

Remarks to the American Philosophical Society, November 14, 1998
Globalization and Pay

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My concern is with pay. It is with the distribution of pay, with the economic and social relationship between the well-paid and the poorly paid, between the working prosperous and the working poor. Since the early 1980 inequality of pay has risen sharply, both within nations and between them. Everyone knows this. The issue that divides the economics profession is: why?

We live in a global economy but we rarely analyze it as a global unit. This is partly habit, partly necessity. Economic policy analysis remains primarily a national sport. And data at the global level are often scarce, inconsistent, unreliable. We don't have good figures on unemployment outside the developed countries, and for a topic like inequality the situation is very much worse.

As a result, though inequality is clearly a global issue, the economics literature treats it largely as a phenomenon to be explained in national and even in American terms.

According to a view that once confidently called itself mainstream, the rise in inequality is mainly a matter of relative gains for workers who possess higher levels of skill. Since skill is related to pay through a market evaluation of productivity, there are only two possible ways that differentials can increase. One would be an increase in the effective supply of less-skilled workers, related to the expansion of trade. The other would be an increase in the effective relative demand for the highly skilled, related to technological change.

Most economists are now satisfied that North-South trade is a secondary factor in rise of inequality in the North. The effect is not negligible, as some claimed when inequality first surfaced as a major issue. But it is also not the whole or even the main story. That leaves technological change, and the question becomes, which technological change? Some researchers have stipulated computerization as the new technology specifically responsible. This argument has been widely taken up in the press and by policymakers, notably publications like *Business Week* that make a fetish of information technology. Others, notably the *Economist*, have tied the argument to the conditions of Europe, arguing that where wages of the less-skilled failed to fall, high unemployment rather than rising inequality would be the principal result.

It is a tidy story, well-grounded in contemporary economic theory. In broad outline it is easily grasped, intuitive, plausible. It conveys an appealing appreciation of larger market forces at work. Rising inequality may seem distressing at first, but becomes less so when it is realized that markets are working effectively to reward each person in line with the true productivity of their skills. And this story points in a reassuring way toward an ultimate resolution of our difficulties. As more people acquire the requisite skills, then the premium earned by those skills will decline; education would catch up with technology, as Claudia Goldin has phrased the matter.

The story suffers from one difficulty. It lacks the support of the facts. Indeed on close examination almost nothing of it survives. It is clear, for instance, that computers are made to be easy rather than difficult to use; in most applications they are not skill-enhancing. It turns out that much of the rise in inequality occurs within sectors only weakly affected by computers, and that the greatest increases in computer use come too late to be a principal cause of rising inequality.

It is also not true that unemployment rises uniformly with rigid wage structures in Europe, and not true that the rise of unemployment in Europe affected the less-skilled more heavily than other groups. While it is true that other things equal computer users earn more than non-computer users, it turns out that the same is true of pencil users and those who work in chairs. We are not seeing in those results the effect of computer use on productivity, but rather the effect of status on perquisites of the job.

I claim to have seen these realities earlier than most. But, I have to acknowledge, the body of mainstream researchers have moved with surprising speed over the past few months to reject the “skill-biased technological change” explanation of rising inequality that so dominated the literature just a year ago. Like the natural rate of unemployment, this notion is now on the ropes; if not yet quite down for the count. And here as there, we economists are now confronted with the stark question of what to put in its place.

The approach I offer is fully formed in theory. It rests on a combination of the views of Joseph Schumpeter with those of John Maynard Keynes. I argue that Schumpeterian process of technological change -- those gales of creative destruction -- are coordinated through the Keynesian macromanagement of the business cycle. The effect of a shift from full employment policy in the United States after 1970 was to destabilize the balance of forces between machine makers and machine users, and that the largest single impetus behind rising inequality in the wage structure comes along the fault line that separates the monopolies and would-be monopolies who generate new technologies from the oligopolies who use them.

