



Picture credit: No worries at Moritzplatz U-Bahn station in Berlin, September 2017. (Credit: Joel Schalit/Flickr)

## Special Report

# Inequality under globalisation: A reprise

James K. Galbraith (2018)

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# Inequality under globalisation: A reprise

James K. Galbraith

It is reasonable to begin a review of modern texts on inequality with Rousseau, who distinguished between ‘natural’ inequalities of strength and talent, necessarily small, and those due to title to property, in principle unlimited.

Some modern writers situate the debut of property rights in the rise of agriculture, therefore landownership, grain storage, and the accumulation of artefacts but that is not necessarily correct. As Veblen argued, the ownership of women, horses and livestock, as well as slaves, servants and soldiers, no doubt predates farming by many thousands of years.

Rousseau’s contemporary Adam Smith put a passage in the [Wealth of Nations](#) on the “Inequalities resulting from the policies of Europe,” in which he implicates a particular form of property rights, namely monopolies granted by states to corporations (meaning townships), which enabled them to buy cheap and sell dear. Smith also advanced the taxonomic scheme of wages, profits, rent, which in the hands of Ricardo and then Marx became the fundamental concepts of a theory of distribution, culminating in Marx’s theory of profit as extraction of surplus value, which in the late 19th and early 20th Century was countered by neoclassical marginal productivity theory and the Cobb-Douglas production function – a mathematical expression of the idea, from each according to his marginal productivity to each according to his... marginal productivity – assuming constant returns to scale, of course.

In all of this and continuing to the present day, the ‘functional’ distribution of income largely reduced to wage and profit shares remained the dominant framework of taxonomic schemes. Notwithstanding the clash of insights and ideologies captured with this framing, and allowing for its undoubted utility in an age of limited data and a corresponding need for ‘fundamental laws’ and simplifying principles, it is an impoverished approach to the modern

world and one that embodies the pre-scientific era of *a priori* rather than evolutionary or behaviour-based-taxonomies and classifications.

The foundations for an alternative were laid by Vilfredo Pareto and Corrado Gini, along with Max Lorenz. Their schemes for measuring the inequality of pay as incomes reflected a different conceptualisation of income as an essentially unified construct irrespective of origins, consonant with tax law, but capable of meaningful variations, while the unit of observation – persons or households – was reduced to a no-less prescientific status as an *a priori* basic category, reflecting the preconception that the ‘bourgeois household’ forms the universal undifferentiated building block of society, very much in line with the favoured schematisation of neoclassical economics. Neoclassical economists have been stuck with this framework ever since. They, therefore, explain further movements of inequality as the product of shifting demand or supply of a characteristic of the workers, namely ‘skill’– yet another *a priori* categorisation in the service of restricting the range of analysis and even of thought. To be sure the success of this approach as a disciplinary mechanism has been exceptional, relegating all challenges to fringe positions whose tenets are quite hard for those raised in the neoclassical tradition even to grasp.

The Russian Revolution and establishment of the Soviet Union made concrete the possibility on a grand scale of a socialist republic freed from feudal, capitalist or fascist control, and the Soviet victory in World War Two demonstrated the industrial and military potential of such a state, with the feat soon underscored by the outcome of the Chinese Civil War four years later.

Socialist prestige was high and against it, apart from the terror-power of the atomic bomb, the West needed to exhibit concrete and dramatic economic accomplishments as well as political discipline. This necessity was underscored at home in the Western countries by the power of trade unions and the expectations of veterans. From these sources arose social democracy, democratic socialism and the welfare state, including in their international dimensions the Marshall Plan, the Bretton Woods institutions, eventually the Alliance for



Progress, Food for Peace, PL 480 and raft of similar initiatives, all of which were guided by the ethos of Cold War liberalism. Three of whose major figures were Walt Rostow, Simon Kuznets and Albert Hirschman.

Rostow's central contribution was a simple scheme for 'stages' of economic growth, frankly subtitled 'A non-communist manifesto', written to project the model experience of the US and UK onto the world at large, free of interdependence or conflict, each country rolling down the runway to take off and eventually the plateau of high mass consumption. That flight at altitude cannot be sustained without fuel somewhat limited the aeronautical analogy but it was, at least, a message of hope and emulation. Rostow's theory lacked explicit distributional implications, although 'high mass consumption' implicitly entailed the end-state of a middle-class society.

Simon Kuznets, an economist of high practical distinctions, sketched out a distributional theory of the industrialisation process. In simple terms, the advent of urbanised industries in an economy previously dominated by peasant or yeoman agriculture must entail rising inequality until the share of peasants and farmers drops below a certain threshold, at which point the dynamics of workers' organisation and urban democracy take over and inequality declines again. This is the substantial basis of Kuznets' famous 'inverted-U' relationship between inequality and average income, and it certainly captured one major aspect of distribution under conditions of industrial change.

