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## GLOBALIZATION AND INEQUALITY REVISITED\*

### Abstract

This article summarizes the literature on inequality and economic development from Kuznets (1955) through the neo-classical labor-market-adjustment models and technology/education dialectics of the 1990s, and onward to the modern use of comprehensive, consistent data sets with global coverage to assess the interdependent and divergent experience of advanced, developing and transition economies in the age of globalization. Work based on the data sets developed by the University of Texas Inequality Project broadly validates Kuznets' original view of the importance of inter-sectoral transitions, but with many distinct and new insights, as it becomes possible to track regional and transnational patterns, common global macroeconomic forces and, most recently, the critical role played by exchange rates in the evolution of inequality in open economies.

**Keywords:** globalization, inequality, wages, labor markets, productivity.

**JEL Classification:** D63, E23, F60, J31.

In 1955, Simon Kuznets offered an intuitive account of the evolution of economic inequalities in the process of industrialization. At first, urban centers and factories would attract labor from the poor-but-egalitarian countryside, and the differential necessary to achieve this would be, for a time, the single most important source of inequality in the system. As cities grew, so too would inequality, until such time as the countryside mechanized and emptied out, and the now-industrial nation became predominantly citified. Then, Kuznets reasoned, inequalities would begin to fall – a process

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reinforced by the development of trade unions, democratic governance, and a redistributive welfare state.

Kuznets had very little evidence to work with, apart from the apparent experience of the United States, Great Britain, and a few nations of continental Europe through the middle of the twentieth century. In much of the world, moreover, the process of industrial development had barely begun, and in important parts of it, the Kuznets process had been short-circuited by communist revolution. Moreover, Kuznets had to be careful to restrict himself to inequalities of pay, excluding land rent from the picture; otherwise the starting point of (say) the antebellum South in the United States would have to be accounted very differently. Still, his was a powerful common-sense argument, and it dovetailed nicely with the optimistic liberalism of American development theorists at the time. So the Kuznets Curve – an inverted-U relationship between national income and economic inequality – became the archetype of hypothetical global-inequality relationships.

Over time, there was even a tendency for the original logic of Kuznets' argument to recede in memory, and for analysts to focus on finding an empirical inverted-U in comparative and historical data. As sources of data multiplied, this became increasingly difficult, for the apparent signal – if it existed at all – could not be reliably found in the noisy survey records on which researchers were prone to rely. For much of the post-war period, researchers using survey records could not even establish trend changes in inequality for most countries, including the United States. With no apparent trends, and the rising fashion of general-equilibrium models, the topic of distribution fell into obscurity. As a result, while Kuznets' curve remained an archetype, it ceased to command wide acceptance.

Within the United States, researchers began to notice that inequality was beginning to rise in the mid- to late 1980s; credit for calling attention to the phenomenon belongs in part to Bluestone and Harrison (1990), who offered an explicitly political and institutional argument, relating the rise of inequality to the consequences of the economic policies adopted under President Ronald Reagan, especially that administration's attack on trade unions. The mainstream of the economics profession took a different view, however, with two competing market-based arguments. One of these emphasized the role of technology, the other the role of trade.

Bound and Johnson (1992) proposed that rising wage inequalities were the result of increasing relative demand for workers with skills suitable to the changing requirements of employers; thus, "skill-biased technological

change” entered the lexicon. Underlying this concept was the implicit view that changing inequality was driven by changing wage rates, reflecting changing marginal productivity, and thus that wage rates were set in an efficient and competitive labor market. The skill-bias hypothesis thus reinforced the view that the US labor market owed its favorable record on job creation and unemployment (compared to Europe) to its “flexibility” – to the latitude enjoyed by employers to match wage rates to the requirements of technology and the distribution of skills.

The concept of inequality driven by skill-biased technological change focused attention on the relative demand for skilled labor. An early alternative proposed that the true cause was instead a large increase in the effective supply of unskilled labor, due to the globalization of manufacturing and to immigration from developing countries. Thus the hypothesis of a rightward shift in relative demand for skills was countered by the hypothesis of a leftward shift in relative supply. Either hypothesis would produce a rising gap between skilled and unskilled pay rates; the distinction between them would turn on the effects on rates of employment among the skilled and the unskilled. The trade hypothesis also raised welfare and policy questions – whether the gains from more efficient world productive capacity justified the losses imposed on unskilled workers in the developed countries, and whether those losses deserved compensation. Still, like the skill-bias argument, the trade argument was built on the neoclassical foundation of efficient labor markets and marginal productivity wage setting, with an admixture of the Stolper-Samuelson relative-wage-equalization theorem.