There are other forces of course. By sorting industrial wage data into the major patterns of wage change, it becomes possible to identify them: an effect of rising interest rates and the high dollar, especially in the early 1980s, on the wage differential between monopolistic exporters and competitive import-competers, and the rise and then decline of the military budget. But an accelerating instability in the uptake of new investment, and therefore of new technologies broadly speaking, is the main thing I find in the data for the United States.

The difference between my macro-technological hypothesis and the micro-technological hypothesis of the mainstream is straightforward. The mainstream approach focuses on the divide between *users* and *non-users* of new technology, seeks to account for perceived differences in their relative pay as a function of differences in their relative productivity. My approach focuses on the divide between *producers* of technology and *users* of technology, and views the large distributive shifts between these groups as outcomes of shifts in monopoly power.

Through this research, I propose to bring an end to the historic division of economics into macro- and micro- branches, and to do this in a manner quite different from the recent fashion of

producing “micro-foundations” for macroeconomics. Rather, my work seeks the macroeconomic and policy sources of inter-sectoral change.

Sectors can be defined in many ways. My approach is rooted in numerical taxonomy, a systematic method of classification, based on commonalities of historical behavior. It leads to a belief that the essential division must be between, as I have said, machine makers and machine users on one side, and between those who work with machines (manufacturing), and those who do not (services), on the other. Taken together then it is useful to begin the taxonomic exercise with three sectors: a knowledge-based or K-sector, producing machines; a consumption-good producing or C-sector, using machines, and a services sector that makes comparatively little use of machinery and by extension participates comparatively little in international trade.

This sectorization tells us a good deal about the structure of trade. The United States is, quintessentially, a K-sector presence on the global scene: we export aircraft, communications systems, energy production networks and advanced pharmaceuticals; we import clothing and toys and sporting goods and luxury cars. Next to us, the UK is perhaps the leading K-sector economy in the world; France and Germany hold important niches. Europe as a whole is, however, predominantly comprised of C-sector economies, and Japan is in the dual role of being a C-sector provider with respect to the United States but a K-sector exporter with respect to much of Asia. Most so-called developing or emerging economies are C-sector producers and importers of K-goods. At the international level one has also to consider the special role of oil.

With this underlying view in mind, it becomes clear that the “technology versus trade” debate is artificial. Technology defines trade. The processes generating inequality in the global economy are the same as those operating inside national frontiers. In both cases they are macro processes. The differences are only that certain arbitrary conventions, known as frontiers, cause certain transactions to be labeled as exports and imports, and that in a global economy the stabilizing devices that operate at the national level, including unemployment insurance, social security payments, and stabilizing tax reductions and expenditure increases, do not apply.

Now, how do the movements of the global economy affect inequality, within countries and between them? My answer is three-fold: investment favors the K-sector; consumption favors the C-sector; political struggle determines the fate of the S-sector. Thus in an investment boom, knowledge workers move ahead; in a period of full employment the consumption-goods producers catch up. Bringing up the service workers requires specific action on minimum wages, hours, and public employment.

Globally, these forces play out according to the sectoral structure of national economies. In an investment boom, in the early phases of a global expansion, the advanced countries gain on the poor. In the later phases, when consumption rises in the rich countries, the C-sector states gain ground on average, and become more equal internally as well. In a global crisis, the poorest countries fall farthest, while a slump in K-sector exports for the advanced countries only has a large effect on inequality in those countries when it becomes sufficiently large to drive down, through a multiplier process, the consumption of consumption goods.

The next step is to look for data. The standard data set on global inequality, maintained by the World Bank, is not adequate for our purposes. It focusses on income; we need a measure of pay. But more important, coverage is sporadic, in many countries only a few valid survey observations exist, and missing years cannot be filled in after the fact. Without time-series data, one cannot adequately undertake historical analysis.

To deal with these difficulties, my students at the University of Texas and I have built an alternative data set, which measures the evolution of inequality of pay in manufacturing. It is based on data sets that are nearly ubiquitous on an annual basis in countries of any industrial capacity. We also believe that these numbers are fairly reliable indicators of the *change* in inequality for manufacturing pay, and limited evidence so far makes us think they are fairly good at indicating what is going on in the larger economy as well.