Hirschman, a highly independent and original mind, explored the social psychological complications of the Kuznets insight in his concept of the tunnel effect. In two lines of traffic stalled in a tunnel, the sight of one moving ahead lifts, rather than depresses, the spirits in the other line. However, Hirschman was careful to note that if the second line remains struck for too long, the effect will be reversed; hope will be replaced by frustration and eventually by rebellion.

In any event, the Cold War liberals and postwar American Keynesians knew that their place was to advance the optimistic vision of controllable and progressive democratic capitalism.

And political authority in the West, however tied to leading financial and business interests, did realise at least from time to time that actual results were also necessary. By the late 1950s John Kenneth Galbraith could write that economists had lost interest in inequality. Only perhaps in Sweden did it endure; there the Meidner/Rehn model specified compressed wage structures as a path to productivity and competitiveness, and Swedish social democracy implemented that model in a manner that drove Sweden over six decades to the top of the world income tables. But the Swedish School was a secret to all but the Swedes.

In the post-war era the division of labour between neoclassical macroeconomics and pseudo-Keynesian macroeconomics was pioneered at MIT and disseminated worldwide from there. Macro held on to a narrow strip of economic territory: unemployment, inflation, interest rates and money supply, the business cycle, the rate of growth and their interrelations through the quantity theory, the Phillips Curve and Okun's Law. Distribution played no role. The personal distribution of income fell squarely into the microeconomics of labour markets, governed by supply and demand for various levels of skill, while the functional distribution was hardly spoken of at all except by the occasional house Marxist. In consequence for the advanced countries there was no theory of changing inequality. The Kuznets evolution was supposedly complete. The Cobb-Douglas distribution theory with Hicks Neutral Technical change predicted stable functional shares: personal distribution was an *ad hoc* matter of firm-size effects, industry-specific labour rents and efficiency wages. In graduate school in the 1970s this author was told that subject was like watching grass grow.

Beginning in the late 1970s and early 1980s, circumstances began to force a change, perhaps first in the United States but not long after throughout much of the industrial and the developing worlds. An early hearing on these issues in 1982 at the Joint Economic Committee pointed an accusing finger at right-wing policies, and this message was reiterated in 1988 by Barry Bluestone and Bennett Harrison, in a book that laid the blame on de-industrialisation and the war on unions, which were conspicuous features of the Reagan era and of Margaret Thatcher's time in the United Kingdom. The point seemed obvious enough, but there was a subtle difficulty. The severing of micro from macro made it

conceptually difficult for many economists to tie the Reagan Recession of 1981-82 as such to a distributional outcome. Instead, the emphasis fell on specific anti-worker political actions – the firing of air traffic controllers, deregulation of trucking, a radical-right National Labor Relations Board – when in fact the two sides of the economic phenomenon, the macro and the micro-political, were inseparable in practice. Still, this was a minor muddle compared with what was to come.

It was only in the early 1990s that mainstream economics began a concerted search for a less- contentious explanation of rising inequality, rooted in the labour market analysis to which distribution issues had been consigned. Given the evolving preference of applied micro-economists for data based on surveys of household characteristics – however limited these may have been by survey-takers' fixation on race, gender, age, education and a handful of similarly simple categories – the evidentiary basis for a labour market analysis of inequality was remarkably thin. It consisted in important instances of little more than widely separated surveys of earnings stratified by worker characteristics, and then largely confined to a small handful of wealthy countries.

Undaunted, Bound and Johnson set the template for neoclassical investigation thereafter. Rising inequality was a matter of changing relative demand for a peculiar characteristic called skill, unobservable in practice but usually approximated by the number of years spent in school. Demand being driven by marginal productivity, the underlying cause had to be a 'bias' in the character of technological change; firms were demanding a better class of employee. The remedy to the resultant inequality could only be an increased supply of skill – more years in school. And this remedy had the peculiar characteristic that if enough people pursued it, the advantage accruing to each would diminish until it disappeared. Education was economically worthwhile only if it could be effectively restricted – a truism that is nevertheless in its way subversive. At Harvard, the high priests Claudia Goldin and Larry Katz eventually produced a thick book from which the ugly class politics of the 1980s had miraculously disappeared. In American economics, then and since, a thick book

endorsed by Larry Summers is generally sufficient to win an argument; in this profession, proof by intimidation works.

The discipline of economics is such that to have purchase with the profession, any argument counter to 'skill-biased technological change' had to adapt the same broad framework of labour market supply-and-demand. Such an alternative was presented by Adrian Wood in an argument related to North-South trade, which he argued would expand the effective supply of unskilled workers in the Global North, driving down their wages in rich countries but raising them among the poor (where Wood argued factory workers form an intermediate skill class) thus moving inequality in opposite directions in the two spheres (or hemispheres). Wood's argument gained an audience briefly but was ultimately dismissed by the mainstream; among other things the encouragement it would have given to sceptics of free trade made it politically incorrect.

