII is a collection of Gini coefficients for gross household income inequality. It is based on actual measurements of *pay* inequality in the industrial sector, using the between-groups component of Theil's T statistic computed from the United Nations Industrial Development Organization (UNIDO) compilation of payroll and employment by industry for countries around the world. These are then converted into the Gini format for about 430 overlapping observations using the close statistical relationship between the measured T statistic and the original Deininger-Squire Gini measures. The result is a single-concept, consistent comparative data set with (as of the latest revision) 3872 estimates for 149 countries.[5] The EHII estimates track actual measures of gross household income inequality in many countries quite well – and with many more observations than can be garnered directly from surveys. We will use this data for comparative purposes below.

How is inequality related to economic development?

Theories of economic development took off in the years following World War II, in part to meet the ideological challenges facing capitalism in the post-colonial countries during the Cold War. For those countries, communism offered a dual promise: rapid industrialisation as pioneered by the Soviet Union and an egalitarian society run by representatives of the working classes and not by foreign firms or local puppets of the old masters. The communists also rejected social stratification on the ba-

2   World Bank: World Development Indicators Online, 2007.
3   F. Alvaredo, T. Atkinson, T. Piketty, E. Saez, G. Zucman: The World Wealth and Income Database, www.wid.world.

4   F. Solt: The Standardized World Income Inequality Database, http://myweb.uiowa.edu/fsolt/swiid/swiid.html.
5   J.K. Galbraith, A. Shams, B. Halbach, A. Malinowska, W. Zhang: The UTIP Global Inequality Data Sets 1963-2008: Updates, Revisions and Quality Checks, UTIP Working Paper No. 68, 2014.

sis of race or sex, liberating people of colour and women from long histories of oppression. To many observers, it was not obvious that capitalist society could prove itself an attractive alternative in a world where it was no longer considered good manners to impose the choice of economic system by brute force.

In this climate, the economist Simon Kuznets offered an idea based on a simple model of industrial and structural change. Suppose one starts (as in the Northern states of the United States before the Civil War) with an agrarian society based on family farms and small free-holds. Then industrialisation begins. Industry engenders and depends on cities, which grow up around the new factories and mills. Wages in factories must exceed the earnings one can make on the farm, or workers will not accept employment there. Thus, the cities become wealthier than the countryside. Inequality, originally very low, will increase as urbanisation and industrialisation proceed.

But, Kuznets then argued, there eventually will come a turning point. At some point, as agriculture becomes mechanised, the population of the countryside will diminish to a small fraction of the total. Then the inequalities that matter will no longer be those that distinguish the city from the hinterland, but those that exist within the cities. These, while initially high, will diminish as the working classes organise, vote, and create for themselves a world of unionised collective bargaining and, in the political sphere, social democracy and the welfare state. As income rises, inequality will decline, and the ultimate destiny of industrial capitalism is a society of tolerably egalitarian qualities, without the violence necessarily associated with communist revolution.

Kuznets' idea was based on a core insight: the major forces affecting inequality in the process of economic development are not specific public policies, but the structural relations of different sectors in the economy as development unfolds. Certain aspects of the evolution of inequalities are inevitable. Two forces come into play: the relative weight in population and activity of high- and low-income sectors, and the differential in relative pay between them. If the historical process unfolds as Kuznets described, then the trajectory of inequality will follow an inverted U-curve, first rising and then falling as average income grows.

This insight may be modified if the initial or the terminal conditions are different from those that Kuznets assumed. For instance, suppose that instead of egalitarian home-steaders, the initial agriculture is one of large plantations worked by slave labour? In that case, industrialisation might decrease inequality, even if the plantations persist,

since the industrial element would comprise a previously non-existent middle class. In that case, the "Kuznets curve" might be entirely downward sloping, with an egalitarian society emerging steadily in the course of growth, development and emergent resistance to the most repellent features of the previous structure.

Or again, suppose that there emerges a trend toward globalisation, under which some countries take the lead in providing advanced technologies, capital equipment, and services such as communications, insurance and finance? In that case, inequality may rise in those advanced countries with further growth in income, which will flow in the first instance to the few, well-paid denizens of the advanced sectors. The Kuznets curve, having declined during an initial, national phase of industrialisation, will now rise in the richest countries, as the new international phase takes shape. In a 2000 paper, Pedro Conçeicão and this author christened this possibility the "Augmented Kuznets Curve".[6] It appears to fit the evidence quite well for the United States, the UK and Japan.