What do we find? First, the stylized facts for a K-sector economy appear to hold for the U.S. and the U.K.: inequality rises with growth but falls with declining unemployment. Over the long haul in the United States, -- and we have constructed an ersatz inequality series back to 1920 -- the movement of unemployment dominates the movement of inequality as a whole. And the stylized facts for a C-sector economy appear to hold for Brazil and Mexico, where we are especially confident of our data: strong growth reduces inequality and weak growth increases it.

Beyond this, we are still working on statistical relationships. We are increasingly confident, however, that inequality within countries moves in regional patterns -- something that by itself suggests the importance of macroeconomic co-determination. We believe that the politics of macroeconomic policy matters to the evolution of inequality. We believe this, because in many cases we can see in the movement of inequality what appear to us to be traces of the politics of the time. An especially vivid example occurs in Chile: inequality falls through 1973 and then rises, following the bloody coup that installed Augusto Pinochet and his "Chicago boys." Inequality also rises following coups in Argentina, Pakistan, Bangladesh, and elsewhere. In the case of China, where we have measurements no one else has made, the codetermination of the larger mainland economy with those of Hong Kong and Macau, and even perhaps Taiwan, emerges from our analysis; inequality in China rises very rapidly in the early 1990s following Tiananmen. In just a few cases, notably Iran and Nicaragua and the relatively non-violent examples of Zimbabwe and Portugal, all in the 1970s, revolutions accomplish what revolutions are intended to accomplish, namely a leveling of income differences.

Over the sweep of the 1970s across the globe, we think that the oil boom played a key role in distinguishing decreases from increases in inequality. The major oil consumers, including North America and Europe, but also India, suffered recessions and increasing inequality during these years, while the inequality fell sharply in the major oil exporters. During the debt crisis and oil bust of the 1980s, inequality increased much more systematically and drastically throughout the globe; the biggest increases were in Latin America, hardest hit by the crisis. India and China, isolated by choice from the world financial system, grew rapidly during these years and did not experience large increases in inequality. Figures 1 and 2 provide a global snapshot of changing inequality in the ages of oil and debt.

Change in Inequality

1972-1980

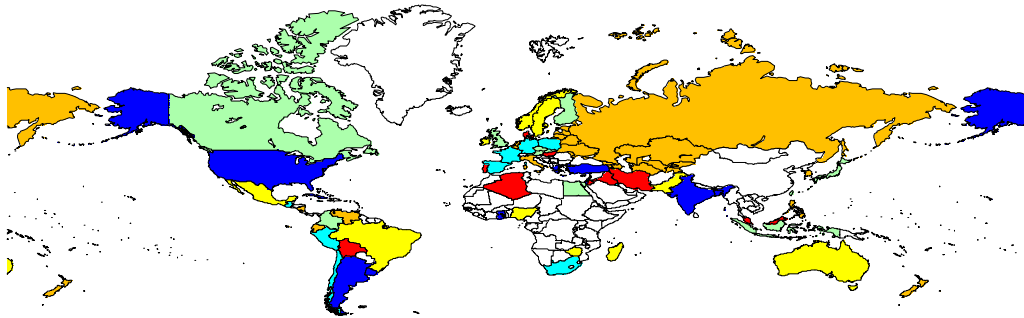
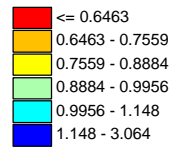


Figure 1.

Change in Inequality

1981-1988

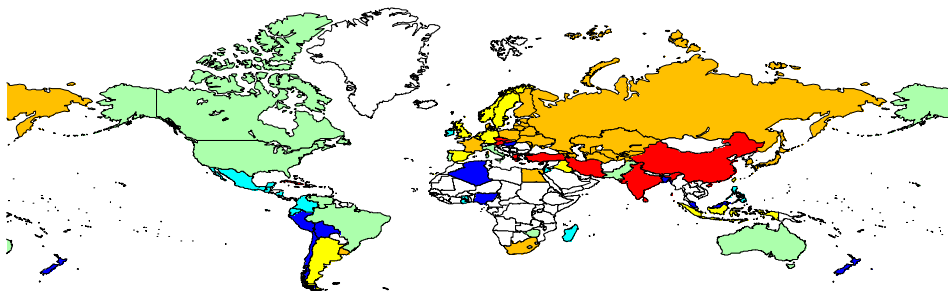
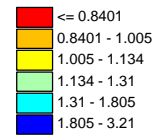


Figure 2.