It was at this point in the mid-1990s that analysis based loosely on the Kuznets hypothesis revived. Thanks in part to efforts at the World Bank to begin to compile a comprehensive global data set of inequality measures, along with income measures prepared by the Penn World Tables and Purchasing Power Parity (PPP) estimates of the relative purchasing power of different national currencies. Fairly soon after the publication of the landmark Deininger and Squire data set there were multiple efforts to trace the growth (or decline) of inequality on the world scale, resolving roughly into three conceptual measures as described by Milanovic: inequality between countries pure and simple (Concept I), inequality between countries weighted by population a (Concept II), and inequality across individuals irrespective of nationality (Concept III).

The diversity of concepts brought with it new sources of uncertainty in the result and indeed inconsistent – on more precisely, divergent – conclusions depending on the concept deployed. Thus, while inequality between countries (Concept I) tended to rise, inequality between countries weighted by population (Concept II) fell. The difference was largely due to the rise in average Chinese incomes, PPP adjusted, notwithstanding that China



(reportedly) manipulated its participation in PPP surveys to reduce the measured rise in average incomes there for political reasons. Meanwhile Concept III inequality could be calculated only by merging datasets from different countries at either PPP or exchange rate equivalents; these numbers too were driven largely by national-average movements rather than measures of inequality *per se*, and the extensive data requirements meant that only a few years (initially just three) could be brought to fruition.

At the other end of the measurement-method scale, the Luxembourg Income Studies set out to blend and homogenise household and personal Taiwan income surveys so as to permit detailed and accurate welfare comparisons – but with the limitation that such surveys are sparse, restricted mainly to the wealthy countries and for the most part to recent years. What one gains in fine detail on household characteristics one loses on the capacity for extensive international and historical comparison. In these matters, there are different ways to process a finite body of data but, methodologically speaking, there is no free lunch.

In this cacophony of facts and semi facts, Kuznets' straightforward and intuitive hypothesis did not fare well. Indeed, most researchers citing Kuznets were not much interested in his narrative of intersectoral shifts; rather they sought inverted-U curves anywhere they might find them and made that the test of Kuznets' thesis, irrespective of whether there existed an underlying framework of early-to-late transition from agriculture to industry and from rural to urban life. In retrospect, this work largely (or wholly) lacks enduring value.

For many researchers in this period, moreover, the relation of inequality to income *level* was no longer of prime interest. Debates over development, education, industrial policy (the East Asian Miracle) and economic growth directed attention toward the link between initial levels of inequality and later growth rates. Two competing strands emerged. One held that low levels of inequality were good for growth – citing Korea, Taiwan, and China but largely ignoring East Germany and the USSR – while the other advanced the opposite strand of thought, that income and savings must first be concentrated before investment and growth

will follow. A fair summary of these debates is that by choosing periods, countries, data sources and econometric techniques with sufficient care, any position can be sustained. But whatever the result, this literature bore only a nodding resemblance or relation to Kuznets.

One is hard-pressed not to draw an unpleasant conclusion, that a driving force behind much inequality research on both right and left has been a search for polemical advantage. The very existence of the topic favours the left; it is no accident that mainstream economics shunned it for decades. But in many left-leaning accounts inequality is always bad – notwithstanding that it is a prime mover of human effort and an inevitable consequence of functional specialisation between labour and capital as well as of differential rewards based on skill, education, seniority, danger, responsibility or anything else. Left analyses have a proclivity also to find that inequality is always rising, and to minimise or dismiss moments when it may be on the decline. On the Right, the characteristic task is apology: inequalities are natural, they are just, and at worst they are unavoidable and don't do excessive damage. They are the product of market outcomes, they can be overcome only by dint of education and effort; if they are not overcome in any particular case the fault lies with the worker or other economic agent and not with the social order.

Against this counterpoint of alarm and apology, a few lines of reasoning stand out as having a pragmatic bent and drive toward policy relevance.

Of these, the most significant is the oldest: The Meidner/Rehn (LO, 1951) model of wage compression as a path toward productivity gain in an open economy. The LO insight was that the composition and technological level of industry in a small economy such as Sweden is endogenous. Floors on wages drive out weak players and place pressure on stronger ones to modernise. The result over time is a superior industrial mix and a higher standard of life both in absolute and relative terms. Moreover, an advanced industrial base can support a large and well-paid service sector; the downside is that high tax rates may force the expatriation of high net-income persons, but this is a minor price. The Meidner/Rehn approach is highly validated by the Sweden experience over 70 years, but of less relevance

to large economies that cannot export the full spectrum of backward technologies and cheap services. Still, to understand that economic progress occurs along a spectrum of existing technological levels and vintages is a critical insight, largely neglected in the neoclassical treatment.

A second framing of the issue of inequality in policy term builds on the model of Harris and Todaro, who studied urbanisation, minimum wages and unemployment in East Africa in the 1960s. Their sharp insight was that an unequal wage structure (say, across an urban/rural divide) generates migration and competition for the better jobs. If these are few and the pay gap is large, then job-seekers must necessarily outnumber jobs and unemployment necessarily results.