How does the broader evidence fit the Kuznets curve? Many economists, using DS or WIDER, have concluded that the fit is poor. The UTIP team, using measures of *pay* inequality from the UTIP-UNIDO data set, takes a more favourable view. Kuznets himself stressed that his theory was related to pay rather than to income, and so it is reasonable to focus on this type of data. The UTIP-UNIDO data suggests that most countries are on a declining Kuznets surface but that China is on an upward-sloping surface (for the traditional reasons), while a few advanced countries, including the US, are again on an upward-sloping surface for reasons just given. Underrating Simon Kuznets is not a good idea.

How do interest rates, growth and saving affect inequality?

Most theories of increasing inequality explored so far have been *microeconomic*; their core idea is that outside forces such as technology or trade buffet incomes through the mediation of particular markets for labour time and capital assets. Kuznets's theory is *meso-economic*, meaning that it relates to structural change across grand categories of economic activity and development.

In 2014 Thomas Piketty offered a simple *macroeconomic* theory of rising inequality, based on two "fundamental

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6 P. Conceição, J.K. Galbraith: Toward a New Kuznets Hypothesis: Theory and Evidence on Growth and Inequality, in: J.K. Galbraith, M. Berner (eds.): Inequality and Industrial Change: A Global View, New York 2001, Cambridge University Press, pp. 139-160.

laws".[7] The first was based on the fact that the ownership of financial assets is concentrated, and so if income on financial assets rises faster than income in general, then the inequality of income should increase. If we call income on financial assets (which is their interest rate) r and the growth rate of income g, Piketty argued that, over the long run, the typical value for r is around five per cent per year while that for g is closer to two per cent. Thus, $r>g$.

A high interest rate surely favours creditors and a low one favours debtors. It is equally sure that "people who have money to lend tend to have more money than people who do not have money to lend".[8] So we should expect periods of high interest rates to favour the rich and periods of low interest rates to favour the poor.

But is Piketty correct that a general tendency of capitalism is to generate ongoing upward redistribution based on payments of interest? That is not so clear, for two reasons. First, taxation of interest income materially reduces the difference between r and g, while consumption with interest income can reduce the extent to which financial balances build up over time. Second, the greater part of the 20th century, at least from 1914 to 1980, stands as an exception to his law. This is the era when income taxation came into widespread use, while interest rates came under the control of central banks. During this period, r (after taxes) did *not* exceed g, and income inequality did not rise in the countries that form the core of Piketty's own data. The assertion of a "long-run tendency" requires one to believe that the conditions of the 19th century and earlier will now return on a sustained basis.

Piketty's second fundamental law concerns the effect of savings on financial wealth. The key idea is that a high savings rate by wealthier people compounds their advantage and grows their incomes more rapidly than those who do not save. This law is subject to the same general criticism as the first: while it is true that you accumulate more by saving than by not-saving, it is also true that taxes and inflation can deflate the value of accumulated wealth in relation to new income, and in practice they often have. History is littered with examples of deflated and exhausted fortunes – fortunately.

Piketty's book *Capital in the Twenty-First Century* has helped spread the idea that changing inequalities are related to growth rates, interest rates, exchange rates, terms of trade and perhaps to other macroeconomic phenomena that affect entire economies in a systematic and general way.[9] But his reduction of the phenomenon to interest rates, growth rates and savings rates alone is unpersuasive. In the case of the United States, it overlooks the link between capital-asset pricing bubbles and income inequality. This link is very clear in the data, but that has nothing to do with high interest rates or savings. Rather, it is a matter of the reallocation of incomes from some of the rich to others. In particular, financial asset prices were pumped up in some sectors (finance, technology) while being demolished in others (old-line manufacturing industries). The rise in inequality was due to the fact that a tiny handful of new capitalists were winning at this game, while a larger group – and their employees – were being wiped out.

What has been the role of financialisation in changing inequality?

"Financialisation" is a clumsy name for an ongoing shift in the authority over economic activity from national governments to financial actors – for the rise in power of the banks, and for the international integration of financial markets.

A common pattern in inequality measures around the world is the influence on the overall measure of inequality of increasing (and sometimes decreasing) incomes in the financial sector. This is hard to detect in survey data, which usually does not identify respondents according to whether they work in or out of finance. But it emerges very clearly when the between-groups component of a Theil index is calculated across sector categories, if (as is usually the case in national data sets) one of the included categories happens to be finance. In such data sets, one can read the effect of rising (and sometimes falling) incomes in finance directly from a table or chart. Or it is often possible to infer the increasing importance of finance from geographic data sets, since most countries and regions have a "financial capital" where the bulk of incomes from that sector are reported. New York and London play that role in the West, Shanghai plays it in China, Moscow plays it in Russia and Sao Paulo does so in Brazil.