Both variations on the labor-market-adjustment narrative generated empirical assertions that would prove problematic. The skill-bias hypothesis notably raised the question: what technical change? The obvious candidate was computerization, but the timing of the diffusion of personal computers came too late to account for rising inequalities (Galbraith 1998), and case studies of the effects of computerization on labor market outcomes failed to support the hypothesis (e.g., DiNardo & Pischke 1996). Meanwhile, the Stolper-Samuelson theorem appeared to predict that wage inequalities would decline in industrializing countries (Wood 1994) as they rose in developed countries, but concrete evidence for this effect proved hard to find. Moreover, the scale of increased trade and outsourcing could only with difficulty be stretched to account for the observed increases in inequality, and for their appearance in the non-traded-goods sectors.

As this debate developed, a third perspective (Baker et al. 2005) continued to make the institutional and political argument that the rise

of inequality in the US was because of the decline of trade unions, the retreat of progressive political forces in general, and the declining real value of the minimum wage. While there was clear historical evidence for this view, it comported poorly with the labor-market models in fashion among economists, since it implied that wage rates had been political and administrative all along. If this were true, the role of economic theory in wage setting is easily dispensed with.

A difficulty with all three lines of argument was that all of them depended on changes in relative wage rates, measured on an hourly basis. This is what corresponds to the theoretical construct of marginal productivity, and what should vary in an “efficient labor market”. Yet for practical purposes, no such measures exist. The actual information sets generally measured weekly earnings, with average hourly earnings derived by dividing hours into earnings. This procedure does not provide a reliable measure of hourly wage rates, however, since (thanks to overtime and other factors) earnings per hour vary with hours worked. Further, changing job classifications and job structures made it very difficult to assess whether rising inequality was due mainly to erosion or improvement of relative wage rates, as against changing structures of employment within or among firms. Indeed, the more one tried to isolate the effect of changes in relative hourly wage rates on overall wage inequality, the less important this factor appeared to be, as compared with changing patterns of employment, a changing composition of the workforce, and (for household earnings) a changing pattern of household composition and family life. Of all these forces, the hourly wage rate associated with any particular line of work appears to be one of the most stable.

Ferguson and Galbraith (1999) analyzed American wage data for the period from 1920 to 1947, allowing a direct test of the proposition (Goldin & Katz 2008) that improved education drove the “Great Compression” during the 1940s. We showed that practically all of the movement of relative wages across sectors in this period could instead be attributed to three identifiable forces: the movement of overall GDP in the Depression and war; the timing of labor actions, including especially strikes; and the movement of the exchange rate. This study reinforced the conclusions of *Created Unequal* (Galbraith 1998), which analyzed the evolution of weekly payrolls by industrial classification from 1958 into the 1990s, showing in general terms that movements in the relative position of major sectors affected differentially by a small number of major forces – macroeconomic and political forces – and in the composition of employment were the dominant influences behind a changing distribution of pay and earnings.

The argument over rising wage inequalities was at first mainly American; it was rooted in surveys of US household earnings. It had, however, an important corollary for European economists, who supposed that their own countries were not subject to fluctuations in relative hourly wage rates. Thus developed the “Euro-sclerosis” view of chronically high European unemployment, which held that this was because of relative wages that refused to adjust to the pressures of technology and trade. High-skilled workers in Europe were paid too little and low-skilled workers too much, and the result was a failure of European labor markets to clear at full employment. The fault was presumed to lie with national labor-market institutions, and thus with protections and rules enforced by national law.

Galbraith and Garcilazo (2004) show how to isolate the effect on European unemployment of conditions and events at three distinct levels. First, there is the local or regional level, to which local labor-market conditions, including the wage structure, are most relevant. Then there is the national level, which captures the influence of law and tradition in each European country. Last, there is the common influence of forces affecting employment at the continental level, whether these emanate from common European policies or from forces in the wider world. Country- and time-fixed effects thus capture the role of national institutions and of continental macroeconomic conditions. A review of the country-fixed effects is sufficient to dismiss the notion that major differences separate the major continental economies of Europe (including Scandinavia); measures of growth, wealth, population structure, and wage inequality are sufficient to account for differences in unemployment among these countries.

Meanwhile, a simple model at the local level takes up the question of theoretical interest: what is the effect on unemployment of wage inequality? Here, the orthodox theory should offer a plain prediction: regions with higher levels of inequality, other things being equal, should experience lower unemployment rates; their inequality measures should serve as *prima facie* evidence of flexibility. In fact, the results are the opposite: higher local inequality is associated, not strongly but very consistently, with higher rates of local unemployment.