The Harris-Todaro hypothesis can be extended to many different circumstances – migrations in Europe, North America and China come to mind – and provides a testable hypothesis in contrast to the skill bias model. The latter predicts that more flexible-meaning unequal-labour markets will have less unemployment, since employers will be able to match pay to skills and requirements; they will choose to hire more unskilled workers if the latter are cheaper. The H/T model predicts the opposite, namely that societies with compressed and regulated wage structures will (within-limits) tend to enjoy lower unemployment, and (if they target investments cleverly) higher rates of productivity growth and larger manufacturing sectors than those who maintain their allegiance to ‘free and flexible’ labour markets. This proves to be one of the rare points on which evidence is spectacularly clear, as reflection on the cases of Scandinavia, Austria and Ireland will attest. The preference of employers for flexibility has everything to do with power, with a reactionary attitude toward modernisation, and nothing at all to do with ‘economic reform’ or combating unemployment.

A third pro-equality argument was offered a few years back by this author and several student collaborators; it is that when countries fight wars, as happens from time to time, the more equal of two combatants almost invariably wins. This appears to hold going back to classical times. Republics fight their way to independence, become Empires by conquest,

fall into decay and disunion, and recede. Communist countries, particularly, did not lose wars unless they fought with each other or took on an-even-more egalitarian theocracy, as the late-stage USSR managed in Afghanistan in the 1970s. And when theocracies collide, the advantage lies not with the richer but with the more compact and coherent, which is to say, usually, with the Islamic.

None of these arguments are even referenced in the 700-page tome of Thomas Piketty which set out to provide an empirical account of the evolution of inequality worldwide. Piketty's book also sought to embed that record in a theoretical framework capable of bearing the weight of comprehensive explanation. For this, a 'new' theory is evidently required, and while Piketty is at pains not to disparage the mainstream labour market education/technology theory, he is not prepared to accept it either. His grand scheme requires a framework capable of operating over a long span of history and pre-history – thousands of years – and for this the concept of skill-biased technology is too specifically modern, too tightly linked to the digital age.

Piketty's proposed solution is to base a theory of inequality on the relationship between  $r$  and  $g$  where  $r$  is the rate of profit and  $g$  is the rate of economic growth. Where the former exceeds the latter inequality must rise, since capital (and land) are owned by the upper classes. So, it remains for Piketty to establish that  $r > g$  is both normal historically and plausible as a matter of theory.

For theory, Piketty reverts to the neoclassical standard, the marginal productivity of capital – a choice that requires him to make a drive-by shooting attack on Cambridge Capital Theory, which since the 1960s established that smaller 'quantities' of capital do not produce higher rates of return. Having made his attack, Piketty can (mostly) argue that a profit/interest rate drive by the marginal productivity of capital typically exceeds overall growth rates without recourse to the culpable (but correct) proposition that interest rates are set by and for the benefit of the state. Instead, for reasons not entirely clear, technology must keep raising the real rate of return on capital.

For Piketty, episodes of levelling are restricted to short periods of capital destruction in wartime – never mind that this did not happen in Germany in World War One or in the US in either war, nor to any dramatic degree in World War Two in France or the UK. Piketty also implicitly assumes that fortunes pass unbroken from one generation to the next – whatever it takes to fuel the hypothesis that the inequalities of the 19th Century were natural and the mitigations of the 20th an aberration, now (however regrettably) receding.

Piketty's celebrated empirical work rests partly on archival research on patrimony in the Paris archives – a narrow foundation – but more on a compilation of income tax records from 29 countries. There is no doubt value in this collection, but recognising that value and its limitations requires acknowledging that (a) not every country has income tax and those that do not may not resemble those that do; (b) among countries that do have income tax, tax laws defining taxable income vary, as does the effectiveness of enforcement and degree of evasion, and (c) even in countries with good reporting and enforcement, tax law changes can alter the reported distribution without effect on the underlying reality.

The 1986 US tax reform was designed to be of this type – that is, to alter the reported distribution without altering the tax burden. The reform required high-income individuals to report more of their income while taxing the whole at a lower rate. The resulting bulge in Piketty's top income share for the US in 1987 et seq. provides a substantial part of his case that rising inequality in America outstrips that in Europe. But it is fictitious, and should have been stripped from his series, but never has been. Further, some of Piketty's longer run data are simply imaginary; there are figures in his book that report values for 2100 and 2200 AD. And as Noah Wright has shown, even those parts which have an arguable basis in fact do not support his central claim that the rate of profit is again coming to exceed the rate of growth.

What remains missing, in the account so far, is a reliable fact-base of information on the evolution of inequality over time and across countries, using a single consistent concept of inequality measured across the full spectrum of nation-states and with sufficient density over



time to establish trends and turning points reliably. To summarise the state-of-play as of 2017:

– The World Institute of Development Economics Research (WIDER) has produced a comprehensive bibliographic compilation of inequality surveys, but any conceptually consistent panel will necessarily be a relatively sparse subset.