The 1990s are, then, the era of liberalization. And our data give a very clear picture of the effect of global financial liberalization on inequality. The picture is not pretty: rapid increases in inequality now occur in Korea, in China, in Africa and in the Middle East, and of course in the radically liberalized economies of Eastern and Central Europe. (Certainly the extreme case is Russia, where we do not have continuous time-series data because of the break-up of the USSR.) Figure 3 presents the information we have on the years up to 1995, while Figures 4 and 5 give a detailed view of Europe and Southern Asia.

The implications of the present global economic crisis become quite clear as one examines these patterns in the data. Not only are the Asian and Russian economies most severely affected undergoing a sharp reduction in their average living standard relative to us. They are also undoubtedly becoming radically more unequal internally. Countries which entered the global economy also made themselves vulnerable to the rise in pay inequalities that were pioneered twenty years earlier by the United States. These rises were masked for much of the present decade in a few countries -- Indonesia, Malaysia -- by construction and export booms that increased employment in middle-wage occupations. Thus the emergence of the "Asian middle class." But the underlying inequalities will now reemerge with extreme virulence as employment in these sectors collapses, which it is doing. The implications for the security of these regions, and by implication of ourselves, are deep and serious.

The dimensions of the tragedy overtaking Russia, Asia and perhaps now also Latin America cannot be overstated. History has, unfortunately, returned. One advantage of the research techniques presented here is that they can help us to watch it unfold. Perhaps also they may motivate us to do something about it. But genuine progress toward stronger growth and greater equality will require very serious change in the simple-minded beliefs in weak government, deregulation, privatization and free global capital flows that have characterized recent years, and that are now responsible in no small measure for the havoc that we now observe.

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Change in Inequality

1989-1995

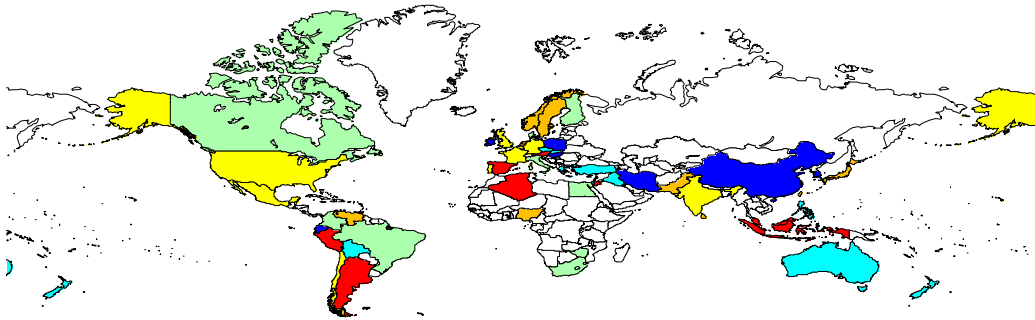
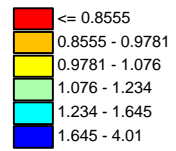


Figure 3.