The financial sector influences inequalities in a second way, by concentrating the growth of investment, and therefore of the associated incomes, in a small quadrant of economic activity at a time. This is a consequence of the herd mentality. At a particular moment, some sector becomes "hot" and all of the financial players rush for a "piece of the action". Some will succeed; many will fail. And there will be a penumbra of shady and fraudulent

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7 T. P i k e t t y: Capital in the Twenty-First Century, Cambridge 2014, Harvard University Press.
8 My father used to call this "Galbraith's Law".

9 T. P i k e t t y, op. cit.

players, who (if left unchecked) may bring major risks to the stability of the system. The effect on inequality stems from the initial rush, which must inevitably concentrate resources into the hands of "superstars" – for a short time. In contrast, typical public-sector financing of the economy spreads activity around; that is the nature of politics. The gains are smaller but more widely shared. In this case, the durability may be greater, and inequality is much less likely to increase.

What do global patterns show?

Looking at global patterns of changing inequality is another way to illustrate the modern power of global finance. A study conducted on the UTIP data set analysed the general tendency for inequality to change, year by year from the early 1960s onwards.[10] Until 1971 there was no general tendency that could easily be observed. Some countries showed rising inequality, while others showed falling inequality, and a reasonable observer might conclude that differences in national policies were the main factors.

From 1971 until around 1980, overall, inequality around the world declined, with the narrow (but important) exception of the recession-riddled industrial West, where it started to rise. Declines were especially sharp in a band of countries extending from Iran and Iraq across North Africa to Algeria – a group clearly tied together by their common role as producers of oil. But other commodity producers also did well, as did the debt-fuelled developing countries in the southern cone of South America.

In 1981 things changed again. Inequality started rising as a dramatic, general pattern almost everywhere. Inequality rose most sharply at first in Latin America and Africa, the epicentres of the world debt crisis. Only those countries that had remained aloof from commercial bank financing were immune: China, India and Iran. In the 1990s, the centre of rapidly rising inequality shifted to Eastern Europe and the former USSR, and in the later 1990s it moved on to Asia, notably to liberalising India and to China. The FDI-powered "Tigers" of Southeast Asia were the exception until a financial crisis hit them in 1997.

This picture illustrates with striking clarity precisely what was going on. In 1971 the stabilising global financial framework created at Bretton Woods in 1944 collapsed. There followed an oil and commodity boom that reduced

inequalities in the producing countries and increased them among the consumers. In the 1980s, ultra-high interest rates and rolling debt crises reversed the balance of financial power. It now unquestionably favoured the rich and crushed the poor, first in Latin America and Africa, then in the communist states, and finally in Asia.

From this pattern, the power of global financial forces is evident. Only those countries that stayed aloof from international debt escaped the storm, and only for as long as they could or chose to maintain their independence. Their capacity to do so was very limited, since this was an era defined by globalisation, neoliberalism and what was called the "Washington Consensus" for economic policy – namely, to privatise, deregulate, open up to external competition, and cut public spending and taxes.

However, in 2000 the wheel turned once again. Thanks to the bursting of the information-technology bubble in the United States and in the wake of the 9/11 attacks, interest rates were cut practically to zero. Commodity prices rose worldwide, especially oil. China continued to grow, providing a new source of demand to many peripheral producers. In much of South America, Russia and eventually even China itself, inequality peaked and began to decline, even as these regions distanced themselves from the neoliberal consensus of the 1990s and from the international institutions that enforced it. This phenomenon again confirms the importance of common global forces, while suggesting that even under "capitalism" – provided the policies are not too savage – there is no necessary tendency for inequality to increase forever. Inequalities may or may not increase, depending on world conditions that are set – to a great extent, though not exclusively – by the powers that control world financial systems.

How do political systems, violence, revolution and war affect inequality?

If – as we have seen – there are world forces that affect the rise or decline of economic inequality, does that mean that local conditions and institutions are unimportant? Of course not. For an appropriate analogy, consider a coastal area ravaged by a massive storm. The extent of the damage will depend in part on the strength of the storm. But it will also depend on the lie of the land, and on the strength of the levees, dykes and ocean gates that may be in place when the storm hits. Similarly, as the world economy is swept by violent forces, the effect on individual countries will depend in part on their institutions and on their policies – on whether they accept or resist.