- Luxembourg Income Studies have produced a fully-consistent micro data collection but for only a relatively few, mostly high-income, countries and years.
- The World Bank has reverted to a dataset of numbers provided by member states with no attempt to assure consistency of concept. Consumption inequality numbers for (say) India are intermingled with income-based numbers for Western countries.
- Piketty and his collaborators rely on tax rather than survey data, with advantages in covering top incomes but weak comparability across countries, limited overall coverage and problems of continuity within countries as tax laws change.
- Milanovic has built a unified world inequality measure but based on a melding of internal inequality measures and country comparisons based on PPP estimates – largely driven by the latter and subject to their weaknesses.

Arguably, these approaches exhaust what can profitably be done from a record of survey and tax data assembled from diverse, incomplete, independent and conceptually autonomous sources. Further progress requires extracting, if possible, reliable information from alternative records, compiled with greater persistence and regularity over the decades and across the globe. But to undertake this task requires a different method, indeed a different measure of inequality, altogether.

What is remarkable, as the work of The University of Texas Inequality Project over 20 years has shown, is that suitable inequality measures exist – and have existed for decades – and that suitable source data are ubiquitous and easy to handle. So, the task of producing a nearly comprehensive, consistent world panel data set of inequality proved to be far simpler and far easier than the prior survey-based or contemporaneous tax-based approaches, as well as incomparably less expensive and faster to implement. Using these methods, a small

group of students in Austin was able to supplement – arguably, to outstrip – some of the world’s largest economic research organisations.

The insight behind the UTIP measures touches on several distinct issues, especially the nature of category structures – of taxonomies – and the fractal character of economic distributions, which bears on the relationship between an observable portion of a distribution and the whole thing.

Categories are groups of individuals; the characteristics of a category are the statistical summary of the characteristics of the individuals covered by the category. Changes in the income (say) of individuals within a group change the average income of the group. One can, therefore, use a change in group average income as a proxy measure of changes affecting the underlying individuals. As group structures become more detailed and refined, the correspondence between group and individual necessarily becomes closer, until the two ways of looking at the data converge with each individual and her own group.

This is true irrespective of the overlying character of the group – whether individuals are classed by location, industry, age, gender, body weight, religion, language or any combination of these or other characteristics so long as the groups are ‘MECE’ – mutually exclusive, collectively exhaustive – that is to say, non-overlapping and covering the entirety of that part of the population being observed. At all points, dividing groups into subgroups increases ‘between-group’ inequality. And after a certain point, the movement of a distribution consistently measured across groups must reflect the movement of the same distribution measured across individuals. There is no need for a ‘random sample’ to establish what the ebb and flow of the distribution is.

Moreover, if the prime forces driving change in a distribution of incomes or earnings are differences across substantial geographic regions or between different industrial or economic sectors, then a fairly rough group structure will capture the important movements over time – so long as the structure is measured consistently. The existence of administrative datasets, collecting income and population by region and employment and

payrolls by sector and industry in hierarchical structures that remain reasonably stable over time, therefore turns out to be of great practical importance to a project of filling in the historical record of inequality statistics.

A limitation of categorical data in practice is that the group and underlying individuals covered may be a systematic (and therefore biased) subset of the population of interest. Thus, in a survey of manufacturing establishments, workers in units below a certain size may be excluded, while those in agriculture, services and the informal economy are not covered at all. But the fractal character of distributions implies that so long as the broad social relations of a society endure – so long as bankers make more than factory workers who make more than peasants – an increase in the inequality within a given observational frame – say, the manufacturing sector – is far more likely than not to mirror a change in the distribution writ large. By the same token, astronomical telescopes can see only a small sliver of the sky, and one can tell the weather – usually though not always – through a window at a glance.

The specific methodological contribution of the UTIP effort was to marry the above insights about categorical data sources – which are cheap and abundant in the real world – to Henri Theil's proposed general entropy measures of between-group inequality, specifically the between-groups component of Theil's T statistic, a simple and flexible formula that requires just two morsels of information on any group structure, namely the total population (or employment) and total income (or payroll) of each group.

From this, an inequality measure can be computed which is unaffected by sampling error, nor by inflation or by differences/changes in the currency unit over time. Moreover, the measure can be added-up at will across sectors or regions, or divided between them. The statistic is thus well-suited to the construction of dense, consistent long inequality time series, on an annual or even monthly basis where sources permit. The production *en masse* of such series from diverse national and regional data sources was an early UTIP contribution.

But there was more. For reasons that remain mathematically obscure – at least to us – in datasets that measure employment and payrolls across consistently-categorised industries or economic sectors – examples include the Industrial Statistics of UNIDO and Eurostat’s REGIO – the between groups component of Theil’s T statistic is effectively normalised, so that measures compared between countries – and not merely through time within a country – tend to correspond closely to the available survey-based measures (especially from harmonised data sets such as LIS) and to evolve smoothly across international frontiers (rising from North to South in Europe, for instance) in ways that strongly suggest that international comparisons with these measures correspond to underlying economic realities.

The same cannot be said for at least some of the survey-based datasets, which in some cases show sharp inconsistencies in inequality between neighbouring countries (such as France and Germany, for example) with similar income levels and open borders. But if France were radically more unequal than Germany as some datasets appear to show, then the street sweepers in Hamburg would be francophone. It is easy enough to establish that this is generally not the case.