Change in Inequality

1989-1995

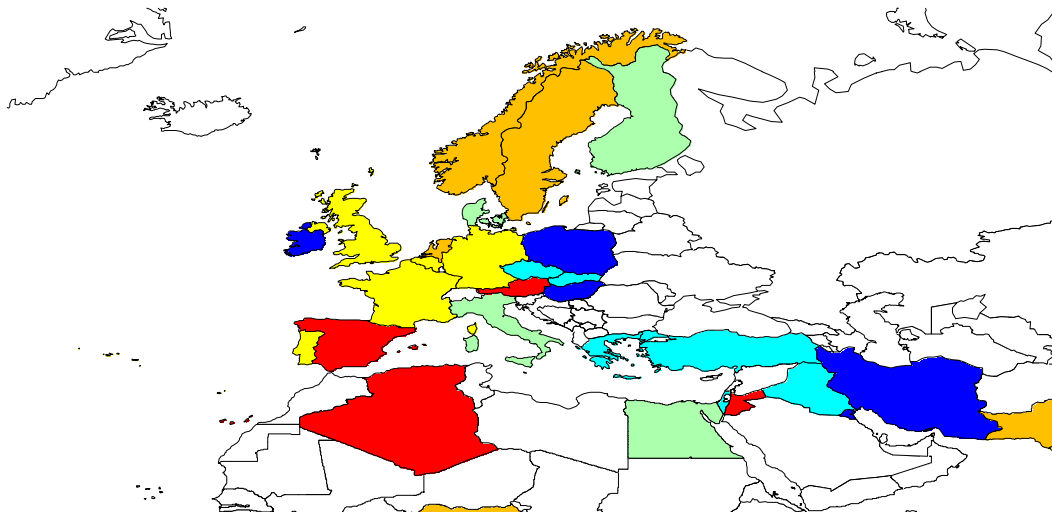
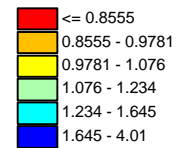


Figure 4.

Change in Inequality

1989-1995

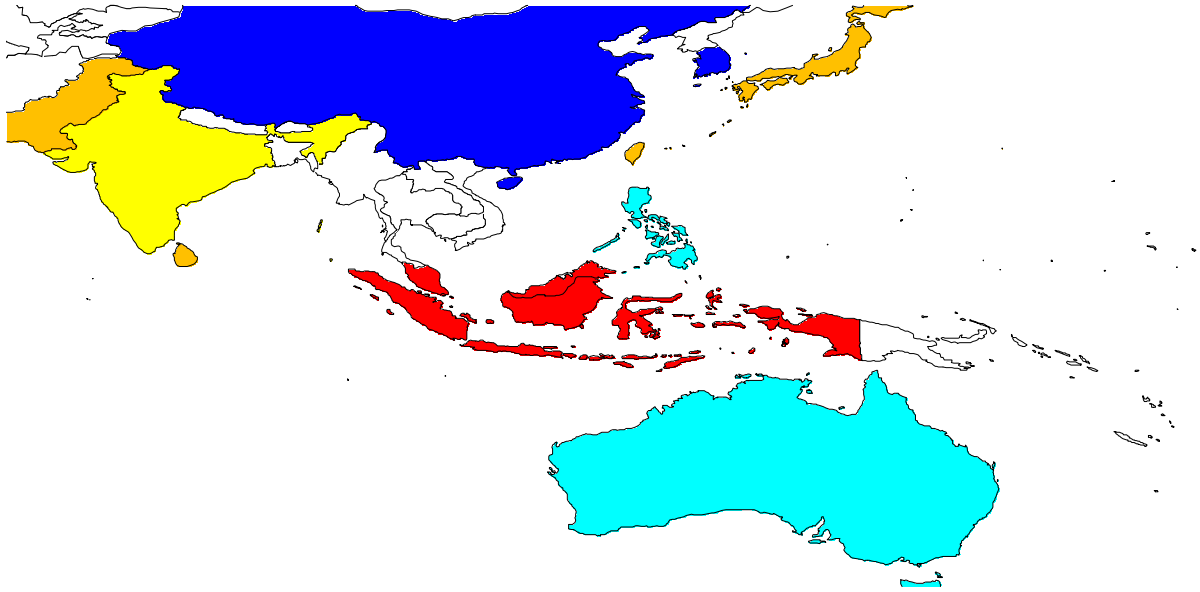
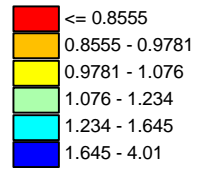


Figure 5.