With a good comparative data set, such as EHII or UTIP-UNIDO, it becomes possible to assess the effect of par-

10 J.K. Galbraith, H. Kum: Estimating the Inequality of Household Incomes: A Statistical Approach to the Creation of a Dense and Consistent Global Data Set, in: Review of Income and Wealth, Vol. 51, No. 1, 2005, pp. 115-143.

ticular political systems and of distinct events, such as war and revolutions, on the course of inequality. However, to make useful conclusions about these matters, one also needs a good source of information about political systems, wars and revolutions. These data sets are largely the province of political scientists, who developed them for other purposes. In the case of the major data sets covering political systems (the POLITY data sets), there is a problem, namely that the scale runs from "authoritarian" to "democratic," grouping both communist and fascist regimes (i.e. military dictatorships) in the same category. However, it is clear that with respect to inequality, these two types of authoritarianism are quite different.

Hsu addressed this problem by developing a categorical data set of regime types by country and year, using a wide range of descriptors to capture the ideology and institutional characteristics of different countries at different times.[11] This enables the data to indicate whether there are significant differences between certain countries at different times, according to their political regimes.

It turns out, not surprisingly, that there are indeed significant differences between the levels of inequality observed in countries with different political systems. Communist countries (in their day) had low inequality, as Cuba does to the present day. The social democratic governments of northern Europe retained low inequalities at least into the 2000s, although values may have changed in recent years in certain cases. Islamic republics have somewhat lower degrees of inequality than their income levels would otherwise suggest. On the other hand, military regimes and one-party non-communist dictatorships tend to have inequality measures on the high side. When military regimes and dictatorships come to an end, inequality is generally much higher than it was before, and the restoration of democracy does not immediately, or automatically, bring a reduction. It takes a long time (if ever) for a newly established democratic government to begin to reduce inequalities incurred under a previous regime, as governments in South Africa, Brazil, Chile and elsewhere have discovered.

It is also possible to assess the effect on inequality of historical events within particular countries. There was, for instance, a spectacular rise in inequality in the countries of Eastern Europe and the former Soviet Union when the Cold War ended and the USSR collapsed. Revolutions are rare events in modern data, but we note a sharp decline in inequality in Iran following the revolution there. There

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11 S. H s u : The Effect of Political Regimes on Inequality, 1963-2002, UTIP Working Paper No. 53, 2008.

also appears to have been, as a general rule, declining inequality in periods just before right-wing *coups d'état* and rising inequality thereafter; this was the experience of Chile before and after 1973, of Argentina before and after 1976, and of numerous other countries that may be tracked in the data.

Conclusions

We have taken a quick tour of a large world, in search of regularities in the movement of economic inequality, as far as it can be observed through the lens of a large, consistent data set. The following general conclusions appear to be in order.

First, when analysed with reliable world data, Kuznets's core insight remains valid. There is a trajectory of inequality in the course of economic development, structural change and rising income. For most countries in the world today, growth reduces inequality, and rich countries are more egalitarian than poor ones. However, there are exceptions, notably at the low end of the scale – the rise of China – and at the high end, as technology and finance emanate from a few of the richest countries to the entire world.

Second, global financial forces and changing financial conditions have played a powerful role affecting economic inequalities around the world over the past 50 years, especially since the collapse of the stabilising framework of Bretton Woods in 1971.

Third, there appears to be no single permanent trend to inequality, neither down (as Kuznets surmised for the long run) nor up (as Piketty argues). Instead, the great upward swing of income inequalities appears to have been mostly a phenomenon of the years 1980-2000. Thereafter, the trend stops, and though inequalities have remained high, there has been a tendency for them to decline in numerous widely separated countries. In South America, most notably, inequality as well as poverty have declined in many countries, including Brazil and Argentina, following crises that forced or enabled policy changes. Lower interest rates and higher commodity prices appear to have been strong factors, as has a retreat in many places from the free market orthodoxies of the prior two decades.

Finally, political institutions have been and in some cases remain a bulwark against rising inequalities. When these institutions crumble, the associated violence can contribute to abrupt changes, which may be difficult to reverse. Rising inequalities can happen quite suddenly, whereas – with just a few revolutionary exceptions – reducing them is a matter of patient progress over many years.