The discovery in principle and practice that between-groups Theil statistics could accurately depict both the evolution of inequalities over time and comparative levels of inequality between countries (or other geographic entities, such as sub-national regions in Europe, or US states) opened up the prospect of a search for international, inter-continental and global patterns in the evolution of inequality through time, hence the possibility of identifying forces driving a continental or even global macroeconomics of inequality, as well as decompositions of each inequality measure into the specific contributions of each region or sector, enabling a descriptive history of inequality going far beyond, in detail, accuracy and causal implications, the limited information reported on households or persons in surveys. It also becomes possible to seek the institutional and political correlates of changing inequality within countries, as the measures prove to be sensitive reflections of revolutions, coup d’états and regime change. Sometimes even the mundane consequences of ordinary elections can be detected.

Before moving on to those themes, it is useful to ask, do measures of inequality computed in this way from a limited and systematically-biased data set, such as UNIDO's Industrial Statistics, correspond to measures taken by other researchers over time in the customary (and far more expensive) ways? To assess this question, UTIP conducted two research exercises. The first was a comparison by linear regression of the UTIP Theil measures to an early collection of Gini measures from diverse surveys – the Deininger/Squire dataset of the World Bank, first published in the mid-1990s, and chosen for this purpose because it has a manageable number of distinct conceptual categories (six) and also because it was the dominant international comparative data set on inequality at the time.

The comparison showed that after controlling for concept – whether an inequality measure was gross or net of tax, whether it was a measure of income or expenditure, whether the observational unit was the person or the household – a large share of the variance in the DS set could be accounted for by just two variables, the share of manufacturing employment in total population and pay inequality measured across industries within the manufacturing sector. Coefficients on both variables were stable and precisely estimated, which thus permitted the construction of extensive estimated measures of gross household income inequality in Gini format, and so the construction of an extensive, dense and consistent dataset of this particular concept, conveying almost 150 countries from 1963 forward, more than available from any other independently-measured source.

The second verification exercise was a matter of comparing the UTIP estimates to inequality measures in the published record, a painstaking exercise carried out over a period of years, largely by Béatrice Halbach and Alexandra Malinowska, and reported in a World Bank volume. There is no easy way to summarise this evidence; it has to be examined and evaluated visually. However, a fair summary is that for wealthy and transition economies, the Estimated Household Income Inequality (EHII) series track available survey evidence on the same concept uncannily well, and generally falls – as predicted – between measures of 'market inequality' and measures of 'disposable' (or net) income inequality – the former high and the latter low.



For developing countries, a similar story holds, except that in some cases – typically larger countries such as Mexico, Brazil, South Africa – the EHII estimates tend to fall below those found by surveys. The relatively small weight of manufacturing in these economies may be partly responsible, but there is also the fact that in some large, poor countries a significant share of households reports no income at all – about a third, in South African data. This calls into question whether the meanings of ‘income’ and ‘household’ are comparable between wealthy countries and those with a substantial share of deeply impoverished people.

With respect to the United States, as well, the EHII estimates diverge from – fall below – survey and tax estimates of inequality because the wealthiest US households have substantial income from capital which they report. This adds an almost unique dimension to measured income inequalities in the US, closely tracking capital asset prices. Whether this makes for a ‘real’ as opposed to only a measurement difference with other wealthy countries is unclear. In any event, even after noting the exceptions, it is clear enough that the simple UTIP EHII model is a success at producing sensible and reliable estimates of gross household income inequalities over time, and the EHII dataset is the largest available consisting solely of independently measured, consistent inequality concepts. The one larger dataset of this type, which incorporates the UTIP measurements as a source, relies on interpolations across time and countries to fill out the missing years and countries. As a result, statistical analysis using Frederick Bolt’s SWIID (Standardized World Income Inequality Dataset) risks exaggerating the true degrees of freedom and statistical precision of the results.

The successful creation of conceptually consistent, dense panel datasets on inter-industry pay inequality and its derivative data set on estimated household gross income inequality, each with about 150 countries and about 4000 independent counties – year observations beginning in 1963, opens the door to a new kind of global economics. Such an economics integrates distribution – the central preoccupation of microeconomics in mainstream classical and neo-classical theory – with the presence of macroeconomic forces and influences on an international and even planetary basis. It is an economics without a priori

national or regional boundaries, an economics *sans frontières*, an empirical economics for an age of globalisation, an economics which treats interdependence as a foundational fact whose properties are to be analysed, rather than as an add-on to a prefabricated national model – as in Keynesian macroeconomics – or as a mere incantation in a world of insular, supply-and-demand driven labour markets, each with its boundaries fixed, in practice, by the happenstance and whim of national or regional statistical agencies. Our work is truly global, and also transcends the conventional distinction between advanced and developing countries, blending the two into a portrait of the world economy as a unified whole.