Two theoretical perspectives cast light on the finding. One is the inequality-and-migration model of Harris and Todaro (1970), which pointed out that high wage differentials induce people to quit low-paid jobs (for example, in peasant agriculture) to seek the small number of better opportunities (for example, in urban factories). Since there is inevitably a surplus of applicants in this situation, unemployment must result.

The condition of migrant labor in modern China provides a vivid illustration of this process. Second, there is the “LO model” of Meidner and Rehn (1951), who argued that small egalitarian countries (such as Sweden) can force the pace of productivity gains by compressing their wage structures, effectively squeezing out low-productivity industries and inviting in those that can profitably pay the required wages. Ultimately, the higher wealth accumulated via this process makes it possible to employ a large part of the labor force in low-productivity sectors, such as public services or subsidized farming, or in training programs. In either model, relative wage equality promotes more higher rates of employment; both are quite consistent with the evidence.

As researchers in development economics grew frustrated with a search for meaningful Kuznets curves in the available collections of survey-based evidence of income and expenditure inequalities around the world, attention focused on an apparently related question: what is the relationship between inequality and economic growth? Here, two opposed positions appeared, each claiming support in the collections of survey data that became available in the 1990s. One model, associated with Forbes (2000), argued that higher inequalities produced higher subsequent rates of growth; with Victorian logic, the mechanism ran through a higher propensity to save of the wealthy segment of the population, and therefore a more rapid rate of capital accumulation. The alternative, advanced notably by Birdsall, Ross, and Sabot (1995) held that countries that reduced inequalities, say through universal education and land reforms, were and would be rewarded with higher growth rates. Here, the mechanism ran through the expected reward to human capital; more widely distributed returns were held to induce a more sustained productive effort from the working population.

Apart from the then-available data, which were sparse, noisy, and hard to interpret, a difficulty with both of these theories lies in the effort to relate a measure of a level – the degree of inequality – to a subsequent rate of change, namely the rate of growth. Were either of the inequality/growth theories correct, it should be possible for countries to raise their income levels indefinitely, relative to other countries, by keeping their inequality in the “correct” position. Yet we know this is not the case. The problem is similar to that of relating the position of the floor pedals to the speed of a car: even if one correctly distinguishes the accelerator from the brake, the car will not speed up indefinitely if the accelerator is held down.

Further, as a matter of logic, there cannot be at the same time a Kuznets-type relationship between the level of income and the level of inequality,

and either a Forbes- or a Birdsall-style relationship between the level of inequality and the subsequent rate of growth. From any given starting point, either of the latter relationships will erase the former over time. So the discovery that a relationship of the Kuznets type actually exists in data relating to pay would lead, inexorably, to the rejection of a relationship between inequality levels and later rates of growth.

Galbraith and Berner (2001) and Galbraith (2012) present evidence that there is a decided Kuznets relationship between income levels and the inequality of pay – as measured in a data set based on the UNIDO Industrial Statistics. Most countries are on a downward-sloping Kuznets surface, with inequality that declines as incomes rise, and at rates closely associated with the overall rate of economic growth. For this reason, the rich countries (members of the OECD) have markedly lower inequality measures than are found in the developing world. There are countries on upward-sloping Kuznets surfaces, however. They include China, which remains in the throes of a vast shift from the countryside to the cities and is thus today the canonical case of the classic Kuznets argument. The evidence suggests that the United States also fits this pattern, for a different reason: as a supplier of advanced capital goods, scientific products, and financial services to the world economy, the US is in a position in which strong growth differentially favors those already at the top of the income ladder. Thus the Kuznets curve exists, having acquired an upward swing at the high end.

The existence of a dense, consistent body of evidence for the level and evolution of pay inequality since the early 1960s permits another useful inquiry, namely into the existence of a worldwide pattern of change in inequalities, which can be done by estimating the time coefficients in a fixed-effects model. Galbraith and Kum (2003) found that inequalities measured within countries showed no consistent worldwide trend until about 1971, following which they tended to decline until around 1980. There then followed a twenty-year period of massively increasing inequalities, peaking in 2000, followed by a modest decline. During the period of rising inequality, distinct regional patterns of intensity can be discerned: first in Latin America (and in Africa, where visible) in the early 1980s, then in Central Europe and the former Soviet Union, and finally, in the 1990s, in Asia, especially in China.