We turn finally to what the analysis shows. Research possibilities with such a dataset are essentially limitless, since inequality measures can be compared profitably not only to each other but also to every other measured socioeconomic variable under the sun: income, life, health, violence, happiness. There is work here to keep researchers busy for decades. The UTIP team has largely – not entirely – steered clear, in part because the limited span of other data sets means that any comparison entails many lost observations – for instance, the famed Barro-Lee dataset on education has only a few hundred country-year data points – but also because establishing the credibility of our measures and exploring the relationships within our own dataset have proved to be challenges enough for a small, part-time team.

Sometimes the most basic facts are, from the standpoint of previous theory, the most fundamental. In this case, a glance at a map tells that there is a gradient of inequality measures that runs roughly from North to South, from wealthier countries to poorer ones, and also (to a degree) from East to West, in the sense that socialist or formerly socialist economies (unless they collapsed) had egalitarian qualities which their capitalist adversaries did not. This gradient plainly reflects the strength of an industrial and urban middle class in the wealthy countries, and the plain fact that without such a class, a country is necessarily both poor and unequal, an amalgam of landlords (and resource barons) and serfs. Especially high inequality readings turn up – no surprise – in the oil kingdoms and in the mining fiefs of the Third World.

This simple observation tells us that Kuznets was right – up to a point. There *is* an organic relation between income and inequality. In general, inequality declines as income rises. Kuznets' view of an initial period of egalitarian peasant agriculture applies only to a handful of cases – such as North America north of the Mason Dixon Line in the 19th Century – and in the wider world only if one excludes – as he did – landlords and rental income. In the modern world, the case of post-revolutionary China fits under the rising pattern of Kuznets' inverted U; one would be hard pressed to identify another important case. Meanwhile close examination of a handful of the richest countries – the US, UK, Japan – exposes another salient fact. In these cases, inequality rises as the economy grows.

This is the evident consequence of a structural concentration on technology and finance – to which I tried to call attention back in 1989 – countries that export financial services and advanced capital equipment to the world experience rising inequality in investment booms, and falling inequality in a slump. The Augmented Kuznets Curve first presented in 2001 (Conceição and Galbraith, in Galbraith/Berner), captures these stylised facts. In short, Kuznets correctly captured the critical role played by intersecting structural change in inequality; his historical experience precluded him having applied that correct insight to the particular and peculiar facts of globalisation.

A second observational fact that emerges from a glance at maps is that countries of the core of the world economy – call them the OECD – resemble each other, and resemble their close neighbours more closely than their distant ones. Thus, the Scandinavian countries form a low-inequality unit, so do Germany and its neighbours, while the Mediterranean countries are more unequal. These are signs of economic integration; large differences occur only across substantial boundaries. Further, large continental regions – the United States – are necessarily more unequal than small European states taken individually, but the picture changes if one takes Europe as a single integrated continental economy, adding the between-countries element of inequality to the within-country components. When this is done pay inequalities across Europe *are larger* than in the US. Whether the same is true for all income is murky, because so much capital income is reported by the American wealthy.

Such income exists also in Europe, but its extent is masked by a greater proportion of privately-held business assets and the presence of entire countries that live off of sheltering high-net worth individuals and families from the tax man.

Examining national patterns over time, it is clear that measures of inequality, particularly those of pay inequality in manufacturing, but also many geographic and intersectoral measures drawn from national data sources, are sensitive mirrors of underlying political events. Thus, the coup in Chile in 1973; in Argentina in 1976, the emergency in India, the reforms after 1993 in China, and above all the collapse of the USSR and of socialism in Eastern Europe show as moments of rising inequality. In some cases, these are dramatic. Meanwhile the Iranian revolution, the Iran-Iraq war and the period of post neoliberal recovery (and higher commodity prices) in South America and Russia in the 2000s are among the limited instances of declining inequalities. The social implications of declining inequality are not always unambiguous. For example, data for the late GDR show declining inequality on a steady path until the country disappeared. As a general rule, though, low and stable inequality is associated with strong institutions and wealth; high and fluctuating inequality is the lot of poorer open economies adrift on a sea of unstable commodity prices and interest rates, as well as military conflict and political upheaval.

Patterns of geographic contiguity establish the existence of interdependence and of global hierarchies. They also validate the centre-periphery view of economic relations under global capitalism and put paid to the practice of national economic modelling except for the largest, most autonomous economies of the global centre – one simply cannot understand what is going on, except by reference to global trends. They also establish the transnational scale of distributive relations, calling into question the notion of ‘microfoundations’. Instead of building a consolidated picture from individual or household data, a practice that assumes the autonomy of those units, the world appears to be structured from the top down and the question becomes, by what major force or forces?

An answer can be sought in a search in the data for global patterns – trends and turning points through time. The existence of a common pattern of movement is evidence *prima facie* of a common underlying force, with broad global effect on national distributions of pay or income. It is also *per contra* proof that purely national or local analyses of ‘market forces’ – the stuff and substance of neoclassical microeconomic and labour market analysis – cannot be sufficient to explain the phenomenon under review.