Both the turning points and the regional patterns strongly point to a straightforward interpretation: inequality was stabilized under Bretton Woods, fell in the worldwide commodities and debt boom of the 1970s, and

then rose massively in the debt crises and the era of financial instability and speculative excess that followed. It peaked in 2000, and thereafter fell in some countries, especially those in Latin America that separated themselves from the Washington Consensus after the currency crises in Brazil in the 1990s and in Argentina in 2002; the pattern of declining inequality was first detected by Galbraith, Spagnolo, and Pinto (2007).

Recent work in this vein compares changes in industrial pay inequality with movements of exchange rates (Rossi & Galbraith 2016). A striking relationship emerges for many countries: exchange rate depreciation raises inequality in the structure of pay. The logic of this finding is entirely mechanical. All industries, in all countries, sell either predominantly to the internal market or predominantly to the outside world. In most cases, the average pay in export sectors is higher than it is for industries that compete with imports. A devaluation raises the local-currency revenue of the exporting sectors, while making no change in the revenues of the others. Those extra revenues are paid out (at least to a degree) within the sector. Therefore, as a mechanical matter, a devaluation increases the gap between high-earning exporters and lower-earning domestic-sales-oriented firms. This shows up clearly in the relationship between exchange rates and pay inequality, especially when the US dollar is used as the reference currency, and especially following trade liberalizations.

Further as Galbraith, Halbach, Malinowska, Shams and Zhang (2014) have shown, estimates of gross household income inequality derived from measures of industrial pay inequality succeed in closely tracking the available (but much less dense and consistent) survey measures of gross income inequality for a large spectrum of countries around the world. Therefore, we can establish a clear line of causal flow, which must run from exchange rates to inequalities in the structure of industrial pay, and thence to inequalities in the structure of gross household incomes. The reverse sequence is not plausible. We may conclude that a major factor driving the movement of inequality measures, for a broad spectrum of countries excluding only the largest developed nations and those subject to the rigidity of the Euro, is the effect of exchange rate movements as determined in international currency markets.

All in all, there is no support here for the analysis of pay inequality as a micro-based national labor-market or wage-adjustment phenomenon, for the notions that technology or education are fundamental drivers of rising inequality in pay, nor for the idea that flexibility in wage setting has any favorable bearing on employment. Nor does the evidence lend any support to



the notion that raising (or lowering) inequality can act as a durable driver of economic growth. Instead, the evidence shows a global pattern to the rise in inequality, suggesting that common global forces are mainly responsible, and that they operate within same broad framework of intersectoral transitions (and changing intersectoral terms of trade) that Kuznets identified nearly sixty years ago. These are macroeconomic and financial forces in the short run, and over a longer horizon, they are the forces of structural change. The timing and composition of the changes observed within the last generation, and especially since 1980, point directly at the conduct of world financial governance, at the neoliberal counter-revolution in policy, at the setting of global interest rates, and at the incidence of debt crises and debt deflations, as the crucial worldwide forces at play. This picture is reinforced by investigations at the national level in widely dispersed countries. Rising inequality is a marker of credit booms, and therefore also a potent indicator of the danger of macroeconomic instability and crisis. The global policy implication is that the control of inequality and the control of unstable finance are substantially the same problem.

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## Abstract

### Globalizacja a nierówności – nowe spojrzenie

Artykuł jest syntezą poglądów na temat nierówności oraz rozwoju gospodarczego prezentowanych w literaturze, poczynając od Kuzneta (1955), przez neoklasyczne modele dostosowania rynku pracy oraz modele uwzględniające zmiany technologiczne i edukacyjne z lat 90., po rezultaty najnowszych badań, w których wykorzystano kompleksowe, spójne zbiory danych o zasięgu globalnym. Są one istotne dla oceny zarówno podobnych, jak i odmiennych doświadczeń gospodarek krajów wysoko rozwiniętych, krajów transformujących gospodarkę i krajów rozwijających się w dobie globalizacji. Prace oparte na zbiorach danych opracowanych w ramach Programu Nierówności reali-

zwanego na Uniwersytecie w Teksasie potwierdzają pogląd Kuzneta na temat dużego znaczenia międzysektorowego przepływu dochodów, ale zawierają wiele odrębnych i nowych ustaleń. Ustalenia te są możliwe, ponieważ obecnie można śledzić przepływy regionalne i ponadnarodowe dochodów, badać wpływ globalnych czynników makroekonomicznych na nierówności dochodowe, a ostatnio także ocenić krytycznie rolę, jaką odgrywają kursy wymiany w ewolucji nierówności w otwartych gospodarkach.

**Słowa kluczowe:** globalizacja, nierówności, płace, rynki pracy, produktywność.