A simple inspection of trends and changes in mean inequality gives a strong clue to the sweep of events. There are four trends and three distinct turning points. From 1963-1971, no trend appears, and changes in individual countries are for the most part small. After 1971, while inequality increases in some of the wealthy countries, in much of the world it is declining. After 1980, there is a radical change, and the world enters on a period of large inequality increases, sweeping across regions beginning in Latin America and Africa, hitting Eastern Europe and the (former) USSR after 1989, and moving on to Asia in the 1990s. In 2000 there is a further turning point, after which stabilisation and even modest declines in inequality are found in Russia, China, Latin America, parts of Africa and elsewhere.

The meaning of these patterns seems accessible without requiring elaborate theory or hypothesis testing; mere knowledge of key economic developments at global scale seems sufficient. In 1971 the stabilising exchange rate framework of the Bretton Woods institutions collapsed – or more precisely was torpedoed by the anchor country, the United States. There followed a nine-year boom in commodity prices, led by oil; and fuelled by the recycling of petrodollars into commercial bank loans to the Third World. Inequality fell in the (numerous, relatively poor) commodity-producing and debt-increasing countries, which grew rapidly: it rose in the fewer (relatively rich) industrialised consumers. Two simple parameters, debt flow and oil prices, dominated the global pattern, while national institutions and politics affected the timing of effect in particular cases, such as Chile or Argentina on one side as compared with (say) Algeria or Iraq on the other.



In 1981 the global crisis ended the commodities-debt-and-development boom. The crisis hit first in the most exposed indebted countries, provoking a collapse of investment, de-industrialisation, a collapse of public revenues and public services, and in certain cases – Chile 1982 – a banking crisis. Inequalities rose as the middle classes were destroyed. Ultimately better-protected countries – the East Bloc – also fell before the pressure, along with the internal political strains it had generated. Financial liberalisation and its discontents then spread to the most successful of the developing nations, the East Asian Tigers, who entered crisis in 1997. Only China, which had maintained capital controls throughout (and, especially, resisted the temptation to lift them in 1995) remained untouched by this final act. That China was therefore poised to reap the spoils in the following decade is therefore not perhaps a surprise.

In the 2000s, following the NASDAQ collapse of April 2000 and the 2001 9-11 attacks, global interest rates fell and with China's growth, commodity prices recovered, giving space for left-wing governments to come to power in South America and in parts of Africa, enabling broad-based growth and poverty reductions. Meanwhile growth in China spread past its initial geographic concentration on Guangdong, Shanghai and Beijing, while in Russia a new government took partial control of the national resource base, stabilising living conditions and arresting the free-fall of life expectancy, fertility, emigration, and violence that had followed the dissolution of the USSR in the early 1990s. So, in Russia too inequality declined. In the US a saw tooth pattern emerged, of underlying stagnation capped by income gains to property speculators and mortgage fraud, the signature elements of the ages of Bush and Obama. In Europe, the consolidation of the Eurozone replayed the global boom of the 1970s on a regional scale, as capital flowing to the newly bankable countries of Portugal, Ireland, Greece and Spain set the stage for the subsequent collapse – PIGS, or, Principal Instigator, Goldman Sachs.

And the collapse came. Curiously the Great Financial Crisis was in the first instance a debacle of the rich countries, *reducing* measured inequalities along the augmented Kuznets Curve. One can see this clearly in national data for the United States, and in Europe-wide

data showing the relative losses in London and Paris, the great financial centres. The effects on the wider world ran through other channels: declining commodity prices, the return of reactionary governments (throughout Latin America, also in India) and especially above all, the ironic flight to the US dollar, capital markets and Treasury bonds. A final discovery of the UTIP team underscores the point: the relationship of pay inequality to exchange rates, measured against the dollar.

From a theoretical point of view, the nexus of exchange rates and inequality is of interest partly because it is on reflection transparent and clear; the lines of causality are unmistakable. A manufacturer has only two possible markets – those inside the country and those outside. Typically – if not invariably – a country exports its best products, and the pay scales of the exporting sectors exceed those who sell only or largely at home. From this it follows instantly that a depreciation of the national currency raises inequality: the peso or real or rupee income of the exporter rises, while that of the non-exporter stays the same. Inequality must rise as a pure matter of accounting-and all the more so, if the increased local currency flows are concentrated within the exporting sector. No behavioural response or effect on trade flows is required, no J-curve or other exotic effect. Devaluations raise inequality and appreciations drive it down. Moreover, we already know that variations in pay inequality drive household income inequality, so the line of causality is unambiguous – from the exchange rate to the inequality measure.

How important is this effect? In an examination of data from over 30 countries, Rossi found that while the slope of the relationship varies, depending on proximity to the United States, the data speak with one voice. The relationship is almost always inverse and the proportion of variance accounted for by this one variable is on the order of 50%. The statistical chase comes to an end: that global financial capital drives the movement of inequality around the world seems firmly established. This, in a nutshell, is what we know about the relationship between globalisation and inequality.

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